

STIEBER CARBIDUM

Abrasive Tool Factory of the Stieber Construction and Industry A.G.

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50X1-HUM

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Our "Carbidum" grinding discs and other products are supplied in the following grades:

Grade As - high grade silicon carbide (to be considered as hardest grinding medium)

Grade Ad - aluminous abrasive (99-99.5 percent aluminum oxide)

Grades Br and Bk - aluminous abrasive (94-96 percent aluminum oxide)

Grade Av - used especially for grinding widia steel [tungsten carbide] (silicon carbide with special binder)

Range of Grain Sizes

Numbers of Grain Sizes					
Very coarse	Coarse	Med. coarse	Med. fine	Fine	Very fine
10,12,14	16 - 20	24,30,36	40,46,50,60	70,80,90,100 120	180,200,220

Hardness

Degrees of Hardness				
Very soft	Soft	Medium	Hard	Very hard
BCDHI	JKL	MNO	PPR	STU

Our grinding discs and other products are supplied in the following binders:

Our products are prepared chiefly by a ceramic process using clay, feldspar, quartz, and other, similar materials. The products are burned at high temperature and the discs thus produced exhibit a striking hardness; the grinding surface appears particularly porous. The ceramic bonded discs may be used for both wet and dry grinding.

The so-called elastic bonded discs are bonded chiefly with rubber, rosin, shellac, and also with vegetable oil. These discs, in addition to elasticity, show great strength, and therefore, may be

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extremely thin. It is also possible to give these discs a higher peripheral velocity than the ceramic bonded discs. These discs are used primarily for sharpening knives, carpenter's tools, and as cutting discs. Our porous discs, bonded and finished according to our own methods, are preferred for precision grinding and fine polishing work.

Discs with a silicate bond are used chiefly for finish grinding and honing. Because of their necessarily low peripheral velocity, their capacity is somewhat below that of the ceramic bonded discs.

Mineral bonded, cold formed discs ████ are used only in rare cases.

Our *av* discs, used exclusively for extra hard steels such as widia, etc., receive a special binder, and are also to be regarded as ceramic bonded discs.

[Table, pp. 4 and 5 of original]

Examples of Grinding Jobs and Proper Discs to be Used

Type of Work	Grade	Grain	Hardness
Cast iron, large pieces	As, Bk	12-20	O-S
Cast iron, medium and small pieces	As, Bk	20-30	P-R
Steel casting, large	As, Bk	12-20	O-S
Steel casting, medium and small	As, Bk	20-30	P-S
Malleable cast iron	As	14-30	Q-T
Chill casting	As	16-30	O-Q
Copper and bronze casting	As	20-36	M-P
Aluminum casting	As	20-30	O-Q
Plate bevelling	Bk	14-30	Q-S
Rolled iron and steel	Bk	12-30	P-Q
Forgings	Bk	14-24	O-T
Press forgings	Bk	16-24	Q-S
Weld seams	Bk	16-36	P-S
Machine parts processing	Bk	16-30	P-R
Lathe, punch, and planer tool processing	Bk	20-30	M-P

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Type of Work	Grade	Grain	Hardness
Lathe, punch, and planer tool sharpening	Ad, Bk	30-40	M-Q
Spring steel	Ad, Bk	12-30	P-R
Tools, Millers, Twist Drills, etc.:			
a) For grinding on edge of disc	Ad, Bk	46-80	J-O
b) For grinding on disc face, eg., the plate disc	Ad, Bk	46-80	H-M
Sharpening tool steel on special machines	Ad, Bk	20-30	L-O
Shaft Grinding			
Untempered steel and iron shafts	Bk	24-70	K-M
Tempered steel	Ad, Bk	40-80	J-M
Grey iron and bronze shafts	As	24-60	L-N
Chill cast shafts	As	30-60	J-L
Polishing chill cast shafts	As	40-100	K-M
Bearings and cylinders (Internal Grinding)			
Untempered steel and iron	As, Ad	40-70	J-M
Tempered steel and chill cast liners	As, Ad	50-80	J-K
Grey iron and bronze	As, Bk	40-80	J-M
Surface Grinding			
a) Surfaces ground with disc edge:			
Untempered steel and soft iron	Ad, Bk	24-40	J-K
Tempered steel, tempered liners, and chill casting	As, Ad	36-60	H-K
Grey iron and bronze casting	As	24-40	J-L
b) Surfaces ground with disc face, e.g., cup wheel, etc.:			
Untempered steel, soft iron	Ad, Bk	20-30	H-J
Tempered steel, case-hardened material, chill casting	As, Ad	16-40	E-J
Grey iron and bronze casting	As, Bk	20-30	H-K
Shears and knives	Bk	20-40	H-L
Paper shears, plane blades, leather shears	Ad, Bk	24-80	J-N
Saw blades, wood gouges, etc.			
Surface grinding of saw blades	Ad, Bk	40-80	M-R

