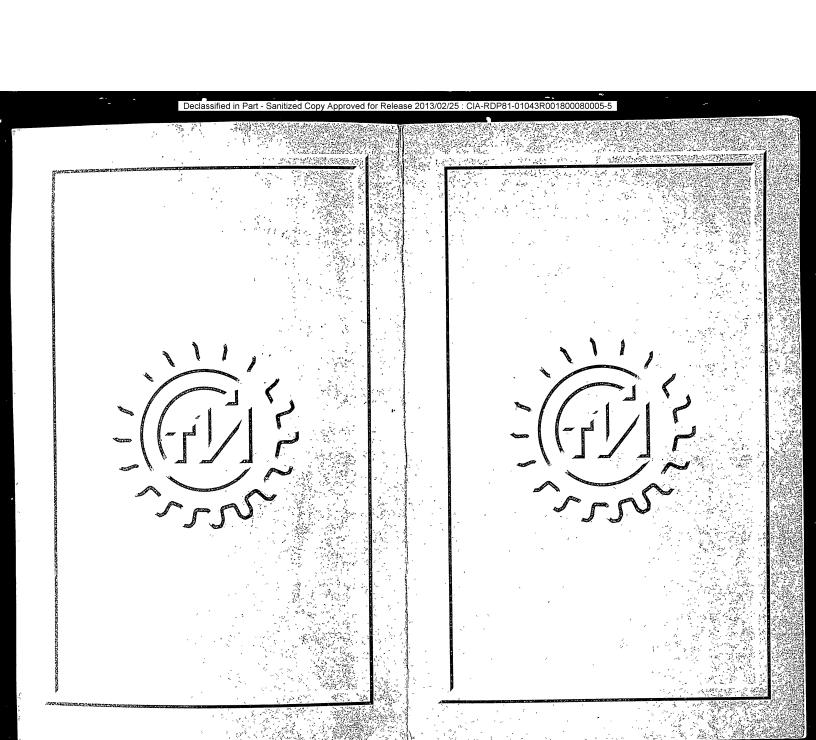
**STAT** 



## METAL-WORKING MACHINERY **STAT**

Stankoimport





### METAL-WORKING MACHINERY



VSESO JUZNOJE EXPORTNO-IMPORTNOJE OBJEDINENIJE

Stankoimport

USSR

MOSCOW

This catalogue contains short specifications of the most common types of metal-working machinery exported by the Vsesojuznoje Exportno-Importnoje Objedinenije "Stankoimport".

Detailed pamphlets sent on request.
All inquiries and correspondence to be forwarded to:

Vsesojuznoje Exportno-Importnoje Objedinenije

"Stankoimport"

32/34, Smolenskaja-Sennaja pl., Moscow, USSR

For cables: Stankoimport Moscow

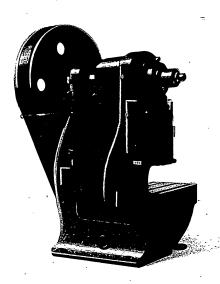
Phone: G 4-21-32

### CONTENTS

Mechanical record	Page
Sap-frame single erank press, model K 115 A. Sap-frame single erank press, model K 110 B. Single erank horn press with adjustable swinging table, model K 126. Sap-frame single erank press, model K 117 A. Sap-frame single erank press, model K 117 A. Sap-frame single erank single action press, model K 235 Intelinable single erank single action press, model K 237 Priction sorew press, model ФA 122 Priction sorew press, model ФA 124 Priction sorew press, model ФA 124 Priction sorew press, model ФA 124 Straight-side single erank press, model K 202 Straight-side single erank press, model K 273 B. Straight-side single erank outlead to the straight-side single erank double action drawing press, model K 475. Straight-side single erank double action drawing press, model K 471. Straight-side single erank double action drawing press, model K 475. Two point single action enclosed press, model K 372 A. Two point single action enclosed press, model K 374 B. Straight-side double erank single action press, model K 366 Straight-side double erank single action press, model K 366 Straight-side double erank single action press, model K 366 Straight-side double erank single action press, model K 366 Straight-side double erank single action press, model K 366 Straight-side double erank single action press, model K 368 Mechanical forging press, model K 863 Mechanical forging press, model K 863 Mechanical forging press, model K 864 Mechanical forging press, model K 864 Mechanical forging press, model MKII 500 Mechanical forging press, model K 810 Mechanical forging press, model MKII 500 Mechanical forging press, model K 810 M	11 13 15 17 19 21 23 25 27 29 31 33 35 40 42 46 48 46 50 52 54 66 66 69 71 73
Punching press, model K 196.  Automatic seven spindle sheet metal stamping press, model A 821	
Hydraulic Presses	
General purpose hydraulic press, model IIB 452 General purpose hydraulic press, model IIA 454 General purpose hydraulic press, model IIA 457 Plastics molding hydraulic press, model II 457 Plastics molding hydraulic press, model II 476 Hydraulic straightening press, model II 476 Hydraulic straightening press, model II 053 Hydraulic die embossing press, model II 053 Hydraulic scrap metal baling press, model II 100 Hydraulic foreing press, model II 100 Hydraulic foreing press, model II 002 Horizontal triplex plunger pump, model F 354 Horizontal triplex hydraulic pump, model F 347 Horizontal triplex hydraulic pump, model F 344	89
Hammers	
Pneumatic power forging hammer, model ME 412 Pneumatic power forging hammer, model M 415 A Pneumatic power forging hammer, model M 4417 Air or steam arch-type double action forging hammer, model M 132 A Air or steam arch-type double action forging hammer, model M 133 A Air or steam arch-type double action forging hammer, model M 134 Air or steam double action drop hammer, model M 211 Air or steam double action drop hammer, model M 212 3150 kg air or steam double action drop hammer.	11 11 12 12

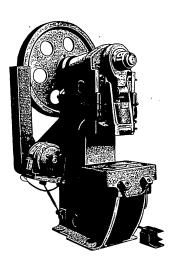
# | Page |

### MECHANICAL PRESSES



### GAP-FRAME SINGLE CRANK PRESS

MODEL K 115 A



These presses are most suitable for blanking, piercing, punching, shallow forming, bending strip and sheet materials and for other cold forming opera-

forming, bending strip and sheet materials and for other cold forming operations.

The press is driven by an individual motor through V-belts. It is started by an electro-magnetic device by pressing with both hands two separately located buttons or by a treadle.

The flywheel rotates freely on its shaft and during the working stroke is connected with the crankshaft by means of two rolling keys. One of the keys performs driving functions while the other one serves to prevent the crankshaft from overtaking the flywheel as the slide is moving down.

The length of stroke is adjusted by an eccentric which is connected with the crankshaft through a geared coupling.

The slide is equipped with 15 mm stroke mechanical ejector.

Slide adjustment is accomplished by means of a connection screw having a spherical head.

For stopping the crankshaft at the upper dead center the press is equipped with a periodically acting band brake.

The press can operate either on single strokes or continuously. When operating on single strokes the crankshaft stops at the upper dead center even if the operating treadle or buttons are inadvertently held down.

Lubrication of the press is effected through centralized system by means of automatic measuring feeders.

Standard equipment: Complete set of electrical equipment suitable for A. C. supply (working current at request), set of wrenches and all the necessary technical instructions for erection and maintenance.

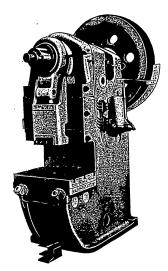
### SPECIFICATIONS

Pressure of slide near bottom of stroke, t	50 —80	R. to L. Diameter	330 280
Number of strokes per minute Adjustment of slide, mm	90 70	Recess in slide for punch stem, mm: Diameter Depth	50 70
Die space, distance from top of bed to bottom of slide, (stroke down,		Throat distance back from center of slide, mm	
adjustment up), mm	$\frac{280}{375}$	Thickness of bolster plate, mm	70
Stroke of stripper, mm	15	Electric motor power, kW	
F. to B	$\frac{440}{660}$	F. to B. R. to L.	1230
Opening in bed, mm: F. to B	220	Maximum height above floor, mm .  Net weight, kg approx.	

### GAP-FRAME SINGLE CRANK PRESS

£3 F.F.

MODEL K 116 B



These presses are most suitable for blanking, piercing, shallow forming, bending strip and sheet materials and for other cold forming operations. The press is driven by an individual motor through V-belts. It is started by an electro-magnetic device by pressing with both hands two separately located buttons or by a treadle.

The flywheel rotates freely on its shaft and during the working stroke is connected with the crankshaft by means of two rolling keys. One of the keys performs driving functions while the other one serves to prevent the crankshaft from overtaking the flywheel as the slide is moving down.

The length of stroke is adjusted by an eccentric which is connected with the crankshaft through a geared coupling.

The slide is equipped with 50 mm stroke mechanical ejector.

Slide adjustment is accomplished by means of a connection screw having a spherical head.

For stopping the crankshaft at the upper dead center the press is equipped with a periodically acting band brake.

STANKOIMPORT

The press can operate either on single strokes or continuously. When operating on single strokes the crankshaft stops at the upper dead center even if the operating treadle or buttons are inadvertently held down.
Lubrication of the press is effected through centralized system by means of automatic measuring feeders.
Standard equipment: Complete set of electrical equipment suitable for A.C. supply (working current at request), set of wrenches and all the necessary technical instructions for erection and maintenance.

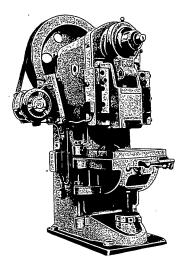
### SPECIFICATIONS

stroke, t	•			
Number of strokes per minute Adjustment of slide, mm adjustment up), mm adjustment up), mm Stroke of stripper, mm F. to B. 480 R. to L. 720 Opening in bed, mm:  Mumber of strokes per minute Both Adjustment of slide (stroke down, adjustment up), mm and to bottom of slide (stroke down, adjustment up), mm blistance (from bed to guides, mm 50 Electric motor power, kW 480 F. to B. 17 R. to L. 17 R. to L. 17 R. to L. 17 Maximum height above floor, mm, 25	stroke, t	63	Diameter	36 31
to bottom of slide (stroke down, adjustment up), mm	Number of strokes per minute Adjustment of slide, mm	100	Diameter	50
Area of top of bed, mm:       Floor space, mm:       17         F. to B.       480       F. to B.       17         R. to L.       720       R. to L.       14         Opening in bed, mm:       Maximum height above floor, mm.       25	to bottom of slide (stroke down, adjustment up), mm  Distance from bed to guides, mm	400	slide, mm	260 80
R. to L	Area of top of bed, mm:		Floor space, mm:	
	R. to L		R. to L	1450
and the second s	F. to B	240	Maximum height above floor, mm Net weight, kg approx.	2500 4878

### SINGLE CRANK HORN PRESS: . WITH ADJUSTABLE SWINGING TABLE

fr 19.

MODEL K 126



This press is designed for punching, blanking and shallow forming as well as for bending strip and sheet materials, flanging, and other cold stamping

as for bending strip and sheet materials, flanging, and other cold stamping operations.

Presses with an adjustable swinging table are used when there is a considerable variation in the height of dies.

Presses with a large die space are particularly convenient for bending, punching and trimming high parts.

With the aid of a horn, the press can be used for making closed shapes such as pipes, small tanks, barrels, etc.

Presses of this type are widely used in the automobile and tractor industry and in manufacturing refrigerators, electric equipment, agricultural machinery, electrical household appliances, hardware and other consumer goods.

The frame is a box-section streamlined grey iron casting. The table is located in respect to the frame by a key joint. The height of the table is regulated by an adjusting screw and nut. The nut is rotated by a ratchet device.

STANKOIMPORT

The drive is from an individual electric motor through a multiple V-belt

3-,

The drive is from an individual electric motor through a multiple v-bine arrangement.

The slide is reciprocated by a crankshaft mounted in bronze-lined bearings. The slide is equipped with a rigid stripper which pushes the finished blanks or scrap off the upper die surface.

The slide is adjusted by hand with a wrench.

The clutch is of the positive rolling key type. The flywheel runs freely on its shaft and when the press is tripped, the flywheel is engaged with the crankshaft by two rollings keys. One is the driving key while the other serves to prevent the crankshaft from overrunning the flywheel when the slide is on the down stroke.

The band brake is of the periodic-action type and is intended for counteracting inertia forces when the clutch is thrown in and for stopping the crankshaft in the extreme upper position.

The press can operate on single as well as on continuous (automatic) strokes.

12

in the extreme upper position.

The press can operate on single as well as on continuous (automatic) strokes. When the press is operated on single strokes, the crankshaft stops in the extreme upper position regardless of whether the starting treadle or push-buttons are released or not.

The press is started either by a two-hand electric push-button station or by a treadle.

Lubrication of the main and crank pin bearings and guides is effected by a lubricating pump station through measuring feeders.

The press is delivered complete with electric motor, starting equipment and wiring, lubricating equipment including lubricating pump station and oil piping, bolster plate, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

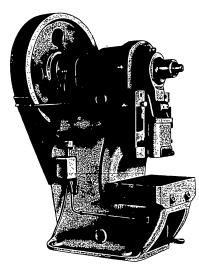
Rated capacity, t	100	Slide dimensions, mm: F. to B	260 470
Slide adjustment, mm Distance from bolster plate to slide (stroke down, adjustment up and uppermost table position), mm Depth of throat, center of slide to frame, mm Distance between axis of bore for	80 160 250	Recess in slide for punch shanks, mm: Diameter Depth Thickness of bolster plate, mm Stroke of stripper, mm Electric motor power, kW Electric motor speed, r.p.m.	50 70 80 50 4.5 750
horn and slide (stroke down, adjust- ment up), mm Table adjustment in height, mm. Diameter of bore for horn, mm. Table dimensions, mm: F. to B. R. to L.	280 280 200 490 720	Floor space, mm: F to B. R. to L.  Maximum height above floor level, mm. Net weight, kg approx.	1800 1480 2615

STANKOIMPORT

### GAP-FRAME SINGLE CRANK PRESS

وس جي پاڻ

MODEL K 117 A



These presses are most suitable for blanking, piercing, shallow forming; bending strip and sheet materials and for other cold forming operations.

The press frame is a streamlined, box-section grey iron casting, cast integral

with the bed.

The press is driven by an individual electric motor through V-belts.

The press is started by an electro-magnetic device by pressing with both hands two separately located buttons, or by a treadle.

The flywheel rotates freely on its shaft and during the working stroke is connected with the crankshaft by two rolling keys.

The length of stroke is adjusted by an eccentric which is connected with the crankshaft through a geared coupling.

The slide is equipped with 50 mm stroke ejector.

Slide adjustment is accomplished by means of a connection screw having a spherical head.

A periodically acting band brake is provided for absorbing the flywheel inertia at the throwing in of the clutch and for stopping the flywheel at the

STANKOIMPORT

13

The press can operate either on single strokes or continuously. When operating on single strokes the crankshaft stops at the upper dead center even if the operating treadle or buttons are inadvertently held down.

The lubrication system of the press is of a combined type: central lubrication of the gibs, crankshaft and connecting rod bearings and clutch is effected by a grease pump through measuring feeders, whereas the remaining friction surfaces are lubricated by hand.

Standard equipment, complete set of electrical equipment, suitable for A. C.

races are lubricated by hand.

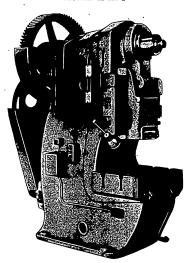
Standard equipment: complete set of electrical equipment suitable for A.C. supply (working current at request), grease pump, pressure gauge, bolster plate, set of wrenches, set of V-belts and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Pressure of slide near bottom of	100	Stroke of stripper, mm	50
stroke, t	100	F. to B	560
Number of strokes per minute	75	R. to L	840
Adjustment of slide, mm	100	Electric motor power, kW	7.0
Die space, distance from top of bed		Electric motor speed, r.p.m	750
to bottom of slide (stroke down,		Floor space, mm:	
adjustment up), mm	340	F. to B	
Throat-distance back from center of		R. to L	
slide, mm		Maximum height above floor, mm	
Thickness of bolster plate, mm	100	Net weight, kg approx.	5500

### GAP-FRAME SINGLE CRANK PRESS

**МОДЕ** К 117 Г



These presses are most suitable for blanking, piercing, shallow forming, bending strip and sheet materials and for other cold forming operations.

The press frame is a streamlined, box-section grey iron casting, cast integral

The press frame is a streamined, pox-section grey non occount, with the bed.

The press is driven by an individual electric motor.

The press is started by an electro-magnetic device by pressing with both hands two separately located buttons, or by a treadle.

The flywheel rotates freely on its shaft and during the working stroke is connected with the crankshaft by two rolling keys.

The length of stroke is adjusted by an eccentric which is connected with the crankshaft through a geared coupling.

The slide is equipped with ejector.

Slide adjustment is accomplished by means of a connection screw having a spherical head.

a spherical head.

A periodically acting band brake is provided for absorbing the flywheel inertia at the throwing in of the clutch and for stopping the flywheel at the upper dead center.

STANKOIMPORT

STANKOIMPORT

14

15

The press can operate either on single strokes or continuously. When operating on single strokes the crankshaft stops at the upper dead center even if the operating treadle or buttons are inadvertently held down.

The lubrication system of the press is of a combined type: central lubrication of the gibs, crankshaft and connecting rod bearings and clutch is effected by a grease pump through measuring feeders, whereas the remaining friction surfaces are lubricated by hand.

Standard equipment: Complete set of electrical equipment, grease pump, pressure gauge, bolster plate, set of wrenches, set of V-belts and all the necessary technical instructions for erection and maintenance.

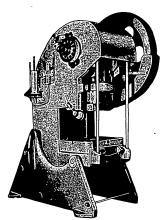
### SPECIFICATIONS

			-	
Pressure of slide near bottom of stroke, t Stroke of slide (adjustable), mm 20-Number of strokes per minute	-100 28 100	F. to B. R. to L. Electric motor Electric motor Floor space, m	bed, mm:  power, kW speed, r.p.m. m:	. 840 . 4.5 . 1000
Throat-distance back from center of slide, mm	340 300	R. to L.	ht above floor, mm.	1110
Thickness of bolster plate, mm	100	Net weight, kg	approx	5700

STANKOIMPORT

### INCLINABLE SINGLE CRANK SINGLE **ACTION PRESS**

MODEL KA 235



The press is designed for blanking, shallow drawing, flanging and other cold stamping operations.

The press can be equipped with an automatic feed.

Due to their inclinable frame, presses of this type find wide application in the most varied branches of industry.

The frame is a box-section streamlined grey iron casting. It is cast integral with the bed and reinforced by two tie-rods. The frame is inclined by rotation about the studs fastened at the right- and left-hand side. The frame can be rigidly locked in three positions: vertical, and inclined at angles of 15° and 30°. The bed is provided with an opening for ejecting blanks when the work is conducted by the "drop through" method. A bolster plate is mounted on the bed. The drive is from an individual electric motor through a multiple V-belt

The drive is from an individual electric motor through a multiple v-belt arrangement.

The slide is reciprocated by a crankshaft revolving in bronze-lined bearings. The slide is equipped with a rigid stripper which ejects finished blanks or sreap from the upper die surface.

The slide is adjusted by hand with a wrench.

The clutch is of the rolling key type. The flywheel runs freely on its shaft but when the clutch is engaged the flywheel is connected with the crankshaft

STANKOIMPORT

-- 17

by two rolling keys. One key drives the crankshaft and the other serves to prevent the crankshaft from overrunning the flywheel when the slide is on the down stroke.

The bank brake is of a posicile of the slive that the slide is on the slide of the slive that the slide is on the slide of a posicile of the slive that the slide is on the slide of the slive that the slide is on the slide of the slive that the slide is on the slide of the slide o

the down stroke.

The hand brake is of a periodic-action type and is intended for counteracting inertia forces arising when the clutch is engaged and for stopping the crankshaft in the upper extreme position.

The press can operate on single as well as on continuous (automatic) strokes. When the press is operated on single strokes, the crankshaft stops in the upper extreme position regardless of whether the treadle has been released. The press is started by a two-hand electric push-button station or by the treadle.

Inbrication of the main and crank pin bearings and guides is effected by a hand pump station equipped with measuring feeders.

The press is delivered complete with electric motor, starting equipment and wiring, lubricating equipment including grease pump station and piping, bolster plate, a set of wrenches and all the necessary technical instructions for installation and operation.

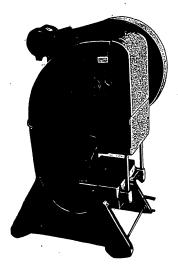
### SPECIFICATIONS

Rated capacity, t Stroke of slide, mm Number of strokes per minute Distance from bed to slide (stroke down, adjustment up), mm Slide adjustment up, mm Depth of throat, center of slide to frame, mm Bed dimensions, mm: F. to B. R. to L. Opening of bed, mm: F. to B.	63 100 80 400 80 310 570 860	Slide dimensions, mm: F. to B. R. to L. Recess in slide for punch shanks, mm: Diameter Depth Maximum angle of frame inclination Width between uprights, mm. Distance from bed to guides, mm. Electric motor power, kW Electric motor speed, r.p.m. Floor space, mm F. to B. R. to L.	1400
F. to B. R. to L. Diameter Thickness of bolster plate, mm	450 400 80	Maxima height above floor level, mm	2800

STANKOIMPORT

### INCLINABLE SINGLE CRANK SINGLE ACTION PRESS

MODEL K 237



The press is designed for blanking, shallow drawing, bending, flanging and other cold stamping operations.

The press can be equipped with an automatic feed.

Due to the inclinable frame, presses of this type find wide application in the most varied branches of industry.

The frame is a box-section streamlined grey iron casting. It is cast integral with the bed and reinforced by two tie-rods. The frame is inclined by rotation about the stude fastened at the right- and left-hand side. The frame can be rigidly locked in three positions; vertical, and inclined at angles of 15° and 30°. The bed is provided with an opening for ejecting blanks when the work is conducted by the "drop through" method. A bolster plate is mounted on the bed.

The drive is from an individual electric motor through a multiple V-belt

The drive is from an individual electric motor through a multiple V-belt arrangement.

The slide is reciprocated by a crankshaft revolving in bronze-lined bearings. The slide is equipped with a rigid stripper which ejects finished blanks or scrap from the upper die surface.

The slide is adjusted by hand with a wrench.

The clutch is of the rolling key type. The flywheel runs freely on its shaft but when the clutch is engaged the flywheel is connected with the crankshaft by two rolling keys. One key drives the crankshaft and the other serves to prevent the crankshaft from overrunning the flywheel when the slide is on the downward stroke.

The band brake is of a periodic-action type and is intended for counteracting inertia forces arising when the clutch is engaged and for stopping the crankshaft in the upper extreme position.

The press can operate on single as well as on continuous (automatic) strokes. When the press is operated on single strokes, the crankshaft stops in the upper extreme position regardless of whether the starting treadle has been released. The press is started by a two-hand electric push-button station or by the treadle.

Lubrication of the main and crank pin bearings and guides is effected by a hand pump station equipped with measuring feeders.

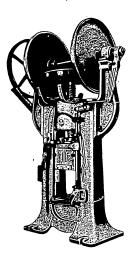
The press is delivered complete with electric motor, starting equipment and wiring, lubricating equipment including grease pump and piping, bolster plate, a set of wrenches and all the necessary technical instructions for installation and operation.

### SPECIFICATIONS

Rated capacity, t Stroke of slide, mm	130	Thickness of bolster plate, mm Recess in slide for punch shanks, mm:	
Number of strokes per minute Slide adjustment, mm	75	Diameter	6
Die space, distance from bed to slide	100	Depth	7
(stroke down, adjustment up), mm	480	Maximum angle of frame inclination	30
Throat depth center of slide to	400	Width between uprights, mm	530
frame, mm	380	Distance from bed to guides, mm	630
Bed dimensions, mm:		Electric motor power, kW	
F. to B	710	Pleateia	
R. to L	1080	Electric motor speed, r.p.m	750
Opening in bed, mm:		Floor space, mm:	
F. to B	380	F. to B	2180
R. to L	560	R. to L.	
Slide dimensions, mm:	300	Maximum height above floor level,	
F. to B	350	mm	3100
R. to L	410	Net weight, kg approx.	

### FRICTION SCREW PRESS

**МОДЕ**Ь **ФА** 122



This press is designed for a wide variety of pressing operations: drawing sheet metal parts, upsetting bolt, spike and rivet heads, as well as bending or straightening sheet metal products.

The press can also be used for producing parts of bakelite, shellac and other

The press can also be used for producing parts of baseling.

The comparatively large capacity of the press and hammer-like nature of its stroke permit using the press for hot forging in closed dies.

The press is widely used in metal-working and other branches of industry where stamping operations are required.

The working parts of the press — the flywheel, the screw and the ram are actuated by vertically mounted diess, which drive the flywheel. The left disc produces the downward motion of the flywheel while the right disc — the upward motion. As the flywheel changes its direction of rotation it screws the threaded spindle in or out reciprocating the ram and providing the working stroke

As the ram moves down, the flywheel also advances with the motion of the threaded spindle. As the flywheel moves away from the centre of the disc, its radius of contact with the disc increases and the flywheel speed conse-

STANKOIMPORT

quently increases. This correspondingly increases the speed of the threaded spindle and, consequently, the speed of the descending ram.

The accumulated energy of moving parts is transformed into work for deforming the blank and imparts a hammer-like action to the ram stroke.

The press is equipped with a hand-operated control mechanism through a system of distributing levers and tie-rods.

The system of control permits either single strokes or continuous operation. The frame is made of cast iron and is cast integral with the bed and crown. The ram is a grey iron casting and has four guiding surfaces, two of which are designed as removable taper gibs.

The threaded spindle is made of special heat-treated alloy steel. The spindle has a right-hand triple thread.

A stripper is provided in the center of the bed.

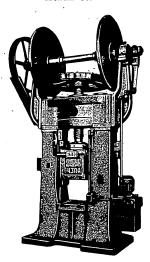
The press is delivered complete with the electrical equipment, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Rated capacity, t	63	Bed dimensions, mm:	
Kinetic energy at end of stroke, kgm	250	F. to B	45
Maximum stroke, mm	250	R. to L	40
Number of strokes per minute	22	Recess in bed, diameter, mm	9
Distance from bed to ram, mm:		Electric motor power, kW Electric motor speed, r.p.m.	4.
Maximum	460	Floor space, mm:	190
Alinimum	190	F. to B	140
Width clear between ram guides, mm	350	R. to L.	174
Width between uprights at bed		Maximum height above floor level,	
level, mm	420	mm	286
	420	Net weight, kg approx.	343

### FRICTION SCREW PRESS

MODEL ΦA 124



This press is designed for a wide variety of pressing operations: drawing sheet metal parts, upsetting bolt, spike and rivet heads, as well as bending or straightening sheet metal products.

The press can also be used for producing parts of bakelite, shellac and other plastics.

plastics.

The considerable capacity of the press and hammer-like nature of its stroke permit using the press for hot forging in closed dies.

The press is widely used in metal-working and other branches of industry where stamping operations are required.

The working parts of the press — the flywheel, the screw and the ram are actuated by vertically mounted disc, which drive the flywheel. The left disc produces the downward motion of the flywheel, while the right disc — the upward motion. As the flywheel changes its direction of rotation, it screws the threaded spindle in or out producing reciprocating motion of the ram and providing the working stroke.

As the ram moves down, the flywheel also advances with the motion of the threaded spindle. As the flywheel moves away from the center of the disc,

STANKOIMPORT

STANKOIMPORT

23

its radius of contact with the disc increases and the flywheel speed conse-

its radius of contact with the disc increases and the hywheel speed consequently increases.

This correspondingly increases the speed of the threaded spindle and, consequently, the speed of the descending ram.

The accumulated energy of moving parts is transformed into work for deforming the blank and imparts a hammer-like nature to the ram stroke.

The press control is effected by an auxiliary hydraulic device (servo-control) ensuring a constant pressure of the disc on the flywheel and requiring but slight effort to shift the control lever.

The control system of the friction screw press permits either single strokes

The control system of the friction screw press permits either single strokes or continuous operation.

or continuous operation.

The frame comprises two parts: the frame proper and the crown. These parts are held together by tie-rods shrunk in place. The frame is made of high-quality cast iron while the crown is of special steel.

The ram is made of high-quality cast iron; it has four guiding surfaces, two of which are designed as removable taper gibs.

The threaded spindle is made of special heat-treated alloy steel. The spindle has a right-hand triple thread.

For storping the moving parts in the upper position a brake is provided.

has a right-hand triple thread.

For stopping the moving parts in the upper position, a brake is provided. The brake is designed to completely absorb the energy of the upwardly moving parts. A special damper is provided to prevent the flywheel from striking the driving shaft if the brake fails to operate.

A stripper is provided in the center of the bed.

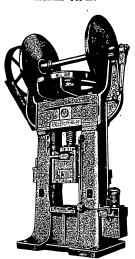
The press is delivered complete with the electrical equipment, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Rated capacity, t Kinetic energy at end of stroke, kgm Maximum stroke, mm Number of strokes per minute Distance from bed to ram, mm: Maximum Minimum Width clear between uprights, mm	1000 360 17 620 260	Ram dimensions, mm: F. to B. R. to L. Electric motor power, kW Electric motor speed, r.p.m. Overall dimensions, mm:	550 10 1000
Width clear between uprights, mm Width clear between ram guides, mm	520 460	Length	
Bed dimensions, mm:		Width	
F. to B	560	Height	
R. to L	510	Net weight, kg approx.	7000

### FRICTION SCREW PRESS

**МОДЕ**Ь ФА 127



This press is designed for a wide variety of pressing operations: drawing sheet metal parts, upsetting bolt, spike and rivet heads, as well as bending or straightening sheet metal products.

The press can also be used for producing parts of bakelite, shellac and other

plastics.

The considerable capacity of the press and hammer-like nature of its stroke permit using the press for hot forging in closed dies.

The press is widely used in metal-working and other branches of industry where stamping operations are required.

The working parts of the press — the flywheel, the screw and the ram are astated by vertically mounted diese, which drive the flywheel. The left disc produces downward motion of the flywheel while the right disc — upward motion. As the flywheel changes its direction of rotation, it screws the threaded spindle in or out producing regimeraciting notion of the ram and working the spindle in or out producing reciprocating motion of the ram and providing the

As the ram moves down, the flywheel also advances with the motion of the threaded spindle. As the flywheel moves away from the center of the disc,

STANKOIMPORT

its radius of contact with the disc increases and the flywheel speed consequently increases. This correspondingly increases the speed of the threaded spindle and, consequently, the speed of the descending ram.

The accumulated energy of moving parts is transformed into work for deforming the blank and imparts a hammer-like nature to the ram stroke.

The press control is effected by an auxiliary hydraulic device (servo-control) ensuring a constant pressure of the disc on the flywheel and requiring but slight effort to shift the control lever. The control system of the friction screw press permits either single strokes or continuous operation.

The frame comprises two parts: the frame proper and the crown. These parts are held together by tie-rods shrunk in place. The frame is made of high-quality cast iron while the crown is made of special steel.

The ram is made of high-quality cast iron; it has four guiding surfaces, two of which are designed as removable taper gibs.

The threaded spindle is made of special heat-treated alloy steel. The spindle has a right-hand triple thread.

For stopping the moving parts in the upper position, a brake is provided. The brake is designed to completely absorb the energy of the upwardly moving parts. A special damper is provided to prevent the flywheel from striking the driving shaft if the brake fails to operate.

A stripper is provided in the center of the bed.

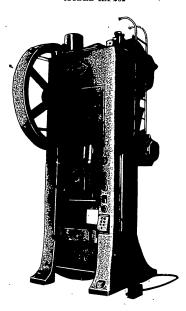
The press is delivered complete with the electrical equipment, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Rated capacity, t		Recess in bed, diameter, mm Ram dimensions, mm:	130
stroke, kgm	420	F. to B	520
Number of strokes per minute	15	R. to L	520
Distance from bed to ram, mm:		Electric motor power, kW	20
Maximum	720	Electric motor speed, r.p.m	1000
Minimum	300	Overall dimensions, mm:	
mm	560	Length	2525
Width clear between uprights, mm	600	Width	1410
Bed dimensions, mm: F. to B	650	Height	4285
R. to L		Net weight, kg approx. 1	

### STRAIGHT-SIDE SINGLE CRANK PRESS

MODEL KA 262



The press is designed for blanking and shallow forming, but can also be used for other kinds of cold forming operations.

The frame is composed of a bed, two uprights and a crown securely keyed and held together by tie-rods which are shrunk in place. The frame is made of high-quality cast iron. All presses are rigidly built, materials used in their construction being specially chosen for their suitability to withstand the stresses imposed upon them. To take up shearing stresses at the joints, the keys are provided.

The press is driven by an individual motor. The motion is transmitted from the motor to the slide through V-belts, train of gears and crankshaft.

STANKOIMPORT

The slide is of a box-section type; it is made of high-quality cast iron and has four guides.

The slide is equipped with an ejector.

Slide adjustment is effected by means of an electric motor and terminal

switches.

The pneumatic clutch of a multiple-disc friction type is coupled with a multiple-disc brake. The brake ensures stopping of the slide at any desired point of the stroke. For stopping the flywheel, when the motor is switched off a supplementary pneumatic shoe-brake, controlled by a special valve is provided. The friction clutch is operated through an electro-magnetic device.

The press is equipped with an automatic push-button station permitting to obtain single strokes or continuous run as well as inching motions necessary for satting up and adjusting disc

obtain single strokes or continuous run as well as inching motions necessary for setting up and adjusting dies.

The lubricating system of the press is of a combined type. Central lubrication of the gibs, crankshaft and connecting rod bearings and clutch is effected by a grease pump through measuring feeders whereas the remaining friction surfaces are lubricated by hand. A pressure gauge is provided for controlling oil pressure in the lubrication system.

The air conduit mounted on the press ensures compressed air supply from the shop mains through the filter and oil atomizer to the friction clutch, the brake and the slide-balancing cylinders. A constant pressure of air from 4.5 to 5.0 atmospheres is maintained in the clutch and brake circuit by means of a reducing valve.

to 5.0 atmospheres is maintained in the cluten and drake circuit by means of a reducing valve.

Standard equipment: Complete set of electrical equipment suitable for A.C. supply (working current at request), grease pump, air conduits mounted on the press, bolster plate, set of wrenches and service manual containing all necessary instructions for erection and maintenance.

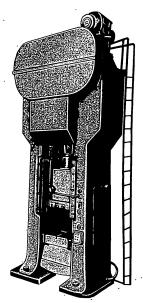
A pneumatic die cushion for the bed can be furnished at extra cost.

### SPECIFICATIONS

, St Editi	CATIONS
Pressure of slide near bottom of stroke, t.   160	Recess in slide for punch stem, mm 75×85 Distance between guides, mm. 590 Distance from bed to guides, mm. 400 Distance from bed to guides, mm. 105 Electric motor power, klW 114 Electric motor power, klW 100 Auxiliary motor power, klW 100 Auxiliary motor power, klW 100 Floor spaced, r.p.m. 1000 Floor spaced, mm: 1000
R. to L 730	F. to. B
Opening in bed, mm 430×430 Dimension of slide, F. to B., mm 560	Maximum height above floor, mm. 3520 Net weight, kg

### STRAIGHT-SIDE SINGLE CRANK ENCLOSED PRESS

MODEL K 273 B



The press is designed for blanking, shallow forming and other kinds of cold

The press is designed for blanking, shallow forming and other kinds of cold forming work.

The frame is composed of a bed, two uprights and a crown securely keyed and held together by tie-rods, which are shrunk in place. The frame is made of high-quality cast iron. All presses are rigidly built, materials used in their construction being specially chosen for their suitability to withstand the stresses imposed upon them. To take up shearing stresses at the joints the keys are provided.

The press is driven by an individual motor. The motion is transmitted from the motor to the slide through V-belts, train of gears and crankshaft.

STANKOIMPORT

The slide is of a box-section type; it is made of high-quality cast iron and has four guides. The balancing of the slide is accomplished by means of pneumatic eyilnders having a constant air pressure.

The slide is equipped with an ejector.

Slide adjustment is effected by an electric motor and terminal switches.

The pneumatic eluteh of a multiple-disc friction type is coupled with a multiple-disc brake. The brake ensures stopping of the slide at any desired point of the stroke. For stopping the flywheel, when the motor is switched off a supplementary pneumatic shoe-brake, controlled by a special valve is provided. The friction clutch is operated through an electro-magnetic device. The press is equipped with an automatic push-button station, permitting to obtain single strokes or continuous run as well as inching motions necessary for setting up and adjusting dies.

The lubricating system of the press is of a combined type. Central lubrication of the crankshaft, intermediate shafts, gibs and connecting rod bearings is effected by a grease pump. The high speed pair of gears is lubricated by splashing in an oil sump.

Simplicity and reliability of the lubricating system ensure long service of the friction surfaces and protect them from dust and dirt.

The air conduit mounted on the press ensures compressed air supply from the shop mains through the filter and oil atomizer to the friction clutch and the slide-balancing cylinders. A constant pressure of air from 4.6 to 5.0 atmospheres is maintained in the clutch and brake circuit by means of a reducing valve.

valve.

Standard equipment: Complete set of electrical equipment suitable for A.C. supply (working current at request), grease pump, air conduits mounted on the press, bolster plate, set of wrenches and service manual containing all necessary instructions for crection and maintenance.

A pneumatic die cushion for the bed can be furnished at extra cost.

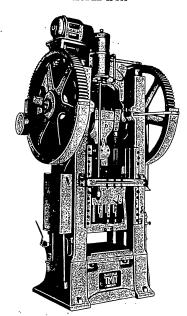
### SPECIFICATIONS

Pressure of slide near bottom of stroke, t   250	Dimension of slide, F. to B., mm.   670
Opening in bed, mm	Maximum height above floor, mm. 5320 Net weight, kg

STANKOIMPORT

### STRAIGHT-SIDE SINGLE CRANK PRESS

MODEL K 265



The press is recommended for various drawing and bending operations. The frame is composed of a bed, two uprights and a crown securely keyed and held together by tie-rods, which are shrunk in place. The frame is made of high-quality cast iron. All presses are rigidly built, materials used in their construction being specially chosen for their suitability to withstand the stresses imposed upon them. To take up shearing stresses at the joints the leave are provided

keys are provided.

The press is driven by an individual motor. The motion is transmitted from the motor to the slide through V-belts, train of gears and crankshaft.

The slide is of a box-section type; it is made of high-quality east iron and has four guides. The slide moves over long guides. The two rear guides are

non-adjustable, while two front ones are adjustable. A recess and a set of clamps are provided at the lower face of the slide for holding die-shanks and a series of holes for die-fastening bolts and stripper pins. Removable strips are provided for ejecting finished pieces from the upper die. The balancing of the slide is accomplished by means of pneumatic cylinders.

Slide adjustment is accomplished by an individual motor through a screw drive. The length of adjustment is controlled by terminal switches:

The pneumatic clutch of a multiple-disc friction type is coupled with a multiple-disc brake. The brake ensures stopping of the slide at any desired point of the stroke. For stopping the flywheel, when the motor is switched off an additional pneumatic shoe-brake, controlled by a special valve, is provided. The engagement of clutch is accomplished by an electro-magnetic device.

The press is equipped with an automatic push-button station. The system of control permits either single strokes or continuous run, as well as inching motions necessary for setting up and adjusting dies.

The lubricating system of the press is of a combined type. Central lubrication of the principal points: the gibs, crankshaft, intermediate shaft and connecting rod bearings is effected by a grease pump. The other less important parts are lubricated by hand through oil cups or by grease guns. The central lubricating system is activated by a hand grease pump, operating on a double conduit system through measuring feeders. Simplicity and reliability of the lubricating system is ensure long service of the friction parts and protect them from dust and dirt.

and dirt.