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[Table, p 6 of original]

Disc Revolution at Various Peripheral Velocities

Disc Diam. mm	Peripheral Velocity in Meters per Second					Disc Diam. mm
	18	20	25	30	35	
	Revolutions per Minute					
30	11,500	12,750	15,900	19,100	22,300	30
40	8,600	9,600	12,000	14,350	16,700	40
50	6,900	7,650	9,500	11,500	13,400	50
60	5,700	6,350	7,950	9,550	11,150	60
75	4,600	5,100	6,400	7,650	8,900	75
100	3,450	3,820	4,800	5,750	6,700	100
125	2,750	3,060	3,830	4,600	5,370	125
150	2,300	2,550	3,200	3,850	4,500	150
175	1,960	2,180	2,730	3,280	3,830	175
200	1,720	1,910	2,390	2,870	3,350	200
225	1,530	1,700	2,125	2,550	2,970	225
250	1,375	1,530	1,910	2,300	2,680	250
300	1,150	1,275	1,600	1,920	2,240	300
350	980	1,090	1,360	1,640	1,910	350
400	860	955	1,200	1,440	1,680	400
450	765	850	1,060	1,270	1,480	450
500	690	765	950	1,140	1,330	500
550	625	695	870	1,040	1,210	550
600	570	635	800	960	1,120	600
650	530	590	740	880	1,030	650
700	495	550	680	820	950	700
800	430	480	600	720	840	800
900	380	425	530	640	750	900
1000	340	380	475	570	660	1000
1200	285	320	400	480	560	1200
1500	230	255	320	380	440	1500

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The shaft rpm is of considerable importance with the respect to the working capacity of an abrasive tool. Low speeds, with inadequate grinding, contribute to excess wear of the abrasive. However, if the shaft turns too rapidly, the abrasive 'smears', heats the work piece, and has little effect. On the basis of these relationships between the hardness and revolution of the abrasive, a certain degree of compensation may be gained and a satisfactory effect achieved when using an abrasive which is above or below the correct degree of hardness, by raising or lowering the revolution rate.

Generally, with hand grinding, peripheral velocities of 20-25 meters per second are more preferable, except when using mineral bonded abrasives, which may operate only at 15 meters per second, naturally resulting in less effective performance.

If the work piece is held against the grinding wheel by mechanical means, with or without mechanical power running the wheel, increased velocities are permissible under normal conditions.

Under certain conditions, high-speed grinding wheels may be run up to 45 or 60 meters per second. Most of the discs used in such cases are elastic bonded discs.

Disc mounting requires particular care. The nut on the shaft must be round and not hexagonal. The disc should be examined for defects by striking with a small hammer or similar object. A clear sound indicates that the disc is undamaged. The hole in the disc should fit the shaft easily and without play. The clamping discs between which the disc is mounted should be of the same size and $1/3$ the diameter of the abrasive disc. Heavy paper, rubber washers, or some such material should be placed between the disc and the clamping discs.

Each grinding machine should be provided the necessary safety devices.

The grinding machines should be strongly built and mounted on

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a good foundation. The shaft should be suited to the disc diameter in order to prevent vibrations which may shatter the disc. The bearings should be well lubricated and protected from dust. The support for the work piece should be as close as possible to the wheel surface and should be moved as the wheel wears down. When discs become spoiled they should be roughened with suitable dressing tools or diamonds.

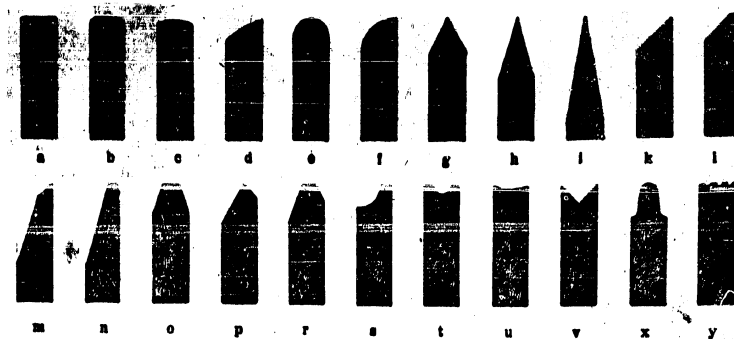
The best peripheral velocity for ceramic bonded discs varies between 20 and 30 meters per second. This velocity should be maintained as the disc wears down by increasing the grinding machine's rpm. The inefficiency of soft discs, after they are worn to about half of the original size, is often attributable to their ~~inadequacy~~ fact that their peripheral velocity has decreased. If a disc has to be roughened because of frequent spoiling, it may be because the disc is too hard or is being run too fast. Rapid wear indicates ~~the~~ either that the disc is too soft or that it is being run too slowly. Discs for surface grinding, on one and the same material, must be softer and coarser than those used for edge grinding of a similar operation.

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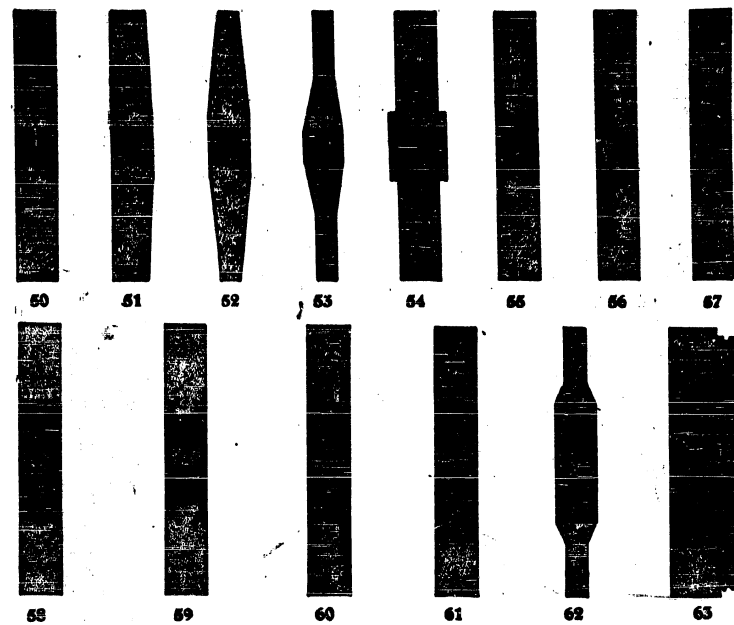
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[Illustrations, page 11 of original]

Grinding Disc Edge Profiles



Disc Form

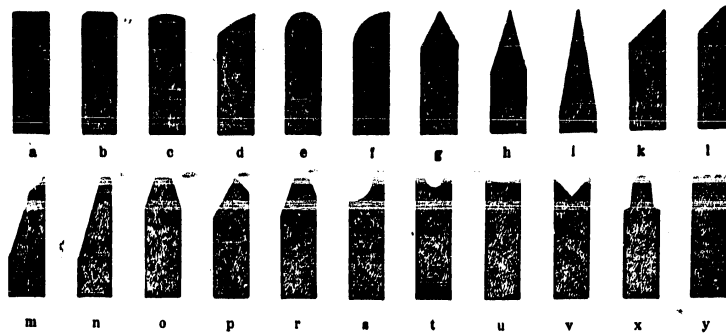


Note: When ordering or requesting estimates, please give disc number and all dimensions (diameter, thickness, aperture, and also dimensions for recess); e.g., Form 56, 300 x 40 x 40, Recess: 200 x 15.