The air conduit mounted on the press ensures compressed air supply from the shop mains through the filter and oil atomizer to the friction clutch, the brake and the slide-balancing cylinders. A constant air pressure of 3.46 kg/sq. cm is maintained in the clutch and brake circuit by a reducing valve.

A hydro-pneumatic cushion for clamping the blanks and for knock out the finished pieces is delivered with the press.

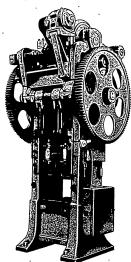
Standard equipment: Complete set of electrical equipment suitable for A. C. supply (working current at request), lubricating system, air conduit mounted on the press, bolster plate, hydro-pneumatic cushion, set of wrenches, service manual containing all necessary instructions for erection and maintenance.

### SPECIFICATIONS

STANKOIMPORT

### STRAIGHT-SIDE SINGLE CRANK DOUBLE ACTION DRAWING PRESS

MODEL K 460



This press is designed for producing sheet metal parts requiring comparatively deep drawing. Simultaneously with drawing, the press can also perform

vely deep drawing. Simultaneously with drawing, the press can also perform blanking operations.

A special feature of design of double action presses is that they are equipped with two slides, one of which moves inside the other. The outer blank-holding slide holds down the blank while the inner slide performs the drawing operation.

The frame comprises a bed, two uprights and a crown, drawn together by four tie-rods shrunk in place. The frame is made of high-quality cast-iron. Frame construction ensures sufficient rigidity and absence of deflections at maximum load. Dowel pins and keys are provided to take up shearing stresses at the joints and prevent displacement.

The tie-rods draw the frame together into a solid structure and take up the major part of the load.

the major part of the load.

The derive is from an individual electric motor. Power is transmitted from the motor in three stages: first stage to the flywheel shaft through a multiple

V-belt drive and the other two stages through a gear train. The drive and the

The drive and the other two stages through a gear train. The drive and the crankshaft actuate the slide.

The drive mechanism is mounted on the crown and is enclosed in a casing. The inner slide is of box-section and is made of high-quality cast iron. The connecting rod is linked to the upper part of the slide by a spherical joint permitting slide adjustment.

Adjustment of the inner slide is accomplished by hand with the aid of a

ratchet mechanism.

The outer slide is actuated by levers linked with two lateral slides. The lateral slides are reciprocated by cams mounted on the crankshaft gears. The outer slide is regulated in height with the aid of adjusting nuts.

The clutch is of a pneumatically operated friction type and is combined with a periodically acting band brake. The clutch is engaged by means of an electro-magnetic device.

Press control is automatic and is effected either by a push-button station or a treadle.

Press control is automatic and is effected either by a push-duction security or a treadle.

The control system permits single stroke operation from a two-hand safety push-button device protecting the operator's hands, single stroke operation from the treadle, continuous (automatic) operation and inching operation applied in setting-up or adjusting dies.

Lubrication is of a combined type. The principal friction surfaces are lubricated from a centralized system through automatic measuring feeders by a special grease pump station; the other points are lubricated by hand with an oil gun through ball-type oil cups. Simplicity and reliability of the lubricating system ensure long service of friction surfaces and protect them from dust and dirt.

system ensure long service of friction surfaces and protect them from dust and dirt.

The lower stripper is mounted in the bed of the press.

The air piping mounted on the press, ensures air supply from the shop mains through the filter and oil atomizer to the pneumatic clutch.

The press is delivered complete with electric motor, starting equipment and wiring, lubricating system with pumps, measuring feeders and pressure gauge for controlling perssure in the lubricating system, air piping, mounted on the press, including reducing valve, pressure gauge and receiver tank, bolster plate, stripper, a set of wrenches and all the necessary technical instructions for erection and maintenance.

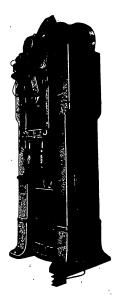
### SPECIFICATIONS

Inner slide capacity at end of stroke, t Outer slide capacity at end of stroke, t Inner slide stroke, mm	63 50 400	Inner slide diameter, mm Outer slide dimensions, mm:	
Number of strokes per minute	240 15	F. to B	510 510
slide, mm	100 550 500 650	F. to B. R. to L. Thickness Electric motor power, kW Electric motor speed, r.p.m.	640 640 90 7 1500
Distance clear between guides, mm. Maximum distance from bed to guides, mm Ged dimensions, mm: F. to B. R. to L.	530 410 640 642	Floor space, mm: F. to B. R. to L. Maximum height above floor level, mm. Net weight, kg. Approx. 1	1670 1710 3750

STANKOIMPORT

### STRAIGHT-SIDE SINGLE CRANK DOUBLE ACTION DRAWING PRESS

MODEL K 471



This press is designed for producing sheet metal parts requiring comparatively deep drawing. Simultaneously with drawing, the press can also perform

vely deep drawing. Simultaneously with drawing, the press can also perform blanking operations.

A special feature of design of double action presses is that they are equipped with two slides, one of which moves inside the other. The outer blank-holding slide holds down the blank while the inner slide performs the drawing operation.

The frame comprises a bed, two uprights and a crown, drawn together by four tie-rods shrunk in place. The frame is made of high-quality cast iron. Frame construction ensures sufficient rigidity and absence of deflections at maximum load. Dowel pins and keys are provided to take up shearing stresses at the joints and prevent displacement.

The tie-rods draw the frame together into a solid structure and take up

The tie-rods draw the frame together into a solid structure and take up the major part of the load.

The drive is from an individual electric motor. Power from the motor is transmitted in three stages: first stage to the flywheel shaft through a multiple. V-belt drive, and the other two stages through a gear train.

The drive and the crankshaft actuate the slide.

The drive mechanism is mounted on the crown and is enclosed in a casing. The inner slide is of box-section type and is made of high-quality cast iron. Adjustment of the inner slide is accomplished by hand with the aid of a ratchet mechanism.

Adjustment of the inner slide is accomplished by hand with the aid of a ratchet mechanism.

The outer slide is regulated in height with the aid of adjusting nuts.

The clutch is of a multiple-disc friction type. It is pneumatically operated and is combined with a multiple-disc pneumatic brake.

The brake stops the slide at any point of the stroke. For stopping the flywheel when the motor is switched off, an auxiliary valve-actuated pneumatic shoe-brake is provided.

The brake stops the silde at any point of the stroke. For stopping the flywheel when the motor is switched off, an auxiliary valve-actuated pneumatic shoe-brake is provided.

The clutch is engaged by means of an electro-magnetic device. Press centrol is automatic and is effected either by a push-button station or a treadle. The control system permits single stroke operation from a two-hand safety push-button device protecting the operator's hands, single stroke operation from the treadle, continuous (automatic) operation and inching operation applied in setting up or adjusting dies.

Lubrication is of a combined type. The principal friction surfaces are lubricated from a centralized system through automatic measuring feeders by a special grease pump station. The other points are lubricated by hand with an oil-gun through ball-type oil cups.

The lower-stripper is mounted in the bed of the press.

The air piping, mounted on the press, ensures air supply from the shop mains through the filter and oil atomizer to the pneumatic olutch and brakes.

The press is delivered complete with electric motor, starting equipment and wiring, lubricating system with pumps, measuring feeders and pressure gauge for controlling pressure in the lubricating system, air piping mounted on the press including reducing valve, pressure gauge and receiver tank, bolster plate, mechanical stripper in the bed, a set of wrenches and all the necessary technical instructions for erection and maintenance.

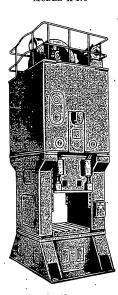
### SPECIFICATIONS

Inner slide capacity t   100	Recess in inner slide for die shanks, mm: Diameter
Recess in bed, mm   420×420	Floor space, mm: F. to B

STANKOIMPORT

### STRAIGHT-SIDE SINGLE CRANK DOUBLE ACTION DRAWING PRESS

MODEL K 475



This press is designed for producing sheet metal parts requiring comparatively deep drawing. Simultaneously with drawing, the press can also perform blanking operation.

A special feature of design of double action presses is that they are equipped with two slides, one of which moves inside the other. The outer blank-holding slide holds down the blank while the inner slide performs the drawing operation.

The frame comprises a bed, two uprights and a crown, drawn together by four tie-rods shrunk in place. The frame is made of high-quality cast iron. Frame construction ensures sufficient rigidity and absence of bed deflections at maximum load. Dowel pins and keys are provided to take up shearing stresses at the joints and prevent displacement.

STANKOIMPORT

The tie-rods draw the frame together into a solid structure and take up

The tie-rods draw the frame together into a solid structure and take up the major part of the load.

The drive is from an individual electric motor. The drive is of the enclosed type with shafts positioned perpendicularly to the front of the press. Power is transmitted to the crankshaft in four stages by multiple V-belt drive and a gear train. Part of the gearing is mounted in an oil bath.

The inner slide is a box-section steel casting. The connecting rod is linked to the upper part of the slide by a spherical joint permitting slide adjustment. Slide adjustment is effected by an individual flange-type motor through a worm reducing gear unit. The motor and the entire adjusting mechanism are mounted inside the inner slide. The die space, at any moment during adjustment, can be read off on the scale of the press control panel indicating the connecting rod position.

the connecting rod position.

The inner and outer slide can be interlocked in any position with respect to one another by the electric control system.

The outer slide is reciprocated by a toggle lever mechanism actuated by

The outer slide is reciprocated by a toggle lever mechanism actuated by the crankshaft.

The clutch is of a friction type. It is pneumatically operated and is combined with a multiple-disc brake. The brake stops the slides at any point of their stroke. For stopping the flywheel when the electric motor is switched off, an auxiliary valve-actuated pneumatic shoe-brake is provided. The valve is located on the press control panel. The clutch is engaged by means of an electromagnetic device.

magnetic device.

Press control is automatic and is provided with a safety device, safeguarding the operator's hands. The control system permits single stroke operation, continuous (automatic) operation and inching operation applied in setting up or

tinuous (automatic) operation and inching operation applied in setting up or adjusting dies.

The bed is equipped with hydro-pneumatic die-cushions having a pneumatic hold-down device. The cushion movements are synchronized with the motion of slides. The control system provides for automatic interruption of die-cushion movement on the return stroke of the outer slide.

Lubrication is of a combined type. The principal friction surfaces are lubricated from a centralized system through automatic measuring feeders by a special grease-pump station. The other points are lubricated by hand.

The air piping, mounted on the press, ensures air supply from the shop mains through the filter and oil atomizer to the friction clutch, pneumatic brake and die-cushions.

The press is delivered complete with electric motor, starting equipment and wiring, lubricating system with grease-pump station, measuring feeders

The press is delivered complete with electric motor, starting equipment and wiring, lubricating system with grease-pump station, measuring feeders and pressure gauge for controlling pressure in lubricating system, air piping mounted on the press including reducing valve, pressure gauge and receiver tanks, bolster plate, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Inner slide capacity, t. Outer slide capacity, t. Inner slide stroke, mm Outer slide stroke, mm Number of strokes per minute. Slide adjustment, mm Maximum distance from bed to inner	200 670 425 7 195	Maximum distance from bed to outer slide in its lowest position, mm Distance clear between guides, mm Distance from bed to guides, mm Bed dimensions, mm:	825 1380 720
Maximum distance from bed to inner slide in its lowest position, mm		F. to B. R. to L. Recess in bed, mm	1530

STANKOIMPORT

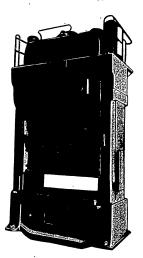
Recess in inner slide for die shanks,		Die-cushion capacity, t:	
mm:	=0	Holding down	80
Diameter	70	Pushing out	12.5
Depth	111	Die-cushion stroke, mm	300
Bolster plate dimensions, mm:		Main electric motor power, kW	55
F. to B	1350	Main electric motor speed, r.p.m	1500
R. to L		Auxiliary electric motor power	
Thickness	160	(adjusting mechanism of the inner	
Inner slide dimensions, mm:		slide), kŴ	1.7
F. to B	900	Auxiliary electric motor speed, r.p.m.	1500
R. to L		Floor space, mm:	
	1000	F. to B	3100
Outer slide dimensions, mm:		R. to L	2500
F. to B	1250	Maximum height above floor level, mm	6675
R. to L	1950	Net weight, kg approx.	
20. 00 23	1200	Tree weight, ag approx.	00000

STANKOIMPORT

39

### TWO POINT SINGLE ACTION ENCLOSED PRESS

MODEL K 372 A



The press is most suitable for various cold forming operations such as: blanking, pieroing, punching, bending and shallow forming of large size sheet of metal.

The frame is composed of a bed, two uprights and a crown securely drawn together by tie-rods, which are shrunk in place. The frame is made of high-quality cast iron. All presses are rigidly built, materials used in their construction being specially chosen for their suitability to withstand the stresses imposed upon them. To take up shearing stresses at the joints, the keys are provided. The press is driven by an individual motor. The motion is transmitted from the motor to the slide through V-belts, train of gears and crankshafts. Such a design of the drive ensures a uniform distribution of the pressure and permits manufacturing of comparatively long parts. The crankshaft gears are made of steel forgings and are properly heat-treated.

STANKOIMPORT

The slide is of a box-section type; it is made of high-quality cast iron and has four guides. The balancing of the slide is accomplished by means of pneumatic cylinders having a constant air pressure of  $3.6~{\rm kg/sq.~cm.}$  Slide adjustment is accomplished by means of an electric motor and terminal switches

terminal switches

terminal switches.

The pneumatic clutch of a multiple-disc friction type is interlocked with a multiple-disc brake. The brake ensures stopping of the slide at any desired point of the stroke.

The engagement of the clutch is accomplished by an electro-magnetic

device.

The press is equipped with an automatic push-button station permitting to obtain single strokes or continuous run as well as inching motions.

The lubricating system of the press is of a combined type, Control lubrication of the crankshalts, intermediate shafts, big and small connecting rod ends and gibs is effected by a grease pump. All the gears are lubricated by splashing in an oil sump. Simplicity and reliability of lubricating system ensure long service of the friction parts and protect them from dust and dirt.

The air conduit mounted on the press ensures compressed air supply from the shop mains through the filter and oil atomizer to the friction clutch and the slide-balancing cylinders. A constant air pressure of 3 kg/sq. cm in the clutch and brake circuit, and from 5 to 6 kg/sq. cm in the slide-balancing cylinders circuit is maintained by a reducing valve.

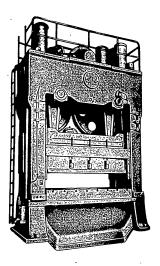
Standard equipment: Complete set of electrical equipment suitable for A. C. supply (working current at request), set of wrenches and service manual containing all necessary instructions for erection and maintenance.

### SPECIFICATIONS

Pressure of slide near bottom of stroke, t	Thickness of bolster plate, mm 12 Opening in bed (two openings), mm:
Stroke of slide, mm	F. to B 80
Number of strokes per minute 20	R. to L 80
Die space, distance from top of bed to bottom of slide (stroke down, adjustment up), mm 800 Adjustment of slide, mm 300	Slide dimensions, mm:   F. to B
Distance between uprights, mm 2000	Stroke of slide ejector, mm 8
Distance between guides, mm 1850	Electric motor power, kW 1
Area of top of bed, mm:	Electric motor speed, r.p.m 100
F. to B 1250	Floor space, mm 2965 × 190
R. to L 2000	Maximum height above floor, mm 486
Bolster plate size, mm 1970 × 1240	Net weight, kg approx. 2734

### TWO POINT SINGLE ACTION ENCLOSED PRESS

MODEL K 374 B



The press is most suitable for various cold forming operations such as: blanking, piercing, punching, bending and drawing of large size sheet of metal. The frame is composed of a bed, two uprights and a crown securely drawn together by tie-rods, which are shrunk in place. The frame is made of high-quality cast iron. All presses are rigidly built, materials used in their construction being specially chosen for their suitability to withstand the stresses imposed upon them.

upon them.

The press is driven by an individual motor. The motion is transmitted from the motor to the slide through V-belts, train of gears and crankshafts. Such a design of the drive ensures a uniform distribution of pressure and permits manufacturing of comparatively long parts. The crankshaft gears are made of high-quality east iron. The flywheel and intermediate shaft gears are made of steel forgings and are properly heat-treated. To ensure accurate meshing all the gears are cut by generating method.

STANKOIMPORT

The slide is of a box-section type; it is made of high-quality cast iron and has four guides. The balancing of the slide is accomplished by means of pneumatic cylinders having a constant air pressure of  $4.5 \, \text{kg/sq.}$  cm. Slide adjustment is accomplished by means of an electric motor and terminal

The pneumatic clutch of a multiple-disc friction type, is interlocked with a multiple-disc brake. The brake ensures stopping of the slide at any desired point of the stock. The engagement of the clutch is accomplished by an electro-

point of the stroke. The engagement of the clutch is accomplished by an electromagnetic device.

The press is equipped with an automatic push-button station consisting of three panels. The system of control permits either single strokes or continuous run, as well as inching motions necessary for setting up and adjusting dies. The lubricating system of the press is of a combined type. Control lubrication of the crankshafts, intermediate shafts, big and small connecting rod ends and guides is accomplished by a grease pump. All the gears are lubricated by splashing in an oil sump. Simplicity and reliability of lubricating system ensure long service of the friction parts and protect them from dust and dirt. The press is equipped with two cushions, serving for clamping the blank, and for knocking out the finished articles from the die.

The air conduit mounted on the press ensures compressed air supply from the shop mains through the filter and oil atomizer to the friction clutch, the brake, the slide-balancing cylinders and the air-cushions. A constant air pressure of 3.6 kg/sq. cm in the clutch and brake circuit, and 6 kg/sq. cm in the slide-balancing cylinders and air-cushion circuit is maintained by a reducing valve.

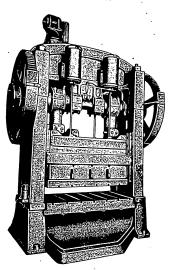
Standard equipment: Complete set of electrical equipment suitable for A.C. supply (working current at request), set of wrenches and service manual containing all necessary instructions for erection and maintenance.

### SPECIFICATIONS

Pressure Tof slide near bottom of stroke, t	Opening in bed, mm: 0 F. to B
Stroke of slide, mm 40	
Number of strokes per minute 1	
Die space, distance from top of bed to	F. to B 1000
bottom of slide (stroke down, ad-	R. to L
justment up), mm 75	
Adjustment of slide, mm 22	0 in the air circuit, t
Distance between uprights, mm 250	0 Electric motor power, kW 28
Area of top of bed, mm:	Electric motor speed, r.p.m 1500
F. to B	0 Floor space, mm 1800 × 3600
R. to L 250	
Thickness of bolster plate, mm 15	0 Net weight, kg approx. 43900

### STRAIGHT-SIDE DOUBLE CRANK SINGLE ACTION PRESS

MODEL K 366



The press is designed for various cold stamping operations in making large-sized sheet metal parts, such as: blanking, piercing, punching, bending and

drawing.

The frame comprises the bed, two uprights and crown, drawn together by tie-rods shrunk in place. The frame is made of high-quality cast iron. Frame design ensures ample rigidity and absence of frame deflection at maximum

load,

The drive is from an individual electric motor. Power is transmitted from
the motor to the crankshaft in three stages: the first stage is to the flywheel
shaft through a multiple V-belt drive and the other two stages are through
gear train. The drive and the crankshaft actuate the slide.

The slide is of a box-section type. It is made of high-quality east iron and

STANKOIMPORT

has four guiding surfaces. The slide is counterbalanced by pneumatic cylinders and is equipped with a mechanical stripper.

Slide adjustment is effected by an electric motor and limit switches.

The clutch is pneumatically operated. It is of a multiple-disc friction type and is coupled to a multiple-disc brake. The brake stops the slide at any point of the stroke. The clutch is engaged by an electro-magnetic device.

Press control is effected automatically from a push-button station or from a treadle. The control system permits single stroke operation by push-buttons with interlocking arrangements for safeguarding the operator's hands, single strokes by treadle, continuous (automatic) operation and inching operation applied in setting up or adjusting dies. Single stroke operation by push-buttons can be effected from three control panels.

The lubrication system is of a combined type. The principal friction surfaces: crankshaft and intermediate shaft bearings, connecting rod big ends, guides and counterbalancing cylinder piston rods grease-lubricated from a centralized system by a pump station through measuring feeders. Plungers and dic-cushion cylinders are lubricated by an oil pump. Simplicity and reliability of the lubricating system ensure long service of friction surfaces and protect them from dust and dirt.

The pneumatic die-cushions, two in number, provided by the press design, are intended for holding down blanks and for ejecting finished pieces from the lower die.

are intended for holding down blanks and for ejecting finished pieces from the lower die.

The air equipment, mounted on the press, provides air supply from the stop mains through the filtre and oil atomizer to the clutch, brake, slide counterbalancing cylinders and die-cushions.

An auxiliary shee-brake, pneumatically operated by a special valve, is provided for stopping the flywheel when the electric motor is switched off. The press is delivered complete with electric motor, starting equipment and wiring, lubricating equipment with measuring feeders and a pressure gauge for controlling pressure in the lubrication system, air equipment mounted on the press including reducing valve, pressure gauge and receiver tanks, bolster plate, mechanical stripper in the slide, a set of wrenches and all the necessary technical instructions for installation and operation.

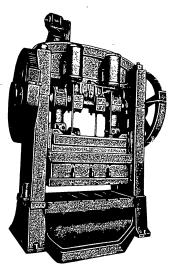
Die-cushions are furnished to special order.

### SPECIFICATIONS

Rated capacity, t	400	Slide dimensions, mm:
Stroke of slide, mm	65	F. to B 1050
Number of strokes per minute	15	R. to L 2460
Slide adjustment, mm Die space, distance from bed to slide	150	Electric motor power, kW 20
(stroke down, adjustment up), mm	640	Electric motor speed, r.p.m 1500
Width between uprights, mm	2500	Floor space, mm:
Bed dimensions, mm:		F. to B
F. to B	1400	F. to B
R. to L		Maximum height above floor level,
Thickness of bolster plate, mm	"160	mm 5870
Openings in bed (two openings), mm:		Total force exerted by die-cushions
F. to B	800	at 6 kg/sq. cm, t
R. to L	1040	Net weight, kg approx. 65250
		Net weight, kg approx. 65250

### STRAIGHT-SIDE DOUBLE CRANK SINGLE ACTION PRESS

MODEL K 365



The press is designed for various cold stamping operations in making large-sized sheet metal parts, such as: blanking, piercing, punching, bending and

sized sheet metal parts, such as: blanking, piercing, punching, bending and drawing.

The frame comprises the bed, two uprights and crown, drawn together by tie-rods shrunk in place. The frame is made of high-quality cast iron. Frame design ensures ample rigidity and absence of frame deflection at maximum load.

load.

The drive is from an individual electric motor. Power is transmitted from the electric motor to the crankshaft in three stages: the first stage is to the flywheel shaft through a multiple V-belt drive, and the other two stages are through a gear train. The drive and the crankshaft actuate the slide.

The slide is of a box-section type. It is made of high-quality east iron and

has four guiding surfaces. The slide is counterbalanced by pneumatic cylinders and is equipped with a mechanical stripper.

Slide adjustment is effected by an electric motor and limit switches. The clutch is pneumatically operated. It is of a multiple-disc friction type and is coupled to a multiple-disc brake. The brake stops the slide at any point of the stroke. The clutch is engaged by an electro-magnetic device.

Press control is effected automatically from a push-button station or from a treadle. The control system permits single stroke operation by push-buttons, with interlocking arrangements for safeguarding the operator's hands, single strokes by treadle, continuous (automatic) operation and inching operation applied in setting up or adjusting dies. Single stroke operation can be effected from three control panels.

The lubricating system is of a combined type. The principal friction surfaces: crankshaft and intermediate shaft bearings, connecting rod big ends, guides and counterbalancing cylinders are grease-lubricated from a centralized system by a pump station-through measuring feeders. Plungers and die-cushion cylinders are lubricated by an oil pump. Simplicity and reliability of the lubricating system ensure long service of friction surfaces and protect them from dust and dirt.

The pneumatic die-cushions, two in number, provided by the press design, are intended for holding down blanks and ejecting finished pieces from the lower die.

The air equipment, mounted on the press provides air supply from the

are intended for holding down blanks and ejecting finished pieces from the lower die.

The air equipment, mounted on the press, provides air supply from the shop mains through the filtre and oil atomizer to the friction clutch, brake, counterbalancing cylinders and die-cushions.

The auxiliary shoe-brake, pneumatically operated by a special valve is provided for stopping the flywheel after the electric motor is switched off. The press is delivered complete with electric motor, starting equipment and wiring, lubricating equipment with measuring feeders, piping and pressure gauge for controlling pressure in the lubricating system, air equipment mounted on the press including reducing valve, pressure gauge and receiver tanks, bolster plate, mechanical stripper in the slide and all the necessary technical instructions for installation and operation.

Die-cushions are furnished to special order.

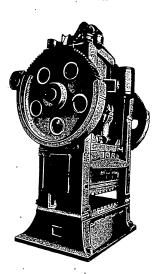
### SPECIFICATIONS

Rated capacity, t Stroke of slide, mm Number of strokes per minute Slide adjustment, mm Maximum die space, distance from bed to slide (stroke down, adjust- ment up), mm Width between uprights, mm Bed dimensions, mm F to B. R. to L. Thickness of bolster plate, mm. Openings in bed (two openings), mm.	300 12 200 850 2500 1400 2500 150	Slide dimensions, mm:	460 82 28 000 290
Openings in bed 'two openings', mm	150	Maximum height above floor level,	-
F. to B	800	mm	
R. to L	1040	Net weight, kg approx. 689	950

STANKOIMPORT

### STRAIGHT-SIDE DOUBLE CRANK SINGLE ACTION PRESS

MODEL K 367



The press is designed for various cold stamping operations in making large-sized sheet metal parts, such as: blanking, piercing, punching, bending and

sized sheet metal parts, such as: blanking, pieroing, punching, bending and drawing.

The frame comprises the bed, two uprights and crown, drawn together by tie-rods shrunk in place. The frame is made of high-quality cast iron. Frame design ensures ample rigidity and absence of frame deflection at maximum load.

load.

The drive is from an individual electric motor. Power is transmitted from the motor the crankshaft in three stages: the first stage is to the flywheel shaft through a multiple V-belt drive, and the other two stages are through a gear train. The drive and the crankshaft actuate the slide.

The slide is of a box-section type. It is made of high-quality east iron and

STANKOIM P<sup>°</sup>ORT

has four guiding surfaces. The slide is counterbalanced by pneumatic cylinders and is equipped with a mechanical stripper.

Slide adjustment is effected by an electric motor and limit switches. The clutch is pneumatically operated. It is of a multiple-disc friction type and is coupled to a multiple-disc brake. The brake stops the slide at any point of the stroke. The clutch is engaged by an electro-magnetic device. Press control is effected automatically from a push-button station or from a treadle. The control system permits single stroke operation by push-buttons with interlocking arrangements for safeguarding the operator's hands, single strokes by treadle, continuous (automatic) operation and inching operation applied in setting up or adjusting dies. Single-stroke operation can be effected from three control panels.

The lubricating system is of a combined type. The principal friction surfaces: crankshaft and intermediate shaft bearings, connecting rod big ends, guides and counterbalancing cylinders are grease-lubricated from a centralized system by a pump station through measuring feeders. Plungers and die-cushion cylinders are lubricated by an oil pump. Simplicity and reliability of the lubricating system ensure long service of friction surfaces and protect them from dust and dirt.

The pneumatic die-cushions, two in number, provided by the press design,

The pneumatic die-cushions, two in number, provided by the press design, are intended for holding down blanks and for ejecting finished pieces from the lower die.

the lower die.

The air equipment, mounted on the press, provides air supply from the shop mains through the filtre and oil-atomizer to the friction olutch, brakes, counterbalancing cylinders, and die-cushions.

An auxiliary shoe-brake, pneumatically operated by a special valve, is provided for stopping the flywheel after the motor is switched off.

The press is delivered complete with electric motor, starting equipment and wiring; lubricating equipment with pumps, measuring feeders, pressure gauge for controlling pressure in the lubricating system, air equipment mounted on the press, including reducing valve, pressure gauge and receiver tanks; bolster plate, mechanical stripper in the slide, a set of wrenches and all the necessary technical instructions for installation and operation.

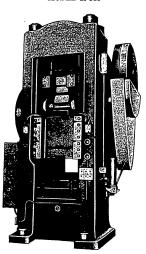
Die-cushions are furnished to special order.

### SPECIFICATIONS

,	AURITORIS
Rated capacity, t         800           Stroke of slide, mm         80           Number of strokes per minute         12           Slide adjustment, mm         200           Die space, distance from bed to slide (stroke down, adjustment up), mm         80           Width between uprights, mm         2500           Bed dimensions, mm:         1500           F. to B.         1500           Thickness of bolster plate, mm         100           Openings in bed (two openings), mm:         1050           F. to B.         1050	Slide dimensions, mm:   1200   F. to B.   1200   R. to L.   2240   Electric motor power, kW   40   Electric motor speed, r.p.m.   1000   F. to B.   3600   R. to L.   4380   Maximum height above floor level, mm.   7650   Total force exerted by die-cushions at
	6 kg/sq. cm, t
R. to L 1000	Net weight, kg approx 107000

### KNUCKLE JOINT COINING PRESS

MODEL K 845



Knuckle joint presses represent the universal type of coining and embossing presses and are widely used for the cold stamping operations requiring a short stroke (sizing, coining, embossing, straightening after stamping, etc.).

Attainable accuracy in thickness of the finished articles is up to 0.05 mm depending on the allowance.

Considerable unit pressures developed in compressing metal in a cold state demand a reliable construction with an ample factor of safety for all its parts:

In order to obtain maximum accuracy of coining, the press is built of an extremely rigid construction ensuring minimum "sag" during operation.

The frame is composed of a platen two uprights and a crown securely keyed and held together by four tie-rods, which are shrunk in place. The frame is made of high-quality cast iron. All presses are rigidly built, materials used in their construction being specially chosen for their suitability to withstand the stresses imposed upon them. To take up shearing stresses at the joints, the keys are provided.

The slide moves along the slide ways of the frame. The motion of the slide is effected by the crankshaft through a system of toggle links. The slide is made of high-quality cast iron.

STANKOIMPORT

Slide adjustment is accomplished by a wedge and screw device. The screw is driven through a worm drive and a vertical shaft. The shaft is rotated by a ratchet mechanism.

The starting friction clutch is equipped with two sliding keys. A periodical action brake is provided for absorbing the inertia pressure of the flywheel at the throwing in of the clutch.

The press is provided with an automatic control system which is operated by means of an electric treadle or by a push-button station.

The system of control permits to obtain the following cycles:

Separate stroke operation — when the slide stops after one stroke at the upper dead center regardless of whether the two starting buttons or the treadle be pressed or not.

upper dead center regardless of whether the two starting buttons or the treadle be pressed or not.

Continuous run — when the press works as long as the treadle or the two starting push-buttons are pressed down.

Automatic operation — when the press is started by pressing down a special push-button "on" and works until another button "off" is pressed.

Lubrication of the toggle-link pivots is accomplished by a gear pump driven by an individual electric motor. This gear-pump motor is switched on simultaneously with the main motor and if for any reason the auxiliary motor should stop the press is automatically stopped.

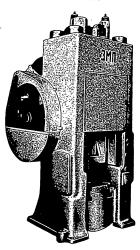
Standard equipment: Complete set of electrical equipment, suitable for A. C. supply (working current at request), set of wrenches and service manual containing all necessary instructions for erection and maintenance.

### SPECIFICATIONS

Pressure of slide near bottom of		Slide dimensions, mm:	
stroke, t	400	onde dimensions, mm:	
Stroke of slide, mm		F. to B	400
Number of steel	55	R. to L	510
Number of strokes per minute	40	Distance from bed to guides, mm	
Die space, distance from top of bed to		Distance from Dea to guides, mm	420
bottom of slide (stroke down, ad-		A. C. Drive motor:	
justment up), mm	410	Power, kW	10
Slide adjustment, mm	15	Speed, r.p.m.	1000
Distance between guides, mm		Oil numm	1000
Area of the Colorest guides, mm	510	Oil pump motor:	
Area of top of bed, mm:		Power, kW	1.0
F. to B	660	Speed, r.p.m.	1000
R. to L	660	Floor space, mm:	
Opening in hed diameter mm	70	F to D	•
Size of bolster plate, mm: F. to B.	1.0	F. to B	1820
F to B		R. to L.	2160
р. 60 Б.	660	Maximum height above floor, mm	3300
R. to L.	640	Height of platen above floor, mm	700
Thickness of bolster plate, mm	120	Net weight, kg	1000

### KNUCKLE JOINT COINING PRESS

MODEL K 846



Knuckle joint presses represent the universal type of coining and embossing presses and are widely used for the cold stamping operations requiring a short stroke (sizing, coining, embossing, straightening after stamping etc.).

Attainable accuracy in thickness of the finished articles is up to 0.05 mm depending on the allowance.

Considerable unit pressures developed in compressing metal in a cold state demand a reliable construction with an ample factor of safety for all its parts.

In order to obtain maximum accuracy of coining, the press is built of an extremely rigid construction ensuring minimum "say" during operation.

The frame is composed of a platen, two uprights and a crown securely keyed and held together by four tie-rods, which are shrunk in place. The frame is made of high-quality east iron. All presses are rigidly built, materials used in their construction being specially chosen for their suitability to withstand the stresses imposed upon them. To take up shearing stresses at the joints the keys are provided.

The slide moves along the slide ways of the frame. The motion of the slide is effected by the crankshaft through a system of toggle links. The slide is

STANKOIMPORT

Slide adjustment is accomplished by means of a wedge and screw device

Slide adjustment is accomplished by means of a wedge and screw device driven through reduction gear.

The reduction gear is driven by an individual motor. The adjusting screw is provided with a pointer. Turning the pointer through one division of the scale corresponds to die space adjustment of 0.05 mm. The movement of the adjusting screw is restricted by terminal switches.

The starting clutch is of a multiple-disc friction type and is coupled with a multiple-disc brake.

The starting clutch is of a multiple-disc income type and is completed. The brake ensures stopping the slide at any desired point of the stroke. The clutch is engaged by means of an electro-magnetic switch. The press is driven by an individual motor through a multiple V-belt driving the flywheel mounted on the intermediate shaft, from which the motion is transmitted to the crankshaft through a pair of gears. An additional brake is provided for stopping the flywheel when the motor is switched off. This brake is operated by compressed air through a special valve.

The air conduit mounted on the press ensures compressed air supply from the shop mains through the filter and oil atomizer to the friction clutch and the main brake, as well as to the flywheel brake. A constant air pressure in the circuit is maintained by means of receivers and a reducing valve.

The lubricating system is of a combined type. Central lubrication of the toggle links is effected by an oil pump driven by an individual motor. The gibs, crankshaft and connecting rod bearings are lubricated by means of a hand operated grease pump.

The press is equipped with automatic push-button control. The system of control permits either separate stroke or continuous run, as well as inching motions necessary for setting and adjusting dies.

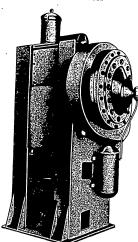
Standard equipment: Complete set of electrical equipment suitable for A.C. supply (working current at request), set of wrenches and service manual containing all necessary instructions for erection and maintenance.

### SPECIFICATIONS

ressure near bottom of stroke, t	800	Slide dimensions, mm:
stroke of slide, mm	65	F. to B
Number of strokes per minute	33	R. to L
Die space, distance from top of bed to		A. C. Drive motor:
bottom of slide (stroke down, ad-		Power, kW 1
justment up), mm	500	Speed, r.p.m 100
lide adjustment, mm	15	Slide adjusting motor:
Distance between guides, mm		Power, kW
	670	Speed, r.p.m. 100 Oil pump motor:
rea of top of bed, mm:	000	Power, kW 1.
R. to L.	860	Speed, r.p.m. 100
pening in bed, diameter, mm	90	Floor space, mm:
ize of bolster plate, mm:	50	F. to B
F. to B	860	R. to L
R. to L.	840	Maximum height above floor, mm., 448
		Height of platen above floor, mm 800
hickness of bolster plate, mm	150	Net weight, kg approx 3170

### MECHANICAL FORGING PRESS

MODEL K 862



The press is designed for hot stamping and sizing of ferrous and non-ferrous metal forgings for mass and large lot production.

In comparison with air and steam hammers, mechanical forging presses possess higher efficiency and production capacity, especially when rolled shape blanks are used. Forging presses produce parts with smaller machining allowablanks are used. Forging presses produce parts with smaller machining allowablanks are used. Forging presses produce parts with smaller machining allowablanks are used. Forging presses produce parts with smaller machining allowablanks and do not require massive foundations.

The frame is a closed-type all-welded structure. Frame design ensures ample rigidity and absence of frame deflection at maximum load. A wedge is effected by means of this table.

The drive is of a one-sided type and is from an individual electric motor. Power is transmitted from the electric motor to the eccentric shaft in two stages: by a V-belt drive to the flywheel shaft and then through a gear train the eccentric shaft is mounted in solid bearing housings into which bronze

to the eccentric shaft.

The eccentric shaft is mounted in solid bearing housings into which bronze bushings are press-fitted.

The slide is of a box-section type; it travels in guides provided on the frame. In addition to the main lower guides, the slide is provided with auxiliary upper

guides. The slide is actuated by the eccentric shaft and is equipped with an adjustable stripper. The lower face of the slide is covered by a hardened steel bolster plate to which the upper die is fastened. Slide motion is counterbalanced by a pneumatic cylinder with constant air pressure.

The clutch is of a multiple-disc friction type. It is built into the large gear of the eccentric shaft and is actuated by compressed air.

The band brake is intended for stopping the slide in the upper position. The brake is applied by spring action and is released by a pneumatic-cylinder connected to the air distributing system of the friction clutch. For stopping the flywheel and the driving shaft, when the electric motor is switched off, a pneumatic shoe-brake is provided. This brake is actuated by a valve mounted on the control panel.

The lower stripper, actuated by a cam mounted on the accoration shaft is

a pneumatic shoe-brake is provided. This drake is accurated by a cam mounted on the eccentric shaft, is intended for ejecting finished pieces from the lower die.

Press control is automatic and is of a combined electric and pneumatic type. Control is effected either by an electrically operated treadle or from a push-button station. The press is designed for the following operation cycles: single stroke operation by push-button or treadle; inching operation by push-button for setting up or adjusting dies; and continuous (automatic) operation by push-button.

button for setting up or adjusting dies; and continuous (automatic) operation by push-button.

The lubrication system is of a centralized force-feed type and is effected by a special pump station through measuring feeders. A pressure gauge is provided for controlling the pressure in the lubrication system. Simplicity of the lubricating system and its reliability ensure long service of the friction surfaces and protect them from dust and dirt.

The air equipment, mounted on the press, provides compressed air supply from the shop mains through the filtre and oil atomizer to the friction clutch, brakes and slide counterbalancing cylinder. Constant pressure in the compressed air circuit is maintained by a reducing valve. The press is provided with a friction type safety device designed for a present load.

A hydraulic attachment for tightening the nuts of the safety device, is furnished with the press.

A hydraulic attachment for tightening the nuts of the safety device, is furnished with the press.

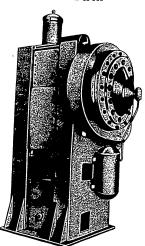
The press is delivered complete with electric equipment and wiring, lubrication system with pump station and pressure gauge, air equipment mounted on the press including air distributing system, oil atomizer, water separator, clutch and counterbalancing cylinder air receivers, pressure gauge and valves, upper and lower bolster plates, hydraulic attachment for tightening nuts of the friction safety device, a set of wrenches and all the necessary technical instructions for installation and operation.