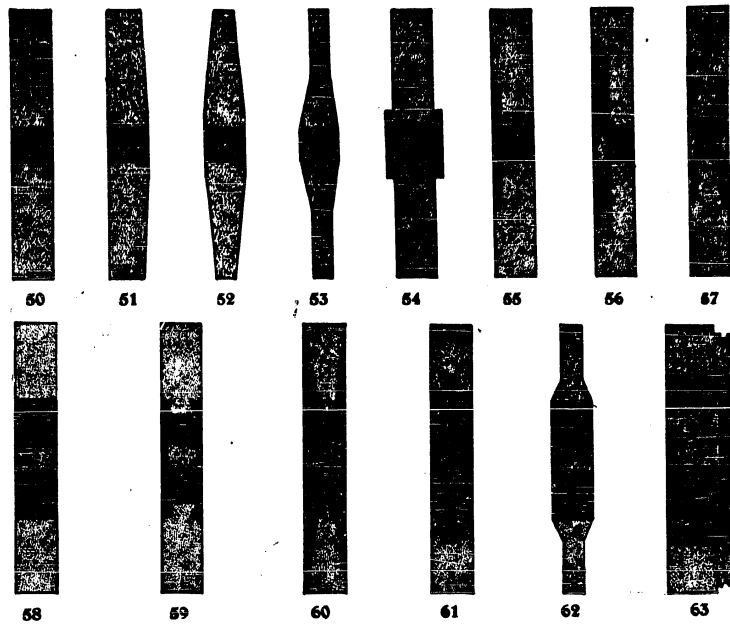
When ordering discs with forms other than those illustrated, please include an accurate drawing with all dimensions.

[Illustrations, page 11 of original]

Rotating Disc Edge Profiles



Disc Forms

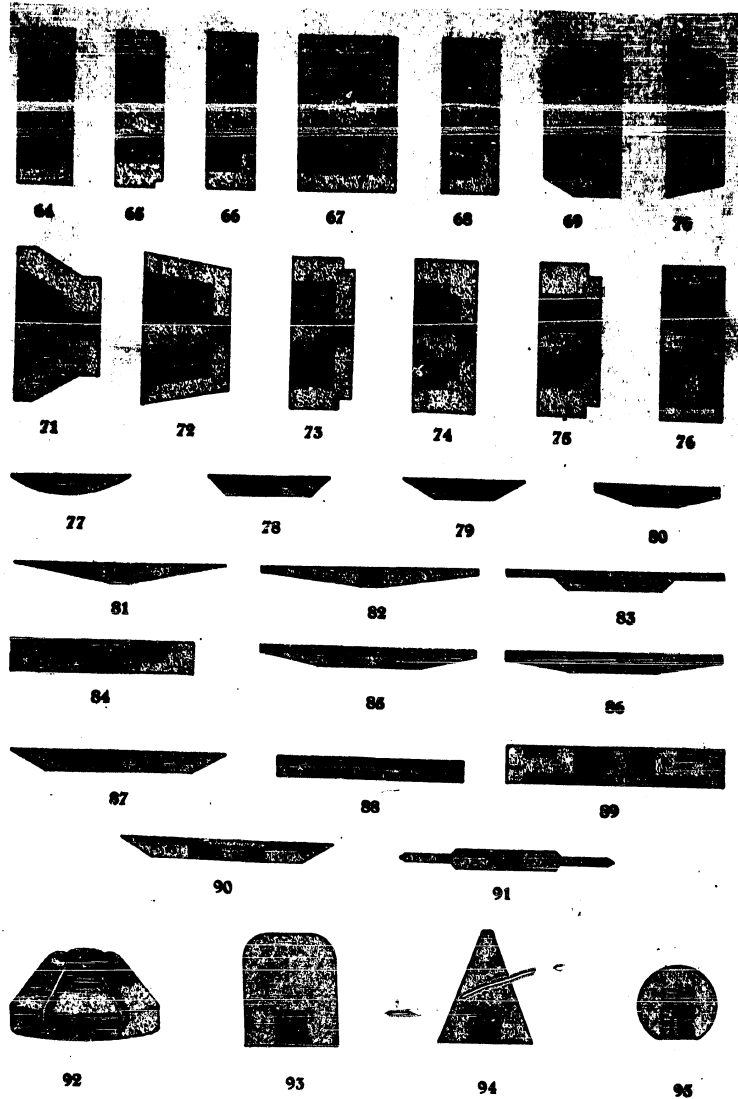


Note: When ordering or requesting estimates, please give disc number and all dimensions (diameter, thickness, aperture, and also dimensions for recess); e.g., Form 56, 300 x 40 x 40, Recess: 200 x 15.

When ordering discs with forms other than those illustrated, please include an accurate drawing with all dimensions.

/Illustrations, page 12 of original/

Disc Forms (continued)



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Standard Prices of Plain Grinding Discs

Diam. mm.	Thickness in mm																		
	6	10	13	16	20	22	25	32	40	45	52	60	65	70	75	82	90	100	100
25	2.30	2.80	3.-	3.20	3.60	3.80	4.30	4.90	5.30	6.-	6.80	7.20	7.90	8.50	9.10	9.60	10.-	10.75	11.50
40	2.60	3.-	3.40	3.60	4.-	4.30	4.70	5.50	6.20	7.-	7.70	8.50	9.10	10.-	10.75	11.50	12.-	13.-	13.50
50	3.40	3.80	4.30	4.70	5.10	5.50	6.-	6.80	7.70	8.50	9.40	10.-	10.75	11.75	12.50	13.50	14.25	15.-	16.-
65	3.80	4.30	4.90	5.30	5.70	6.20	6.60	7.60	8.50	9.60	10.50	11.50	12.25	13.50	14.25	15.25	16.25	17.-	18.-
75	4.30	4.90	5.30	6.-	6.40	7.-	7.50	8.50	9.50	10.75	11.75	12.75	13.75	15.-	16.-	17.-	18.-	19.25	20.25
90	4.90	5.50	6.20	6.80	7.20	7.90	8.30	9.50	10.75	12.-	13.-	14.25	15.25	16.50	17.75	19.-	20.-	21.25	22.25
100	6.-	6.40	7.20	7.90	8.50	9.40	10.-	11.50	12.75	14.25	15.75	17.50	19.-	20.50	21.75	23.25	24.50	26.-	27.75
115	6.80	7.40	8.50	9.40	10.-	11.-	12.-	13.50	15.-	16.75	18.50	20.50	22.-	23.75	25.50	27.-	28.75	30.50	32.25
125	7.60	8.50	9.80	10.75	11.50	12.50	13.50	15.50	17.50	19.25	21.25	23.25	25.-	27.-	29.-	31.-	32.75	34.75	36.75