### SPECIFICATIONS

Rated capacity, t. Stroke of Side, mm Number of strokes per minute Die space, distance from bed to slude (stroke down, adjustment up), mm Table height adjustment, mm. Distance clear betwen uprights, mm Slide dimensions, mm: F. to B. R. to L. Table dimensions, mm: F. to B. R. to L.	600 820	Upper stripper force, t 2.5 Upper stripper stroke, mm 50 Lower stripper stroke, mm 50 Lower stripper force, t 10 Lower stripper force, t 10 Lower stripper stroke, mm 50 Electric motor speed, r.p.m. 1000 Floor space, mm: F. to B. 2515 R. to L 2980 Maximum height above floor level, mm 4675 Net weight, kg approx; 35000

STANKOIMPORT STANKOIMPORT

MODEL K 863



The mechanical forging press is designed for hot stamping and sizing of ferrous and non-ferrous metal forgings for mass and large lot production. In comparison with air ateam hammers, mechanical forging presses possess higher efficiency and production capacity, especially when rolled shape blanks are used. Forging presses produce parts with smaller machining allowances, have the advantage of noiseless operation, do not produce ground vibrations and do not require massive foundations.

The frame is a closed-type all-welded structure. Frame design ensures ample rigidity and absence of frame deflection at maximum load. A wedge shaped table is mounted in the lower part of the frame. Die space adjustment is carried out by means of this table.

The drive is of a one-sided type and is from an individual electric motor. Power from the electric motor to the eccentric shaft is transmitted in two stages: by a V-belt drive to the flywheel shaft and then through a gear train into which bronze bushings are press-fitted.

The slide is of a box-section type; it travels in guides provided on the frame. In addition to the main lower guides, the slide is provided with auxiliary upper

STANKOIMPORT

guides. The slide is actuated by the eccentric shaft and is equipped with an adjustable stripper. The lower face of the slide is covered by a hardened steel bolster plate to which the upper die is fastened. Slide motion is counterbalanced by a pneumatic cylinder with constant air pressure.

The clutch is of a multiple-disc friction type. It is built into the large gear of the eccentric shaft and is actuated by compressed air.

The band brake is intended for stopping the slide in the upper position. The brake is applied by spring action and is released by a pneumatic cylinder connected to the air distributing system of the friction clutch. For stopping the flywheel and the driving shaft when the motor is switched off a pneumatic shoe-brake is provided. This brake is actuated by a valve mounted on control panel.

shoe-brake is provided. This brake is actuated by a valve mounted on control panel.

The lower stripper, actuated by a cam mounted on the eccentric shaft, is intended for ejecting finished pieces from the lower die.

Press control is automatic and is of a combined electric and pneumatic type. Control is effected either by an electrically operated treadle or from a push-button station. The press is designed for the following operation cycles: single stroke operation by push-button or treadle, continuous (automatic) operation by push-button and inching operation by push-button for setting up or adjusting dies.

The lubrication system is of a centralized force-feed type and is effected by a special pump station through measuring feeders. A pressure gauge is provided for controlling the pressure in the lubricating system. Simplicity of the lubricating system and its reliability ensure long service of the friction surfaces and protect them from dust and dirt.

The air equipment, mounted on the press, provides air supply from the shop mains through the filtre and oil atomizer to the friction clutch, brakes and slide counterbalancing cylinder. Constant pressure in the compressed air circuit is maintained by a reducing valve.

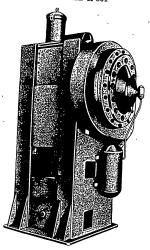
A hydraulic attachment, for tightening nuts of the friction safety device designed for a presst load, is furnished with the press.

The press is delivered complete with electric motor, starting equipment and wiring, lubricating equipment with pump station and pressure gauge, air equipment including air distributing system, oil atomizer, water separator, receiver tanks for the clutch and counterbalancing cylinder, pressure gauge and all the required valves; upper and lower bolster plates, hydraulic attachment for tightening nuts of the friction safety device, as est of wrenches and all the necessary technical instructions for installation and operation.

### SPECIFICATIONS

Rated capacity, t	1000	Upper stripper stroke, mm 50
Number of strokes per minute	80	Lower stripper stroke, mm 50
Die space, distance from bed to slide	00	Upper stripper force, t 2.5
(stroke down, adjustment up), mm	560	Lower stripper force, t
Table height adjustment, mm	15	Electric motor power, kW 55
Distance clear between uprights, mm	860	Electric motor speed, r.p.m 1000
Table dimensions, mm:		
F. to B	990	F. to B
R. to L	500	R. to L
Slide dimensions, mm:		Maximum height above floor level,
F. to B	720	mm 4975
R. to L	720	Net weight, kg approx. 55000

MODEL K 864



The mechanical forging press is designed for hot stamping and sizing of ferrous and non-ferrous metal forgings for mass and large lot production. Geomparison with air and steam hammers, mechanical forging presses possess, higher efficiency and production, capacity especially when rolled shape blanks are used. Forging presses produce parts with smaller machining allowances, have the advantage of noiseless operation, do not produce ground vibrations, and do not require massive foundations.

The frame is a closed-type all-welded structure. Frame design ensures ample rigidity and absence of frame deflection at maximum load. A wedge shaped table is mounted in the lower part of the frame. Die space adjustment is carried out by means of this table.

The drive is of a one-sided type and is from an individual electric motor. Power from the electric motor to the eccentric shaft is transmitted in two stages: by a V-belt drive to the flywheel shaft and then through a gear train into which bronze bushings are press-fitted.

The slide is of a box-section type and travels in guides provided on the frame. In addition to the main lower guides, the slide is provided with auxiliary

STANKOIMPORT

upper guides. The slide is actuated by the eccentric shaft and is equipped with an adjustable stripper. The lower face of the slide is covered by a hardened steel bolster plate to which the upper die is fastened. Slide motion is counterbalanced by a pneumatic cylinder with constant air pressure. The clutch is of a multiple-disc friction type. It is built into the large gear of the eccentric shaft and is actuated by compressed air.

The band brake is intended for stopping the slide in the upper position. The brake is applied by spring action and is released by a pneumatic cylinder connected to the air distributing system of the friction clutch. For stopping the flywheel and the driving shaft when the electric motor is switched off, a pneumatic shoe-brake is provided. The brake is actuated by a valve mounted on control panel.

matic shoe-brake is provided. The brake is actuated by a valve mounted on control panel.

The lower stripper, actuated by a cam mounted on the eccentric shaft, is intended for ejecting finished pieces from the lower die.

Press centrol is automatic and is of a combined electric and pneumatic type. Control is effected either by an electrically operated treadle or from a push-button station. The press is designed for the following operation cycles: single stroke operation by push-button or treadle; continuous (automatic) operation by push-button and inching operation by push-button for setting up or adjusting dies.

single stroke operation by push-uncontraction by push-button for setting up or ration by push-button and inching operation by push-button for setting up or adjusting dies.

The lubricating system is of a centralized force-feed type and is effected by a special pump station through measuring feeders. A pressure gauge is provided for controlling the pressure in the lubricating system. Simplicity of the lubricating system and its reliability ensure long service of the friction surfaces and protect them from dust and dirt.

The air equipment mounted on the press provides air supply from the shop mains through the filtre and oil atomizer to the friction clutch, brakes and slide counterbalancing cylinder. Constant pressure in the compressed air circuit is maintained by a reducing valve.

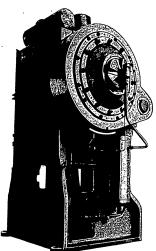
The hydraulic attachment, for tightening nuts of the friction safety device designed for a presst load, is furnished with the press.

The press is delivered complete with electric motor, starting equipment and wiring, lubricating equipment with pump station and pressure gauge; air equipment mounted on the press, including air distributor, oil atomizer, water separator, receiver tanks for clutch and counterbalancing cylinder, pressure gauge and all the required valves; upper and lower bolster plates, hydraulic attachment for tightening nuts of the friction safety device, a set of wrenches and all the necessary technical instructions for installation and operation.

### SPECIFICATIONS

,		,
Rated capacity, t Stroke of slide, mm Number of strokes per minute Die space, distance from bed to slide (stroke down, adjustment up), mm Table height adjustment, mm Distance clear between uprights, mm Table dimensions, mm: F. to B. R. to L. Slide dimensions, mm: F. to B. R. to L.	300 75 660 10 980 1200 910	Upper stripper force, t. 2.5  Upper stripper stroke, mm 50  Lower stripper force, t 15  Lower stripper stroke, mm 50  Electric motor power, kW 75  Electric motor speed, r.p.m. 1000  Floor space, mm 3700×3190  Maximum height above floor level, mm 5430
	000	Net weight, kg approx. 85170

MODEL MKII 1500



The mechanical forging press is designed for hot stamping and sizing of ferrious and non-ferrous metal forgings for mass and large lot production. In comparison with air and steam hammers, mechanical forging presses possess higher efficiency and production capacity, especially when rolled shape blanks are used. Forging presses produce parts with smaller machining allowances, have the advantage of noiseless operation, do not produce ground vibrations and do not require massive foundations.

The frame is of the closed-type. It is a solid casting made of high-quality steel. Frame design ensures ample rigidity and absence of frame deflection at maximum load. A wedge shaped table is located in the lower part of the frame. Adjustment of die space is effected by means of this table.

The drive is of a one-sided type and is from an individual electric motor. Power is transmitted from the electric motor to the eccentric shaft in two stages: by a V-belt drive to the flywheel shaft and then through a gear train to the eccentric shaft. The eccentric shaft is mounted in split bearings with bronze lines and half-rings.

The eccentric shaft is an alloy steel forging.

STANKOIMPORT

The slide is of a box-section type and travels in guides provided on the frame. In addition to the main lower guides, the slide is provided with auxiliary upper guides. The slide is actuated by the eccentric shaft and is equipped with an adjustable stripper. The lower face of the slide is covered by a hardened steel bolster plate to which upper die is fastened. The slide is counterbalanced by a pneumatic cylinder with constant air pressure.

The clutch is of a multiple-disc friction type. It is built into the large gear of the eccentric shaft and is actuated by compressed air.

The band brake is intended for stopping the slide in the upper position with the clutch disengaged. The brake is applied by spring action and is released by a pneumatic cylinder connected to the air distributing system of the friction clutch. For stopping the flywheel and drive shaft when the electric motor is switched off, a pneumatic shoe-brake is provided. This brake is actuated by a valve mounted on the control panel.

The lower stripper, actuated by a cam mounted on the eccentric shaft, is intended for ejecting finished pieces from the lower die.

Press control is automatic and is of a combined electric and pneumatic type. Control is effected either by an electrically operated treadle or from a push-button station. The press is designed for the following operation cycles: single stroke operation by push-button or treadle, inching operation for setting up or adjusting dies by push-button and continuous (automatic) operation by push-button.

The lubricating system is of a centralized force-feed type and is effected by a special pump station through measuring feeders. A pressure gauge is provided for measuring and controlling the pressure in the lubricating system. Simplicity and reliability of the lubricating system ensure long service of the friction surfaces and protect them from dust and dirt.

The air equipment mounted on the press provides air supply from the shop mains through the filtre and oil atomizer to the friction clutch,

counterbalancing cylinder. Constant pressure in the compressed air circuit is maintained by a reducing valve.

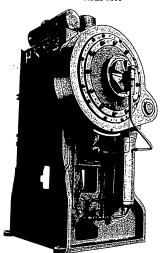
The hydraulic attachment, for tightening nuts of the safety friction device designed for a preset load, is furnished with the press.

The press is delivered complete with electric motor, starting equipment and wiring, lubricating equipment with pump station and pressure gauge; air equipment mounted on the press including air distributors, oil atomizer, water separator, receiver tanks for the clutch and counterbalancing cylinder, pressure gauge and all the required valves; lower and upper bolster plates, hydraulic attachment for tightening nuts of the safety device, a set of wrenches and all the necessary technical instructions for installation and operation.

### SPECIFICATIONS

SI ECHIONITONS			
	500 Stroke of upper stripper, mm 50 300 Stroke of lower stripper, mm 50 75 Pressure in air circuit, atm 4 to 5		
(stroke down, adjustment up), mm Table height adjustment, mm Distance clear between uprights, mm	Electric motor power, kW		
Slide dimensions, mm: F. to B	F. to B		
F. to B	Height above floor level 5260 Height below floor level 390 Net weight, kg approx. 102000		

MODEL MKII 2500



The mechanical forging press is designed for hot stamping and sizing of ferrous and non-ferrous metal forgings for mass and large lot production. In comparison with air and steam hammers, mechanical forging presses possess higher efficiency and production capacity, especially when rolled shape blanks are used. Forging presses produce parts with smaller machining allowances, have the advantage of noiseless operation, do not produce ground vibrations and do not require massive foundations.

The frame is a closed-type solid casting made of high-quality steel. Frame design ensures ample rigidity and absence of frame deflection at maximum lead. A wedge shaped table is located in the lower part of the frame. Adjustment of die space is effected by means of this table.

The drive is of a one-sided type and is from an individual electric motor. Power is transmitted from the electric motor to the eccentric shaft in two stages: by a V-belt drive to the flywheel shaft and then through a gear train to the eccentric shaft. The eccentric shaft is an alloy steel forging.

The eccentric shaft is an alloy steel forging.

STANKOIMPORT

The slide is of a box-section type and travels in guides provided on the frame. In addition to the main lower guides, the slide is provided with auxiliary upper guides. The slide is actuated by the eccentric shaft and is equipped with an adjustable stripper. The lower face of the slide is covered by a hardened steel bolster plate to which the upper die is fastened. The slide is counterbalanced by a pneumatic cylinder with constant air pressure.

The clutch is of a multiple-disc friction type, It is built into the large gear of the eccentric shaft and is actuated by compressed air.

The band brake is intended for stopping the slide in the upper position with the clutch disengaged. The brake is applied by spring action and is released by a pneumatic cylinder connected to the air distributing system of the friction clutch. For stopping the flywheel and drive shaft when the electric motor is switched off, a pneumatic shoe-brake is provided. The brake is actuated by a valve mounted on the control panel.

The lower stripper, actuated by a cam mounted on the eccentric shaft, is intended for ejecting finished pieces from the lower die.

Press control is automatic and is of a combined electric and pneumatic type. Control is effected either by an electrically operated treadle or from a push-button station. The press is designed for the following operation cycles: single stroke operation by push-button or adjusting dies by push-button and continuous (automatic) operation by push-button.

The lubricating system is of a centralized force-feed type and is effected by a search approach.

push-button.

The lubricating system is of a centralized force-feed type and is effected by a special pump station through measuring feeders. A pressure gauge is provided for controlling the pressure in the lubricating system. Simplicity and reliability of the lubricating system ensure long service of friction surfaces and protect them from dust and dirt.

The air equipment mounted on the press provides air supply from the shop mains through the filtre and oil atomizer to the friction clutch, brakes and counterbalancing cylinder. Constant pressure in the compressed air circuit is maintained by a reducing valve.

counterbalancing cylinder. Constant pressure in the compressed air circuit is maintained by a reducing valve.

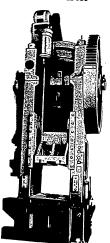
The hydraulic attachment, for tightening nuts of the safety device designed for a preset load, is furnished with the press.

The press is delivered complete with electric motor, starting equipment and wiring, lubricating system with piping and pressure gauge, air equipment mounted on the press including air distributors, oil atomizer, water separator, receiver tanks for the clutch and counterbalancing cylinder, pressure gauge and all the required valves; upper and lower bolster plates, hydraulio attachment for tightening nuts of the safety device, a set of wrenches and all the necessary technical instructions for installation and operation.

, 51	L DOLL'IO	ALIUNS
Rated capacity, t. Stroke of slide, mm Number of strokes per minute. Die space, distance from bed to slide (stroke down, adjustment up), mm Table height adjustment, mm	350 60 890 16	Stroke of upper stripper, mm         65           Stroke of lower stripper, mm         65           Air pressure in circuit, atm         4 to 5           Electric motor power, kW         110           Electric motor speed, r.p.m         750
Distance clear between uprights, mm	1220	Press dimensions, mm:
Slide dimensions, mm: F. to B	1120	F. to B
R. to L	1070	Total height 6780
Table dimensions, mm:	1400	Height above floor level 6000 Height below floor level 780
R. to L	1200	Net weight, kg approx 170000

### STRAIGHT-SIDE SINGLE CRANK TRIMMING PRESS WITH OUTER SLIDE

HODEL K 984



The press is particularly recommended for blanking, piercing and for trimming drop forgings.

The frame is composed of a platen, two uprights and a crown scourely keyed and held together by tie-rods, which are shrunk in place. The frame is made of high-quality east iron. All presses are rigidly built, materials used in their construction being specially chosen for thoir suitability to withstand the stresses imposed upon them. To take up shearing stresses at the joints the keys are provided.

The press is driven by an individual motor. The motion is transmitted from the motor to the crankshaft through V-belts and train of gears. The crankshaft rotates in split bronze bearings.

The slide is of a box section type; it is made of high-quality east iron and has four guides.

The slide moves over long guides. The two rear guides are non-adjustable, while two front ones are adjustable. The balancing of the slide is accomplished by pneumatic cylinders at a pressure of 5.5 kg/sq. cm.

STANKOIMPORT

Slide adjustment is accomplished by an individual electric motor through an open type reduction gear which revolves the adjusting screw. The motion of the screw is limited by terminal switches.

The outer slide is located at the left side of the press and moves along the guiding gibs by means of an overhanging eccentric fastened to the crankshaft. Distance between the bed and the outer slide is adjusted by turning a specially provided ring.

guiding gibs by means of an overhanging eccentric fastened to the crankshaft. Distance between the bed and the outer slide is adjusted by turning a specially provided ring.

The clutch of a multiple-disc friction type is coupled with a multiple-disc brake. The clutch plates are pressed together by springs, which ensure a uniform braking effort. The outside clutch and brake plates are made adjustable to compensate for the wear of ferrodo lining. For better cooling the clutch hub, the cylinder and the brake hub are connected by air-venting channels. The clutch shaft is running in taper roller bearings. The driving clutch plates and the stationary disc plates are made of a special quality cast iron.

The pressure in the clutch cylinder is about 2.5 kg/sq. cm.

The press is equipped with a combined push-button and treadle control. The system of control permits either single stroke or continuous run, as well as inching motions necessary for setting up and adjusting dies. The starting push-buttons and the treadle are provided with a safety interlocking device requiring both hands to operate.

The lubricating system of the press is of a combined type. Central lubrication of the principal points is effected by a grease pump, with automatic feeders, while the less important friction parts are lubricated by hand. Simplicity and reliability of the lubricating system ensure long service of the friction parts and protect them from dust and dirt.

The air conduit mounted on the press ensures compressed air supply from the shop mains through the filter and oil atomizer to the friction clutch, the brake and the slide-balancing cylinders. A constant air pressure of 2.5 kg/sq. cm, in the clutch and brake circuit, and of 5 to 6 kg/sq. cm in the slide-balancing cylinders is maintained by a reducing valve.

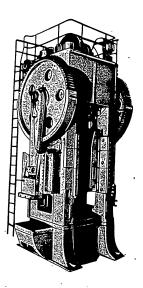
A special brake, for stopping the flywheel, when the motor is switched off, is provided.

is provided,
Standard equipment: Complete set of electrical equipment for A. C. supply
(working current at request), bolster plate, oil pump and piping, oil cups,
grease guns, air conduit on the press only, set of wrenches and service manual
containing all necessary instructions for erection and maintenance.

SI	ECIFI	CATIONS
Pressure of slide near bottom of slide, t	315 210 25	Thickness of bolster plate, mm
bottom of slide (stroke down, adjustment up), mm Adjustment of slide, mm Distance between uprights, mm	750 150 930	Stroke of slide, mm
Distance between guides, mmArea of top of bed, mm:  F. to B	770	Distance, center of slide to frame, mm -250  Electric motor power, kW
R. to L. Opening in bed, mm: F. to B.	930	Auxiliary motor power, kW 2.8 Auxiliary motor speed, r.p.m. 1000 Floor space, mm:
R. to L	560	F. to B
F. to B	$\frac{1370}{920}$	Maximum height above floor, mm 5638 Net weight, kg approx. 33300

# STRAIGHT-SIDE SINGLE CRANK TRIMMING PRESS WITH OUTER SLIDE

MODEL K 987



The press is intended for hot and cold trimming after forging, as well as for blanking and piercing operations.

The outer slide is used for cropping holding lugs and for trimming forgings. The frame comprises a bed, two uprights and crown, drawn together by tie-rods shrunk in place. The frame is made of high-quality cast iron. Frame design ensures ample rigidity and absence of frame deflection at maximum

load,
The drive is from an individual electric motor. Power is transmitted from
the electric motor to the crankshaft in three stages: the first stage, to the flywheel shaft, is through multiple V-belt drive, the second stage is through a
single and the third — through a double gear train. The crankshaft is mounted

STANKOIMPORT

in split bronze-lined bearings. Gears and pinions are made of steel. The crankshaft is a high-quality steel forging.

The slide is of a box-section type. It is made of high-quality cast iron and has four guiding surfaces. The slide travels in long frame guides. The two front guides are adjustable while the two rear guides are non-adjustable. Slide motion is counterbalanced by four pneumatic cylinders mounted on the uprights.

front guides are adjustable while the two rear guides are non-adjustable. Slide motion is counterbalanced by four pneumatic cylinders mounted on the uprights.

Slide adjustment is accomplished by an individual electric motor through a gear reducing unit gear. To restrict adjustment limits, in addition to the indicating pointers on the frame, the machine is equipped with limit switches, which automatically shut off the electric motor at the upper and lower adjustment positions of the slide.

The outer slide is situated on the right side of the press. The outer slide is reciprocated in its guides by means of a crank and connection coupled to the slide through an adjusting screw with a spherical bearing surface. The die space is adjusted by hand through a worm gear.

The clutch is of the pneumatic multiple-disc friction type and is coupled to a multiple-disc brake. The brake discs are forced together by springs to provide constant braking force and constant action. To compensate the wear of asbestos or ferrodo-faced discs, the outermost discs of the clutch and brake are adjustable. The clutch shaft is mounted in taper roller bearings. The driving discs of the clutch and the stationary discs of the brake are made of a special grade cast iron. Air pressure in the clutch cylinder is about 2.6 atm.

Press control is of a combined push-button and treadle type. The control system provides for single strokes and continuous (automatic) operation as well as for inching operation applied in setting up or adjusting disc. The starting push-buttons are provided with a safety device requiring both hands to start the machine.

The Inbritating system is of a combined type. Principal friction surfaces are grease-lubricated by a centralized system through measuring feeders from a hand pump station while the other points are lubricated individually by hand. Simplicity and reliability of the lubricating system ensure long service of the friction surfaces and protect them from dust and dirt.

The air equipment mounted on the press pro

The press is delivered complete with main drive electric motor, auxiliary electric motor for die space adjustment, starting equipment and wiring, lubricating pump and piping; air equipment including receiver tanks and pressure gauges; oil cans and lubricating guns; bolster plate; a set of wrenches and all the necessary technical instructions and drawings for installation and opera-

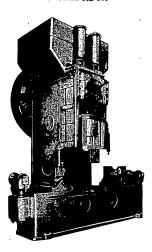
#### · SPECIFICATIONS

Rated capacity, t	420	Slide adjustment, mm	180
Number of strokes per minute	12	F. to B	1260
Die space, distance from bed to slide		R. to L	1220
(stroke down, adjustment up), mm	780	Distance between guides mm	1040

Recess in slide for die shanks, mm:  Width Depth Opening in bed, mm: F. to B. R. to I. Slide dimensions F. to B., mm Bolster plate thickness, mm Distance from bed to guides, mm. Outer slide capacity, t. Stroke of outer slide, mm Die space, distance from bed to outer slide outer slide outer slide outer slide outer slide, mm	230 45 760 760 990 155 800 200 150	Opening in outer slide bed (diameter), mm Recess in outer slide for punch shanks, mm: Diameter Depth Distance from outer slide bed to gui- des, mm. Electric motor power, kW Electric motor speed, r.p.m. Floor space, mm:	38
Die space adjustment for outer slide	500	F. to B	
mm	130	Height above floor level, mm 65	0

## STRAIGHTENING SINGLE CRANK PRESS

MODEL KB 105



The press is designed for straightening rods, pipes and structural steel shapes, as well as for breaking test samples. The press can be used on finishing lines of rolling mills and pipe manufacturing plants, as well as in heat treatment and blank preparation shops of machine building works.

The press is simple in maintenance and reliable in operation.

Straightening of parts is accomplished by three pressure blocks. The movable upper block is mounted on the slide while the other two are fastened to the table. The work to be straightened is moved along on two rollers which are raised by springs after the slide has moved upward.

The trame is a C-shaped steel casting. The table is provided with recesses and grooves for setting up and moving the pressure block holders.

The drive is from an individual electric motor.

The upper and lower slides are intended for moving the upper straightening pressure block. The upper slide is reciprocated by the crankshaft and travels in flat guides.

STANKOIMPORT

STANKOIMPORT

The lower slide, on which the pressure block is mounted is actuated by the upper slide and travels in four guides. The upper and lower slides are linked by two special racks. The stationary upper rack is mounted rigidly on the upper slide and the movable lower rack is mounted on the screw head between two guides. When the press runs idle, the teeth of the stationary rack coincide with the recesses of the movable rack.

The press is started from the control panel by push-buttons and an electromagnet actuating the starting mechanism through a system of levers.

By means of a special change-over switch, the press can be operated on single, as well as on continuous (automatic) strokes.

The Inbricating system is of a combined type:

Centralized grease Inbrication for the principal friction surfaces: crankshaft and intermediate shaft bearings, upper and lower slide guides and upper slide block;

Individual grease-gun Inbrication through ball-type grease cups; Oif drop-Inbricators for the guides of the movable rack slide;

The gear reducing unit is splash-lubricated by oil poured into the casing. The centralized lubricating system comprises a hand-operated grease pump station, measuring feeders and oil piping.

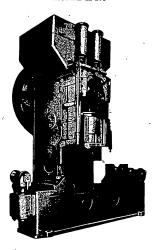
The press is delivered complete with electric motors starting and protecting equipment and wiring, lubricating equipment, straightening tools, grease-gun, oil can, a set of V-belts, and all the necessary technical instructions for installation and operation.

#### SPECIFICATIONS

Rated capacity, t 200	Bar and section steel, mm:
Stroke of slide, mm 70	Maximum
Number of strokes per minute 30	Minimum 20
Adjustment of slide, mm 100	Main electric motor power, kW 14
Gap, mm	Main electric motor speed, r.p.m 1500
Width between uprights, mm:	Air pressure in cylinder, kg/sq. cm . 4
Maximum 1800	Floor space, mm:
Minimum 440	F. to B
Diameter of pipe to be straightened,	R. to L
mm 76 to 219	Maximum height above floor level,
Maximum thickness of pipe walls,	mm 4130
	<ul> <li>Net weight, kg approx. 15300</li> </ul>

### **STRAIGHTENING** SINGLE CRANK PRESS

MODEL K 108



The press is designed for straightening rods, pipes and structural steel shapes as well as for breaking test samples. The press can be used on finishing lines of rolling mills and pipe manufacturing plants, as well as in heat treatment and blank preparation shops of machine building works.

The press is simple in maintenance and reliable in operation.

Straightening of parts is accomplished by three pressure blocks. The movable upper block is mounted on the slide while the other two are fastened to the table.

to the table

to the table.

The work to be straightened is moved along on two rollers which are raised by springs after the slide has moved upward.

The frame is a C-shaped steel casting. The table is provided with recesses and grooves for setting up and moving the pressure block holders.

The drive is from an individual electric motor.

The upper and lower slides are intended for moving the upper straightening pressure block. The upper slide is reciprocated by the crankshaft and travels in flat guides.

STANKOIMPORT

STANKOIMPORT

70

The lower slide, on which the pressure block is mounted is actuated by the upper slide and travels in four guides. The upper and lower slides are linked by two special racks. The stationary upper rack is mounted on the upper slide and the movable lower rack is mounted on the screw head between two guides. When the teeth of the two racks coincide, the press makes its working stroke. When the press runs idle, the teeth of the stationary rack coincide with the recesses of the movable rack.

The press is started from the control panel by push-buttons and an electromagnet actuating the starting mechanism through a system of levers.

The lubricating system is of a combined type:
Centralized grease lubrication with grease for the principal friction surfaces: crankshaft and intermediate shaft bearings, upper and lower slide guides and upper slide block;
Individual grease-gun lubrication through ball-type grease cups;
Oil drop-lubricators for the guides of the movable rack slide;
The gear reducing unit is splash-lubricated by oil poured into the casing. The centralized lubricating system comprises a hand operated grease-pump station, measuring feeders and oil piping.

The press is delivered complete with electric motors, starting and protecting equipment and wiring, lubricating equipment, straightening tools, grease-gun, oil can, a set of V-belts and all the necessary technical instructions for installation and operation.

#### SPECIFICATIONS

Rated as		
Rated capacity, t Stroke of slide, mm Number of strokes por	400	Bar and section steel, mm:
Number of strokes per	80	Minimum
Number of strokes per minute	20	Minimum
Lower slide adjustment, mm	150	Maximum
Gap, mm	420	
Man between uprights, mm:		
	700	Air pressure in cylinders, kg/sq.cm 3
Maximum	2000	Et 3
Maximum diameter of pipe to be	3000	Floor space, mm ·
straightened, mm		F. to B
Maximum thickness of	400	
Maximum thickness of pipe walls,		Height above floor level, mm 5160
mm	40	Net weight, kg
		THE WEIGHT, RE OPPRESS OFFICE

STANKOIMPORT

#### **PUNCHING PRESS**

MODEL K 196



This press is intended for punching holes in sheet metal and steel sections. The press is widely used in structural steel shops, in the shipbuilding and locomotive industries and at various construction sites.

The frame is made of steel plates and is reinforced in the region of the throat by special bands.

The press is actuated by an individual electric motor through a combined V-belt and gear drive.

Press control is from a treadle. By means of a special device, the press can be used for continuous operation

be used for continuous operation.

Lubrication is accomplished by a lubricating pump station through measur-

Inbrication is accompaised by a inbricating pump season anough measuring feeders.

For accurate location of punched holes, the press is equipped with a centering device.

The press is delivered complete with electric motor, starting equipment and wiring, lubricating pump station with piping, a set of wrenches, two sets of punching tools for 28 and 40 mm diameter holes and all the necessary technical instructions and drawings.

STANKOIMPORT

ň

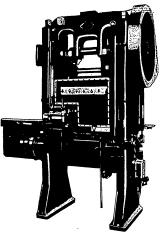
#### SPECIFICATIONS

Rated capacity, t	80	Number of strokes per minute  Electric motor power, kW  Electric motor speed, r.p.m  Floor space, mm:	4.5
25 mm	28	Length	2500
For sheet thickness up to		Width	700
18 mm Stroke of slide, mm	40 38	Maximum height above floor level,	
Depth of throat, center of slide to	50	mm	2170
frame, mm	800	Net weight, kg approx.	2900

STANKOIMPORT

### AUTOMATIC SEVEN SPINDLE SHEET METAL STAMPING PRESS

MODEL A 821



The press is designed for multi-operation sheet metal stamping.

The automatic press is widely used for a large variety of drawing operations, as well as for making electric lamp caps.

The press is equipped with a strip feeding device for material and with a gripping type mechanical arrangement for transfering blanks from operation to operation.

The blanks are stripped off the punches by rigidly fixed strippers and pushed out of the lower dies by springs.

Press control is accomplished by a hand-operated lever.

The press is driven from an individual electric motor through a multiple V-belt arrangement.

The clutch is of the friction disc type and is combined with a friction brake.

In order to safeguard the operator's hands, the operating zone of the press is protected by a screen guard. The guard is linked with the starting lever in such a manner that the press can be started only when the guard is lowered.

The lubrication system of the press is of a combined type: partly centralized and partly individual lubrication.

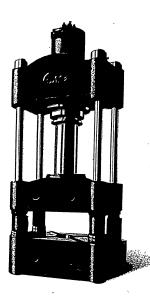
STANKOIMPORT

The automatic press is delivered complete with electric motor and starting equipment, lubricating equipment, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Rated eapacity, t Stroke of slide, mm Number of strokes per minute Number of spindles Distance between spindles, mm Maximum diameter of blank, mm Maximum width of strip, mm Blank-gripping device opening, mm	140 50 7 85 58	Recess in chuck for holding spindles, mm: Diameter Dopth Electric motor power, kW Electric motor speed, r.p.m. Floor space, mm: Width Length Maximum height above floor level, mm Net weight.	1.2 1000 1195 1810
errying device opening, mm	75	Net weight, kg approx.	2600

HYDRAULIC PRESSES



# GENERAL PURPOSE HYDRAULIC PRESS

МОДЕТ ПВ 452



The general purpose hydraulic press is designed for metal stamping, blanking and drawing operations, for briquetting abrasives and for plastics molding operations. Due to its universal applications the press is widely used in various branches of industry.

The frame of the press comprises the stationary lower and upper platens and a moving platen or slide guided on four columns. The platens are made of cast iron while the columns and the nuts for tightening the columns are made of forged steel.

The lower platen or bed has T-slots for die fastening and a space for mounting the return stroke and ejector cyclinders.

The upper platen or crown has a centrally-located bore for mounting the working cylinder.

The moving platen or slide has T-slots for die fastening. A hole for the end of the piston rod is provided in the center of the moving platen.

The working cylinder, made of forged steel, is mounted in the bore of the crown and is fastened by means of studs and nuts.

The free end of the cylinder has a recess for mounting the guiding sleeve, packing cup and cup ring, which are held in the cylinder by means of a bushing and a clamping ring. The ring is fastened to the cylinder by means of studs and nuts. The upper end of the cylinder is to be connected to the hydraulic system.

studs and nuts. The upper end of the cylinder is to be connected to the nydraulic system.

The main piston is made of cast iron and is rigidly connected to the slide. The return stroke cylinders are made of forged steel and are used for lifting up the moving platen. The cylinders are mounted in the bored lugs of the bed while the plungers are connected to the moving plate. Each cylinder has a packing box consisting of a guiding sleeve, a packing cup, a cup ring, a bushing and a clamping flange. Inlets are provided in the lower part of the cylinders for supplying the working fluid.

The ejector is designed for removing the finished workpiece from the die. It consists of a hydraulic cylinder and a plunger. The plunger is of the piston-type and is provided with packing cups. The design of the plunger permits the use of one cylinder for both the working and return strokes of the ejector. Operation of the press is hand-controlled by means of two double-spindle water distributors.

Operation of the press is nand-controlled by means of two double-spindle water distributors.

Supplying the press with high-pressure water can be accomplished from an individual pump or a pump and accumulator unit.

The press is furnished complete with ejector, set of packing cups, water distributors, piping on the press and all the necessary technical instructions for erection and operation of the press.

### SPECIFICATIONS

Rated capacity, t Working pressure, kg/sq.em Maximum stroke of moving platen, mm. Maximum distance between table and moving platen, mm. Distance clear between columns, mm F. to B. R. to L. Table size, mm: F. to B. R. to L. Table size, mm.	50 200 400 600 280 580 490 535	Diameter of hole in table, mm. Return stroke capacity, t Ejector capacity, t Ejector stroke, mm Height of table above floor level, mm Diameter of hole in moving platen, mm. F. to B. F. to B. R. to L. Height above floor level, mm. Met weight, kg. Approx.	7. 15 80 14 49 98 245
R. to L	535	Net weight, kgapprox.	17

STANKOIMPORT

### GENERAL PURPOSE HYDRAULIC PRESS

MODEL IIA 454



The general purpose hydraulic press is designed for metal stamping, blanking and drawing operations, for briquetting abrasives and for plastics moulding operations. Due to its universal applications the press is widely used in various branches of industry.

operations. Due to its universal applications the press is widely used in various branches of industry.

The frame of the press consists of the stationary lower and upper platens and a moving platen or slide guided on four columns. The platens are made of cast iron, while the columns and the nuts for tightening the columns are made of forged steel.

The lower platen or bed has T-slots for die fastening and a space for mounting the return stroke and ejector cylinders.

The upper platen or crown has a centrally located bore for mounting the working cylinder.

The moving platen or slide has T-slots for die fastening. A hole for the end of the piston rod is provided in the center of the moving platen.

The working cylinder, made of forged steel, is mounted in the bore of the crown and fastened by means of studs and nuts. The free end of the cylinder has a recess for mounting the guiding sleeve, leather packing cup, which are held in the cylinder by means of a bushing and a clamping ring. The ring is

STANKOIMPORT

fastened to the cylinder by means of studs and nuts. The upper end of the cylinder is to be connected to the hydraulic system.

The main piston is made of cast iron and is rigidly connected to the slide. The return stroke cylinders are made of forged steel and are used for lifting up the moving platen. The cylinders are mounted in bored lugs of the bed, while the plungers are connected to the moving platen. Each cylinder has a packing box consisting of a guiding sleeve, a packing cup, a cup ring, a bushing and a clamping flange. Inlets are provided in the lower part of the cylinders for supplying the working fluid.

The ejector is designed for removing the finished workpiece from the die. It consists of a hydraulic cylinder and a plunger. The piston-type plunger is provided with packing cups. The design of the plunger permits the use of one cylinder for both the working and return strokes.

Operation of the press is hand-controlled by means of two double-spindle water distributors.

water distributors.

Supplying the press with high-pressure water can be accomplished from an individual pump or a pump and accumulator unit.

The press can be installed as a single unit or in line both other hydraulic

Presses.

The press is furnished complete with ejector, set of packing cups, water distributors, piping on the press and all the necessary technical instructions for erection and operation of the press.

#### SPECIFICATIONS

Rated capacity, t Working pressure, kg/sq.cm Maximum stroke of moving platen, mm	200	Diameter of hole in table, mm Return stroke capacity, t Ejector capacity, t Ejector stroke	15
Maximum distance between table and	600		
moving plates			
moving platen, mm  Distance clear between columns, mm:	900	Diameter of fiole in moving platen	
F, 10 B	310		170
	660	Floor space occupied, mm:	
rable size, mm:	000	F. to B.	720
F. to B			
R. to L.	600	Height above floor level, mm	1240
	600	Net weight les	<b>3330</b>

GENERAL PURPOSE HYDRAULIC PRESS

MODEL II 457



The general purpose hydraulic press is designed for hot and cold sheet metal stamping, for straightening and bending, for forging non-ferrous metals and their alloys and for plastics molding operations.

Due to its universal applications, the press is widely used in various branches of industry. Depending on technological requirements, the press can operate either as a single independent unit or in line with other presses.

The press is of the four-column down-acting type with two return stroke cylinders and has a hydraulic plunger-type ejector mounted in the lower platen.

The upper, lower and moving platens are made of cast iron: the columns

platen.

The upper, lower and moving platens are made of cast iron; the columns, the column nuts and hydraulic cylinders are of steel.

The main cylinder is mounted in the bore of the upper platen and is fastened by means of a ring and studs. An inlet for supplying the working fluid is arranged on the top of the cylinder.

The main piston is made of cast iron and is rigidly connected to the moving platen. The plungers of the return stroke cylinders are also fastened to the moving platen. moving platen.

STANKOIMPORT

STANKOIMPORT

- 83

The lower and the moving platens are provided with T-slots for fastening

The lower and the moving platens are provided with T-slots for rastening dies and fixtures.

The columns and the moving platen liners are lubricated by means of grease cups mounted on the moving platen.

Operation of the press is hand-controlled by means of two water distributor valves. One, a four-way valve, switches over the main and the return stroke cylinders while the other, a two-way valve, controls ejector operation. The valves and the valve seats are made of stainless steel.

The press can be driven either from an individual pump or from a hydraulic accumulator unit. Water and emulsion are used as the working fluid.

The press is furnished complete with two water distributor valves, set of packing cups and all the necessary technical instructions for erection and operation of the press.

#### SPECIFICATIONS

STANKOIMPOŖT

### **PLASTICS** MOLDING HYDRAULIC PRESS

**МОДЕ**Ь ПВ 474



The hydraulic press is designed for the compression molding of plastics. It can also be used for stamping small workpieces and in the abrasive manufacturing industry.