150	9.80	11.-	12.25	13.75	15.-	16.25	17.50	20.-	22.50	25.-	27.75	30.25	32.75	35.75	38.25	41.-	43.50	46.-	48.50
175	11.75	13.50	15.-	16.50	18.25	20.25	22.-	24.75	28.50	32.-	35.-	38.25	41.75	45.50	49.-	52.-	55.25	58.50	62.75
200	13.75	16.-	18.-	20.25	22.50	24.50	26.50	30.75	35.25	39.50	43.75	48.-	52.50	56.75	61.25	65.50	70.-	74.50	79.-
225	15.75	18.50	21.25	23.75	26.50	29.-	31.75	37.-	43.-	48.50	54.-	59.50	64.75	70.25	76.50	83.-	89.25	95.75	102.-
250	18.25	22.-	25.-	28.50	31.75	34.75	38.25	44.75	52.-	59.50	67.-	74.50	81.75	89.25	96.75	104.-	112.-	117.-	124.-
300	23.50	26.50	30.75	35.-	39.75	44.25	49.-	58.50	67.-	75.75	85.-	95.-	105.-	116.-	126.-	136.-	146.-	155.-	166.-
350	-	34.50	39.50	46.-	52.25	58.75	64.75	77.50	90.-	103.-	115.50	129.-	143.-	157.-	170.-	184.-	198.-	211.-	225.-
400	-	-	50.-	59.-	67.-	75.50	84.-	101.-	118.-	135.-	152.-	168.-	185.-	202.-	218.-	235.-	252.-	268.-	285.-
450	-	-	-	73.-	83.-	93.-	103.-	125.-	147.-	168.-	189.-	209.-	229.-	249.-	269.-	289.-	309.-	329.-	349.-
500	-	-	-	93.-	105.-	117.-	129.-	153.-	179.-	203.-	228.-	252.-	276.-	300.-	325.-	349.-	373.-	397.-	421.-
550	-	-	-	-	133.-	147.-	161.-	189.-	219.-	250.-	280.-	310.-	340.-	370.-	400.-	429.-	459.-	489.-	519.-
600	-	-	-	-	183.-	197.-	225.-	259.-	298.-	332.-	370.-	404.-	442.-	476.-	510.-	548.-	582.-	616.-	-
650	-	-	-	-	-	230.-	255.-	298.-	340.-	383.-	429.-	472.-	519.-	565.-	608.-	655.-	701.-	748.-	-
700	-	-	-	-	-	-	-	353.-	412.-	472.-	523.-	578.-	629.-	680.-	727.-	778.-	825.-	871.-	-
750	-	-	-	-	-	-	-	-	455.-	514.-	574.-	633.-	697.-	757.-	816.-	876.-	939.-	999.-	-
800	-	-	-	-	-	-	-	-	-	599.-	672.-	744.-	816.-	893.-	956.-	1020.-	1084.-	1148.-	-