The individual hydraulic drive makes the press a self-contained unit, that can be installed at any place in production lines depending on the technological requirements

can be installed at any place in production lines depending on the technological requirements.

The frame is welded of steel plates. The main cylinder is rigidly clamped in the upper part of the frame, and the hydraulic ejector is arranged in the lower portion. The steel slide guides are mounted on the side surfaces of the frame.

The main cylinder is a steel forging. The piston moving in the cylinder, has cast-iron piston rings. The piston rod, carrying the slide on its lower end, is sealed with vinyl-plastics packing cups. Limit switches, limiting the up and down strokes of the slide, are mounted on the right-hand column of the frame.

STANKOIMPORT

The hydraulic ejector is mounted under the table. It consists of the hydraulic cylinder, piston with the rod, guiding sleeve, piston rings and packing cups. The upper and the lower extreme positions of the rod are limited by stroke limit switches, which automatically switch over the ejector hydraulic control

The hydraulic drive mechanism is arranged behind the press as an inde-pendent unit. It consists of an oil reservoir on which a low-pressure vane pump, a high-pressure piston-type pump, electric motor and control devices are

mounted.

The oil reservoir is equipped with an oil cooler.

The table and the slide are provided with steel bolster plates having T-slots for clamping the molds. The bolster plates are heat-insulated from the table and the slide by spacers.

Control is effected by means of push-button stations.

Hydraulic control of the main and the ejector cylinder circuits is accomplished by means of two piston-type three-way valves which, in turn, are controlled by push-buttons through electromagnets. The pumps are provided with automatic relief valves.

trolled by push-buttons inrough electromagnets. The pumps are provided with automatic relief valves.

The press is furnished complete with the high- and low-pressure pumps, hydraulic controls, piping, electric motor, electrical equipment and all the necessary technical instructions for the erection and operation of the press.

#### SPECIFICATIONS

Rated capacity, t Return stroke capacity, t Ejector up-stroke capacity, t Ejector up-stroke capacity, t Ejector up-stroke capacity, t Maximum stroke of slide, mm Down-stroke, mm Down-stroke idle speed, mm/see Down-stroke working speed, mm/see Return stroke speed, mm/see Ejector up-stroke speed, mm/see Ejector down-stroke speed, mm/see Maximum dwell with pressure ap- piled, min Maximum dwell with pressure ap- piled, min Maximum forking pressure, kg/sq.cm Distance clear between columns, mm Size of bolster plates, mm: F. to B. R. to L.	100 54 8.8 2.5 550 120 50 1.10 46.5 13 45 200 710 600 700	Maximum distance between holster plates, mm
		kg approx. 4000

STANKOIMPORT

### **PLASTICS** MOLDING HYDRAULIC PRESS

**МОДЕ**Ь П 476



The hydraulic press is designed for the compression molding of plastics. It can also be used for stamping small workpieces and in the abrasive manufacture of the compression of the co

turing industry.

The individual hydraulic drive makes the press a self-contained unit, that can be installed at any place in production lines depending on the technological

requirements.

The frame is welded of steel plates. The main cylinder is rigidly clamped in the upper part of the frame, and the hydraulic ejector is arranged in the lower part. The steel slide guides are mounted on the side surfaces of the frame. Two compartments are provided in the frame. The left-hand compartment is designed for electrical equipment and the right-hand compartment, for control mechanism.

The real activities is a steel foreign. The rod connected to the piston moving

The main cylinder is a steel forging. The rod, connected to the piston moving in the cylinder, is guided in the bronze sleeve. The piston has cast-iron piston rings, The rod is sealed with vinyl-plastics packing cups.

STANKOIMPORT

The cast-iron slide is of a box-form and is reinforced with internal stiffening ribs. The guides of the slide are made as separate strips and can be adjusted

ribs. The guides of the slide are made as separate strips and can be adjusted for wear.

The hydraulic ejector is arranged under the table of the press. It consists of the hydraulic cylinder, piston with the rod, guiding sleeve, piston rings and packing cups. The ejector rod stroke is limited by the upper and lower limit switches, that automatically switch over the ejector hydraulic control system.

The hydraulic drive mechanism is arranged behind the press as an independent unit. It consists of an oil reservoir on which a low-pressure vane pump, high-pressure piston pump, electric motor and hydraulic control equipment are mounted. The oil reservoir is equipped with an oil cooler, which, when required, can also be used as an oil heater.

The table and the slide are provided with cast-iron bolster plates having T-slots for clamping the molds. The bolster plates are insulated from the table and the slide by spacers.

Control is effected by means of push-buttons.

Hydraulic control of the main and the ejector cylinder circuits is accomplished by means of two piston-type three-way valves, which, in turn, are controlled by push-buttons through electromagnets. The pumps are provided with automatic relief valves.

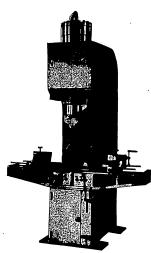
The press is furnished complete with high-pressure pump, low-pressure pump, oil reservoir, hydraulic control, piping, electric motor, electrical equipment and technical instructions necessary for erection and operation of the press.

Sr.	ECIF1	UATIONS	
Ejector üp-stroke capacity, t. Ejector down-stroke capacity, t. Maximum stroke of slide, mm Maximum stroke of slide, mm Maximum stroke of slide of slide, mm Maximum stroke of slide speed, mm/sec Slide working stroke speed, mm/sec Slide working stroke speed, mm/sec Ejector down-stroke speed, mm/sec Ejector down-stroke speed, mm/sec Maximum dwell with pressure ap- Maximum working pressure, Ig/squem working pressure, Ig/squem working between columns, mm Size of bolstep blates, mm: E/ to Bl. F.	160 29.4 111.3 2.5 600 200 45 1.0 40 12 54 45 200 760 650 750	Maximum distance between bolster plates, mm  High-pressure pump capacity, 1/min High-pressure pump working pressure, kg/sq.cm. Low-pressure pump capacity, 1/min Low-pressure pump working pressure, kg/sq.cm. Low-pressure pump working pressure, kg/sq.cm. Low-pressure pump working pressure, kg/sq.cm. Overall dimensions including hydraulic drive, mm.  F. to Ba. F. to L.  Maximum height above floor level, mm. Net weight including hydraulic drive.	900 5 200 100 65 4.5 1000 1665 1405 3895
'		· kg approx. (	6000

STANKOIMPORT

### HYDRAULIC STRAIGHTENING PRESS

**МОДЕ** П 413



The hydraulic straightening press is designed for straightening crankshafts and camshafts of automobile and tractor engines, shafting pipes and other similar parts.

SIMILAR PARTS.

The press can also be used for stamping small workpieces produced by bending, flanging, blanking drawing as well as for pressing-fitting sleeves, bearings, etc.

bearings, etc.

This press is widely used in forging, stamping, heat treatment and assembly departments of automobile and machine building plants, as well as in repair shops.

The frame is made of welded steel plates. The frame carries the hydraulic

cylinder and the table.

The hydraulic drive and oil reservoir are arranged inside the frame to pro-

The hydraulic drive and oil reservoir are arranged inside the rame to provide compact installation.

The piston-type plunger is made of east iron and has three east-iron pistorings. The piston rod is guided in a cast-iron sleeve and is sealed with packing cups of "Sevanite" (special oil resistant rubber). The collars are held in the

cylinder bore by means of cast-iron ring and a steel flange. The lower free end of the plunger is provided with a dovetail adapter for attaching straighten-

end of the plunger is provided with a dovetan adapter for attaching straightening and stamping tools.

The welded table has a slot on its upper surface for setting two pressure-blocks and two side slots for mounting centres.

The steel pressure block can be adjusted by hand and set in positions corresponding to the length of the workpiece to be straightened.

The centres are designed for checking the workpiece with a dial gauge. The centres are mounted in carriages, which move along the side slots of the table on rollers. The carriages are mounted on springs, so that after each press stroke, the workpiece, together with the centres raises away from the pressure blocks and can be easily rotated on the centres. and can be easily rotated on the centres.

The press is driven by a vane pump which is powered by an individual

Control is effected by means of a handle and a pedal. Five push-buttons for motor control, electro-magnetic reversing valve and piston switching valve

motor control, electro-magnetic reversing valve and piston switching valve control are also provided.

Lubrication. Working parts of the cylinder, pump and other equipment are continuously lubricated with oil from the hydraulic circuit of the press.

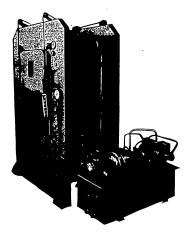
The press is furnished complete with electrical equipment and wiring, hydraulic drive, hydraulic control valves, piping, set of packing glands, straightening accessories of the table, grease gun and oil can, limit switches, oil reservoir, hydraulic pressure gauge and a set of technical instructions necessary for erection and operation of the press.

#### SPECIFICATIONS

Rated capacity, t	25	Table height above floor level, mm Maximum distance between centres,	
kg/sq.cm	50	mm	1100
Pump conscier 1/min	300	Height of centres above table sur-	
Pump capacity, 1/min	100	_ face, mm	150
Speed of piston down stroke, mm/sec	34	Electric motor power, kW	7
Speed of piston up stroke, mm/sec	67	Speed of electric motor and speed of	
Maximum distance between upper pressure block and table, mm	450	pump, r.p.m. Overall dimensions, mm:	1000
		F. to B	1260
Frame gap, mm	250	R. to L	1730
Table size, mm:		Height above floor level	2800
F. to B	300	Net weight without electrical equip-	2000
R. to L	1615	ment, kg approx.	0070

### HYDRAULIC DIE EMBOSSING PRESS

морет и 023



The hydraulic press is designed for die sinking operations in high carbon

The hydraulic press is designed for die sinking operations in high carbon and alloy steels.

The press is widely used in shops manufacturing dies for hammers and presses. If required, it can be used as a general purpose press for sheet metal stamping operations, for straightening and calibration as well as for briquetting abrasives and molding plastics.

The trame of the press consists of the front and the back plates between which the cast steel and sides are secured. On the top of the frame a steel crown is firmly secured, between the plates, and the steel hydraulic cylinder is fastened in the bottom of the frame.

The piston of the hydraulic cylinder unit is made of cast iron and the cups are rubberized fabric.

The piston of the hydraunc cylinder unit is made of east fron and the cups are rubberized fabric.

The slide is made of east steel and is firmly secured to the outer end of the plunger by means of pins.

The press is driven from two vane pumps powered by a single electric motor.

The pumps and other hydraulic equipment, except the non-return and relief valves, are mounted on the welded steel oil tank.

The intensifier is designed for increasing the pressure of the liquid flowing to the hydraulic cylinder at the moment of pressing.

The hydraulic control equipment includes:

STANKOIMPORT

a) a relief valve, designed to limit the maximum pressure in the hydraulic system to any desired adjustable valve;
b) two solenoid-controlled and operated reversing valves, designed for controlling the direction of liquid flow. One directs the oil flow either to the intensifier or to the servo-motor of the relief valve; the other valve directs the liquid flow alternately to the left and to the right-hand recesses of the intensified culture. sifier cylinder;

siner cylinder;

a) a pressure relay designed for switching-over the electrical circuit when
the required pressure is reached;

d) by-pass and non-return valves mounted in one valve body. The by-pass
valve is designed for free flow of liquid from the cylinder to the tank during
the return stroke. The non-return valve separates the high pressure line from
the low pressure line

the return stroke. The non-return valve separates the high pressure line from the low pressure line.

Press operation is controlled by means of push-buttons that provide for lowering the piston, pressing stroke, and for lifting the piston.

The guards are designed for protecting the operator from flying splinters in case of destruction of the workpiece. The guards have plexiglass inspection windows to observe the process of pressing. The guards are equipped with limit switches which are electrically interlocked with the press control in such a way that the press can not be started until both guards are properly closed.

The slide guides are lubricated by means of grease cups. The guard hinges are lubricated by a lubricating gun. The other working mechanisms of the press are self-lubricating.

The press is furnished complete with electric motor, electrical equipment and wiring, hydraulic drive and controls, oil tank, piping, set of packing cups, pressure gauge, protecting guards and all the necessary technical instructions for erection and operation of the press.

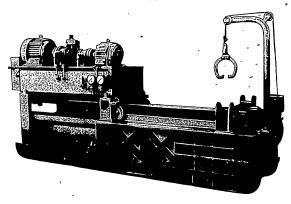
#### SPECIFICATIONS

Rated capacity, t         1000           Slide stroke, mm         350           Die space, mm         650	Small pump capacity, l/min
Working surface of slide, mm. $750 \times 800$ working pressure, kg/s <sub>c</sub> ,cm	Power, kW   4.5

STANKOIMPORT

### HYDRAULIC SCRAP METAL BALING PRESS

MODEL III 100



The press is designed for baling sheet metal scrap, as well as scrap of ferrous and non-ferrous metals. It is mounted on skids. It can be moved to any required site and installed without a foundation.

The press can be used in scrap storage yards, in metal salvage works as well as in machine building and metal-working plants having sheet and strip metal

as in machine building and media-working plants having sheet and stelly metal waste.

The press comprises the following principal units: bed, first and second baling mechanisms, shutter mechanism, drive.

The bed is welded of steel plates. It consists of a base and four sides. The sides are ribbed and are bolted to the base and to each other. The inside of the pressure box is surfaced with wear-resistant steel liners. A tube, used for a rotary crane installation, is welded to the rear wall of the bed. This crane is to be used for lifting the baled scrap from the press box.

The first baling mechanism consists of a cast-iron hydraulic cylinder with a piston-type plunger. The plunger is sealed with piston rings made of high-quality cast iron. The rod and the cylinder are sealed by means of rubberized cotton fabric packing cups. The free end of the rod carries a slide, the working side of which is lined with wear-resistant plates. The cylinder is arranged on the front wall of the press box and is fastened with four bolts.

The second baling mechanism is identical to the first, but is arranged on the side wall of the press box, and operates only at the end of the stroke of the first baling mechanism.

first baling mechanism.

The shutter mechanism is used for closing the box during the pressing operation. It consists of a hydraulic cylinder, a carriage and a cover. The cylinder is mounted under the oil reservoir. The free end of its piston rod is rigidly connected to the carriage. The cover is connected to the carriage by means of two hinges. The shutter is locked by swinging the hinges relative to the journals. When opening the shutter, first the carriage moves back, lifting the front end of the shutter cover: After a gap appears between the baled scrap and the shutter cover, the shutter opens.

The press is driven from two vane pumps, which, in turn, are driven by individual electric motors. The pumps and hydraulic control equipment are mounted on the oil reservoir arranged over the press on special stays.

Control. The electric motors are push-button controlled,
Hydraulic cylinders are controlled by means of two-way hand-operated valves. One valve is for controlling the shutter mechanism cylinder operation and the other valve is for the cylinders of the first and second baling mechanisms. At the neutral position of the valves, the pumps are connected to the drain. Between the pumps and the shutter cylinder control valve, an automatically operated valve is mounted to divert the oil flow from the pumps to cylinders of the first and second baling mechanisms when the pressure in the shutter cylinder reaches 25 kg per sq. cm.

The press is furnished complete with electrical equipment and wiring, hydraulic pumps, control and safety valves, pressure gauges, oil reservoir, set of packing glands, set of wrenches and technical instructions necessary for installation and operation of the press.

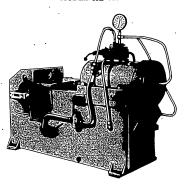
#### SPECIFICATIONS

Capacity of first baling mechanism, t 70 First vane pump:	
Capacity of second baling Capacity, 1/min	70
mechanism, t	g/sa.em 65
Dimensions of press box, open, mm Speed, r.p.m.	980
Delight 1780 First summer alastic market	
77 Ident 700 Douge 1-337	10
	980
	950
Length 300 Second vane pump:	
Width 280 Capacity, 1/min	100
Height 502 Maximum pressure, k	g/sq.cm . 65
Bale weight (specific weight 1.9), kg 80 Speed, r.p.m	980
Maximum thickness of baling scrap. Second pump electric motor:	:
mm 3 Power, kW	10
Unit pressure at the end of the first Speed, r.p.m.	980
baling slide stroke, kg/sq.cm. 20 Overall dimensions	,
Unit pressure at the end of the second Tongth	4875
baling slide stroke, kg/sq.em. 70 Width	2300
Pressing time, min	2000
Number of pumps 2 Net weight, kg	nnrox 9000

TANKOIMPORT

### HYDRAULIC FORCING PRESS

МОДЕL ПБ 002



The press is designed for press fitting the pins of caterpillar links for tractors, as well as for other similar operations.

The press finds application in tractor plants, as well as in repair shops. Complete equipment consists of: press, roll table and winch.

The bed is a box-sectioned grey iron casting, divided by an inside partition into two compartments. For compactness the hydraulic drive is mounted in one of the compartments, while the other serves as a reservoir for the working fluid. The hydraulic cylinder and the table are mounted above the bed.

The working cylinder is a steel forging. A hollow piston-type plunger located in the cylinder transmits pressure to the work.

The drive is from a vane pump which pumps liquid under pressure into the cylinder. The pump is driven by an individual electric motor. The pump shaft is connected directly to the motor shaft through a flexible coupling.

The hydraulic intensifier is designed for raising pressure in the working cylinder at the moment of pressing. Preliminary filling of the cylinder and the reverse stroke are accomplished directly by the pump.

Control is effected by means of a hand-operated slide valve. The slide valve comprises a steel body, distributing plunger, two covers and operating lever. The slide valve is connected by a piping system to the pump, the recesses of the working and the reversing cylinders, the intensifier and the outlet.

The relief valve protects the hydraulic system from damage if the pressure rises above the presst limit.

The winch is operated by a hand drive and facilitates feeding the crawler tracks to the roll table and from the roll table to the press and back again.

back again.

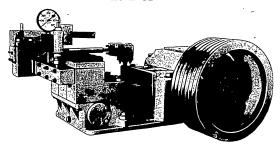
The press is delivered complete with the hydraulic drive, the piping system, control valves, electrical equipment and wiring, a set of working tools, roll table, winch, a set of plunger sealing rings and gland packing, as well as all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Rated capacity, t	100 320	Vane pump: Capacity, 1/min	3
Maximum	635 315	Pressure, kg/sq.cm	6 95
Table adjustment in height, mm Distance from centre of die holder to	30	kg/sq.cm	4 5
table, mm: Maximum Minimum	70 40	Electric motor speed, r.p.m	950
Height of table above floor level, mm: Maximum	890	Length Width Height	118
Minimum Distance from centre of die holder to	860	Net weight of press kg approx	8500
frame, mm	120 60	Net weight of roll table, kg Net weight of tools, kg	100

### HORIZONTAL TRIPLEX PLUNGER PUMP

МОДЕТ LP 324



The pump is designed for: individual direct hydraulic press drive, hydraulic

The pump is designed for: individual direct hydraulic press drive, hydraulic accumulator stations, driving various hydraulic mechanisms.

The pump comprises the following principal units: frame, crankshaft and connecting rod assembly, cylinder, high-pressure accumulator, universal shutoff valve, safety valve, drive.

The frame is made of east iron and is provided with two housings for crankshaft bearings and three supports for the slide bushings. The three cylinders are mounted on the front part of the frame.

The crankshaft and connecting rod assembly comprises a forged steel crankshaft and three welded steel connecting rods, mounted on rolling friction bearings. The slides are of cylindrical shape and travel in the bushings mounted on the frame. Steel plungers are fastened to the slides.

The cylinders are steel forgings. Suction and pressure valves are mounted in the cylinders. The valves are made of high-quality stainless steel, assuring high-quality pump service.

The high-pressure accumulator is mounted at the end of the cylinders. The accumulator is equipped with a high-pressure gauge and a safety valve. A universal shut-off valve is intended for diverting the pump discharge to the overflow sink, when there is no demand for high-pressure water supply. The valve operates automatically.

The safety valve safeguards the hydraulic system and the piping against damages when pressure rises above the maximum.

The drive is from an individual A. C. electric motor through a multiple V-belt running over the flywhel-pulley.

Lubrication of the crankshaft and connecting rod mechanism is effected by the splash-system. Machine oil is poured into the pump housing to the level gauge mark.

The plungers are lubricated through grease cups.

STANKOLMPORT

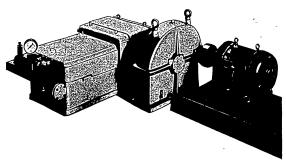
The pump is delivered complete with the electrical equipment, a set of Y-belts, oil-guns, a set of packing gaskets and glands, a set of wrenches and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Capacity, I/min Working pressure, kg/sq.cm Plunger diameter, mm Plunger stroke, mm Number of strokes per minute Universal shut-off valve, mm:	200 40	Minimum height of feed tank above floor level, mm	3500 40
Diameter of non-return valve passage Diameter of reverse valve passage Safety valve adjustment, kg/sq.om.	32 32 230	Length Width Maximum height above floor level, mm. Net weight, kg approx.	1315

### HORIZONTAL TRIPLEX HYDRAULIC PUMP

MODEL Γ 347



The horizontal triplex hydraulic pump is designed for direct connection to hydraulic presses, hydraulic accumulator installations, driving various hydraulic mechanisms.

draulic mechanisms.

The pump comprises the following principal units: frame, crankshaft and connecting rod assembly, cylinder block, high- and low-pressure accumulators, relief valve, safety valve, gear reducing unit, drive.

The frame is of a box-type internally ribbed grey iron casting.

The crankshaft and connecting rod assembly consists of a forged steel crankshaft main journals are mounted in roller bearings.

The cylinder block is made of forged steel and has three housings for plungers, suction and pressure valves and packings.

The pump plungers are made of high-quality forged steel and reciprocate in bronze liners. Packings for the plungers and valves are made of vinyl-plastics.

plastics.

The high-pressure accumulator is mounted on the top of the cylinder block. A high-pressure gauge, a safety valve and a relief valve are mounted on the accumulator. The latter is arranged on the outflow line.

The low-pressure accumulator is arranged under the cylinder block and is connected to the supply line.

The relief valve is designed for diverting the pump water from the pressure circuit to the drain when there is no demand for high-pressure water supply.

The safety valve is designed for discharging the high-pressure water to the drain when the pressure in the high-pressure circuit rises above the preset maximum.

maximum.

The relief valve and the safety valve operate automatically.

All valves and valve seats are made of forged stainless steel.

STANKOIMPORT

The gear reducer is designed as a separate unit. It consists of a cast-iron split-type housing and a pair of herring-bone gears.

The pump drive is from an A. C. electric motor. Power is transmitted through a flexible toothed clutch, to the driving shaft of the reducing unit, and then, from the driven shaft, through a second toothed clutch, to the pump crank-

shaft.

Lubrication of the pump is accomplished by means of a small gear pump, which is driven from the crankshaft.

Gears and bearings of the gear reducing unit are splash-lubricated by oil poured into the housing.

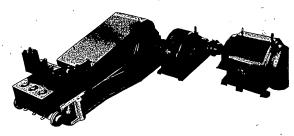
The pump is furnished complete with electric motor, electrical starting and protective devices, centralized lubricating system, reducing unit, toothed clutches and all the necessary technical instructions for erection and operation of the numn. of the pump.

#### SPECIFICATIONS

Cranksnatt speed, r.p.m.   130   Gear rr	Height 948
--	------------

### HORIZONTAL TRIPLEX HYDRAULIC PUMP

MODEL F 359



The horizontal triplex hydraulic pump is designed for: hydraulic air or weighted accumulator installations, driving various hydraulic mechanisms. The pump comprises the following principal units: frame, gear reducing unit, crankshaft and connecting rod assembly, cylinder block with high- and low-pressure accumulators, relief and safety valves, drive.

The frame is a box-type internally ribbed grey iron casting carrying all other units of the pump.

The frame is a box-type internally ribbed grey iron easting carrying an other units of the pump.

The gear reducer is designed as a separate unit. It consists of a cast-iron split type housing and a pair of helical gears.

The crankshaft is a carbon steel forging.

The I-section connecting rods are made of cast steel.

The cylinder block and the high-pressure accumulator are made of-a solid forged steel block having housings for plungers, guiding bronze liners, packings, as well as suction and pressure valvés.

Packings are made of vinyl-plastics possessing high strength and heat resistance.

The high-pressure accumulator is provided with a relief valve, on one end,

The high-pressure accumulator is provided with a relief valve, on one end, and with non-return and safety valves on the other. The low-pressure accumulator is arranged under the cylinder block and is connected to the supply line.

The relief valve is designed for diverting the pump water from the pressure circuit to the drain when there is no demand for high-pressure water supply. The safety valve is designed for discharging the high-pressure water to the drain when the pressure, in the high-pressure circuit, rises above the preset maximum. The relief and the safety valves operate automatically. The non-return valve provides for a flow high-pressure water in one direction only, i.e., from the pump to the user and prevents return of fluid. All the valves and valve seats are made of forged stainless steel.

The pump drive is from an individual synchronous electric motor, which

The pump drive is from an individual synchronous electric motor, which has a direct current exciter. The shaft of the exciter motor and the shaft of the

STANKOIMPORT

electric motor are connected by means of a flexible coupling. Power is transmitted from the electric motor, through a flexible toothed clutch, to the gear reducing unit, and then through a second toothed clutch to the crankshaft.

Lubrication of all friction surfaces of the pump is accomplished by means of a gear pump mounted directly on the frame and driven from the crankshaft.

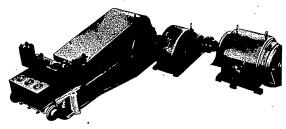
The pump is furnished complete with electric motor, electric motor exciter, electrical starting and protective equipment, wiring on the pump, centralized lubricating system, set of valves and packing cups, toothed flexible couplings, oil cooler and all the necessary technical instructions for erection and operation of the pump.

#### SPECIFICATIONS

	•
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Pump weight, kg         15600           Dimensions of gear reducing unit, mm:         1460           Length         130           Width         700           Height         1336           Gear ratio         5.87           Weight of unit, kg         2400           Overall dimensions of pump plant in-
Speed, r.p.m. 750	cluding electrical equipment, mm:
Pump dimensions, mm:         4125           Length         425           Width         2210           Height         1515	Length 5730 Width 6400 Height 1515 Total weight, kg approx. 21510

### HORIZONTAL TRIPLEX HYDRAULIC PUMP

морел г з44



The horizontal triplex hydraulic pump is designed for hydraulic air or weighted accumulator installations, driving various hydraulic mechanisms.

The pump comprises the following principal units: frame, gear reducer, crankshaft and connecting rod assembly, cylinder block, relief and safety

valves, drive.

The frame is a box-type internally ribbed grey iron casting carrying all the

valves, curve.

The frame is a box-type internally ribbed grey iron casting carrying all the other units of the pump.

The gear reducer is designed as a separate unit. It consists of a cast-iron split-type housing and a pair of gears.

The crankshaft is a carbon steel forging.

The I-section connecting rods are made of cast steel.

The cylinder block and the high-pressure accumulator are made of a solid forged steel block, having housings for plungers, guiding bronze liners, packings, as well as suction and pressure valves.

Packings are made of vinyl-plastics of high strength and heat resistance. The high-pressure accumulator is provided with a relief valve on one end, and with a non-return and safety valve on the other.

The low pressure accumulator is arranged under the cylinder block and is connected to the supply line.

The relief valve is designed for diverting the pump water from the pressure circuit to the drain when there is no demand for high-pressure water supply.

The safety valve is designed for discharging the high-pressure water to the drain when the pressure, in the high-pressure circuit, rises above the preset maximum.

The relief and safety valves operate automatically.

The non-return valve provides for a flow of high-pressure water in one direction only, i.e., from the pump to the user and prevents return of fluid. All of the valves and valve seats are made of forged stainless steel.

The pump drive is from an A. C. electric motor. Power is transmitted through

a flexible toothed clutch, gear reducing unit and a second toothed clutch to the crankshaft.

STANKOIMPORT

STANKOIMPORT

Lubrication of all friction surfaces of the pump is accomplished by means of a gear pump mounted on a special oil reservoir and driven by an individual electric motor.

Gears and bearings of the gear reducing unit are splash-lubricated by oil poured into the housing

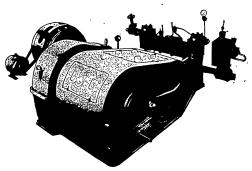
General and bearings of the general reducing mine are spansificated by on poured into the housing.

The pump is furnished complete with the electric motor, starting and protective equipment, wiring on the pump, centralized lubricating system, set of valves and packings, toothed clutches, oil cooler, set of wrenches and all the necessary technical instructions for erection and maintenance of the pump.

#### SPECIFICATIONS

### HORIZONTAL TRIPLEX HYDRAULIC PUMP

MODEL Γ 301



The horizontal triplex hydraulic pump is designed for: hydraulic air or weighted accumulator installations, driving various hydraulic mechanisms.

The pump comprises the following principal units: frame, gear reducer, crankshaft and connecting rod assembly, cylinder block, high- and low-pressure accumulators, relief and safety valves, drive.

The frame is a box-type internally-ribbed grey iron casting, made integral with the gear reducing unit housing, and carrying all the other units of the pump.

pump.

The gear reducing unit has one pair of herring-bone gears. The driving shaft runs in cylindrical roller bearings mounted in the frame. The crankshaft is mounted in self-aligning roller bearings.

The crankshaft and connecting rod assembly consists of a forged steel crankshaft, three steel connecting rods and slide blocks. The connecting rods are connected by means of the wrist pins to the slides that reciprocate in the frame guides.

guides.

The pump plungers are made of a high alloy forged steel. The packing glands on the plungers are made of rubberized fabric. The plunger surfaces are rendered highly wear-resistant and anti-corrosive by means of nitriding. The cylinder block and the high-pressure accumulator are made of a solid forged steel block having housings for plungers and packing devices, as well as for the suction and pressure valves. The high-pressure accumulator is connected to the high-pressure property and to the sink through a non-reteur valve.

The low-pressure accumulator, connected to the supply line, is arranged under the cylinder block and fastened to it by means of studs.

STANKOIMPORT

STANKOIMPORT

The relief and safety valves are arranged directly on the high-pressure accumulator. The relief valve is designed for diverting the pump water from the pressure circuit to the drain when there is no demand for high-pressure water supply. The safety valves are designed for discharging the high-pressure water to the drain when the pressure in the high-pressure circuit rises above the preset maximum. The relief and safety valves operate automatically. All the valves and the valve seats are made of forged stainless steel.

The pump drive is from an individual synchronous electric motor coupled to the reducing unit input shaft through a flexible toothed clutch. The synchronous electric motor is provided with a direct current exciter, which is connected to the main electric motor through a V-belt drive.

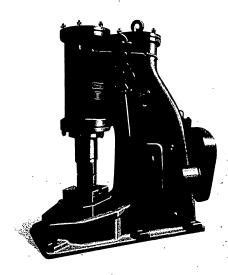
Lubricating of all friction surfaces of the pump is accomplished by means of a centralized lubricating pump station. The operation of the lubricating system is controlled by means of electrical contact pressure gauges and the pressure line oil supply relay. When the pressure in the oil pressure line drops below the preset minimum, the above-mentioned devices automatically switch off the main electric motor of the pump. This lubricating system provides for full reliability of pump operation.

The pump is furnished complete with electric motor, electric motor exciter, electrical starting and protective equipment, wiring on the pump, centralized lubricating system, set of valves and packings, set of V-belts, toothed coupling and the necessary technical instructions for erection and maintenance of the pump.

#### SPECIFICATIONS

Pump capacity, I/min.         68           Working pressure, kgka,cm.         32           Plunger diameter, mm.         42           Plunger storke, mm.         42           Crankshaft speed, r.p.m.         52           Suction pipe diameter         6           Discharge pipe diameter         4           Electric motor power, kW.         47	Overall dimensions including drive, mm:  Length
250ctile motor power, kW 470	Electric motor weight, kg approx. 5300

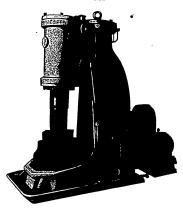
# HAMMERS



STANKOIMPORT

### **PNEUMATIC** POWER FORGING HAMMER

MODEL ME 412



The hammer is designed for a wide variety of forging operations, by the general forging method in flat and swage dies, such as: drawing, hole piercing, hot cropping, forge welding, bending, twisting and stamping in open dies.

The erection of self-contained pneumatic power hammers does not require considerable investment, as there is no need for steam boilers, compressor stations, steam or compressed air piping.

The hammer is driven from individual squirrel-cage type electric motor. The hammer can be effectively applied not only in repair shops but also in forging shops of various industries.

The principal features of the hammer are: ample available energy, economical operation, perfect control, ability of the ram to strike blows of varying force owing to the sensitive power control, maximum utilization of the heat of the forging owing to the large number of strokes, high efficiency, possibility of holding down the forging under ram pressure, accessibility of the hammer from three sides, simplicity of maintenance.

The hammer is provided with a double-acting air distributing system.

The necessary coordination between the upper and lower recesses of the working and compressor oyinders is provided for by means of a control hand lever and a treadle. Different valve positions permit five distinct cycles of operation: running idle, ram "hold-up", continuous operation, single strokes, holding down or "squeezing" the forging.

STANKOIMPORT

<del>-</del> 109

Consecutive compression and exhaust of air in the working cylinder by the compressor piston imparts the reciprocating motion to the ram.

The compressor piston is driven through a crank mechanism and two-stage speed reduction gearing from an individual type electric motor.

The first stage of power transmission is through a V-belt drive to ensure a flexible connection of the electric motor with the hammer.

The second stage comprises a spur gear drive.

A safety device is provided to prevent the ram from striking the upper cylinder cover.

The ram is made of forged steel but is available also as a high-quality steel

The ram is made of forged steel but is available also as a high-quality steel casting with unfinished internal surfaces.

The anvil block is a solid grey iron casting; its weight is equal to 12 times the nominal weight of the falling parts of the hammer.

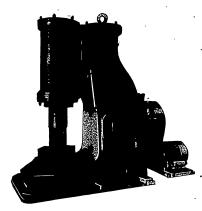
The working and compressor cylinders are lubricated by a drip oil cup. The gear drive operates in an oil bath.

The hammer is delivered complete with electric motor and starting equipment, anvil block, upper and lower hammer dies, fastening wedges and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

### **PNEUMATIC** POWER FORGING HAMMER

MODEL M 415 A



The hammer is designed for a wide variety of forging operations by the general forging method in flat and swage dies such as: drawing, hole piercing, hot cropping, forge welding, bending, twisting and stamping in open dies.

The erection of self-contained pneumatic power hammers does not require considerable investment, as there is no need for steam boilers, compressor stations, steam or compressed air piping.

The hammer is driven from an individual electric motor.

The hammer is driven from an individual electric motor.

The hammer can be effectively applied not only in repair shops but also in forging shops of various industries.

The principal features of the hammer are: ample available energy, economical operation, perfect control, ability of the ram to strike blows of varying force owing to the sensitive power control, maximum utilization of the heat of the forging owing to the large number of strokes, high efficiency, possibility of holding down the forging under ram pressure, accessibility of the hammer from three sides, simplicity of maintenance.

The hammer is provided with a double-acting air distributing system. The necessary coordination between the upper and lower recesses of the working and compressor cylinders is provided for by means of a control had lever and a treadle. Different valve positions permit five distinct cycles of operation: running idle, ram "hold-up"; continuous operation, single strokes, holding down or "squeezing" the forging.

STANKOIMPORT

STANKOIMPORT

Consecutive compression and exhaust of air in the working cylinder by the compressor piston imparts the reciprocating motion to the ram.

The compressor piston is driven through a crank mechanism and two-stage speed reduction gearing from an individual electric motor.

The first stage of power transmission is effected through a V-belt drive to ensure a flexible connection of the electric motor to the hammer.

The second stage comprises a spur gear drive.

A safety device is provided to prevent the ram from striking the upper cylinder cover.

A safety device is provided to prevent the rain from senting only cylinder cover.

The ram is made of forged steel but is available also as a high grade steel casting with unfinished internal surfaces.

The anvil block is a solid grey iron casting; its weight is equal to 12 times the nominal weight of the falling parts of the hammer.

Lubrication of the working and compressor cylinders is effected by a special lubricating pump station. The gear drive operates in an oil bath.

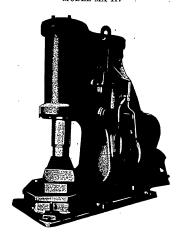
The hammer is delivered complete with the electric motor and starting equipment, anvil block, upper and lower hammer dies, fastening wedges, lubricating pump station and all the necessary technical instructions for crection and maintenance.

#### SPECIFICATIONS

Nominal weight of falling parts, kg Number of strokes per minute Effective kinetic energy of falling	400 130	Maximum stroke of ram, mm Electric motor power, kW	700
parte learn of falling		Dieceric motor power, kW	28
Distance from center of ram to	950	Electric motor speed, r.p.m Floor space, mm:	1500
	520	2.001 space, mm:	
	520	F. to B	1900
box, mm		Maximum height above floor level	3170
Hammer die surface			00##
Hammer die surface, mm 100> Height of lower die face above floor level, mm	(265	Net weight without anvil block, kg	2000
level, mm	750	Net weight of anvil block, kg	8630 4800

### **PNEUMATIC** POWER FORGING HAMMER

MODEL MA 417



The hammer is designed for a wide variety of forging operations by the general forging method in flat and swage dies, such as: drawing, hole piercing, hot cropping, forge welding, bending, twisting and stamping in open dies.

The erection of self-contained pneumatic power hammers does not require considerable investment, as there is no need for steam boilers, compressor stations, steam or compressed air piping.

The hammer is driven from an individual squirrel-cage type electric motor. The hammer can be effectively applied not only in repair shops but also in forging shops of various industries.

The principal features of the hammer are: ample available energy, economical operation, perfect control, ability of the ram to strike blows of varying force owing to sensitive power control, maximum utilization of the heat of the forging owing to the large number of strokes, high efficiency, possibility of holding down the forging under ram pressure, accessibility of the hammer from three sides, simplicity of maintenance.

The hammer is provided with a double-acting air distributing system. The necessary coordination between the upper and lower recesses of the working and compressor cylinders is provided for by means of a control hand lever and

STANKOIMPORT

STANKOLMPORT

a treadle. Different valve positions permit five distinct cycles of operation: running idle, ram "hold-up", continuous operation, single strokes, holding down or "squeezing" the forging.

Consecutive compression and exhaust of air in the working cylinder by the compressor piston imparts the reciprocating motion to the ram.

The compressor piston is driven through a crank mechanism and a two-stage reduction gearing from an individual electric motor.

The first stage of power transmission is effected through a V-belt drive to ensure a flexible connection of the electric motor to the hammer.

The second stage comprises a spur gear drive.

A safety device is provided to prevent the ram from striking the upper cylinder cover.

The ram is made of forged steel but is available also as a high grade steel

cylinder cover.

The ram is made of forged steel but is available also as a high grade steel casting with unfinished internal surfaces.

The anvil block is a solid grey iron casting; its weight is equal to 12 times the nominal weight of falling parts of the hammer.

Lubrication of the working and compressor cylinders is effected by a special lubricating pump station. The gear drive operates in an oil bath.

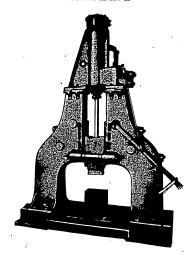
The hammer is delivered complete with the electric motor and starting equipment, anvil block, upper and lower hammer dies, fastening wedges, lubricating pump station and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Nominal weight of falling parts, kg. 750 Number of strokes per minute 105 Effective kinetic energy of falling	Maximum stroke of ram, mm 835 Electric motor power, kW 55
parts, kgm	Electric motor speed, r.p.m 1000
Distance from center of ram to frame, mm	Floor space, mm:
Distance from the lower die face to	F. to B
the lower edge of the ram stuffing box, mm	Maximum height above floor level,
Hammer die surface, mm 130×345 Height of lower die face above floor	mm
level, mm 810	approx. 16930
010	Net weight of anvil block, kg 9000

### AIR OR STEAM ARCH-TYPE DOUBLE ACTION FORGING HAMMER

MODEL M 132 A



This hammer is designed for various forging operations performed by general forging methods on flat dies.

The hammer is actuated by compressed air or steam at a pressure of 6 to 8 atmospheres and can be operated on the following cycles: single strokes of varying force, ram "hold-up", holding down or "squeezing" the forging.

The frame uprights are made of high-quality cast iron and are fastened to a cast-iron bed plate by fitted bolts. In the zone of the guides, the uprights are drawn together by two tie-rods which impart rigidity to the construction and diminish stress in the frame.

The adjustable ram guides ensure accurate guiding of the ram.

The working cylinder is mounted on the upper part of the uprights. The cylinder is made of high-quality cast iron and is fastened to the uprights by fitted bolts. On the top of the cylinder, a safety cylinder head is mounted comprising a safety cylinder and safety piston.

This safety head prevents the working piston from striking the cylinder cover.

STANKOIMPORT

115

STANKOIMPORT

The working piston and the rod are fastened together in a manner ensuring

The working piston and the rod are fastened together in a manner ensuring reliable operation of the hammer. The hammer is provided with a hand-operated control mechanism with an automatic steam cut-out. Control is effected by two levers: the throttle valve and slide valve levers. The position of the throttle valve provides economical steam consumption depending on operating conditions. The position of the slide valve selects one of the available operating cycles.

The anvil block is made of cast iron; its weight is equal to 15 times the weight of the falling parts. Die-cushions and hammer dies are fastened by wedges and keys. Shifting of the anvil block with respect to the foundation is prevented by oak wedges.

The lubricating system is of a combined type: centralized lubrication of the cylinder, rod, slide and throttle valves and ram guides is effected by a pump station, while the control levers are lubricated by hand either through grease or oil cups, or by pouring oil into the oil holes provided. The pump station is actuated by the control lever tie-rod and feeds oil at each stroke of the ram.

The hammer is delivered complete with the anvil block, die-cushion, upper and lower hammer dies, fastening wedges, 8 anchoring plates, 8 anchoring bolts and nuts, lubricating pump station, oil piping and all the necessary technical instructions for erection and maintenance.

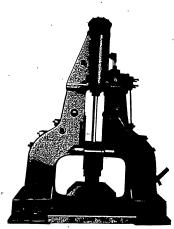
#### SPECIFICATIONS

Nominal weight of falling parts, kg 1000	Rod diameter, mm 110
Effective kinetic energy of falling	Number of strokes per minute, rated 100
parts, kgm 3500	Ram dimensions, mm:
Maximum stroke of ram, mm 1000	F. to B 300
Width clear between uprights, mm 1800	R. to L 490
Width clear between ram guides, mm 430	Floor space, mm:
Distance from lower die to face floor	F. to B
level, mm 750	R. to L
Hammer die surface, mm 230×410	
Inlet steam or air pressure, eff. atm . 6 to 8	Maximum height above floor level,
Exhaust pressure, eff. atm 0.1 to 0.5	mm, 4880
Inlet pipe diameter, inches 2 1/4	Net weight without anvil block, kg
Exhaust pipe diameter, inches 3	approx. 14250
Working cylinder bore, mm 330	Net weight of anyil block, kg 15000

STANKOIMPORT

### AIR OR STEAM ARCH-TYPE DOUBLE ACTION FORGING HAMMER

MODEL M 133 A



The hammer is designed for various forging operations performed by general forging methods on flat dies.

The hammer is actuated by compressed air or steam at a pressure of 6 to 8 atmospheres and can be operated on the following cycles: single strokes of varying force, ram 'hold-up', holding down or 'squeezing' the forging.

The frame uprights are made of high-quality cast iron and are fastened to a cast-iron bed plate by fitted bolts. In the zone of the guides the uprights are drawn together by two tie-rods which impart rigidity to the construction and diminish stress in the frame.

The adjustable ram guides ensure accurate guiding of the ram.

The working cylinder is mounted on the upper part of the uprights by fitted bolts. On the top of the cylinder as afety oylinder head is mounted comprising a safety cylinder and a safety piston. This safety head prevents the working piston from striking the cylinder cover.

The working piston and the rod are fastened together in a manner ensuring reliable operation of the hammer.

STANKOIMPORT

116

The hammer is provided with a hand-operated control mechanism with an automatic steam cut-out. Control is effected by two levers: the throttle valve and slide valve levers. The position of the throttle valve provides economical steam consumption depending on operating conditions. The position of the slide valve selects one of the available operating cycles.

The anvil block is made of cast iron; its weight is equal to 15 times the weight of the falling parts. Die-cushions and hammer dies are fastened by wedges and keys. Shifting of the anvil block with respect to the foundation is prevented by oak wedges.

The lubricating system is of a combined type: centralized lubrication of the cylinder, rod, slide and throttle valves and ram guides is effected by a pump station, while the control levers are lubricated by hand either through grease or oil cups, or by pouring oil into the oil holes provided. The pump station is actuated by the control lever tie-rod and feeds oil at each stroke of the ram.

the ram.

The hammer is delivered complete with the anvil block, die-cushion, upper and lower hammer dies, fastening wedges, 8 anchoring plates, 8 anchoring bolts and nuts, lubricating pump station, oil piping and all the necessary technical instructions for erection and maintenance.

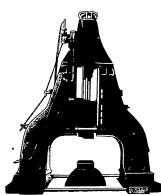
#### SPECIFICATIONS

Nominal weight of falling parts, kg 2000 Effective kinetic energy of falling	Rod diameter, mm
parts, kgm 7000	rated
Maximum stroke of ram, mm 1260	Ram dimensions:
Width clear between uprights, mm 2300	F. to B
Width clear between ram guides, mm 550	R. to L 610
Distance from lower die face to floor	Floor space, mm:
level, mm 750	F. to B 1700
Hammer die surface, mm 290×520	R. to L
Steam or air pressure, eff.atm 6 to 8	Maximum height above floor level,
Exhaust pressure, eff.atm0.1 to 0.5	mm 5640
Inlet pipe diameter, mm 108×5	Net weight without anvil block, kg
Exhaust pipe diameter, mm 133×4	approx. 25620
Working cylinder bore, mm 430	Net weight of anvil block, kg 30000
	<del>-</del>

STANKOIMPORT

### AIR OR STEAM ARCH-TYPE DOUBLE ACTION FORGING HAMMER

MODEL M 134



The hammer is designed for various forging operations performed by general forging methods on flat dies.

The hammer is actuated by compressed air or steam at a pressure of 6 to 8 atmospheres and can be operated on the following cycles: single strokes of varying force, ram "hold-up", holding down or "squeezing" the forging.

The frame uprights are made of high-quality cast iron and are fastened to a cast-iron bed plate by fitted bolts. In the zone of the guides the uprights are drawn together by two tie-rods which impart rigidity to the construction and diminish stress in the frame.

The adjustable ram guides ensure accurate guiding of the ram.

diminish stress in the frame.

The adjustable ram guides ensure accurate guiding of the ram.
The working cylinder is mounted on the upper part of the uprights.
The cylinder is made of high-quality cast iron and is fastened to the uprights by fitted bolts. A safety cylinder head, comprising a safety cylinder and a safety ston is mounted on the top of the working cylinder. This safety head prevents the working piston and the rod are fastened together in a manner ensuring reliable operation of the hammer.

The hammer is provided by a hand-operated control mechanism with an automatic steam cut-out. Control is offected by two levers: the throttle valve and slide valve levers. The position of the throttle valve provides economical steam consumption depending on operating conditions. The position of the slide valve selects one of the available operating cycles.

STANKOIMPORT

The anvil block is made of cast iron; its weight is equal to 15 times the weight of the falling parts. Die-cushions and hammer dies are fastened by wedges and keys. Shifting of the anvil block with respect to the foundation is prevented by oak wedges.

The lubricating system is of a combined type: centralized lubrication of the cylinder, rod, slide and throttle valves and ram guides is effected by a pump station, while the control levers are lubricated by hand either through grease or oil cups, or by pouring oil into the oil holes provided. The pump station is actuated by the control lever tie-rod and feeds oil at each stroke of the ram.

station is actuated by the control ever tie-rod and needs on at each stroke of the ram.

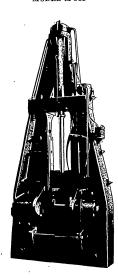
The hammer is delivered complete with the anvil block, die-cushions, upper and lower hammer dies, fastening wedges, 8 anchoring plates, 8 anchoring bolts and nuts, lubricating pump station, oil pumping and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

STANKOIMPORT

### AIR OR STEAM DOUBLE ACTION DROP HAMMER

MODEL M 211



This hammer is designed for hot forging in closed multiple-pass impression

This hammer is designed for hot forging in closed mutapie-pass impression dies.

The hammer is used in forge shops operating on large lot or mass production. The hammer is actuated by compressed air or steam at a pressure of 6 to 8 atmospheres and can be operated on the following cycles: single strokes of varying force, continuous operation, ram "hold-up".

The frame uprights are made of high-quality cast iron and are mounted on the anvil block. The uprights are spanned at the top by a cylinder base plate on which the working cylinder is mounted.

The cylinder is fastened to the uprights by studs with damping springs. A safety cylinder head, comprising a safety cylinder and a safety piston, is mounted on the top of the working cylinder.

STANKOIMPORT

This safety head prevents the working piston from striking the cylinder

cover.

The working piston and the rod are fastened together in a manner ensuring reliable operation of the hammer.

The steam distributing system of the hammer operates through a cylindrical slide valve and a throttle valve, controlled from a treadle.

The ram guides are adjustable and are held to the uprights through damping

springs.

The anvil block is a solid steel casting; its weight equals 20 times the weight

The anvil block is a solid steel casting; its weight equals 20 times the weight of the falling parts.

The die holder is mounted on the anvil block. The lower die is fastened to the die holder is mounted on the anvil block rests freely on an oakwood cushion in a shallow well in the foundation and is secured by oak wedges to prevent axial displacement.

The lubricating system is of a combined type: centralized lubrication of the cylinder, throttle and slide valves and ram guides is effected by a pump station, while the control levers and the contacting surfaces are lubricated by land by means of a grease-gun and an oil-can.

The hammer is delivered complete with the anvil block, die holder, fastening wedges, lubrication pump station, oil piping and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Nominal weight of falling parts, kg 1000 Effective kinetic energy of falling	Superheated steam temperature at inlet 200°C
parts, kgm	Number of strokes per minute, rated 80
Width clear between uprights, mm 560	Ram dimensions, mm:
Width clear between ram guides, mm 500	F. to B
Maximum distance from lower die	R. to L
face to lower edge of guides, mm 220	Die holder size, F. to B., mm 660
Minimum height of lower die face	Floor space, mm:
above floor level, mm 840	F. to B
Minimum height of dies without shanks, mm 220	R. to L 2380
Working cylinder bore, mm 280	Maximum height above floor level,
Rod diameter, mm	mm
nlet steam or air pressure, eff. atm 6 to 8	Net weight without anvil block, kg
Exhaust pressure, eff. atm 0.1 to 0.5	Net weight of anyil block leg 20300

### AIR OR STEAM DOUBLE ACTION. DROP HAMMER

MODEL M 212



This hammer is intended for hot forging in closed multiple-pass impression

dies.

The hammer is used in forge shops operating on large lot or mass pro-

The hammer is used in forge shops operating on large lot or mass production.

The hammer operates on compressed air or steam at a pressure of 6 to 8 atmospheres and can be operated on the following operation cycles: single strokes of varying force, continuous (automatic) strokes, ram "hold-up".

The uprights are made of high-quality steel and are mounted on the anvil block. The uprights are spanned at the top by the cylinder supporting plate on which the working cylinder is mounted.

The cylinder is fastened to the uprights by studs with damping springs. A safety cylinder head comprising a safety cylinder and safety piston is mounted on the top of the working cylinder.

This safety head protects the cylinder cover from heavy blows by the piston. The method of fastening the piston to the rod ensures reliable operation of the hammer.

The method to the harmonic of the harmonic.

Steam distribution is accomplished by a cylindrical slide valve and a throttle. The valve and the throttle are controlled from a treadle.

STANKOIMPORT

The anvil block is a solid steel casting, with a weight equalling 20 times the weight of the falling parts.

On the anvil block is mounted a die holder, to which the lower die is fastened by a key and wedge. The anvil block rests freely on an oak-wood cushion in a shallow well in the foundation and is secured by oak wedges to prevent axial displacement.

The lubricating system is of a combined type. The cylinder, slide valve throttle and guides have centralized lubrication from a pump station, while the control levers and joint surfaces are lubricated by hand with a grease-gun and an oil-can.

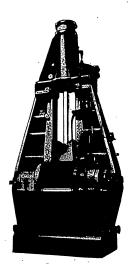
the control levers and joint surfaces are indirected by hand with a grease-gui and an oil-can.

The hammer is delivered complete with anvil block die holders fastening wedge, lubricating pump station and piping, a set of wrenches and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Width clear between uprights, mm. 900 Width clear between guides, mm. 900 Maximum distance from lower die face to lower edge of guides, mm. 970 Minimum height of lower die face above floor level, mm. 940 Minimum height of dies without	Diameter of rod, mm
--	---------------------

### $3150 \, \mathrm{kg}$ AIR OR STEAM DOUBLE ACTION DROP HAMMER



The hammer is designed for hot forging in closed multiple-pass impression

dies.

The hammer is used in forge shops operating on large lot or mass production. The hammer is actuated by compressed air or steam.

The frame uprights are made of cast steel and are mounted on the anvil block. To facilitate setting up dies, the uprights can be adjusted along the anvil block by means of wedges. The uprights are spanned at the top by the cylinder base plate on which the working cylinder is mounted. The cylinder is fastened to the uprights by studs with damping springs.

A safety cylinder head, comprising a safety cylinder and a safety piston, is mounted on the top of the working cylinder. This safety head prevents the working piston from striking the cylinder cover.

The working piston and the rod are fastened together in a manner ensuring reliable operation of the hammer. The piston is shrunk on the upper taper

STANKOIMPORT

STANKOIMPORT

124

end of the rod without subsequent riveting over. The lower taper end of the rod is fastened to the ram by means of a split steel bushing and a brass sleeve.

The steam distributing system of the hammer operates through a cylindrical slide valve and a throttle valve, controlled from a treadle.

The ram guides are adjustable and are held to the uprights through damping springs.

springs.

The ram and the piston are made of steel while the rod is made of high

grade alloy steel.

The cylinder is a steel casting with a press-fitted cast-iron liner.

The anvil block is a solid steel casting; its weight equals 20 times the weight of falling parts.

The die holder is mounted on the anvil block. The lower die is fastened in

The die holder is mounted on the anvil block. The lower die is tastened in the die holder by a wedge.

The anvil block rests freely on an oak-wood cushion in a shallow well in the foundation and is secured by oak wedges from axial displacement.

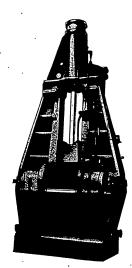
The hammer is equipped with a centralized lubricating system supplied from a lubricating pump station.

The hammer is delivered complete with the anvil block, die holder, lubricating pump station, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Nominal weight of falling parts, kg Effective kinetic energy of falling parts, kgm	7800	Rod diameter, mm
Minimum height of dies without shanks, mm Working cylinder bore, mm	350 460	Net weight without anvil block, kg approx. 25000 Net weight of anvil block, kg 63000

5000 and  $10000 \,\mathrm{kg}$ AIR OR STEAM DOUBLE ACTION **DROP HAMMERS** 



The hammers are designed for hot forging in closed multiple-pass impression

dies.

The hammers are used in forge shops operating on large lot or mass pro-

The hammers are actuated by compressed air or steam at a pressure of 6

The hammers are actuated by compressed air or steam at a pressure of 6 to 8 atmospheres.

The frame uprights are steel castings and are mounted on the anvil block. To facilitate setting-up dies, the uprights can be adjusted along the anvil block by means of wedges. The uprights are spanned at the top by the cylinder base plate on which the working cylinder is mounted. The cylinder is fastened to the uprights by studs with damping springs.

A safety cylinder head, comprising a safety cylinder and a safety piston is mounted on the top of the working cylinder. This safety head prevents the working piston from striking the cylinder cover.

STANKOIMPORT

STANKOIMPORT

126

The working piston and the rod are fastened together in a manner ensuring reliable operation of the hammer.

The piston is shrunk on the upper taper end of the rod without subsequent riveting over. The lower taper end of the rod is fastened to the ram by means of a split steel bushing and a brass sleeve.

The steam distributing system of the hammer operates through a cylindrical slide valve and a throttle valve controlled from a treadle.

The ram guides are adjustable and are held to the uprights through damping springs.

The ram guides are adjustance and are nead to the uprights through damping springs.

The ram and the piston are made of steel while the rod is made of heat-treated high grade alloy steel.

The cylinder is a steel casting with a cast-iron liner:

The anvil block of hammer consists of two parts: the upper part is a solid steel casting, the lower one — a grey iron casting. The parts are connected by straight shanks and pins.

The weight of the anvil block equals 20 times the weight of the falling parts. The die holder is fastened to the anvil block. The lower die is fastened in the die holder by wedges.

The die holder is rastened to the anvii block. The lower die is lastened in the die holder by wedges.

The anvil block rests freely on an oak-wood cushion of the foundation and is secured by oak wedges from axial displacement.

The hammer is equipped with a centralized lubricating system supplied from a lubricating nump station.

The hammer is equipped with a centralized lubricating system supplied from a lubricating pump station.

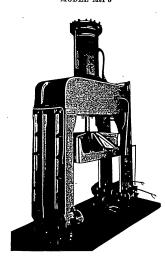
The hammers are delivered complete with anvil blocks, die holder, lubricating pump station, oil piping, a set of wrenches and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Nominal weight of fal- ling parts, kg Energy of blow kgm	5000 12500	10000	Rod diameter, mm Inlet steam or air pres-	200	250
Energy of blow, kgm Maximum stroke of ram,	12300	25000	sure, eff. atm	6 to 8	6 to 8
mm	1300	1400	Ram dimensions:		
Width clear between up-			F. to B., mm	1000	1200
rights, mm Maximum distance from	700	1000	Die holder dimensions:		
lower die face to lower			F. to B., mm	. 1200	1400
edge of guides, mm	400	400	Floor space, mm:		
Minimum height of lo-	400	400	F. to B	2000	2700
wer die face above	, ,		R. to L	3700	4400
floor level, mm	875	775	Maximum height above		
Minimum height of dies			floor level, mm Net weight without an-	6645	7250
without shanks, mm .	400	450	vil block, kg approx.	41000	75000
Working cylinder bore,			Net weight of anvil	41000	19000
mm	540	750	block, kg	100000	200000

### **PNEUMATIC** SHEET METAL STAMPING HAMMER

MODEL МЛЗ



The hammer is designed for producing sheet metal parts by impact stamping in lead and zino or combination cast dies.

The hammer is of the double-action type and is actuated by compressed air. The hammer is mounted on a solid cast-iron anvil block. A steel bolster plate, fastened to the anvil block by screws, serves as the working table surface. Four V-section cast-iron uprights with prismatic guides for the ram are mounted on four lugs of the anvil block. On the lower ends the uprights are provided with adjusting wedges and are fastened to the anvil block by studs with damper springs.

The uprights are connected by a cast-iron crown member which, together with the uprights and the anvil block, forms the frame.

The working oylinder, with the safety cylinder head, is mounted on the crown member.

crown member.

The safety head prevents the piston from striking the cylinder cover.

STANKOIMPORT

The working cylinder piston is connected to the rod by a shrunk taper fit with subsequent riveting over of the end. The ram is connected to the rod by a taper fit and a bushing.

Air distribution is effected by a piston valve and a throttle.

The hammer is controlled by hand levers but is provided with automatic air out-off

The hammer is controlled by hand levers but is provided with automatic air cut-off.

The lubricating system is of a combined type. The working cylinder, piston valve, throttle, pneumatic locking device, cut-off valve and throttle cylinder are centrally lubricated. The control levers and the piston rod are lubricated by hand.

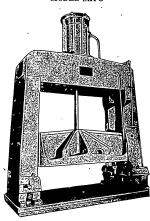
The hammer is delivered complete with anvil block and all the necessary technical instructions for installation and operation.

#### SPECIFICATIONS

Working table surface, mm $1700 \times 1200$ Weight of falling parts without die, kg $2620$ Maximum weight of upper die, kg $3000$ Minimum surface of die, mm $1200 \times 850$	Ram speed at the moment of blow (rated), m/sec
Maximum stroke of ram, mm 1200	stroke, kgm
Distance between guides, mm.   1700	Floor space, mm:   Fi to B

### **PNEUMATIC** SHEET METAL STAMPING HAMMER

MODEL MЛ 5



The hammer is designed for producing sheet metal parts by impact stamping in lead and zinc or combination cast dies.

The hammer is of the double-action type and is actuated by compressed air. The hammer is mounted on a solid cast-iron anvil block. A steel bolster plate, fastened to the anvil block by screws, serves as the working table surface. Four V-section cast-iron uprights with prismatic guides for the ram are mounted on four lugs of the anvil block. On their lower part, the uprights are provided with wedge adjustment and are fastened to the anvil block by studs with damper springs.

The uprights are connected by a cast-iron crown member which, together with the uprights and the anvil block, forms the frame.

The working cylinder, with the safety cylinder head, is mounted on the crown member.

The working cylinder, with the safety cylinder head, is mounted on the crown member.

The safety head prevents the piston from striking the cylinder cover. The working cylinder piston is connected to the rod by a shrunk taper fit with subsequent riveting over of the end. The ram is connected to the rod by a taper fit and a split bushing.

Air distribution is effected by a piston valve and a throttle.

The hammer is controlled by hand levers but is provided with automatic air controlled.

air cut-off.

STANKOIMPORT

131

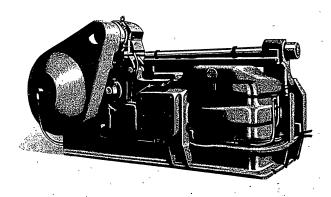
The lubricating system is of a combined type. The working cylinder, piston valve, throttle, pneumatic looking device, cut-off valve and throttle cylinder are centrally lubricated. The control lever and the piston rod are lubricated individually by hand.

The hammer is delivered complete with the anvil block and all the necessary technical instructions for installation and operation.

#### SPECIFICATIONS

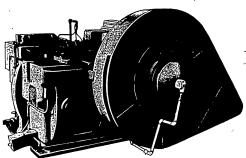
Working table surface, mm 3100×1800
Weight of falling parts without die,
kg 9320
Maximum weight of upper die, kg 5000
minimum surface of die, mm 2200 \(\sigma 1275
Maximum stroke of ram, mm 1500
Distance between guides, mm 3100
Height of working table above floor
level, mm
Cylinder bore, mm 700
Rod diameter, mm 150
Inlet pir processes of
Inlet air pressure, eff. atm 4 to 6
Exhaust air pressure, eff. atm0.1 to 0.5
Air consumption at I atm, cu.m/hr 1120

FORGING MACHINES



### HORIZONTAL FORGING MACHINE

MODEL B 111



The forging machine is designed for upsetting a wide variety of forgings, made of rod stock heated to forging temperature, in open dies.

Upsetting can be performed in one or more operations.

The forgings made on this machine have a small draft (from 1° to 3°) resulting in an economy of metal and subsequent machining time.

The machine has a high production capacity as a finished forging can be obtained in one or two strokes.

The trame is a one-piece steel casting with stiffening ribs.

The crankshaft is an alloy steel forging.

The heading slide is a steel casting. To obtain a higher accuracy of the product the heading slide has front and rear bearings, connected by an overarm. The front guide bearing is provided with bronze adjusting liners.

The side and the gripping slides are made of cast steel. In designing the machine special attention was paid to reliability of slide operation.

The starting clutch is of a quadruple disc friction type and is pneumatically operated. Pneumatic starting ensures safe operation as, in case of an interruption of air supply, the machine will immediately stop. The clutch design ensures its reliable operation even when the clutch-plates are worn.

The brake, of a band-type, operates periodically and stops the crankshaft when the heading slide is in the extreme rear position. Braking force is applied by a spring while brake release is effected pneumatically.

The stop is provided to control the required length of the rod being forged. The stop is automatically moved away during the working stroke of the heading slide.

Cooling of the working tools is effected by a system of coolant pipes mounted

Cooling of the working tools is effected by a system of coolant pipes mounted

on the machine.

Overloads are prevented by a spring-operated safety device.

Lubrication is of the force-feed type and is effected by pumps actuated by the heading slide.

STANKOIMPORT

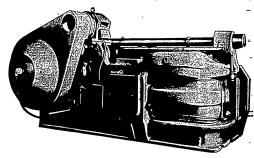
The forging machine is delivered complete with the electrical equipment and wiring, a set of V-belts, oil pumps with piping, air distributor with a pressure gauge, coolant piping, die holder, safety guards for external moving parts, a set of wrenches and all the necessary technical instructions for erection and

#### SPECIFICATIONS

160	Electric motor power, kW	10
	Electric motor speed, r.p.m	750
	• • •	
		2200
10		2300
260		
	mm	1680
300	Net weight, kg approx. I	1400
	230 90 40 67 75 260 145	230

### HORIZONTAL FORGING MACHINE

MODEL B 113



The forging machine is designed for upsetting a wide variety of forgings, made of rod heated to forging temperature, in open dies.

Upsetting can be performed in one or more operations.

Forgings made on this machine have a small draft (from 1° to 3°) resulting in an economy of metal and subsequent machining time.

The machine has a high production capacity as a finished forging can be obtained in one or two strokes.

The frame is a one-piece steel casting with external stiffening ribs. To increase frame rigidity and the accuracy of forging two longitudinal tie bars are provided.

crease frame rigidity and the accuracy of forging two longitudinal tie bars are provided.

The crankshaft is an alloy steel forging.

The heading slide is a steel casting. To obtain a higher accuracy of the product the heading slide has front and rear guide bearings connected by an overarm. The front guide bearing is provided with bronze adjusting liners.

The side and the gripping slides are made of cast steel. In designing, the machine, special attention was paid to reliability of slide operation.

The starting clutch is of the quadruple disc friction type and is pneumatically operated. Pneumatic starting ensures safe operation as, in case of an interruption of air supply the machine will be immediately brought to a stop. The clutch design ensures its reliable operation even when the clutch-plates are worn.

worn.

The brake, of a band-type, operates periodically and stops the crankshaft when the heading slide is in the extreme rear position. Braking force is applied by a spring, brake release is effected pneumatically.

The stop is provided to control the required length of the rod being forged. The stop is automatically, moved away, during the working stroke of the heading slide.

Side.

Cooling of the working tools is effected by a system of coolant pipes mounted on the machine.

STANKOIMPORT

STANKOIMPORT

Declassified in Part - Sanitized Copy Approved for Release 2013/02/25 : CIA-RD

The flywheel is stopped after the electric motor is switched off by a brake. The flywheel is stopped after the electric motor is switched on by a brake. The flywheel brake is operated by a pneumatic valve located at the operator's position.

Overloads are prevented by a spring-operated safety device.

Lubrication is of the forced-feed type and is effected by pumps actuated by the heading slide.

Lubrication is of the foreed-feed type and is effected by pumps actuated by the heading slide.

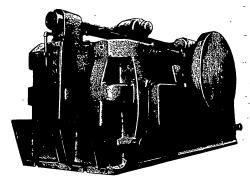
The forging machine is delivered complete with the electrical equipment and wiring, a set of V-belts, oil pumps and piping, air distributor with a pressure gauge, coolant piping, die holder, safety guards for external moving parts, a set of wrenches and all the necessary technical instructions for erection and

### SPECIFICATIONS

Rated capacity, t	500 280 190	Electric motor power, kW  Electric motor speed, r.p.m	
Maximum diameter of rod, mm  Die opening, mm  Number of strokes per minute	80 125 45	Floor space, mm:     F. to B	
Die dimensions, mm: Length Width Height	180	Maximum height above floor level, mm  Net weight, kg approx. 3	

### HORIZONTAL FORGING MACHINE

MODEL TKM 800



The forging machine is designed for upsetting a wide variety of forgings made of steel rod heated to forging temperature, in open dies.

Upsetting can be performed in one or more operations.

Forgings made on this machine have a small draft (from 1° to 3°) resulting in an economy of metal and subsequent machining time.

Horizontal forging machines are widely used in forge shops operating on serial or mass production of various parts.

The machines possess high production capacity as a finished piece can be produced in one or two strokes.

The frame is a one-piece steel casting stiffened with external ribs, To increase rigidity and accuracy of operation, two longitudinal tie bars are provided. The erankshaft is a forging made of special steel.

The heading ram is a steel casting. In designing the machine, particular attention was paid to reliable operation of the side and gripping slides.

To increase the accuracy of parts produced the heading slide is provided with front and rear guide bearings connected by an overarm. The front guide bearings have adjustable bronze liners.

The pneumatically-operated clutch is of the four-disc friction type. Pneumatic control ensures safe operation of the machine, as in case of an interruption of air supply, the machine is immediately brought to a stop. The clutch design ensures reliable operation even when the discs are worn.

A periodically operated pneumatic band brake is provided to stop the heading slide in the extreme rear position. The brake operates automatically. It is applied by spring action and is released pneumatically.

To protect the machine from overfeads, a special friction-type safety device combined with the brake drum is mounted on the driving shaft.

STANKOIMPORT

STANKOIMPORT

This device is tripped when the torque on the pinion gear exceeds its maxi-

The bolts of the friction safety device are tightened by a special hydraulic attachment.

A special spring and lever device is provided for protecting parts of the gripping mechanism from breakage.

The machine is safeguarded against considerable overloads by a special device interlocked with the pneumatic clutch engagement.

An adjustable stop is provided for measuring of the required length of rod. The stop is automatically withdrawn during the working stroke of the heading slide

Pneumatic equipment, mounted on the machine, ensures safe operation control. It consists of an air supply head, reducing valve, oil atomizer, water separator and receiver.

The machine is equipped with a centralized system of grease lubrication and with an arrangement for water cooling of the dies.

The flywheel is stopped, after the electric motor is switched off, by a brake, actuated by a pneumatic valve located at the operator's position.

The drive is from an individual electric motor through V-belts and gears. Control is effected by a treadle located at the operator's position.

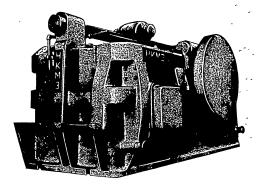
The design permits either single strokes or continuous (automatic) operation. The forging machine is delivered complete with the electric motor, starting equipment and wiring, a set of V-belts, lubricating pumps and piping, air distributing equipment with pressure gauge, water cooling system for dies, hydraulic attachment for tightening nuts of safety device, hydro-pneumatic lifting table, die holder, guards for external moving parts, a set of wrenches and all the necessary technical instructions for installation and operation.

### SPECIFICATIONS

Rated capacity, t	800 380 250	Electric motor power, kW Electric motor speed, r.p.m.	
Maximum rod diameter, mm Die opening, mm Number of strokes per minute Die dimensions, mm:	100	Floor space, mm: F. to B. R. to L.	3600
Length	550 210 660	Maximum height above floor level, mm  Net weight, kg approx.	2265

### HORIZONTAL FORGING MACHINE

MODEL FKM 1200



The forging machine is designed for upsetting a wide variety of forgings made of rod stock heated to forging temperature, in open dies.

Upsetting can be performed in one or more operations.

Forgings made on this machine have a small draft resulting in an economy of metal and subsequent machining time.

Horizontal forging machines are widely used in forge shops operating on serial or mass production of various parts.

The machines possess a high production capacity as a finished forging can be produced in one or two strokes.

The frame is a one-piece steel casting stiffened with external ribs. To increase frame rigidity and accuracy of forging two longitudinal tie bars are provided.

crease frame rigidity and accuracy of longing two longitudinal die bars are provided.

The crankshaft is a special steel forging.
The heading slide is a steel casting. In designing the machine, particular attention was paid to ensuring reliable operation of the side and gripping slides. To increase the accuracy of parts produced, the heading slide is provided with front and rear guide bearings connected by an overarm. The front guide bearing can be adjusted by means of bronze liners.

The pneumatically-operated clutch is of the multiple-disc friction type. Pneumatic control ensures safe operation of the machine as, in case of an interruption of air supply, the machine is immediately brought to a stop. The clutch design ensures reliable operation of the machine even when the discs are worn. A periodically operated pneumatic band brake is provided to stop the heading slide in the extreme rear positions. The brake operates automatically; it is applied by the action of a spring and released pneumatically.

STANKOIMPORT

141

To protect the machine from overloads, a special friction-type safety device combined with the brake drum is mounted on the driving shaft. This device is tripped when the torque on the pinion gear exceeds the allowable maximum

The bolts of this frictional device are tightened by a special hydraulic

The botts of this frictional device are tightened by a special hydraulic attachment furnished with the machine without extra charge. The design of the machine also includes a combined lever and spring device for protecting parts of the gripping mechanism from breakage.

To protect the machine from considerable overloads, a special device interlocked with the pneumatic clutch engagement is provided.

An adjustable stop is provided for measuring off the required length of rod. The stop is automatically withdrawn during the working stroke of the heading slide.

slide.

A combination hydraulic-pneumatic lifting table is furnished with the machine for transferring rods from pass to pass.

Pneumatic equipment, mounted on the machine, ensures reliable operation control. It consists of an air supply head, reducing valve, oil atomizer, water

control. It consists of an air supply near, reasons years, on a separator and receiver.

The machine is equipped with a centralized system of grease lubrication and with an arrangement for water cooling of the dies.

The flywheel is stopped when the electric motor is switched off by a brake, actuated by a pneumatic valve located at the operator's position.

The machine is driven by an individual electric motor through a combined V-belt and gear drive.

The machine is urren by an incompared to the machine is effected by a treadle located at the operator's position. The design permits either continuous (automatic) operation or single

Strokes.

The forging machine is delivered complete with the electric motor, starting equipment and wiring, one set of V-belts, lubricating pumps and piping, air distributing system with a pressure gauge, piping for die cooling system, hydraulic attachment for tightening safety-device nuts, hydro-pneumatic lifting table, die holder, guards for external moving parts, a set of wrenches and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Rated capacity, t	1200 500	Electric motor power, kW	80
Working stroke of heading slide mm	216	Electric motor speed, r.p.m	585
Maximum rod diameter, mm Die opening, mm	150	Floor space, mm:	
Number of strokes per minute	$\frac{215}{27}$	F. to B	
Die dimensions, mm:		•	4300
Length	.660	Maximum height above floor level,	3700
Width Height	290 820	Net weight, kg approx. 19	
	020	ther weight, kg approx. 12	23000

# HORIZONTAL FORGING MACHINE

MODELS TKM 2000 and TKM 3000



The forging machines are intended for upsetting various forgings made of rod stock heated to forging temperature, in open dies.

Upsetting can be performed in one or more operations.

Forgings made on these machines have a small draft resulting in an economy of metal and subsequent machining time.

Horizontal forging machines are widely used in forge shops operating on serial or mass production of various parts.

The machines possess a high production capacity as a finished forging can be obtained in one or two strokes.

The frame is made of cast steel. It is built up of two sections. The jointing plane passes between the crankshaft and the die blocks, The sections are drawn together by heavy tie bars and eight flange bolts. In addition, the rear part of the frame is stiffened by another bolt passing above the crankshaft.

The crankshaft is a special steel forging.

The heading slide is made of cast steel. In designing the machines, particular attention was paid, to ensuring reliable operation of the side and gripping slides. To increase the accuracy of the parts produced, the heading slide is provided with front and rear guide bearings connected by an overarm. The front guide bearing can be adjusted by means of bronze liners.

The pneumatically-operated clutch is of the multiple-dies friction type. Pneumatic control ensures safe operation of the machine even when the discs are worn.

A periodically operated pneumatic band brake is provided to stop the heading

are worn.

A periodically operated pneumatic band brake is provided to stop the heading

A periodicary operated pneumatic stand state is provided to scop the neading slide in the extreme rear position.

The brake operates automatically; it is applied by the action of a spring and released pneumatically.

STANKOIMPORT

To protect the machine from overloads, a special friction-type safety device combined with the brake drum is mounted on the driving shaft. This device is tripped when the torque on the pinion gear exceeds the allowable maximum

Is tripped when the triple of the gripping mechanism from breakage.

The bolts of this frictional device are tightened by a special hydraulic, attachment furnished with the machine without extra charge.

The design of the machine also includes a combined lever and spring device

The design of the machine also includes a combined lever and spring device for protecting parts of the gripping mechanism from breakage.

To protect the machine from considerable overloads, a special device interlocked with the pneumatic olutch engagement is provided.

An adjustable stop is provided for measuring off the required length of rod. The stop is automatically withdrawn during the working stroke of the heading slide.

The stop is automatically withdrawn during the working stroke of the heading slide.

A combination hydro-pneumatic lifting table is furnished with the machine for transferring rods from pass to pass.

Pneumatic equipment, mounted on the machine, ensures reliable operation control. It consists of an air supply head, reducing valve, oil atomizer, water separator and receiver.

The forging machines are equipped with a centralized system of grease lubrication and with an arrangement for water cooling of the dies.

The flywheel is stopped when the electric motor is switched off by a brake, actuated by a pneumatic valve located at the operator's position.

The machines are driven by individual electric motors through a combined V-belt and gear drive.

Control is effected by a treadle located at the operator's position. The design permits either continuous (automatic) operation or single strokes.

For cranking-over the machine while setting-up or during repairs the model PKM 3000 forging machine is equipped with an auxiliary drive.

The forging machines are delivered complete with the electric motor, starting equipment and wiring, one set of V-belts, lubricating pumps and piping, air-distributing equipment with a pressure gauge, water piping for the die-cooling system, hydraulic attachment for tightening safety device nuts, die holder, hydro-pneumatic lifting table, guards for external moving parts, a set of wrenches and all the necessary technical instructions for operation and maintenance.

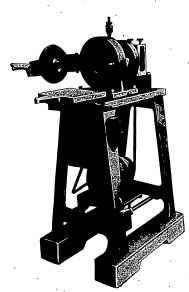
### SPECIFICATIONS

Rated capacity, t	KM 2000 2 000	PKM 3000		KM 2000	PKM 3000
Full stroke of heading	810	3 000 750	Main electric motor speed, r.p.m	750	750
Working stroke of head- ing slide, mm Maximum rod diameter,	400	490	Auxiliary electric motor power, kW Auxiliary electric motor	_	14
Die opening, mm	190 305	225 350	speed, r.p.m	_	1 500
Number of strokes per minute Die dimensions, mm:	25	25	tion gear ratio Floor space, mm:	_	21
Length Width	. 850 320	1 100 390	F. to B R. to L	8 750 5 000	10 300 . 6 120
Height Main electric motor po-	1 050	1 300	Maximum height above floor level, mm	3 880	4 320
wer, kW	155	245	Net weight, kg approx.	223 000	375 000

STANKOIMPORT

### ROTARY SWAGING MACHINE

MODEL B 201



The rotary swaging machine is designed for reducing molybdenum, tungsten and steel rods heated to forging temperature.

The machine is used in the production of medical instruments, as well as precision machine and instrument parts.

The swaging machine comprises the following units: head, feed rolls with gear reducing unit, drive, lubricating and cooling system.

All these units and the electrical equipment are mounted on a cast-iron frame.

All these units and the vertical frame.

The head is the principal working mechanism of the machine. The spindle and the roll housing are mounted in the head in anti-friction bearings.

The spindle is made of steel and has a transverse slot on the front end for mounting swages and hammers. On the rear end of the spindle the flywheel

STANKOIMPORT

- 145

is mounted. An axial hole is provided in the spindle for passing through the finished rods. This bore terminates in a bell-mouth outlet. Five pairs of rolls and spacers are mounted in the roll housing.

Coordination of roll action with hammers and swages is attained in the following manner: as the spindle revolves, the hammers and the swages are forced out to the periphery by centrifugal force. The ends of the swages and hammers run over the rolls and are pressed to the center to swage the rods.

The feed rolls serve for automatic feed-in of the rods in the process of swaging. The lower roll drives the rod while the upper roll is idle and is held against the rod by spring action.

The drive is from an individual electric motor. Power is transmitted to the spindle flywheel through a V-belt drive. A separate V-belt transmits motion to the worm reducing gear unit which actuates the feed rolls.

The lubricating and cooling system consists of a gear pump and oil piping. The pump is driven by the main drive V-belt. The pump forces oil through the circulating system for lubricating and cooling the roll housing, the rolls and the swaging tools. The same oil serves to wash the scale off the rolls. The spindle bearings are lubricated by a grease gun through ball-type grease cups.

The rolls and the swaging machine is delivered complete with the electrical equipment and wiring, lubricating and cooling equipment, a grease gun, a set of working tools, an oil tank, feed rolls, a set of V-belts and all the necessary technical instructions for erection and maintenance.

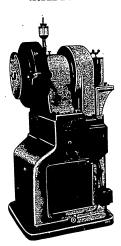
#### SPECIFICATIONS

Maximum initial diameter of rod, mm         4.2           Final diameter of rod, mm         2.4           Speed of head, r.p.m         1200           Number of rolls in housing         10           Speed of feeding, m/min         4 to 6	Floor space, mm: ,
Electric motor power, kW 1.0	mm 1330
Electric motor speed, r.p.m 1500	Net weight, kg approx. 300

STANKOIMPORT

# ROTARY SWAGING MACHINE

MODEL B 202



The rotary swaging machine is designed for reducing molybdenum, tungsten and steel rods heated to forging temperature.

The machine is used in the production of medical instruments, as well as precision machine and instrument parts.

The swaging machine comprises the following units: head, feed rolls with the gear reducing unit, drive, lubricating and cooling system.

All the mechanisms are mounted on a cast-iron frame.

The head is the principal working mechanism of the machine. The spindle and the roll housing are mounted in the head in anti-friction bearings.

The spindle is made of steel and has a transverse slot on the front end for mounting swages and hammers. On the rear end of the spindle the flywheel is mounted. An axial hole is provided in the spindle for passing through the finished rod.

timished rod.

Six pairs of rolls and spacers are mounted in the roll housing.

Coordination of roll action with hammers and swages is attained in the following manner. As the spindle revolves, the hammers and the swages are forced to the periphery by centrifugal force. The ends of the hammers and swages run over the rolls and are pressed to the center to swage the rods.

S.T.ANKOIMPORT

The feed rolls serve for automatic feed-in of the rods in the process of swaging. The lower roll drives the rod while the upper roll is idle and is held against the rod by spring action.

The drive is from an individual electric motor. Power is transmitted to the spindle flywheel through a V-belt drive. A separate V-belt transmits motion to the feed roll gear reducing unit.

The lubricating and cooling system consists of a gear pump and oil piping. The pump is driven by the main drive V-belt. The pump forces oil through the circulating system for lubricating and cooling the roll housing, the rolls and the swaging tools. The same oil serves to wash the scale off the rolls.

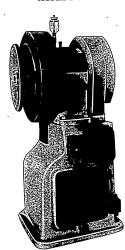
The rotary swaging machine is delivered complete with the electrical equipment and wiring, lubricating and cooling equipment, grease gun, a set of working tools, an oil tank, a set of V-belts and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Maximum initial diameter of rod, mm Final diameter of rod, mm	4.2	Floor space, mm: F. to B	
Speed of head, r.p.m Number of rolls in the housing	950	R. to L	
Speed of feeding, m/min	3	Maximum height above floor level,	
Electric motor power, kW	1.7	mm	1360
Electric motor speed, r.p.m	1500	Net weight, kg approx.	468

# ROTARY SWAGING MACHINE

MODEL B 203



The rotary swaging machine is designed for reducing molybdenum, tungsten and steel rods heated to forging temperature.

The machine is used in the production of medical instruments, as well as precision machine and instrument parts.

The swaging machine comprises the following mechanisms: head, drive, lubricating and cooling system.

All the mechanisms are mounted on a cast-iron frame.

The head is the principal working mechanism of the machine. The spindle and the roll housing are mounted in the head in anti-friction bearings.

The spindle has a transverse slot on the front end for mounting swages and hammers. On the rear end of the spindle, the flywheel is mounted. An axial hole is provided in the spindle for passing through the finished rods, six pairs of rolls are mounted in the roll housing.

Coordination of roll action with hammers and swages is attained in the following manner. As the spindle revolves, the hammers and the swages are following manner. As the spindle revolves, the hammers and the swages are forced to the periphery by centrifugal force. The ends of the swages and hammers run over the rolls and are pressed to the center to swage the rods.

STANKOIMPORT

The drive is from an individual electric motor. Power is transmitted to the spindle flywheel through a V-belt drive.

The lubricating system is of a combined type. The bearings are lubricated through ball-type grease cups by a grease gun. The working tools and the rolls are lubricated by machine oil through a circulating system actuated by a gear pump. The same oil serves to cool the tools and to wash the scale off the rolls.

The oil pump is driven by a V-belt from the main drive.

The working tools are made of high-quality tool steel.

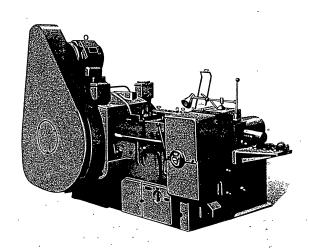
The rods are fed by hand, but on special order, automatic roller feed can be furnished at an extra price.

The rotary swaging machine is delivered complete with the electrical equipment and wiring, lubricating and cooling equipment, grease gun, a set of working tools, an oil tank, a set of V-belts, feed rolls and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

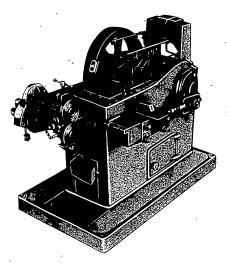
Maximum initial diameter of rod, mm Final diameter of rod, mm		Floor space, mm: F. to B	
Speed of head, r.p.m	550	R. to L	940
Number of rolls in housing	12	Maximum height above floor level,	
Electric motor power, kW	1.7	mm	
Electric motor speed, r.p.m	1500	Net weight, kg approx.	635

# COLD AND HOT FORGING **AUTOMATIC MACHINES**



# AUTOMATIC SINGLE STROKE SOLID DIE COLD HEADER

MODEL A 111



The automatic header is designed for upsetting rivet and screw heads, as well as other small parts made of wire or rod, in one stroke.

The upset heads are principally of round- or flat-head type.

The upset heads are principally of round- or flat-head type.

In selecting an automatic cold header, the following considerations are to be borne in mind:

A single-stroke cold header can produce only parts in which the length of material required to form the upset head does not exceed 2 to 2½ diameters of the wire or rod used.

A double-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 4½ diameters of the wire or rod.

A triple-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 6 to 8 diameters of the wire or rod.

STANKOIMPORT

Solid dies can be used only for parts with a shank length not exceeding 8 diameters of the wire or rod.

For longer shanks, open dies should be used.

All the operations performed by the model A 111 automatic cold header, such as feeding the stock, cutting-off, upsetting the bolt or rivet head and knocking-out the finished pieces are fully automatic and are interconnected in a single kinematic system.

The automatic header comprises the following principal units: stock feed mechanism; cut-off and carrying-over from feed line to heading line; heading ram; knock-out.

The wire is fed intermittently by rollers through the cut-off die up to the stop controlling the length of the blank.

The knife blade, moving perpendicularly to the wire, cuts the blank off and carries it over to the heading line.

As the ram moves forward, the punch pushes the blank into the upsetting die up to the stop and then, in the course of further motion of the ram, upsets the bolt or the rivet head.

As the ram moves backward the finished piece is ejected from the die and

the boit or the rivet head.

As the ram moves backward the finished piece is ejected from the die and the cycle is repeated.

The heading ram and all the other mechanisms are actuated by the crankshaft, which is driven through a multiple V-belt arrangement from an electric meter. Lubrication of the most important friction surfaces is effected from a cen-

A foot-operated shoe-brake is provided for quickly stopping the automatic cold header.

The header is equipped with safety devices which prevent overloading any

The header is equipped with sarety devices when personal for its mechanisms.

All the external moving parts are enclosed by removable guards.

The design of the machine ensures accessibility and simplicity of adjustment of all the mechanisms and tools.

The automatic cold header is delivered complete with the electrical equipment, a set of wrenches and all the necessary technical instructions for erection and ministerance. and maintenance,

#### SPECIFICATIONS

The automatic cold header is designed for upsetting bolt, rivet and screw heads of various shapes made of wire or rod material up to 6 mm in diameter.

In selecting an automatic cold header the following considerations are to

AUTOMATIC DOUBLE STROKE SOLID DIE COLD HEADER MODEL A 121 A

In selecting an automatic cold reactor to be borne in mind:

A single-stroke cold header can produce only parts in which the length of material required to form the upset head does not exceed 2 to 2½ diameters of the wire or rod used.

A double-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 4½ diameters of the

A triple-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 6 to 8 diameters of the wire or rod.

Solid dies can be used only for parts with a shank length not exceeding 8 diameters of the wire or rod stock. For longer shanks, open dies should be

8 diameters of the wire or rod stock, For longer shains, open duce catching used.

All the operations performed by the model A 121 A automatic cold header such as feeding the stock, cutting off and carrying over the blank, upsetting the bolt or rivet head and knocking out the finished pieces are fully automatic. The automatic header comprises the following principal units: stock feed mechanism; cut-off and carrying-over from feed line to heading line; punch movement slide; heading ram; knock-out.

The wire is fed intermittently by rollers through the cut-off die up to the stop controlling the length of the blank.

STANKOIMPORT

The knife blade, moving perpendicularly to the wire cuts off the blank and carries it over to the heading line.

As the ram moves forward the punch pushes the blank into the upsetting die up to the stop and then, in the course of further motion of the ram, upsets the intermediate shape. On the second stroke, another punch upsets the head to the final shape. to the final shape.

As the ram moves back after the second stroke, the knock-out ejects the

finished piece from the die.

The heading ram is driven by the crankshaft, while all the other mechanisms are actuated by the camshaft.

The camshaft is driven by the crankshaft through a pair of gears with a ratio of 1 to 2.

The crankshaft is driven from an individual electric motor through a mul-

tiple V-belt arrangement.

A foot-operated shoe-brake is provided for quickly stopping the automatic cold header.

Lubrication of the most important friction surfaces is effected from a centralized force-feed system by means of a mechanically driven pump-station.

The header is equipped with safety devices which prevent overloading any

of its mechanisms.

All the external moving parts are enclosed by removable guards.

The design of the machine ensures accessibility and simplicity of adjustment of all the mechanisms and tools.

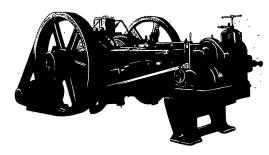
The automatic cold header is delivered complete with the electrical equipment, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Maniana diameter of min (ma)		The same of the sa
Maximum diameter of wire (mm)		Pressure exerted at the end of
with an ultimate strength of		stroke, t
60 kg/sq. mm	6	Number of pieces per minute 115
Minimum diameter of wire, mm	4	Electric motor power, kW 4.5
Maximum length of shank, mm	50	Electric motor speed, r.p.m 1500
Minimum length of shank, mm	8	Overall dimensions, mm:
Maximum length of blank, mm	75	Length 2175
Minimum length of blank, mm	18	Width 1240
Number of strokes per minute	230	Height 1168
Stroke of heading ram, mm	85	Net weight, kg approx. 2870

# AUTOMATIC DOUBLE STROKE SOLID DIE COLD HEADER

MODEL A 123



The automatic header is designed for upsetting bolt and screw heads of various shapes, as well as other parts of more complicated form in two con-

In selecting an automatic cold header, the following considerations are to be borne in mind:

be borne in mind:

A single-stroke cold header can produce only parts in which the length of material required to form the upset head does not exceed 2 to 2½ diameters of the wire or rod used.

A double-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 4½ diameters of the wire or rod.

wire or rod.

A triple-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 6 to 8 diameters of the

wire or rod.

Solid dies can be used only for parts with a shank length not exceeding 8 diameters of the wire or rod stock. For longer shanks, open dies should be

All the operations performed by the model A 123 automatic cold header, such as feeding the stock, cutting-off and carrying-over the blank, upsetting the bolt or rivet head and knocking-out the finished pieces, are fully automatic and are interconnected in a single kinematic system.

The automatic header comprises the following principal units: straightener rolls; stock feed mechanism; cut-off and carrying-over from feed line to heading line; heading ram and punch movement slide; knock-out.

The wire is fed intermittently by rollers through the cut-off die up to the stop controlling the length of the blank.

STANKOIMPORT

157

The knife blade, moving perpendicularly to the wire cuts off the blank and carries it over to the heading line.

As the ram moves forward, the punch pushes the blank into the upsetting die up to the stop and then, in the course of further motion of the ram, upsets the intermediate shape. On the second stroke, another punch upsets the head to the final shape. As the ram moves back after the second stroke, the knock-out ejects the

As the rain moves back after the second scroke, the knock-out ejects the finished piece from the die.

The heading ram is driven by the crankshaft, while all the other mechanisms are actuated by the camshaft.

The camshaft is driven by the crankshaft through a pair of gears with a ratio of 1 to 2, i.e., the camshaft makes one revolution to two revolutions of the crankshaft.

The crankshaft is driven from an individual electric motor through a mul-

The crankshaft is driven from an inconstitution by better the V-belt arrangement.

A foot-operated shoe-brake is provided for quickly stopping the machine.

Lubrication of the most important friction surfaces is effected from a centralized force-feed system by means of a mechanically driven pump-station.

The header is equipped with safety devices which prevent overloading any of its mechanisms.

of its mechanisms.

All the external moving parts are enclosed by removable guards. The design of the machine ensures accessibility and simplicity of adjustment of all the

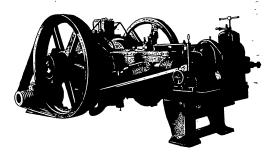
of the machine custics accessionly with the property of the automatic cold header is delivered complete with the electrical equipment, a set of wrenches and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Maximum stock diameter (mm) with an ultimate strength of 60 kg/sq. mm.  Maximum length of shank, mm.  Maximum length of shank, mm	12 90 15 140	Stroke of heading ram, mm	170 60 20 1000
Minimum length of blank, mm. Maximum diameter of head, mm. Maximum height of head, mm. Number of strokes per minute. Pressure exerted at the end of stroke, t	32 25 9 120	rolls, mm: Length Width Height Weight .with straightener rolls, kg	2130 1570

# AUTOMATIC DOUBLE STROKE SOLID DIE COLD HEADER

MODEL A 124



The automatic header is designed for upsetting bolt and rivet heads, as well as other parts made of calibrated wire or rod, in two consecutive strokes. In selecting an automatic cold header the following considerations are to be borne in mind:

A single-stroke cold header can produce only parts in which the length of material required to form the upset head does not exceed 2 to 2½ diameters of the wire or rod used.

A double-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 4½ diameters of the wire or rod.

wire or rod.

A triple-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 6 to 8 diameters of the wire or rod.

Solid dies can be used only for parts with a shank length not exceeding 8 diameters of the wire or rod stock. For longer shanks, open dies should be used

used.

All the operations performed by the header such as feeding the stock, cutting-off and carrying-over the blank, upsetting the bolts or rivet head and
knocking-out the finished pieces, are fully automatic and interconnected in a knocking-out the finished pieces, are fully automatic and interconnected in a single kinematic system.

The automatic header comprises the following principal units: stock feed mechanism; cut-off and carrying-over from feed line to heading line; heading ram and punch movement slide; knock-out.

The rod is fed intermittently by rollers through the cut-off die up to the stop controlling the length of the blank.

The knife, moving perpendicularly to the rod, cuts off the blank and carries it over to the heading line.

STANKOIMPORT

STANKOIMPORT

As the ram moves forward, the punch pushes the blank into the upsetting die up to the stop and then, in the course of further motion of the ram, upsets the intermediate shape. On the second stroke another punch upsets the head

to the final shape.

As the ram moves back after the second stroke, the knock-out ejects the

As the ram moves past after the second second, who know the other mechanisms are actuated by the camshaft.

The heading ram is driven by the crankshaft, while all the other mechanisms are actuated by the camshaft.

The camshaft is driven by the crankshaft through a pair of gears with a ratio of 1 to 2, i.e., the camshaft makes one revolution to two revolutions of the crankshaft.

The crankshaft is driven from an individual electric motor through a mul-

The crankshat is driven from an individual electric mosts whough a mattiple V-belt arrangement.

A foot-operated shoe-brake is provided for quickly stopping the cold header.

Lubrication of the most important friction surfaces is effected from a centralized force-feed system by means of a mechanically driven pumping station.

The header is equipped with safety devices which prevent overloading any of its mechanisms

The header is equipped with safety devices which prevent overloading any of its mechanisms.

All the external moving parts are enclosed by removable guards.

The design of the machine ensures accessibility and simplicity of adjustment of all the mechanisms and tools.

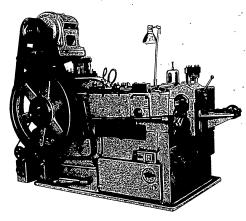
The automatic cold header is delivered complete with the electrical equipment, one set of dies for 16 mm dia. stock, lubricating pump and piping, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Minimum length of shank, mm  Maximum length of blank, mm  Minimum length of blank, mm  Maximum diameter of head, mm  Maximum height of head, mm	Stroke of heading ram, mm   Number of pieces per minute	2540 1835
---	---	--------------

AUTOMATIC DOUBLE STROKE OPEN DIE COLD HEADER

MODEL AA 161



The automatic header is designed for upsetting bolt, rivet and screw heads, as well as other parts with long shanks made of calibrated wire, in two con-

as well as other parts with any sheather security strokes.

In selecting an automatic cold header it should be borne in mind that a In selecting an automatic cold header in should be borne in mind that a single-stroke cold header can produce only parts in which the length of material required to form the upset head does not exceed 2 to 2½ diameters of wire or rod used.

A double-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 4½ diameters of the wire or rod.

A triple-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 4½ diameters of the stroke cold header can produce parts in which the length of material required to the stroke cold header can produce parts in which the length of material required to the stroke cold header can produce parts in which the length of material required to the stroke cold header can produce parts in which the length of material required to the stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 2 to 2½ diameters of the stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 2 to 2½ diameters of the cold header can produce parts in which the length of material required to the stroke cold header can produce parts in which the length of the cold header can produce parts in which the length of the cold header can produce parts in which the length of the cold header can produce parts in which the length of the cold header can produce parts in which the length of the cold header can produce parts in which the length of the cold header can produce parts in which the length of the cold header can produce parts in which the length of the cold header can produce parts in which the length of the cold header can produce parts in which the length of the cold header can produce parts in which the length of the cold header can produce parts i

wire or rod.

A triple-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 6 to 8 diameters of the wire or rod.

Solid dies can be used only for parts with a shank length not exceeding 8 diameters of the wire or rod. For longer shanks open dies should be used.

All the operations performed by the header, such as wire or rod feeding, cutting-off and carrying-over the blank, upsetting the bolt or rivet head and knocking-out the finished pieces are fully automatic and are interconnected in a single kinematic system.

STANKOIMPORT

161

STANKOIMPORT

The automatic header comprises the following principal units: automatic stock feed; punch movement slide; cut-off and carry-over from feed line to heading line; heading ram; knock-out.

The wire is fed intermittently by rollers through the cut-off die up to the stop controlling the length of the blank.

The rod is cut off and carried over to the heading line by the action of the

The rod is cut off and carried over to the heading line by the action of the cut-off mechanisms.

The ram performs the upsetting operation in two consecutive strokes.

The dies are returned by spring action to the feeding line where the next blank ejects the finished piece.

The ram is driven by the crankshaft, while all the other mechanisms are

actuated by the camshaft.

The camshaft is driven by the crankshaft through a pair of gears with a ratio of 1 to 2, i.e., the camshaft makes one revolution to two revolutions of

the crankshaft. The crankshaft is driven from an individual electric motor through a mul-

The crankshaft is driven from an individual electric motor whose in tiple V-belt arrangement.

A foot-operated shoe-brake is provided for quickly stopping the machine. Lubrication of the most important friction surfaces is effected from a centralized force-feed system by means of a pumping station.

The header is equipped with safety devices which prevent overloading any of its mechanisms.

All the external moving parts are enclosed by removable guards.

The design of the machine ensures accessibility and simplicity of adjustment of all the mechanisms and tools.

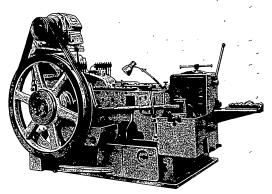
The automatic cold header is delivered complete with the electrical equipment, one set of dies for 6 mm dia, stock, a set of wrenches and all the necessary ment, one set of dies for 6 mm dia. stock, a set of wrenches and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Maximum wire diameter (mm) with an		Number of pieces per minute	135
ultimate strength of 60 kg/sq. mm	6	Stroke of heading ram, mm	120
Maximum length of shank, mm	72	Electric motor power, kW	7
Minimum length of shank, mm	16	Electric motor speed, r.p.m	1000
Maximum length of blank, mm	95	Overall dimensions, mm:	
Minimum length of blank, mm	18	Length	2325
Maximum diameter of head, mm	12	Width	1300
Maximum height of head, mm	4.5	Height	
Number of strokes per minute	270	Net weight, kg approx.	

AUTOMATIC DOUBLE STROKE OPEN DIE COLD HEADER

MODEL A 169



The automatic header is designed for cold heading of bolt blanks and other

parts made of wire or rod.

With the aid of special fixtures and a corresponding set-up, the automatic header can be used for making parts by the cold bending method. In selecting a cold header, it is necessary to keep in mind the following con-

A single-stroke automatic cold header can produce only parts in which the length of material used to form the upset head does not exceed 2 to 2½ diameters of the wire or rod.

meters of the wire or rod.

A double-stroke automatic cold header can produce parts in which the length of material used to form the upset head does not exceed 4½ diameters

of the wire or rod,

A triple-stroke automatic cold header can produce parts in which the length
of material used to form the upset head does not exceed 6 to 8 diameters of the

wire or rod.

Solid dies can be used only for making parts in which the length of the shank is not more than 8 times the diameter of wire or rod.

For longer shanks, open dies should be used.

All the operations performed by the header: feeding the wire or rod, outting-off and carrying-over the blank, upsetting the bolt or rivet head and knocking-out the finished piece are fully automatic and are interconnected in a single kinematic system.

STANKOIMPORT

163

The automatic header comprises the following principal units: automatic feed; punch movement slide; cut-off and carry-over from feed line to heading line; heading ram; knock-out.

Wire or rod, straightened by a special device, is fed by intermittently revolving rollers through the cut-off die to the stop, set to the required length of blonk.

of blank,

The rod is cut off and carried over to the heading line by the action of the

cut-off mechanism.

-off mechanism. The heading ram forms the head in two consecutive strokes. The dies are returned by spring action to the feed line where the next blank

The cursual purposes the cambatt through a pair of gears with a ratio of 1 to 2, i. e. the cambatt makes one revolution to two revolutions of the cambatt.

The cambatt is driven by the crankshaft through a pair of gears with a ratio of 1 to 2, i. e. the cambatt makes one revolution to two revolutions of the crankshaft.

crankshaft.

The crankshaft is driven from an individual electric motor through a multiple V-belt arrangement.

A foot-operated shee-brake is provided for quickly stopping the machine. Lubrication of the most important friction surfaces is effected by a centralized force-feed system by means of an oil pumping station.

The automatic header is equipped with safety devices preventing overloading of any of its mechanisms.

The design of the automatic header approach accordibility and the safety devices preventing overloading of any of its mechanisms.

loading of any of its mechanisms.

The design of the automatic header ensures accessibility and easy adjustment of all its mechanisms and tools.

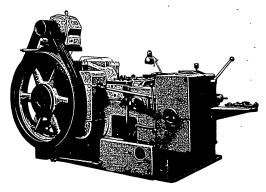
The automatic header is delivered complete with the electric motor, starting equipment and wiring, one set of dies for 8 mm dia, stock, one set of V-belts, a set of wrenches, lubrication pump and oil piping and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Maximum diameter of part shank (mm) with an ultimate strength of 60 kg/sg.mm	8 95 18 130 22	Number of pieces per minute	50
Maximum diameter of upset head, mm Maximum height of upset head, mm Number of strokes per minute	16 6 210	Length	2080
		the state of the s	

AUTOMATIC DOUBLE STROKE OPEN DIE COLD HEADER

MODEL A 162



The automatic header is designed for cold heading of bolt blanks and other The automatic header is designed for cold heading or note blanks and other parts made of wire or rod.

With the aid of special fixtures and a corresponding set-up, the automatic header can be used for making parts by the cold bending method.

In selecting a cold header, it is necessary to keep in mind the following considerations:

In selecting a cold header, it is hecessary to keep members siderations:

A single-stroke automatic cold header can produce only parts in which the length of material used to form the upset head does not exceed 2 to 2½ diameters of the wire or rod.

A double-stroke automatic cold header can produce parts in which the length of material used to form the upset head does not exceed 4½ diameters of the wire or rod.

A triple-stroke automatic cold header can produce parts in which the length of material used to form the upset head does not exceed 6 to 8 diameters of the wire or rod.

of material used to form the upset head does not extend to constant which the length of the Solid dies can be used only for making parts in which the length of the shank does not exceed 8 times the diameter of wire or rod.

For longer shanks, open dies should be used.

All the operations performed by the header: feeding the wire or rod, cutting-off and carrying-over the blank, upsetting the bolt or rivet head and knocking-out the finished piece are fully automatic and are interconnected in a single kinematic system.

STANKOIMPORT

165

The automatic header comprises the following principal units: automatic feed; punch movement slide; cut-off and carry-over from feed line to heading.

line; heading ram; knock-out.

Wire or rod, straightened by a special device, is fed by intermittently revolving rollers through the cut-off die to the stop, set to the required length of blank.

The rod is cut off and carried over to the heading line by the action of the cut-off mechanism

The heading ram forms the head in two consecutive strokes.

The dies are returned by spring action to the feed line where the next blank

ejects the finished piece.

The heading ram is driven by the crankshaft, while all the other mechanisms are actuated by the camshaft.

The camshaft is driven by the crankshaft through a pair of gears with a ratio of 1 to 2, i. e., the camshaft makes one revolution to two revolutions of the crankshaft.

The crankshaft is driven from an individual electric motor through a mul-

The crankshaft is driven from an individual electric motor through a multiple V-belt arrangement.

A foot-operated shoe-brake is provided for quickly stopping the machine. Lubrication of the most important friction surfaces is effected from a centralized force-feed system by means of a pumping station.

The automatic header is dquipped with safety devices preventing overloading of any of its mechanisms.

All the external moving parts are enclosed by removable guards.

The design of the automatic header ensures accessibility and easy adjustment of all its mechanisms and tools.

The automatic header is delivered complete with the electric motor, starting equipment and wiring, one set of dies for 10 mm dia, stock, one set of V-belts,

equipment and wiring, one set of dies for 10 mm dia. stock, one set of V-belts, a set of wrenches, lubrication pump, oil piping and all the necessary technical instructions for erection and maintenance.

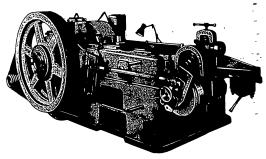
A wire reel is available on special order.

#### SPECIFICATIONS

SI LOU	MONITONS	
Maximum diameter of part shank (mm) with an ultimate strength of	Number of pieces per minute	
	Stroke of heading ram, mm	170
Maximum length of shank, mm 120	Floatric mater LTT	
Minimum length of shank, mm		
Maximum length of blank, mm 160 Minimum length of blank, mm 30	Upsetting force, t	65.4
Maximum diameter of upset head,	Length	3160
Maximum height of upset head, mm 7.5	Width	1960
Maximum neight of upset head, mm 7.5		2070
Number of strokes per minute 170	Net weight, kg approx.	8800

AUTOMATIC DOUBLE STROKE OPEN DIE COLD HEADER

MODEL A 163



The automatic cold header is designed for upsetting bolt, rivet and screw heads, as well as other parts with long shanks, made of calibrated wire, in two In selecting an automatic cold header, the following considerations are to be borne in mind:

A single-stroke cold header can produce only parts in which the length of material required to form the upset head does not exceed 2 to 2½ diameters of the suite and of the wire or rod.

A double-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 4½ diameters of the

A triple-stroke cold header can produce parts in which the length of ma-terial required to form the upset head does not exceed 6 to 8 diameters of the

wire or rod.

Solid dies can be used only for parts with a shank length not exceeding. Solid dies can be used only for longer shanks, open dies should be used. All the operations performed on the automatic cold header, such as feeding the wire or rod, cutting-off and carrying-over the blank, upsetting the biolt or rivet head and knocking-out the finished product are fully automatic and are interconnected in a single kinematic system.

The automatic header comprises the following principal units: automatic stock feed; punch movement mechanism; cut-off and carrying-over from feed line to heading line; heading ram; knock-out.

The wire is fed intermittently by rollers through the cut-off die up to the stop controlling the length of the blank.

The blank is cut off and carried over to the heading line by the action of the cutting mechanism.

cutting mechanism.

STANKOIMPORT

The ram performs the upsetting operation in two consecutive strokes.

The die is returned by the action of springs to the feed line, where the next blank ejects the finished piece.

The ram is driven by the crankshaft while all the other mechanisms are actuated by the camshaft.

The camshaft is driven by the crankshaft through a pair of gears with a ratio of 1 to 2, i.e., the camshaft makes one revolution to two revolutions of the crankshaft.

crankshaft.

The crankshaft is driven from an electric motor through a V-belt arrange-

The craims in its diversion from a receiver interest access ment.

A foot-operated, shoc-brake is provided for quickly stopping the header.

Lubrication of the most important friction surfaces is effected from a centralized force-feed system by means of an oil-pumping station.

The automatic header is equipped with safety devices to prevent overloading any of its mechanisms.

All the external moving parts are enclosed by removable guards.

The design of the automatic header ensures accessibility and simplicity of adjustment of all the mechanisms and tools.

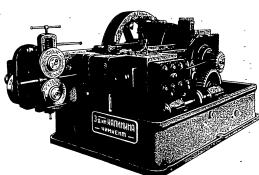
The header is delivered complete with the electrical equipment, one set of dies for 12 mm dia. stock, a set of V-belts, a set of wrenches, a lubricating pump with piping and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Maximum length of shank, mm   14   Ele	mmber of pieces per minute   7
--	--------------------------------

AUTOMATIC DOUBLE STROKE. OPEN DIE COLD HEADER

MODEL À 164



The automatic header is designed for upsetting bolt, rivet and screw heads, as well as other parts with long shanks made of calibrated wire, in two consecutive strokes.

In selecting an automatic cold header, it should be borne in mind that a single-stroke cold header can produce only parts in which the length of material required to form the upset head does not exceed 2 to 2½ diameters of the wire or rod used.

A double-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed  $4\frac{1}{2}$  diameters of the

A triple-stroke cold header can produce parts in which the length of material required to form the upset head does not exceed 6 to 8 diameters of the

terial required to form the upset head does not exceed 6 to 8 diameters of the wire or rod.

Solid dies can be used only for parts with a shank length exceeding 8 diameters of the wire or rod. For longer shanks open dies should be used.

All the operations performed by the header, such as wire or rod feed, cutting-off and carrying-over the blank, upsetting the bolt or rivet head and knocking-out the finished pieces are fully automatic and interconnected in a single kinematic system.

The automatic cold header comprises the following principal units: automatic stock feed; punch movement slide; cut-off and carry-over from feed line to heading line; heading ram; knock-out.

The wire is fed intermittently by rollers through the cut-off die up to the stop controlling the length of the blank.

STANKOİMPORT

. 169

The rod is cut off and carried over to the heading line by the action of the

cut-off mechanism.

The ram performs the upsetting operation in two consecutive strokes.

The dies are returned by spring action to the feeding line where the next blank ejects the finished piece.

The heading ram is driven by the crankshaft, while all the other mechanisms are actuated by the camshaft.

The camshaft is driven by the crankshaft through a pair of gears with a ratio of 1 to 2,1. e. the camshaft makes one revolution to two revolutions of the crankshaft.

The crankshaft is driven from an individual electric motor through a nultiple V-belt.

tiple V-belt.

A foot operated shoe-brake is provided for quickly stopping the machine.

Lubrication of the most important friction surfaces is effected from a centralized force-feed system by means of a pumping station.

The header is equipped with safety devices which prevent overloading of any of its mechanisms.

any of its mechanisms.

All external moving parts are enclosed by removable guards.

The design of the machine ensures accessibility and simplicity of adjustment of all its mechanisms and tools.

The automatic cold header is delivered complete with the electrical equipment are at a fallier for the mechanisms. ment, one set of dies for 16 mm dia. stock, a set of V-belts, a set of wrenches, the lubrication pumping station with piping and all the necessary technical instructions for erection and maintenance.

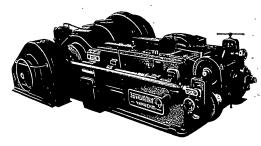
### SPECIFICATIONS

37 1			
Maximum diameter of wire (mm)		Stroke of heading ram, mm	250
with an ultimate strength of 60 kg/sq. mm	10	Number of pieces per minute	56
Maximum length of shank, mm	16 190	Electric motor power, kW	28
Minimum length of shank, mm	48	Electric motor speed, r.p.m	
Maximum length of blank, mm	255	Overall dimensions, mm:	
Minimum length of blank, mm	48	Length	4690
Maximum diameter of head, mm	31.3	Width	2580
Maximum height of head, mm Number of strokes per minute	.11	Height	1850
ramosi of shokes per minute	112	Net weight, kg approx. 5	20100

STANKOIMPORT

# **AUTOMATIC HOT** AND COLD ROLLER HEADING MACHINE

MODEL A 148 A



This machine is designed for hot and cold stamping of roller blanks for roller

This machine is designed for not and cold stamping of rother blanks for rother bearings.

In the process of operation, calibrated rod is fed intermittently by revolving rollers up to the stop. The end of the rod protruding from the cutting die is cut off by a shearing blade and is transferred to the heading line where it is forced impact into the forming die. The approaching slide with a punch upsets the blank into the shape of a taper roller. As the slide recedes to its rear position the knock-outs push the roller out of the die.

The frame is a solid casting made of special grade cast iron. The frame is designed so as to insure high accuracy of products manufactured on the heading machine.

The drive is from an individual electric motor through a multiple V-belt arrangement.

The crankshaft is a high grade heat-treated steel forging of ample-strength

The crankshalt is a high grade heat-treated seet longing of ample-strength and reliability in operation.

The heading slide is made of special grade cast iron. To ensure the required accuracy of products made by the machine, the slide is provided with auxiliary guides on the front part. To ensure alignment of the punch and die, the punch can be adjusted both vertically and horizontally.

The clutch, of the double-disc friction type, is pneumatically operated and is combined with a band brake. The brake stops the slide in its extreme rear nection

The air line, mounted on the machine, supplies air from the shop mains to

The air line, mounted on the machine, suppose the clutch and brake.

To ensure constant air pressure, the air circuit is provided with a regulating valve. Air distribution is effected by a special slide valve.

Lubrication of the principal friction surfaces is centralized.

The automatic roller heading machine is delivered complete with electric motor, starting equipment and wiring, oil pumps and piping, air line mounted

STANKOIMPORT

171

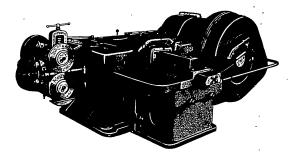
on the machine (including air conducting head, slide valve control and pressure regulating valve), a set of wrenches, a set of dies and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Maximum diameter of roller for cold		Maximum length of blank transferred	
heading with an ultimate strength		to the heading die, mm	
up to 75 kg/sq. mm, inches	1	Number of strokes per minute	
		Electric motor power, kW	-2
Maximum diameter of roller for hot		Electric motor speed, r.p.m	100
heading, inches	2	Overall dimensions, mm:	
Maximum diameter of rod for cold			~10
	010	Length	
heading, mm	24.3	Width	297
Maximum diameter of rod for hot		Height	157
heading, mm	40	Net weight, kg approx.	

# AUTOMATIC HOT AND COLD BALL HEADING MACHINE

MODEL A 148



The ball heading machine is designed for hot and cold stamping of ball blanks for ball bearings.

In the process of operation, calibrated rod is fed intermittently by revolving rollers up to the stop. The end of the rod protruding from the cutting die is cut off by a shearing blade and transferred to the heading line where it is forced by impact into the forming die. The approaching slide with a springaction punch upsets the blank into the shape of a ball. As the slide recedes to its rear position, the knock-outs provided in the punch and die push the ball out of the die.

The frame is a solid casting made of special grade cast iron. The frame is

ball out of the die.

The frame is a solid casting made of special grade cast iron. The frame is designed to ensure high accuracy of products manufactured on the heading

The drive is from an individual electric motor through a multiple V-belt

arrangement.

The crankshaft is a high grade heat-treated steel forging of ample strength and reliability in operation.

The heading slide is made of special grade cast iron. To ensure the required accuracy of products made by the machine, the slide is provided with auxiliary guides on the front part. To keep the blank in the spherical recess of the lower die, the punch is set into a spring-mounted punch holder. To ensure alignment of the punch and die, the punch can be adjusted both vertically and horizontally. The knock-out is mounted in the head of the slide.

The clutch, of the double-disc friction type, is pneumatically operated and is combined with a band brake. The brake stops the slide in its extreme rear position.

The air line, mounted on the machine, supplies air from the shop mains to the clutch and brake. To ensure constant air pressure, the air circuit is

STANKOIMPORT

173

provided with a regulating valve. Air distribution is effected by a special slide valve.

Lubrication of the principal friction surfaces is centralized.

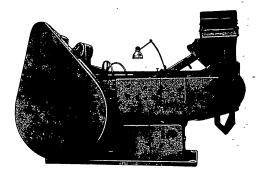
The automatic ball heading machine is delivered complete with electric motor, starting equipment and wiring, oil pumps and piping, air line mounted on the machine (including air conducting head, slide valve control and pressure regulating valve), a set of wrenches, a set of dies and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Maximum diameter of ball for cold · heading with an ultimate strength	Maximum diameter of rod for hot heading, mm 40
up to 75 kg/sq.mm, inches 1 1/8 Minimum diameter of ball for cold	Number of strokes per minute 70
Minimum diameter of ball for cold heading, inches	Electric motor power, kW 40
Maximum diameter of ball for hot	Electric motor speed, r.p.m 1000
heading, inches 2	Overall dimensions, mm:
Minimum diameter of ball for hot	Length 5120
heading, inches 1 1/8	Width 2975
Maximum diameter of rod for cold	Height 1570
heading, mm 24.3	Net weight, kg approx. 23740

# AUTOMATIC BOLT HEAD TRIMMER

морег и 531 г



The automatic bolt head trimmer is designed for producing square or hexagonal bolt heads by trimming blanks previously upset on a cold header.

For bolts processed for thread rolling, the shanks can be extruded simultaneously with the head trimming operation.

The trimmer can be used for extruding only on bolts not requiring head

The trimmer can be used for extruding only on bolts not requiring head trimming.

The bolt head trimmer comprises the following principal units: blade-type hopper with guides; pushing feeder; manipulating feeder; trimming and extruding mechanism; knock-out mechanism.

Bolt blanks are loaded in bulk into the hopper where a reciprocating blade pushes the blanks toward the guides. The guiding device consists of two parallel inclined bars along which the blanks slide by gravity toward the pushing feeder. The hopper is equipped with a deflector which rights incorrectly positioned blanks or returns them to the hopper.

As the pushing feeder moves forward, the blank falls into a recess of the carrier block and is carried over to the trimming line. Here the blank is gripped by the manipulating feeder spring fingers and is positioned directly in line with the punch and die.

The blank, placed on the trimming line by the manipulating feeder, is then pushed into the stationary punch.

In the process of being pushed in and before the head is trimmed, the shank passes through an extrusion die and is reduced to the size required for thread rolling.

The blat head is trimmed at the end of the gate stroke and is completed.

The bolt head is trimmed at the end of the gate stroke and is completed at the moment when the movable die is near to the stationary punch.

STANKOIMPORT

After this the knock-out mechanism ejects the blank from the stationary punch, through the hexagonal hole of the movable die and further through the gate into the finished product receptacle.

Burrs, remaining after the head-trimming operation, are cut off in the process of ejection and fall down between the die and punch into a separate

process of ejection and fall down between the die and punch into a separate receptacle.

The crankshaft is driven from an individual electric motor through a multiple V-belt arrangement running over the flywheel.

A foot-brake is provided for quickly stopping the flywheel.

For cooling and lubricating the working tools during shank extrusion and head trimming operations, the machine is equipped with a gear pump supplying the cooling and lubricating liquid.

The trimmer is equipped with a force-feed lubrication system operated by a special mechanically driven pump.

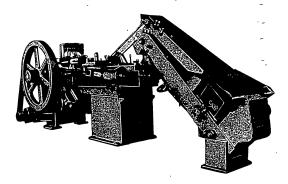
The hopper mechanisms are driven through a sprocket from the crankshaft. The automatic trimmer is delivered complete with the electrical equipment, a set of wrenches and all the necessary technical instructions for crection and maintenance.

### SPECIFICATIONS

Maximum diameter of bolt shank, mm Maximum length of bolt shank, mm Minimum length of bolt shank, mm Minimum overall length of bolt, mm	10 80 6 15	Deflector speed, r.p.m.  Electric motor power, kW  Electric motor speed, r.p.m.  Overall dimensions, mm:	4.5
Number of strokes per minute	110	Length	2900
Stroke of gate, mm	105	Width	
Double strokes of hopper blade per		Height	1800
minute	66	Net weight, kg approx.	4050

# AUTOMATIC BOLT HEAD TRIMMER

MODEL A 233



The automatic bolt head trimmer is designed for producing square or hexagonal bolt heads by trimming blanks previously upset on solid or split die double stroke 12, 14 and 16 mm automatic cold headers.

For bolts processed for thread rolling, the shanks can be extruded simultaneously with the head trimming operation.

The trimming can be used for extruding only, on bolts not requiring head trimming

trimming.

The automatic bolt head trimmer can also be used for secondary upsetting

The automatic bolt head trimmer can also be used for secondary upsetting operations.

The bolt head trimmer comprises the following principal units: chain feed hopper; pushing feeder; manipulating feeder; trimming and extruding mechanism; knock-out mechanism.

Bolt blanks are loaded in bulk into the lower end of the conical hopper where a spiral cam agitates the blanks. Fingers, mounted on a chain, pass where a spiral cam agitates the blanks. Fingers, mounted on a chain, pass where the bloth in the bottom of the hopper and, extract the blanks, carrying them to the upper part of the lifting wheel. From here they slide by gravity along an inclined chute to the pushing feeder.

As the pushing feeder moves forward, the blank falls into a recess of the carrier block and is carried over to the trimming line. Here the blank is gripped by the manipulating feeder spring fingers and is positioned directly in line with the punch and die.

The blank, placed on the trimming line by the manipulating feeder, is then pushed into the stationary punch.

In the process of being pushed in and before the head is trimmed, the shank passes through an extrusion die and is reduced to the size required for thread rolling.

STANKOIMPORT

177

The bolt head is trimmed at the end of the gate stroke and is completed at the moment when the movable die is near to the stationary punch.

After this, the knock-out mechanism ejects the blank from the stationary

punch, through the hexagonal hole of the movable die and further through the gate into the finished product receptacle.

Burrs, remaining after the head trimming operation, are cut off in the process of ejection and fall down between the die and punch into a separate

process of specula and fail down between the die and punch into a separate receptacle.

The drive of the bolt head trimmer is through a multiple V-belt arrangement from an individual electric motor mounted on an adjustable bracket.

The crankshaft actuates all the mechanisms with the exception of the chain

The cranssnatt accuraces an enouncement of the dispersion of the flywheel.

A foot-brake is provided for quickly stopping the flywheel.

The lubricating system is of a combined type, Forced-feed lubrication from an oil pump is installed for the most important friction surfaces while the other

an oil pump is installed for the most important friction surfaces while the other stations are lubricated by hand.

For cooling and lubricating the working tools during extruding and head trimming operations, the trimmer is equipped with a special electric pump supplying the cooling and lubricating liquid.

The chain of the hopper is driven by an individual electric motor through a variable speed gear box with a 1 to 3 ratio, and a two-speed gear reducing unit.

The chain hopper, as well as the lifting wheel and the chute can be adjusted

The chain hopper, as wen as the intung wheel and the chuice can be adjusted for blanks of varying diameters and lengths.

The automatic bolt head trimmer and the chain hopper are safeguarded against overloads by special safety devices.

The automatic bolt head trimmer is delivered complete with the electrical equipment, a set of wrenches and all the necessary technical instructions for erection and maintenance.

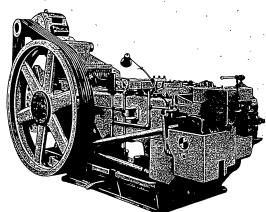
### SPECIFICATIONS

Maximum diameter of bolt shank, mm Maximum length of bolt shank, mm Minimum diameter of bolt shank, mm. Minimum length of bolt shank, mm. Number of strokes per minute, for shanks up to 150 mm in length Number of strokes per minute, for shanks over 150 mm in length	16 200 12 25 55 45	Stroke of gate, mm
	Chain	Hopper
Maximum size of blanks, mm: Diameter Length Hopper capacity, cu. dm Chain speed, m/min: Maximum Minimum Chute adjustment in height, mm.	16 200 150 25 10 175	Electric motor power, kW   0.85

STANKOIMPORT

# AUTOMATIC COLD NUT FORMING MACHINE

MODEL A 411



The nut forming machine is designed for producing finished 6 and 8 mm nuts out of steel wire or rod without the need of any subsequent operations (such as burring, chamfering, trimming, etc.) except threading.

The nuts are cold formed of calibrated rod in 5 operations:
1. Cutting off blank and transferring it to the second station;
2. Preliminary upsetting and chamfering one face;
3. Upsetting from both sides to a barrel shape and spotting of hole by two conical center marks;
4. Upsetting the hexagonal form with inner and outer chamfers and preliminary punching of the hole;
5. Piercing the hole and stripping the nut which drops into the finished product receptacle.
Each operation is performed in one revolution of the crankshaft.

product receptacle.

Each operation is performed in one revolution of the crankshaft,
A finished nut is likewise obtained in one crankshaft revolution, as all of
the five operations are performed simultaneously.

In accordance with the operations performed the nut forming machine comprises the following principal units: gate; cut-off mechanism; transfer slide;
feeding and knock-out mechanism; gripping mechanism for the 4-th station;
stripper.

STANKOIMPORT

A foot brake is provided for quickly stopping the flywheel.

The working tools, at the fifth station, are cooled by means of a special pump with a capacity of 6 litres per minute.

The lubricating system is of the centralized type and is actuated by a pump with a capacity of 2.5 litres per minute. The pump is driven by an individual electric motor.

The oil lubricating system is provided with a pressure relay ensuring dependable lubrication of the machine. The main electric motor cannot be switched on until the pressure in the oil circulating line reaches 2 atmospheres. If the pressure falls during operation, the main electric motor is automatically stopped.

stopped.

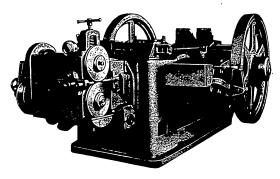
The automatic nut forming machine is delivered complete with the electrical equipment, one set of tools, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Maximum size of nut, mm 8	Stroke of gate, mm 1
Minimum size of nut, mm 6	Electric motor power, kW
Maximum blank diameter, mm 10	Electric motor speed, r.p.m 7
Minimum blank diameter, mm 8	Overall dimensions, mm:
Maximum length of blank, min 11.67	Length 32
Minimum length of blank, mm 9.7	Width 19
Number of pieces per minute 100	Height 23
Maximum crankshaft speed, r.p.m 100	Net weight, kg approx. 116

# **AUTOMATIC** COLD NUT FORMING MACHINE

MODEL A 412



The nut forming machine is designed for producing finished 10 to 12 mm nuts without the need of any subsequent operations (such as burring, chamfering, trimming, etc.) except threading.

The nuts are cold formed of calibrated steel rod in 5 operations:

1. Cutting off blank and transferring it to the second station;

2. Preliminary upsetting and chamfering one face;

3. Upsetting from both sides, to a barrel shape and spotting of hole by two conical center marks;

4. Upsetting the bexagon form with inner and outer chamfers and pre-

5. Opsetting from both sides, to a barrel shape and spotting of hole by two conical center marks;
4. Upsetting the hexagon form with inner and outer chamfers and preliminary punching of the hole from both sides;
5. Piercing the hole and stripping the nut which drops into the finished product receptacle.

Each operation is performed in one revolution of the crankshaft.
A finished nut is likewise obtained in each crankshaft revolution, as all of the five operations are performed simultaneously.

In accordance with the operations performed, the nut forming machine comprises the following principal units: drive; feeding mechanism; out-off mechanism; gate; transfer slide; stripper.

For quickly stopping the flywheel, the machine is equipped with a brake. The working tools, at the fifth station, are cooled by means of a special pump with a capacity of 18 litres per minute.

The lubricating system is of the centralized type and is actuated by two pumps with a rocker arm drive from the pitman.

The pressure in the lubricating system is up to 75 atm.

The frame is of a box-section type and is made of high-quality cast iron.

STANKOIMPORT

181

STANKOIMPORT

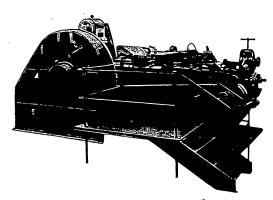
All the external moving parts are enclosed by removable guards, The automatic nut forming machine is delivered complete with the electrical equipment, one set of tools, a set of wrenches and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Maximum size of nut, mm	12 10 16 12 19.2 16.1	Stroke of gate, mm
Number of pieces per minute	80	mm 1740
Maximum crankshaft speed, r.p.m	80	Net weight, kg approx. 18200

# AUTOMATIC COLD NUT FORMING MACHINE

MODEL A 413



The nut forming machine is designed for producing finished nuts from rod material without the need of subsequent operations (such as burring, chamfering, trimming, etc.) except threading. Nuts are cold-formed of calibrated steel rod in 5 operations:

1. Cutting off blank to length and transferring it to the second station;

2. Preliminary upsetting and chamfering one face;

3. Upsetting from both sides to a barrel shape and spotting the hole by two conical center marks;

4. Upsetting the hexagon form with inner and outer chamfers and preliminary punching of the hole from both sides;

5. Piercing the hole and stripping the nut which drops into the finished product receptacle.

- 5. Piercing the hole and stripping the nut which drops into the himshed product receptacle.
  A finished nut is obtained in each revolution of the crankshaft.
  In accordance with operations performed, the nut forming machine comprises: drive, feeding mechanism, gate, cut-off machine, transfer slide, stripper. For quickly stopping the flywheel, the machine is equipped with a brake, consisting of a pneumatic cylinder with piston and the brake-operating lever. The drive is through a pneumatic disc-type friction clutch. To counteract crankshaft inertia when the clutch is disengaged, the machine is equipped with a band brake which is applied by spring action and is released by a pneumatic device.

STANKOIMPORT

Backward motion of the feeding rollers, during idle swinging of the clutch link is prevented by means of a periodically-operating brake.

To counteract inertia forces and to decrease play and knock in the drive

mechanism links, the overrunning clutch is equipped with a constant-action The working tools, at the fifth station, are cooled by means of a special

The WORKING tools, at the filter statem, are content by means of a special coolant pump.

The lubricating system is of a combined type: centralized lubrication is from a vane-type oil pump and individual lubrication from a grease gun through ball-type grease cups.

The friction clutch and brakes are controlled through an electromagnetically constant at all distributing mechanism.

The friction clutch and brakes are controlled through an electromagnetically operated air distributing mechanism.

To protect the gland packing of the electromagnetic air distributor valve, as well as of the clutch starting and brake cylinders pistons, the entering compressed air is moistened with atomized oil by means of an injection-type lubricator.

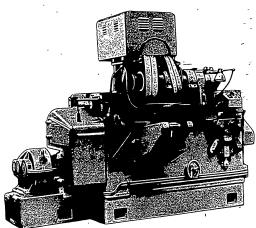
The nut forming machine is delivered complete with electric motor, wiring, lubricating equipment, air equipment with all the necessary valves and pressure gauge, one set of tools, a set of wrenches and all the necessary technical instructions for installation and operation.

### SPECIFICATIONS

Maximum size of nut, mm     16       Maximum blank diameter, mm     22       Maximum length of blank, mm     17.8       Stroke of gate, mm     170       Number of pieces per minute (rated) 55 to65       Electric motor newer letter	Length 5 Height above floor level, mm 2	450 240 395
Electric motor power, kW 40	Net weight, kg approx. 42	000

# AUTOMATIC CHAIN WELDING MACHINE

MODEL A 624 B



The machine is designed for welding single-butt links previously joined on

The machine is designed for welding single-butt links previously joined on a chain bending machine.

Chains with gaps between link ends are fed continuously from the automatic chain bending machine to the welding machine.

The chain welding machine welds the links that are in the vertical plane. In order to weld all the links, the chain is turned through an angle of 90°.

The chain welding machine performs the following operations: feeding the chain; upsetting the links before welding; welding the links; pressing down the flash after welding; removing the flash.

The electric control system permits continuous automatic operation, idle runs and setting up operation.

Lubrication of principal friction surfaces is centralized from station through measuring feeders. The other points are lubricated individually by band with a lubricating-gun through ball-type cups.

The automatic chain welding machine is delivered complete with electric motor, starting equipment and wiring, lubricating pump station with oil piping, lubricating-gun, a set of wrenches and all the necessary technical instructions for installations and operation.

STANKOIM P'ORT

185

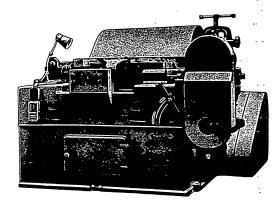
STANKOIMPORT

#### SPECIFICATIONS

Size of chains welded, mm 13 to	17	Electric motor speed, r.p.m	100
Size of links welded, mm:		Welding transformer rating, kVA	1000
Maximum length	78	Floor space, mm:	"
Minimum length	48		2210
<ul> <li>Maximum width</li> </ul>	60	R. to L	
Minimum width	32	Maximum height above floor level,	
Camshaft speed, r.p.m	15	mm	
Electric motor power, kW	4.5	Net weight, kg approx.	8020

# AUTOMATIC CHAIN MAKING MACHINE

MODEL A 615 B



The machine is intended for cold bending and joining chain links of ca-

The machine is intended for cold bending and joining chain links of calibrated steel.

The links are welded on a special automatic chain welding machine.

The machine is driven from an individual electric motor through a V-belt drive and a friction clutch.

The drive is equipped with a device for varying intermediate shaft speed to control the number of links produced by the machine per minute. The preliminary bending and cutting slide, final bending slide, hold-down mechanism and manipulating device are actuated by the camshaft.

The lubricating system is of a combined type. Centralized lubrication is accomplished through measuring feeders by a grease pump station while individual lubrication is effected by hand with a lubricating-gun through ball-type cluis.

vidual indication is elected by the cups.

The automatic chain making machine is delivered complete with electric motor, grease pump station with piping, lubricating-gun, a set of wrenches and all the necessary technical instructions for installation and operation.

The machine can be furnished, set up in accordance with the Buyer's drawings (within the capacity of the machine), at an extra cost.

STANKOIMPORT

STANKOIMPORT

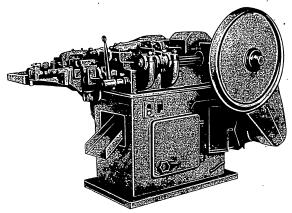
186

#### SPECIFICATIONS

Maximum anchor chain size, mm	17	Links per minute:	
Minimum anchor chain size, mm	15	Maximum	1
Maximum calibrated chain size, mm	18	Minimum Electric motor power, kW	1.
Minimum calibrated chain size, mm .	16	Electric motor speed, r.p.m Floor space, mm:	1000
Maximum length of blank, mm	179	F. to B	2550
Maximum size of links, mm:		R. to L	2630
Length	78	mm	
Width	60	Net weight kg approx	

# AUTOMATIC WIRE NAIL MACHINE

MODEL A 713 A



The automatic wire nail machine is designed for making building, tar-paper and coat nails.  $\hdots$ 

and coat nails.

The machine comprises the following principal mechanisms: feeding mechanism; straightener rolls; gripping mechanism; heading mechanism; pointing and cut-off mechanism; stripper; ejector.

All these nail making operations are fully automatic and are interconnected in a single kinematic system.

The frame comprises two parts: a cast-iron base on which is mounted a horizontal cast steel frame. All these mechanisms and the drive are mounted on the horizontal frame.

The drive is from an individual electric motor which transmits power to the crankshaft through a V-belt drive. The crankshaft actuates the heading ram as well as the two side shafts through bevel gears having a 1 to 1 ratio. All the other mechanisms are actuated by cams mounted on the side shafts. The operations required to complete one nail are performed in one revolution of the crankshaft.

The feeding mechanism serves to feed wire into the gripping dies. This

of the crankshaft.

The feeding mechanism serves to feed wire into the gripping dies. This mechanism can be adjusted to the length of feed.

The straightener rolls straighten the wire before the latter passes into the feeding mechanism. The wire is straightened by being subject to consecutive bending in passing through five rolls. The rolls are not driven but are revolved by the wire passing through them. The straightening force can be adjusted by changing the distance between the rolls.

STANKOIMPORT

STANKOIMPORT

The gripping mechanism closes the split die during the heading operation and opens it after the nail head has been formed. The die consists of two symetrical halves: a stationary and a movable die-half. The gripping mechanism is kinematically interconnected with the movable part of the die.

The heading mechanism obtains its reciprocating motion from a connecting rod. The sliding ram is provided with a recess for a holder into which the heading tool is clamped. The holder and the heading tool are clamped and adjusted by screws

adjusted by screws.

The distance between the heading tool and the die is regulated by an adjusting nut.

The pointing and cut-off mechanism consists of two brackets on which housings with slides are mounted. The slides are equipped with blades for pointing and cutting-off nails. The slides are reciprocated by pitmans actuated

pointing and cutting-oft nais. The slides are reciprocated by pitmans actuated by the side shaft cams.

The stripper is intended for knocking off nails which are held on a burr after the pointing and cut-off operations. The stripper consists of a lever with a roll, stripping lever with a knock-out bar and damper. The force of the stripper blow is adjustable.

stripping lever with a knock-out dat and damped.

blow is adjustable.

The ejector serves to push out nails which for some reason are still held on a burr. The ejector consists of a strip held against the heading tool by a spring. The machine is safeguarded against overloading by the transmission of the flywheel torque to the crankshaft through a friction clutch which slips in case of excessive load.

The automatic wire nail machine is delivered complete with the electrical equipment and wiring, tools, V-belts, grease gun, oil-can, straightener rolls and all the necessary technical instructions for erection and maintenance.

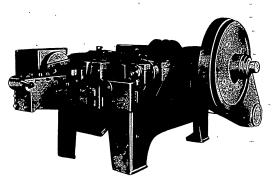
### SPECIFICATIONS

Nail diameter, mm: Maximum		Heading ram stroke, mm	120
Minimum	1 8	Electric motor power, kW	2.8
Nail length, mm:	1.0	Electric motor speed, r.p.m	1500
Maximum	80	Floor space, mm:	
Minimum Ultimate strength of material, kg/sq.	15	F. to B. R. to L.	1750 1215
Crankshaft speed, r.p.m	95	Maximum height above floor level,	
Number of pieces per minute	400 400	Net weight, kg approx.	1238

STANKOIMPORT

# AUTOMATIC WIRE NAIL MACHINĒ

MODEL A 715



The automatic wire nail machine is designed for making building, tar-paper and roofing nails out of coiled wire.

The machine comprises the following mechanisms: feeding mechanism; straightener rolls; gripping mechanism; heading mechanism; pointing and cutoff mechanism; stripper; ejector.

All these nail-making operations are fully automatic and are interconnected in a single kinematic system.

The frame is a steel casting. All the mechanisms and the drive are mounted on the frame.

The frame is a steel casting. All the mechanisms and the drive are mounted on the frame.

The drive is from an individual electric motor which transmits power through a multiple V-belt to the flywheel mounted on the crankshaft. The crankshaft actuates the heading ram, as well as two side shafts through bevel gears having a 1 to 1 ratio. The cams actuating all the other mechanisms are mounted on the side shafts. The operations required to complete one nail are performed in one revolution of the crankshaft.

The tending mechanism serves to feed wire into the gripping dies. This

performed in one revolution of the crankshaft.

The feeding mechanism serves to feed wire into the gripping dies. This mechanism can be adjusted to the length of feed.

The straightener rolls straighten the wire before the latter passes into the feeding mechanism. The rolls are not driven but are revolved by the wire passing through them.

The gripping mechanism closes the split die during the heading operation and opens it after the nail head has been formed. The die consists of two symmetrical halves: a stationary and a movable die-half. The gripping mechanism is kinematically interconnected with the movable part of the die.

The heading mechanism obtains its reciprocating motion from the crankshaft through the sliding ram. The ram is provided with a recess for a holder into which the heading tools are clamped.

STANKOIMPORT

190

- 191

The pointing and cut-off mechanism consists of two brackets on which housings with slides are mounted. The slides are equipped with blades for pointing and cutting off nails. The slides are reciprocated by connecting rods actuated by the side shaft cams.

The ejector serves to push out nails which for some reason are still held on a burr. The ejector consists of a lever held against the heading tool by a spring. The machine is safeguarded against overloading by the transmission of the flywheel torque to the crankshaft through a friction clutch which will slip in case of excessive loads.

The lubricating system is of a combined two wins lately

case of excessive loads.

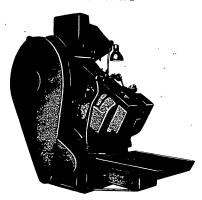
The lubricating system is of a combined type using both grease and machine oil. Lubrication is carried out by hahd through a grease gun and an oil can. The automatic wire nail machine is delivered complete with the electrical equipment and wiring, tools, V-belts, grease gun, oil can, straightener rolls and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Nail diameter, mm: Maximum		Electric motor power,	kW	10
Minimum		Electric motor speed, r Floor space, mm:	.p.m	1000
Nail length, mm:		F. to B		9015
Maximum	10	R. to L		1838
Number of pieces per minute	000	Maximum height abov		
Number of strokes per minute	200	Net weight kg	mm	1390

# AUTOMATIC FLAT DIE THREAD ROLLING MACHINE

MODEL A 251 B



The machine is designed for rolling thread on bolt stems between flat dies profiled in the form of a development of the helical threads.

Bolt blanks are charged into the hopper from which they are automatically transferred to the thread rolling line, where they are carried along by the moving die, rolled over the stationary die and fall into a trough from which they are periodically removed.

All the mechanisms are mounted on the former thinks.

une, roused over one standard and all into a trough from which they are periodically removed.

All the mechanisms are mounted on the frame which rests on a bed inclined to an angle of 30° to the horizontal.

The inclined position of the mechanisms and tools facilitates automatic feed and considerably simplifies the design of the machine.

The stationary die is set into a die holder, the position of which, with respect to the frame, can be adjusted in accordance with the type and size of bolt being threaded. The reciprocating slide carries the non-adjustable die.

The thread rolling machine is delivered complete with the automatic feeder comprising the following parts:

a) Blade-type hopper into which blanks are charged by hand. A reciprocating blade moves inside the hopper and pushes the blanks towards the guiding device. The position of the hopper is regulated in accordance with the size of the bolts being threaded.

b) Guiding devices consisting of two inclined strips over which the blanks slide by gravity towards the feeding mechanism. A separating lever singles one blank out of the procession of blanks and transfers it to the feeding mechanism.

STANKOIMPORT

STANKOIMPORT

A deflector, mounted at the hopper outlet, rights incorrectly positioned blanks or returns them to the hopper.

All the mechanisms of the thread rolling machine are actuated by an individual electric motor through a combination of V-belt, lever, cam and gear

vidual electric motor through a combination of V-bett, lever, cam and gear drives.

To prevent breakdowns in case of overloads, the machine is provided with safety devices mounted on the slide-driving and hopper mechanism shafts. These devices ensure slipping at overloads.

The machine is controlled by a push-button station located on the frame near the operator's position.

A coolant gear pump is provided for cooling the working tools.

Friction surfaces are centrally lubricated by a lubricating pump through measuring feeders.

External moving parts are enclosed by guards.

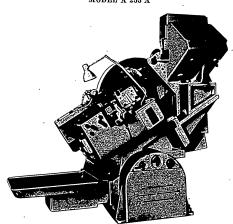
The thread rolling machine is delivered complete with electric motor, starting equipment and wiring, lubricating pump with piping and measuring feeders, coolant pump, hopper, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Maximum diameter of rolled thread (mm) for steel with a yield point of 80 kg/sq.mm and faximum length of bolt shank, mm diaximum length of bolt shank, mm diaximum length of bolt shank, mm daximum length of threaded portion, mm diaximum length of threaded portion, mm diaximum length of threaded portion, mm diaximum length of threaded portion, couble strokes of slide per minute (rated production capacity) troke of slide, mm diaximum die height, mm diaximum die height, mm diaximum length of stationary die, mm	Maximum length of moving die, mm Double strokes of hopper blade per minute Mapper capacity, cu. dm Hopper capacity, cu. dm Hopper capacity, cu. dm Hopper capacity, cu. dm Hopper capacity, ipm Electric motor speed, r.p.m. Coolant pump: Speed, r.p.m. Capacity, i/min Overall dimensions, mm: Length Width Height Not weight with hopper, kg approx.	41 25 30 2.8 1500 700 2.4 1410 1015 1400

# AUTOMATIC FLAT DIE THREAD ROLLING MACHINE

MODEL A 253 A



This machine is designed for rolling thread on bolt stems between flat dies, profiled in the form of a development of the helical threads.

Bolt blanks are charged into the hopper from which they are automatically transferred to the thread rolling line, where they are carried along by the moving die, rolled over the stationary die and fall into a trough from which they are

die, rolled over the stationary die and fall into a trough from which they are periodically removed.

All the mechanisms are mounted on the frame which rests on a bed inclined to an angle of 30° to the horizontal.

The inclined position of the mechanisms and tools facilitates automatic feed and considerably simplifies the design of the machine.

The stationary die is set into a die holder, the position of which with respect to the frame, can be adjusted in accordance with the type and size of bolt being threaded. The reciprocating slide carries the non-adjustable die.

The thread rolling machine is delivered complete with the automatic feeder comprising the following parts:

a) Blade-type hopper into which blanks are loaded by hand. A reciprocating blade moves inside the hopper and pushes the blanks towards the guiding device. The position of the hopper is regulated in accordance with the size of bolts being threaded.

STANKOIMPORT

STANKOIMPORT

b) The guiding device consisting of two inclined strips over which the blanks slide by gravity towards the feeding mechanism. A separating lever singles one blank out of the procession of blanks and transfers it to the feeding mechanism. A deflector, mounted at the hopper outlet, rights incorrectly positioned blanks or returns them to the hopper.

All the mechanisms of the thread rolling machine are actuated by an individual electric motor through a combination of V-belt, lever, cam and gear drives

To prevent breakdowns in case of overloads, the machine is provided with safety devices mounted on the slide driving and hopper mechanism shafts. These devices ensure slipping at overloads.

The machine is controlled by a push-button station located on the frame near the operator's position.

ir the operator's position.

A coolant gear pump is provided for cooling the working tools.

Centralized lubrication is effected by a lubricator through a system of oil

Centralized lubrication is effected by a lubricator through a system of oil piping and oil cups.

External moving parts are enclosed by guards.

The thread rolling machine is delivered complete with electric motor, starting equipment and wiring, lubricator with oil-piping, coolant pump, hopper, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Jorimum 31			
laximum diameter of rolled thread (mm) for steel with yield point of		Maximum length of stationary die,	
80 kg/sg mm		*****	200
80 kg/sq.mm	12	Maximum length of moving die, mm	220
linimum diameter of rolled thread,		Double strokes of hopper blade per	220
mm	8	minute	
laximum length of bolt shank, mm	-	Hopper conscites	50
fini I met of bott shank, mm	120	Hopper capacity, cu.dm	38
linimum length of bolt shank, mm	18	Deflector speed, r.p.m.	250
faximum length of threaded portion,			7
angen of threaded portion,		Electric motor speed r.p.m	1500
mm m	60	Coolant pump:	1000
linimum length of threaded portion,		Speed, r.p.m.	000
mm	18	Capacity 1/:-	920
Ouble strokes of alide	10	Capacity, l/min.	3
ouble strokes of slide per minute		Overall dimensions, mm:	
(racca production canacity)	85	Length	2085
troke of slide, mm	110	Width	1900
avimum die beleit	446	Height.	1000
aximum die height, mm	65	Height Net weight with hopper, kg approx.	1919
	- 0	approx.	2740

STANKOIMPORT

# AUTOMATIC CIRCULAR DIE THREAD ROLLING MACHINÉ

MODEL 5933



The machine is designed for rolling Metric and English external threads on various parts.

In operation, the blank is placed into a special centering device between two

threaded rollers

threaded rollers.

As the rollers approach each other, the developed radial pressure produces a negative impression of the thread profile on the smooth surface of the blank prepared for threading. Tangential forces cause the blank to rotate forming the thread impression over the entire perimeter of the blank. As the rollers are gradually forced into the body of the blank a gradual displacement of the blank material takes place.

In the process of thread rolling, plastic flow of the blank surface is produced, causing bending of the external fibres of material.

The machine can be used for rolling both right- and left-hand threads. Stock feed is automatic.

Stock feed is automatic.

The machine is driven from an individual electric motor through a multiple V-belt arrangement.

The thread rolling machine is delivered complete with electric motor and starting equipment, a set of change gears, a set of wrenches, work light lamp

STANKOIMPORT

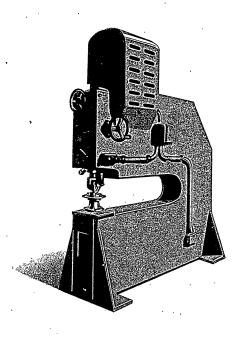
with step-down transformer, coolant pump, a set of cams for automatic and semi-automatic operation and all the necessary technical instructions for the creation and maintenance.

Threading rollers can be furnished on special order.

### SPECIFICATIONS

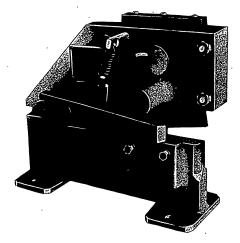
Maximum length of threaded por- tion, mm Number of spindles speeds Number of spindles, r.p.m. 40 to 2 Speed range of spindles, r.p.m. 40 to 2 Maximum distance between spindles, Minimum distance between spindles,	50	Movable slide travel, mm	90 2.8 1500 1100 606 1095
	90	Net weight, kg approx	650

SHEARS



# HAND-OPERATED METAL SHEARS

MODEL II 970



The shears are designed for cutting sheet and sectional steel. They can be mounted on a bench and used in metal cutting and repair shops, construction sites, travelling maintenance shops, as well as for erection work.

The frame consists of a welded frame and two bars connected with bolts.

The bars serve as guides for the slide. The slide is actuated by a lever drive.

The lever is fastened to the crankshaft which transmits motion to the slide.

The shears are delivered complete with a set of knives for cutting sheet and strip steel.

A set of knives for cutting steel sections can be furnished on special order.

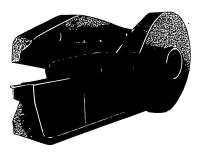
STANKOIMPORT

#### SPECIFICATIONS

Maximum size of material cut (mm)           with an ultimate strength of           45 kg/sq. mm:         13           Round         13           Square         13           Bar         80 × 7	Maximum effort on lever, kg 6 Upper knife shear angle 8°20 Stroke of slide, mm 22 Lever rotation angle 18 Overall dimensions, mm: Length
Sheet 6	Length 34 Width 14
Angle 30×30×4	Height
outsing force, kg 6000	Net weight, kg approx. 3

# ALLIGATOR POWER SHEARS

MODEL HA 313



These shears are designed for cutting sheet, bar and structural section steel. As the cutting of structural steel shapes is accompanied by distortion of the flanges, the shears are primarily used for cutting scrap.

The frame is a steel casting. The longitudinal sides are stiffened by ribs and connected by transverse sections and the base plate. Lugs are provided in the upright column with bores for the jaw axle and the drive shafts. The left side of the frame has a recess for fastening the lower knife.

The jaw is a hollow steel casting with internal stiffening ribs. On the right side of the jaw, a recess is provided for fastening the upper knife. Wear of the jaw is taken up by ajusting wedges. Power is transmitted from the crankshaft to the jaw by a pitman.

The drive is from an individual electric motor through a multiple V-belt to the flywheel and then through a two-stage gear train to the crankshaft.

To protect the shears from accidental overloads, a frictional safety device with clutch rings is arranged between the hub and the body of the flywheel. Starting the shears is accomplished by a treadle through a system of levers and a sliding key clutch. The construction of the clutch permits either single strokes or continuous operation of the shears.

The brake is of the band-type. It acts periodically and serves to keep the jaws in the open position.

The lubricating system is of a combined grease and oil type. Oil cups are filled by a hand oil-can.

The cletric aguinment consists of a protected type A. C. electrical motor,

The lubricating system is of a commined greate that a state of filled by a hand oil-can.

The electric equipment consists of a protected type A.C. electrical motor, starting and protecting devices, as well as electric wiring enclosed in flexible metal conduit.

The shears are delivered complete with the electrical equipment, a set of knives, V-belts and wrenches, a grease-gun, oil-can and all the necessary instructions for erection and maintenance.

STANKOIMPORT

203

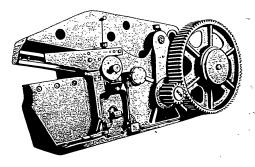
#### SPECIFICATIONS

OI MOIL IN	ALLONS	
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Number of strokes per minute  Electric motor power, kW  Electric motor speed, r.p.m.  Floor space, mm:	10 1500
Channel         No. 18           I-beam         No. 18           Angle, mm         100×100×12           Pice         No. 18	F. to B. R. to L.  Maximum height above floor level.	$\frac{2850}{1285}$
Pipe, mm	Net weight, kg approx	1300

STANKOIMPORT

# ALLIGATOR POWER SHEARS

MODEL H 315



Alligator shears are designed for cutting structural shapes, bars and sheet metal. As the cutting is accompanied by deformation of the flanges, the machine is used primarily for cutting scrap.

The frame is a steel casting. The uprights are stiffened by ribs and connected together by side plates and the base plate. The uprights are provided with lugs with bores for the jaw axle, drive-shaft, intermediate shaft and crankshaft bearings. The left side of the frame has a recess for momiting the lower knife. The jaw is a hollow steel casting with internal stiffening ribs. On the right side of the jaws a recess is provided for fastening the upper knife. Wear of the jaw is taken up by adjusting wedges. Power is transmitted from the crankshaft to the jaw by a pitman.

The drive is from an individual electric motor through a multiple V-belt arrangement to the flywheel and then through a two-stage gear train to the crankshaft.

crankshaft.

To protect the shears from accidental overloads, a incitional safety device with clutch rings is arranged between the hub and the body of the flywheel. Starting the shears is effected by an electromagnet actuated by a 'readle. The electromagnet actuates the starting clutch. The shears can be operated on either single or continuous strokes. In addition to the treadle, the shears are provided with a foot switch which can be set in any required position. The foot switch is used when cutting large material.

The brake serves to keep the jaws in the open position. The brake operates periodically and is of the band-type. Band tension is regulated by a spring. The lubricating system is of a combined grease and oil type. Grease lubrication is effected through individual grease cups mounted on the jaw axle, shaft and pitman bearings and on the clutch hub.

The control mechanism is lubricated with oil by a hand oil-can.

STANKOLMPORT

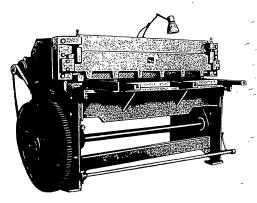
The shears are delivered complete with electric equipment, a set of knives, a set of V-belts, oil-can, socket wrench and all the necessary technical instructions for installation and operation.

#### SPECIFICATIONS

Maximum size of material cut with an ultimate strength of 45 kg/sq.mm:         Round, mm       100         Square, mm       90         Flats, mm       22 × 500         Channel       No. 36         I-beam       No. 20         Angle       No. 20	Number of strokes per minute   2   Electric motor power, kW   1   Electric motor speed, r.p.m.   300
Length of knives, mm	Net weight, kg approx. 1000

# SHEET METAL SHEARS

MODEL H 472



The shears are designed for straight line slitting and cross cutting of sheet steel, brass, aluminium, etc. Cross cutting is performed in one stroke of the knife; slitting of sheets longer than 1600 mm is accomplished by a series of consecutive cuts while moving the sheet along the table.

The frame is a welded construction made of steel plates. The side members are connected together by angle-section girders. The table is bolted to the front of the frame.

the tennected operator by angio-covering grants.

The flywheel and large gear are of cast iron while the small gear eccentric shaft and flywheel shaft are steel forgings. The knives are made of high-quality

The hywheel and large geat are of seasons and the state and flywheel shaft are steel forgings. The knives are made of high-quality tool steel.

The drive is from an individual electric motor. Power is transmitted from the electric motor to the flywheel through a muiltiple V-belt drive and then through a pair of gears to the eccentric shaft, which actuates the knife bar by means of two pitman links. The drive is located in the lower part of the frame to provide improved operating qualities.

The shears are engaged by a treadle which, through a system of tie-rods, trips the rolling key type clutch. The main gear runs freely on the eccentric shaft and, when the machine is put into operation, is connected with the eccentric shaft by means of rolling keys of the clutch.

The shears are equipped with a special mechanism which permits either single strokes or continuous operation.

The brake is of a band-type and is designed for periodical operation. It is intended for counteracting inertia forces arising when the knife bar is on its down stroke and for stopping the eccentric shaft in the extreme upper position.

STANKOIMPORT

The knife-bar performs the cutting operation. The upper knife and the hold-down bar are mounted on the knife bar. The operation of the hold-down bar is coordinated with the movement of the knife bar. The hold-down pressure is

coordinated with the movement of the Kinle dar. The hold-down pressure is regulated by springs.

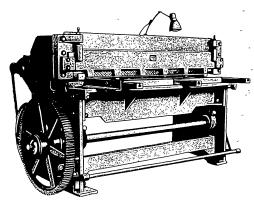
Lubrication is effected by a grease gun through individual grease cups. The shears are delivered complete with electrical equipment and wiring, a set of V-belts and all the necessary technical instructions for installation and

### SPECIFICATIONS '

gauge, mm 500 Net weight, kg approx. 1600
---

### SHEET METAL SHEARS

MODEL H 473



The sheet metal shears are designed for straight line slitting and cross cutting of sheet metal. Cross cutting is performed in one stroke of the knife; slitting of sheets longer than 1600 mm is accomplished by a series of consecutive cuts while moving the sheet along the table.

The frame members, right and left, as well as the table are made of welded steel plates. The table is bolted to the frame.

The principal parts are made of the following materials: the flywheel and the main gear are grey iron castings while the small gear, eccentric shaft and flywheel shaft are steel forgings.

The drive is from an individual electric motor. Power is transmitted from the electric motor through a V-belt drive to the flywheel and then through a pair of gears to the eccentric shaft, which actuates the knife bar by means of two pitman links.

The shears are engaged by a treadle, which actuates the rolling key clutch

two pitman links.

The shears are engaged by a treadle, which actuates the rolling key clutch through a system of tie-rods.

The main gear revolves freely on the eccentric shaft and in its working position is looked on the eccentric shaft by means of a rolling key of the clutch. The shears are equipped with a special mechanism which permits either single strokes or continuous operation.

The brake is of a hand-type.

The knife bar performs the cutting operation. The upper knife and the hold-down bar, operating in coordination with the cutting blade, are mounted on the knife-bar. Downward pressure of the hold-down bar is controlled by adjustable springs.

STANKOIMPORT

STANKOIMPORT

Lubrication of the friction surfaces is effected by means of a grease gun.

The knives are made of high quality tool steel.

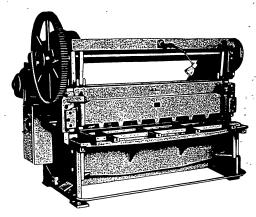
The shears are delivered complete with the electrical equipment and wiring back gauge, side gauge, table extension, a set of knives, grease gun, a set of V-belts and wrenches as well as all the necessary technical instructions for creation and maintenance.

### SPECIFICATIONS

Thickness   2.5   Height	Mum width of strip cut to back   go, mm   Mul   Go, mm   G
--------------------------	--

## SHEET METAL SHEARS

MODEL H 475



The shears are designed for straight line slitting and cross cutting of sheet metal. Cross cutting is performed in one stroke of the knife; slitting of sheets longer than 2000 mm is accomplished by series of consecutive cuts while moving the sheet along the table.

The frame is of welded construction and made of steel plates. The table is bolted to the frame.

The principal parts are made of the following materials: the flywheel and main gear are grey-iron castings, while the eccentric shaft, small gear and flywheel shaft are steel forgings.

The drive is from an individual electric motor. Power is transmitted from the electric motor to the flywheel through a pair of gears to the eccentric shaft, which actuates the knife bar by means of two pitman links.

The shears are engaged by a treadle situated along the front of the machine. The treadle by means of limit switches actuates an electro-magnet which controls the starting clutch.

The main gear revolves freely on the eccentric shaft and in its working position is locked on the eccentric shaft by means of two rolling keys of the clutch. One of the keys drives the eccentric shaft while the other prevents the eccentric shaft from overrunning the gear when the knife bar is on its down stroke.

The shears are equipped with a special mechanism which permits either

stroke.

The shears are equipped with a special mechanism which permits either single strokes or continuous operation.

STANKOIMPORT

STANKOIMPORT

The brake is of a band-type and is intended for continuous braking action when the knife bar is on its down stroke. Brake-band tension is adjusted by

The lubricating system is of a combinedtype and comprises a centralized hand-operated grease lubricating pump station and individual grease-cups lubricated by a grease gun. The engagement mechanism is lubricated by machine all forms and the compression of the

lubricated by a grease gun. The engagement chine oil from an oil-can.

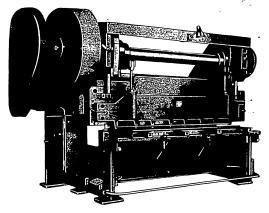
The shears are delivered complete with the electrical equipment and wiring, back gauge, side gauge, table extension, a set of knives, lubricating pump station with feeders and piping, grease gun, oil-can, a set of V-belts and wrenches and all the necessary technical instructions for crection and maintenance.

#### SPECIFICATIONS

Maximum size of sheet cut (mm) with an ultimate strength 50 kg/sq.mm: Thickness 6.3	Maximum width of sheet cut to back gauge, mm
Length	Electric motor power, kW
Stroke of knife bar mm	Floor space, mm:
Width clear between uprights pro-	F. to B
Gap or throat clearance, mm 300	Height

### SHEET METAL SHEARS

MODEL II 477



The shears are designed for straight line slitting and cross cutting of sheet metal. Cross cutting is performed in one stroke of the knife; slitting of sheets longer than 2000 mm is accomplished by a series of consecutive cuts while moving the sheet along the table.

The shears find application in metal storage yards and in the shops of various works where sheet metal cutting is required.

The frame is a welded construction, made of steel plates. The side members are connected by angles and by two box-section girders. The table is bolted to the front of the frame.

The table is provided with extensions for slitting long sheets, side gauges and "goose neck" switcelling rollers to facilitate feeding heavy sheet metal.

The drive is from an individual electric motor through a multiple V-belt to the flywheel and then through a two stage gear train to the eccentric shaft which actuates the knife bar through two pitman links.

The shears are engaged by means of an electro-magnet either from a pushbutton switch, a stationary electric treadle or a movable electric foot switch used in cutting large-sized sheets. The three types of starting devices are provided to ensure convenience in performing various cutting operations.

The main gear revolves freely on the eccentric shaft and in its working position is locked on the eccentric shaft by means of two rolling keys of the clutch. One of the keys drives the eccentric shaft while the other prevents the eccentric shaft from overrunning the gear when the knife bar is on its down stroke.

STÄNKOIMPORT

STANKOIMPORT

The brake is of a band-type, and is mounted on the right end of the eccentric shaft. The brake is intended for counteracting inertia forces arising when the clutch is engaged and for stopping the eccentric shaft in the extreme upper

the clutch is engaged and for stopping the eccentric share.

The knife bar performs the cutting operation. The upper knife and the hold-down bar are mounted on the knife bar.

The lubricating system is of a combined type. Centralized lubrication of the knife bar guides, hold-down bar, eccentric shaft bearings is effected by a grease-lubrication pump station through measuring feeders. All the other friction surfaces are lubricated by hand, by means of a grease gun.

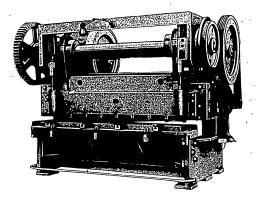
The shears are delivered complete with the electrical equipment and wiring, a set of knives, lubricating pump station, grease gun, back gauge with vernier scale, table extension and rollers, side gauge, a set of V-belts and wrenches and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Maximum size of sheet (mm) with an ultimate strength of 50 kg/sq.mm: Thickness 12.5 Width 2000	Maximum width of strip cut to back gauge, mm 50  Height of lower knife edge above
Number of strokes of knife bar per	floor level, mm 80
minute 30	Electric motor power, kW 1 Electric motor speed, r.p.m 300
Stroke of knife bar, mm 125	Overall dimensions, mm:
Upper kniffe shear angle 2°58'	F. to B 250
Width clear between uprights, mm 2250	R. to L
Can on these tales	Height 236
Gap or throat clearance, mm 400	Net weight, kg approx. 750

### SHEET METAL SHEARS

MODEL H 478



The shears are designed for straight line slitting and cross cutting of sheet metal. Cross cutting is performed in one stroke of the knife; slitting of sheets longer than 2000 mm is accomplished by a series of consecutive cuts while moving the sheet along the table.

The shears find application in the shops of various works where sheet metal cutting is required.

The frame is a welded construction, made of steel plates. The table is bolted to the front of the frame and is provided with extensions for cutting long sheets, side gauges, a back gauge and "goose neck" swivelling rollers to facilitate feeding heavy sheet metal.

The drive is from an individual electric motor mounted on the frame. Power is transmitted from the electric motor to the flywheel through a multiple V-belt and then through two pairs of gears to the eccentric shaft which actuates the knife bar by means of two pikman links.

The shears are engaged by electro-magnet either from a push-button switch, a stationary electric treadle or a movable electric foot switch used in cutting large-sized sheets. The three types of starting devices are provided to ensure convenience in performing various cutting operations. The electro-magnet engages the rolling key clutch.

The main gear revolves freely on the eccentric shaft and when the clutch is engaged the gear is locked on the eccentric shaft by means of two rolling keys of the clutch. One of the keys drives the eccentric shaft while the other prevents the eccentric shaft from over-running the gear when the knife bar is on its down stroke.

STANKOIMPORT

STANKOIMPORT

214

The brake is of a band-type and is mounted on the right end of the eccentric shaft. The brake is intended for counteracting inertia forces during the down stroke of the knife bar and for stopping it in the extreme upper position. The knife bar performs the cutting operation. The upper knife is mounted on the knife bar. The action of the hold-down device is coordinated with the motion of the knife bar and is effected through cams on the eccentric shaft. The lubricating system of the shears is of a combined type. Centralized lubrication of the knife bar guides, hold-downs, eccentric shaft, intermediate shaft and flywheel shaft bearings is effected by a hand-operated grease pump station through measuring feeders. All the other friction surfaces are lubricated by hand by means of grease gun.

station through measuring recours. An one other friction surfaces are lubricated by hand by means of grease gun.

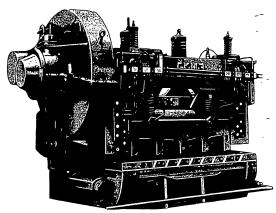
The shears are delivered complete with the electrical equipment and wiring, work light system with a step-down transformer, lubricating system, grease gun, back gauge with vernier scale, table extensions with rollers, side gauge, a set of V-belts, a set of wrenches and all the necessary technical instructions for erection and maintenance.

### SPECIFICATIONS

Maximum size of sheet (mm) with an ultimate strength of 50 kg/sq.mm: Thickness	Maximum width of sheet cut to back gauge, mm
Width 2000	floor level, mm 800
Number of strokes of upper bar per	Electric motor power, kW 20
minute 30	Electric motor speed, r.p.m 3000
Stroke of knife bar, mm 140	Overall dimensions, mm:
Upper knife shear angle 3°15'	F. to B 2568
Width clear between world!	R. to L
Width clear between uprights, mm 2360	Height 2350
Gap or throat clearance, mm 400	Net weight, kg approx. 10000

### SHEET METAL SHEARS

MODEL И 349



The shears are designed for straight line slitting and cross cutting of sheet materials made of steel, non-ferrous metals and their alloys. Cross cutting is accomplished in one stroke of the blade; slitting of sheets longer than 2000 mm is accomplished by a series of consecutive cuts while moving the sheet along the table.

The frame comprises two uprights held together by two crosspieces and the table. The lower stationary knife is mounted on the table.

The drive is from an individual electric motor mounted on the frame. Power is transmitted from the electric motor to the eccentric shaft through a two-stage gear reducing unit and a pair of gears. A flywheel mounted on the shaft between the electric motor and the gear reducing unit ensures smooth operation of the machine in the process of cutting.

The shears are engaged either by an electro-magnet actuated from a push-button or by a treadle through a system of tie-rods. The electro-magnet and the tie-rods actuate the claw clutch mounted on the left end of the eccentric shaft.

the tie-rods actuate the claw cutter mounted or the restaurance shaft.

The band brake is mounted on the right-hand end of the eccentric shaft and is intended for counteracting inertia forces arising when the knife bar is on its down stroke and for stopping it in its upper position. The tension of the band brake is regulated by a spring.

The knife bar is actuated by the eccentric shaft by means of two pitman links. The knife bar on which the upper knife is mounted performs the cutting operation.

STANKOIMPORT

The hold-down bar is intended for holding down the sheet during the cutting operation. Operation of the hold-down bar is coordinated with the movement of the knife bar. The hold-down bar and the knife bar are fitted with damper springs which ensure smooth operation of the shears without jerks or impacts.

damper springs which ensure smooth operation of the shears without jerks or impacts.

The shears are protected from overloads by a friction-type safety device. The lubricating system is of a combined type. The eccentric shaft and pitman link bearings, knife bar guides and hold-down bar are lubricated by a hand-operated grease pumping station through measuring feeders. The other friction surfaces are lubricated by a grease gun through individual grease cups. The gear reducing unit and the large gear are lubricated by oil poured into their casings.

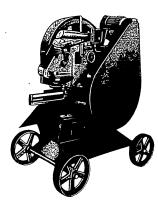
The shears are delivered complete with an electric motor, starting and protecting equipment centralized lubricating station with piping and measuring feeders, grease gun, back gauge, gear reducing unit, a set of knives, a set of wrenches and all the necessary technical instructions for installation and operation.

### SPECIFICATIONS

50 kg/sq. mm: Thickness	Number of strokes per minute
Upper knife shear angle	Electric motor power, kW

## REINFORCEMENT BAR SHEARS

MODEL HA 212



The reinforcement bar shears are used on construction sites for cutting concrete reinforcement bars. They can also be used in metal storage yards for cutting round, square and bar steel and small angle stock.

For convenience the shears are mounted on wheels so as to be easily transported to the place of work.

The frame is a single column welded construction, made of steel plates and stiffened by ribs.

The drive is from an individual electric motor through a multiple V-belt arrangement to the flywheel and then to the eccentric shaft through a pair of

The slide is actuated through a pitman by the eccentric shaft. The clearance is adjusted and the slide play is taken up by means of adjustable liners.

The shears are started by a hand-lever. The construction of the shears permits either single strokes or continuous operation.

The shears are delivered complete with the electrical equipment, starting, and protecting devices, electric wiring, a set of V-belts, hold-down device, a set of knives, lubricating equipment and all the necessary technical instructions for erection and maintenance.

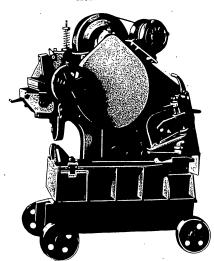
STANKOIMPORT

### SPECIFICATIONS

Maximum size of material cut (mm) with an ultimate strength of 45 kg/sq.mm: Round . 32 Square . 32 Bar . 18×00 Length of knives, mm . 120 Number of strokes per minute. 45	R. to L	72
Electric motor power, kW 1.7	Net weight, kg approx:	48

# COMBINATION PUNCH, SHEARS AND BAR CUTTER

MODEL C 229 A



The shears are designed for cutting structural steel of various profiles, for notching angle, I-beam, flats and sheet metal, as for punching holes and stamping small parts of mild steel.

The shears are portable and simple in operation. They are used in metal storage yards and in preliminary machining departments of structural steel workshops.

The shears comprise the following principal units: frame, shears, punching press, drive.

The frame is welded of steel plates and on it the principal units are mounted. The shears for cutting sheet and profile sections are mounted on the right-hand side of the frame. One of the principal parts of this mechanism is the ram. The upper part of the ram has an opening in which an insert with a bronze bushing is mounted. The middle part is provided with a slot for the section bushing is mounted. The upper blade for cutting sheet metal is fastened in the lower part.

STANKOIMPORT

At the side adjacent to the ram, the cover is provided with a recess for mounting the lower blade of the section steel shears and the pointer holder. A hold-down device for sheet metal is mounted on the outside of the cover, at the lower edge. The hold-down device comprises a sprocket and a stop. A similar device intended for holding section steel materials is mounted on the right-hand side of the ram.

of the ram.

The punching press and notching device are located at the left-hand side of the frame. In a vertical slot in the frame is mounted the punching ram with cylindrical spiral spring, wedge knife holder, punch holder and bushing. On the projecting part of the ram the holder and the upper notching tool are mounted. The lower notching tool, consisting of two halves, is mounted on plates welded to the frame and to the slide cover. The stripper, fastened to the cover and the frame, is mounted in the lower part of the ram.

A bolster plate is fastened to the punch table.

The drive is from an individual electric motor. Power is transmitted from the electric motor through a multiple V-belt drive to the flywheel mounted on the driving shaft. The latter transmits power through a gear train to the driving gears of the shearing mechanism and the punching press.

The shears are started by a claw clutch, which is engaged by a combined system of levers and cams.

The shears are started by a claw cutten, which is engaged by a combined system of levers and cams.

The starting mechanism of the punching press is identical to the above. The driving shaft, ram king pin, idler gear stud, shear and punch eccentric shafts and claw clutches are grease lubricated through grease cups. The other friction surfaces are lubricated with machine oil through ball-type oil-cups filled with an oil-gun.

The shears are delivered complete with an electric motor, starting equipment and wiring, gear guards, lubricating equipment, a set of V-belts, a set of blades for cutting square, round, channel and angle stock, punching and notching tools and all the necessary technical instructions for installation and operation.

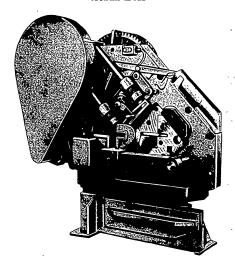
### SPECIFICATIONS

Maximum size of material cut:       13         Sheet, mm       13         Flats, mm       20 × 40         Length of cut, mm       125         Angle, mm       90 × 10         Round, mm       40         Square, mm       32         Channel       No. 12         Maximum diameter of hole punched       10         Maximum diameter of hole punched       20	Notching device:   1-beam or angle, mm   .65×10     1-beam or angle, mm   .65×10     10-beam or angle, mm
in 20 mm sheet, mm 15	Net weight, kg approx. 1210

STANKOIMPORT

## COMBINATION SHEARS AND BAR CUTTER

MODEL H 514



The shears are designed for cutting sheet, sectional and structural shape

steel.

The shears find application in forge and repair shops and in structural steel shops. The machine requires but a small floor space.

The shears are adapted for operation by unskilled workers. Their construction is simple and reliable in operation. No complicated adjustments or

set-ups are required.

The combination shears comprise two machines: one for sheet metal and

the other for profile sections.

Both machines are mounted on a common frame and have a common drive.

Both are started by the same lever, so that work can be carried out simul-

taneously on two machines.

The frame is a single column welded construction. It consists of a steel plate strengthened by ribs, an auxiliary plate and a rear cover.

STANKOIMPORT

The slide of the sheet and profile sectional shears is located between the main plate and the rear cover.

The drive is from an individual motor through a multiple V-belt arrangement to the flywheel and then through a two-stage gear train to the eccentric

shaft.

The slide of the sheet and profile section shears is driven by a pitman connected to the eccentric shaft. A recess is provided in the slide for setting up the

neeted to the eccentric shall. A recess is provided in the control permits cutting knives.

The control is through a lever mechanism. The system of control permits either single strokes or continuous automatic operation.

To prevent slippage of the metal during cutting, the shears are equipped with hold-downs dampers.

The lubricating system is of a combined grease and oil type. Greasing is carried out with a grease gun, oiling by a hand oil-can through special oil holes provided

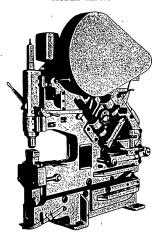
The shears are delivered complete with the electrical equipment, a set of knives and V-belts, a grease gun, an oil-ean and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Maximum size of the metal cut with an ultimate strength of 45 kg/sq.mm:	Channel, straight cut Nos. 5 to 22a
Sheet metal shears, mm:	Angle, at 45°, mm100×100×10
Sheet thickness	Number of strokes per minute 27
Bar section 150×16	Electric motor power, kW 4.5
Profile section shears:	Electric motor speed, r.p.m 3000
Round, mm 60	Floor space, mm:
Square, mm 50	F. to B 1700
Angle, straight cut,	R. to L 650
mm 120×120×12	Maximum height above floor level,
1-beam, straight cut	mm 1740
Nos. 5 to 20a	Net weight, kg approx. 2045

## COMBINATION PUNCH, SHEARS AND BAR CUTTER

MODEL HA 633



The shears are designed for cutting sheet, sectional and structural shape steel, as well as for punching holes.

In addition to punching the press is adapted for notching operations.

The combination punch and shears can be used in forge shops and, due to their universal nature, small floor space required and variety of operations performed, they are also an indispensable unit of equipment for repair and structural steel shops.

The shears are adapted for operation by unskilled workers. Their construction is simple and reliable and no complicated adjustments or set-ups are required.

tion is simple and reliable and no complicated addisonants of severals are required.

The combination punch and shears comprise three machines: sheet metal shears, shears for profile sections and punching press.

All the three mechanisms are mounted on a common frame and have a

The punching press can be operated separately while the two types of shears can operate together.

Each revolution of the eccentric shaft actuates all the three mechanisms.

STANKOIMPORT

225

The kinematic system is so arranged that the operation of the punching press does not coincide with the operation of the two shears which work concur-

The frame is a single column welded construction. Slide control for the shears is effected by a lever system. They can be also set for continuous operations.

The punching press is equipped with two types of control: by a hand lever and by a treadle. Each type operates independently.

A centering device is provided for accurate hole-punching.

To prevent metal slippage during cutting, hand operated hold-downs are provided. They are operated by spiral gearing on the sectional metal shears and by a screw drive on the sheet metal shears.

and by a screw drive on the sheet metal shears.

To prevent slippage when cutting at a miter angle, a stop is provided which can be moved to the required position and clamped by a screw.

The shears are delivered complete with the electrical equipment and starting devices, one set of universal knives for cutting round, square and angle stock one set of knives for cutting sheet metal and all the necessary technical instructions for crection and maintenance.

Special knives for cutting I-beams and channels can be furnished on special order.

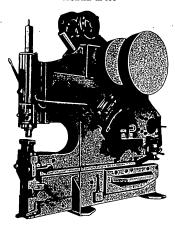
#### SPECIFICATIONS

Sheet Metal Shears   Maximum thickness of sheet metal, mm   16	Angle, straight cut,
	Note: Ultimate strength of the materia cut — 45 kg/sq. mm.

STANKOIMPORT

## COMBINATION PUNCH, SHEARS AND BAR CUTTER

MODEL H 635



The shears are designed for cutting sheet, structural and section steel as well as for punching holes. In addition to hole punching, the punching press mechanism can be used for blanking.

The shears can be used in forge and stamping, structural steel and repair shops. Due to their universal application and limited floor space required, the machine can be installed at any place in the shop.

The shears comprise three machines: sheet metal shears, shears for cutting structural profiles and a punching press. All the three machines are mounted on a common frame and have a common drive. The punching press design also nermits the installation of a notching device.

on a common frame and have a common drive. The punching press design also permits the installation of a notching device.

The frame is of a single-column type. It is welded of steel plates and is stiffened by cover plates and ribs.

The drive is from an individual electric motor through multiple V-belts to the flywheel and then through a two-stage gear train to the eccentric shaft. The ram of the shears for structural profiles is actuated by a pitman mounted on the eccentric shaft; the eccentric cam and the ram of the sheet metal shears are driven through an additional tie-rod.

The numbing reservant is divisor by a pitman combined with a surjective.

The punching press ram is driven by a pitman combined with a swinging counterweight.

The machine mechanisms can be started separately. A single revolution of the crankshaft operates all the three machines, but the kinematic system is so designed that the working cycle of the punching press does not coincide with the working cycle of the shears.

Engagement mechanism of the structural profile and sheet metal shears is of a combined treadle and lever type.

The engaging mechanism of the punching press is operated either by a hand lever or by a treadle through a system of tie-rods. Each system of control operates independently.

The centering device ensures accurate location of punched holes.

To reliably clamp material when cutting structural shapes and sheet metal, the shears are equipped with adjustable hold-downs operated by hand through a helical gear drive.

The lubricating system is of a combined grease and oil type. The eccentric shaft journals, ram guides, counter-balancing device and punching press-guides are grease lubricated through ball-type grease cups. The other friction surfaces are lubricated with an oil-can.

The shears are delivered complete with electric equipment, a set of blades for cutting angle, round and square bars, a set of blades for cutting sheet metal, lubricating equipment, a set of V-belts, centering device and all the necessary technical instructions for installation and operation.

### SPECIFICATIONS

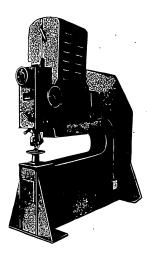
Maximum thickness of sheet cut, mm $25$ Maximum section of flats cut, mm $160 \times 30$ Length of blade, mm	Diameter
Stroke of blade, mm	Diameter
Structural Shape Shears	Stroke of s
Round, mm   65   Square, mm   150×150×18   Angle, straight cut, mm   150×150×18   Angle, at miter angle of 45°, mm   110×110×14   With special blades:   180×180×18   Maximum angle, straight cut, mm   180×180×18   Maximum angle, at miter angle of 45°, mm   130×130×14   Maximum I-beam   No. 30a	Gap, mm. Number of Electric me Electric me Overall din Len Wid Heig Net weight

Sheet Metal Shears

CATIONS
Maximum channel No. 30a
Punching Press Diameter of hole in 25 mm sheets,
mm 35
Diameter of hole in 30 mm sheets,
mm 30
Stroke of slide, mm
Gap, mm 600
Number of strokes per minute 30
Electric motor power, kW 7
Electric motor speed, r.n.m. 1500
Overall dimensions, mm:
Length 2450
Width 1000
Height 2400
Net weight, kg approx. 4700
Note: Ultimate strength of material cut.
— 45 kg/sq.mm

**BLANKING SHEARS** 

MODEL H 533



The shears are designed for straight line and profile blanking of sheet metal on either an external or internal outline, as well as for flanging and fluting operations. The shears can also be used for working cardboard, pressboard, vulcanized rubber and other similar materials. This renders the shears applicable in various branches of industry.

The frame is a welded box-type construction made of steel plates and stiffened by internal ribs. The frame supports a table to which stationary working tools are fastened. The frame is provided with guides for the centering device slide.

slide.

The drive is effected from an individual electric motor to the eccentric shaft pulley through a multiple V-belt drive. The eccentric shaft actuates the slide through a pitman.

The slide is provided with a stroke adjustment device. Adjustment is carried out by varying the eccentricity by means of a special bushing mounted on the eccentric shaft and moved by a handwheel. The adjustment can be made while the machine is running. The blanking and piercing tools are mounted on the slide.

STANKOIMPORT

STANKOIMPORT

The space is adjusted by changing the pitman length by means of a screw with a spherical heel. This adjustment can also be carried out while the shears are in operation.

The centering device is applied in straight line cutting as well as for blank

The centering device is applied in straight line cutting as well as for blanking out discs or rings.

The stripper and hold-down device serves to hold down the work in the course of blanking out or piercing.

The lubricating system is of a combined type. The slide guides and the roller bearing are lubricated by grease through ball-type grease cups. The eccentric shaft bearings are lubricated by machine oil.

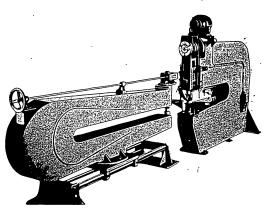
The shears are delivered complete with the electrical equipment and wiring in flexible metal conduit, grease gun, oil-can, centering and hold-down devices, a set of V-belts, a set of working tools and all the necessary technical instructions for erection and maintenance.

#### SPECIFICATIONS

Jaximum thickness of material cut (mm) with an ultimate strength of 45 kg/sq. mm	Electric motor power, kW Electric motor speed, r.p.m Floor space, mm:	2. 150
per minute:	F. to B.  R. to L.  Maximum height above floor level,	
Itman adjustment, mm 50 Distance from center of slide to	mm : Net weight without auxiliary devices,	199
frame, mm 1050	kgapprox.	990

### BLANKING SHEARS

MODEL II 535



The shears are designed for straight and profile blanking of sheet metal on either internal or external outline, as well as for flanging and fluting operations. The shears can also be used for cutting cardboard, pressboard, vulcanized rubber and other similar materials. This renders the shears applicable in various branches of industry.

The frame is a welded box-type construction made of steel plates and stiffened by internal ribs. The frame supports a table, to which stationary working tools are fastened. The frame is provided with guides for the centering device slide

The drive is effected from an individual electric motor through a multiple V-belt drive to the eccentric shaft pulley. The eccentric shaft actuates the slide

V-belt drive to the eccentric shaft pulley. The eccentric shaft actuates the slide through a pitman.

The slide is equipped with a stroke adjustment device. Adjustment is carried out by varying the eccentricity by means of a special bushing mounted on the eccentric shaft and moved by a handwheel.

The blanking and piercing tools are mounted on the slide.

Die space is adjusted by changing the pitman length by means of a screw with a spherical heel.

The centering device is used for straight line cutting, as well as for blanking out discs and rings. The frame of the device is welded of steel plates.

The stripper and hold-down device serves to hold down the work in the course of blanking out or piercing.

course of blanking out or piercing.

STANKOIMPORT

STANKOIMPORT

The slide guides and the roller bearing are lubricated with grease through ball-type grease cups replenished by a grease gun. The eccentric shaft bearing are lubricated by machine oil.

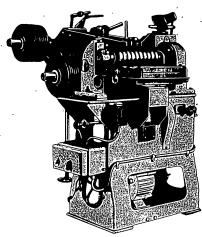
The shears are delivered complete with electrical equipment and wiring in flexible metal conduit, grease gun, oil-can, centering and hold-down devices, a set of V-belts, a set of working tools and all the necessary technical instructions for erection and operation.

### SPECIFICATIONS

The second secon			16
Maximum thickness of material cut (mm) with an ultimate strength of		Electric motor power, kW	4:57
45 kg/sq. mm ·	U 3	Electric motor speed, r.p.m.	1500
Number of strokes of upper knife		ricor space, mm:	
per minute:		F. to B	5830
Maximum	860	R. to L	970
Minimum	510		
Maximum stroke of knife, mm.	10	Maximum height above floor level,	
Pitman adjustment, mm	50	· mm	2385
Distance from center of slide to		Net weight without auxiliary devices,	,
frame, mm	1260	kg approx.	1870
Gap of circular cutting device, mm. Maximum diameter of cut out circle,	2150	Net weight of auxiliary devices, kg	
		approx.	1200
mm	3000	Total net weight, kg approx	3160

### ROTARY GANG SLITTING SHEARS

MODEL H 400



The shears are designed for longitudinal cold slitting of rolled steel, brass, bronze or aluminium strip. The shears can be applied in cold rolled strip manufacturing shops and in blank preparation departments of cold stamping shops. The shears comprise the following principal units: cutting mechanism with guiding device, winding mechanism, drive, V-belt drive reducing gear unit with variable speed regulation, unwinding device, reel lifting device.

The frame is of welded design and is made of steel plates. The cutting mechanism, drive, guiding device and winding mechanism bracket are mounted on the frame.

The disc cutters are mounted on the upper and lower disc shafts. Disc clamping design ensures rapid change of disc cutters. The cutters are made of high quality tool steel and can be repeatedly reground in the course of operation. The disc cutter shafts are removable, due to which the time required to set up the shears for cutting a different size of strips is considerably decreased.

Center to center distance between the disc cutter shafts is adjusted by moving the upper shaft with the aid of a handwheel operated screw mechanism.

Set up for cutting strips of another width is effected by replacing the disc cutter shafts by another pair of shafts with a previously mounted set of properly spaced disc cutters.

STANKOIMPORT

STANKOIMPORT

282

The guiding device is mounted on a welded bracket bolted to the frame. It is intended for proper positioning of the cut strip between cutters.

The winding mechanism is mounted on a box, comprising two welded brackets connected by spacing studs. The box is bolted to the frame and its free end is supported by a stay.

The cut strips are wound on two receiver drums.

The drive is from an individual electric motor which, in addition to the cutting mechanism, also actuated the winding mechanism.

Power is transmitted from the electric motor through a V-belt speed variator to the disc cutter shafts and winding mechanism.

The V-belt speed variator provides for speed regulation by changing the transmission ratio between the driving and driven pulleys.

The variator is equipped with a scale of speeds for setting up the required cutting speed.

thing speed.

The unwinding device comprises a mechanism with a taper drum arrangement for gripping reels. The elamping device is operated by a handwheel.

To ensure constant tension of the strip, the unwinding device is equipped

with a brake.

The lubricating system is of a combined oil and grease type. Grease is injected by a grease gun through ball-type grease cups. Oil lubrication is accomplished with the aid of an oil-ean.

The shears are delivered complete with the cutting, guiding, winding and unwinding mechanism, reel lifting device, electric motors, starting equipment and wiring, a set of disc cutters for one size of strip, winding reels, a set of V-belts, V-belt speed variator and all the necessary technical instructions for installation and operation.

installation and operation.

The machine is delivered with a set of tools for cutting 300 mm strip into 20 strips 15 mm in width.

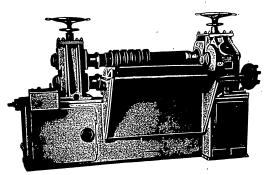
#### SPECIFICATIONS

Maximum ultimate strength of material cut — 150 kg/sq.mm Thickness of strip cut, mm:		Electric motor power (two motors), kW	
Maximum	0.5	Electric motor speed, r.p.m	1000
Minimum Maximum width of strip cut, mm	0.03 300	Floor space, mm:	
Maximum weight of real lea	0.0	F. to B	3430
maximum diameter of reel mm	EOO	R. to L	1480
Minimum width of strip cut, mm Cutting speed, m/sec:		Maximum height above floor level,	
Maximum	0.28	mm	1260
Minimum	0.14	Net weight, kg approx.	860

STANKOİMPORT

## ROTARY GANG SLITTING SHEARS

MODEL H 402



The shears are designed for longitudinal cold slitting of rolled steel, brass, bronze or aluminium strip.

The shears comprise the following principal units: unwinder for wide sheet material, unwinder for narrow strip reels of small inside diameter, pneumatic knife for transverse cutting of strip, scrap breaker, cutting mechanism — disc shears, winding mechanism — receiver drum with take-off device.

The drive is effective from an individual electric motor through a two-stage gear reducing unit and a gear box. Center to center distance between the cutting disc shafts is adjusted simultaneously for all the paired discs by raising or lowering the upper shaft with the aid of a handwheel operated mechanism.

Disc adjustment in axial direction for setting up to cut any desired width of strip, is accomplished with the aid of spacer collars.

Disc cutters are made of high-quality tool steel and can be repeatedly reground in the course of operation.

Disc cutter shafts are removable, due to which the time required to set up the shears for cutting different size of strip is considerably decreased.

The scrept breaker is intended to facilitate removal of the cut-off edges of strip.

of strip.

The scrap breaker is driven from an individual electric motor through a control of the scrap wind up on the

The scrap breaker is driven from an individual electric motor through a one-stage gear reducing unit. If the cut-off edges of the strip wind up on the receiver drum, the scrap breaker does not operate.

The pneumatic knife for transverse cutting servos to trim the strip before it is fed into the machine, as well as for cutting the strip in any other intermediate position. The upper slanting knife is stationary, the lower knife is movable and is actuated by a pneumatic cylinder.

The receiver drum, designed for winding up the cut strip, is driven by an individual electric motor through a two-speed gear reducing unit. The drum

STANKOIMPORT

284

is fitted with a friction device which ensures slipping of the drum as the religional diameter increases. The friction device maintains constant tension of the wound strip. In addition the drum is equipped with a pneumatic device for taking off wound reels.

The lubricating system is of a combined type: by a grease gun through ball-type grease cups and by splash-lubrication of oil poured into the gear reducing unit casings.

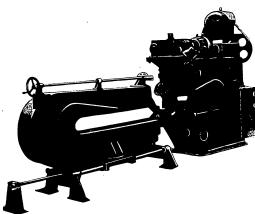
The disc shears are delivered complete with all the above units, electric equipment, grease gun, oil-can, a set of disc outers, a set of wrenches and screw drivers, a set of spare parts and a set of all the necessary technical manuals for erection and maintenance.

#### SPECIFICATIONS

Maximum ultimate strength of material cut — 120 kg/sq.mm         1.5           Thickness of strip cut, mm:         0.2           Maximum         0.5           Width of stock to be cut, mm:         800           Maximum         50           Width of storp cut, mm:         50           Width of strip cut, mm:         4           Maximum         4           Weight of strip cut, mr.         1500           Weight of reel cut, kg         1500           Weight of strip cut on receiver drum, kg         1500           Maximum outside diameter of stock reel, mm:         1200           Inside diameter of stock reel, mm:         Afaximum         500           Minimum         500           Minimum         30 to 100	Minimum inside diameter of cut strip reel, mm
40 00 100	approx. 800

### ROTARY SHEARS

MODEL HA 453



The rotary shears are designed for straight line and circular cutting of sheet metal. With the aid of special tools, the machine can also be used for flanging and beading operations.

The shears are widely used in sheet metal cutting shops of automobile and aircraft plants as well as in the manufacture of agricultural machinery, metal utensils and containers.

The shears comprise the following principal units: frame, drive, gear reducing unit for raising and lowering the slide, upper cutter head, straight cutting device, circular cutting device.

The frame is of C-shaped design and is welded of steel plates. The frame is provided with a recess for the gear drive from the driving shaft to the disc cutter shafts.

The drive is effected from an individual electric motor mounted on the top

The drive is effected from an individual electric motor mounted on the top of the frame. Power is transmitted from the electric motor to the flywheel-pulley through a multiple V-belt drive and then through a system of spur and level gears to the upper and lower disc cutters.

The gearing provides for two operating speeds depending on the material cut and its thickness.

Lower cutter adjustment is intended for obtaining the required clearance between the upper and lower cutters.

The lower cutter position is regulated by a hand-operated worm gear revolved by handle.

STANKOIMPORT

STANKOIMPORT

The worm gear reducing unit serves for raising and lowering the slide of the upper cutter head. The unit is driven by an individual reversible electric motor through a flexible coupling.

The upper cutter head comprises a bracket fastened to the frame and a slide connected to the gear reducing unit by means of the adjusting screw. Slide adjustment in height regulates the position of cutter edges and allows the most effective cutting conditions to be obtained.

The straight cutting device is for slitting sheet metal into strips of required width. The device comprises an adjustable stop with a clamp and a scale.

The circular cutting device is a separate unit. It consists of a C-shaped welded frame with a centering and clamping device. The frame is mounted on a supporting member and can be moved along its guides by means of a hand-operated screw device. The required cutting radius is set to a scale fastened to the frame.

The lubricating system is of a combined type: centralized grease lubrication

to the frame.

The lubricating system is of a combined type: centralized grease lubrication of the principal friction surfaces by a hand-operated pump station through measuring feeders; individual grease lubrication by a grease gun through baltype grease cups; individual oil lubrication by an oil-can.

The shears are delivered complete with the main electric motor, a reversible gear reducing unit electric motor, starting and protecting equipment and wiring in flexible metal conduit, a set of disc cutters, straight cutting device with scale, circular cutting device with scale (scales are graduated in metric units), a set of V-belts, lubricating equipment with piping and measuring feeders, grease gun, oil-can, a set of wrenches and all the necessary technical instructions for installation and operation.

### SPECIFICATIONS

SI ECITION TONS				
Maximum thickness of sheet metal cut (mm) with an ultimate strength of 50 kg/s,mm 10 Gap, mm 920 Cutting speeds, m/min . 1.6; 2.5; 3.2; 5.0 Diameter of disc cutters, mm 155 Gap of circular cutting device, mm 1810 Maximum diameter of circle cut out	Main electric motor speed, r.p.m. 465 to 1420 Gear reducing unit electric motor power, kW 2.8 Gear reducing unit electric motor speed, r.p.m. 1000 Overall dimensions with circular cutting device, mm:			
of square sheet, mm	Length			

VSESOJUZNOJE EXPORTNO-IMPORTNOJE OBJEDINENIJE

# "STANKOIMPORT" EXPORTS AND IMPORTS:

Machine Tools

Woodworking Machinery

Metal-Working Machinery (Presses, Hammers, Shears, Cold Forming

Machines, Punching Machines)

Rolling Mills (imports)

Measuring Instruments and Apparatus (for metal industry)

Testing Machines and Instruments (for metals)

Optical Instruments and Equipment

Portable Electric and Pneumatic Tools (for metal and woodworking)

Metal and Wood Cutting Tools

Mechanic's Tools and Chucks

Sintered Carbide and Hard-Alloy Products

Abrasive Products

Ball and Roller Bearings

Microscopes of all types

Motion-Picture Equipment and Accessories

Geodetic Instruments and Equipment

Photographic Cameras

Binoculars

Magnifiers

Crude Optical Glass Blocks and Blanks, etc.

Design and specifications of the metal working machinery illustrated herein are subject to change without notice.

STANKOIMPORT