Separate estimates will be furnished upon request for discs over 300 mm in diameter.

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Standard Prices of Saw Grinding Discs

rpm with V-25 m/sec	Disc mm	Disc Thickness in mm							
		3	6	8	10	12	13	16	18
4800	100	5.30	6.	6.20	6.40	--	--	--	--
3840	125	6.80	7.60	8.10	8.50	--	--	--	--
3200	150	8.50	9.80	10.40	11.	11.75	--	--	--
2740	175	10.60	11.75	12.75	13.50	14.50	--	--	--
2400	200	12.75	13.75	15.	16.	17.30	18.	--	--
2130	225	15.	15.75	17.25	18.50	20.40	21.25	--	--
1920	250	17.	18.25	20.25	22.	24.	25.	28.50	30.25
1600	300	--	23.50	25.	26.50	29.20	30.75	35.	37.50
1370	350	--	--	31.	34.50	37.80	39.50	46.	49.25
1200	400	--	--	41.	45.	48.70	50.	59.	63.

[Table, p. 15 of original]

Standard prices for Grinding Cylinders

Wall Thickness	mm	25	32	40	45	52	60	65	70	75	82	90	95	100	mm	Wall thickness
Diam.	Height	Standard Price Per Unit												Height	Dia. mm	
mm																
200	100	69.25													100	200
	125	85.75												125		
	150	102.-												150		
	175	119.-												175		
	200	135.-												200		
225	100	89.-	90.50	91.75											100	225
	125	110.-	112.-	114.-										125		
	150	132.-	134.-	136.-										150		
	175	153.-	155.-	158.-										175		
	200	174.-	176.-	179.-										200		
250	100	109.-	110.-	112.-	113.-	115.-									100	250
	125	134.-	136.-	138.-	140.-	142.-								125		
	150	160.-	163.-	165.-	167.-	169.-								150		
	175	186.-	189.-	191.-	194.-	196.-								175		
	200	212.-	215.-	218.-	221.-	224.-								200		
300	100	116.-	143.-	145.-	148.-	150.-	152.-	153.-	155.-	156.-					100	300
	125	144.-	177.-	180.-	183.-	186.-	188.-	190.-	191.-	193.-				125		
	150	171.-	211.-	215.-	218.-	221.-	224.-	226.-	228.-	231.-				150		
	175	199.-	245.-	249.-	253.-	257.-	260.-	263.-	265.-	268.-				175		
	200	226.-	279.-	284.-	288.-	292.-	296.-	299.-	302.-	304.-				200		
350	100	159.-	163.-	167.-	171.-	175.-	203.-	205.-	207.-	209.-	211.-	213.-	214.-	215.-	100	350
	125	197.-	202.-	207.-	212.-	217.-	251.-	254.-	256.-	259.-	261.-	263.-	265.-	267.-	125	
	150	234.-	240.-	246.-	252.-	259.-	299.-	302.-	305.-	309.-	311.-	313.-	316.-	318.-	150	
	175	272.-	279.-	286.-	293.-	300.-	347.-	350.-	354.-	358.-	361.-	364.-	365.-	369.-	175	
	200	310.-	318.-	326.-	334.-	342.-	395.-	399.-	404.-	408.-	411.-	414.-	417.-	420.0	200	
400	100	195.-	201.-	207.-	213.-	218.-	223.-	227.-	231.-	235.-	262.-	264.-	267.-	269.-	100	400
	125	241.-	248.-	255.-	263.-	270.-	275.-	281.-	286.-	291.-	324.-	327.-	330.-	333.-	125	
	150	287.-	296.-	305.-	313.-	322.-	328.-	334.-	340.-	347.-	387.-	390.-	393.-	397.-	150	
	175	333.-	343.-	354.-	364.-	374.-	381.-	388.-	395.-	402.-	449.-	453.-	455.-	460.-	175	
	200	380.-	391.-	403.-	414.-	426.-	434.-	442.-	450.-	458.-	511.-	516.-	520.-	524.-	200	

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Standard Prices For Grinding Cylinders

Wall thickness Diam. mm	Height mm	Standard Price per Unit												Height mm	Wall thickness Diam. mm	
		25	32	40	45	52	60	65	70	75	82	90	95			100
450	100	235.-	241.-	247.-	252.-	258.-	264.-	270.-	276.-	282.-	286.-	290.-	295.-	299.-	100	450
	125	290.-	298.-	305.-	313.-	320.-	327.-	334.-	342.-	349.-	354.-	360.-	365.-	370.-	125	
	150	346.-	355.-	364.-	373.-	381.-	390.-	399.-	407.-	416.-	422.-	428.-	435.-	441.-	150	
	175	402.-	412.-	422.-	433.-	443.-	453.-	463.-	473.-	483.-	490.-	497.-	505.-	512.-	175	
	200	458.-	469.-	481.-	492.-	504.-	516.-	527.-	539.-	550.-	558.-	567.-	575.-	583.-	200	
500	100	281.-	288.-	294.-	300.-	307.-	313.-	319.-	325.-	331.-	337.-	343.-	349.-	354.-	100	500
	125	348.-	356.-	364.-	372.-	380.-	387.-	394.-	402.-	409.-	417.-	424.-	431.-	439.-	125	
	150	415.-	424.-	434.-	443.-	453.-	461.-	470.-	479.-	488.-	496.-	505.-	514.-	523.-	150	
	175	482.-	493.-	503.-	514.-	525.-	536.-	546.-	556.-	566.-	576.-	587.-	597.-	607.-	175	
	200	549.-	561.-	574.-	586.-	598.-	610.-	621.-	633.-	645.-	656.-	668.-	680.-	691.-	200	
550	100	309.-	358.-	365.-	372.-	380.-	386.-	392.-	399.-	405.-	411.-	417.-	423.-	429.-	100	550
	125	382.-	443.-	452.-	461.-	470.-	477.-	485.-	493.-	501.-	509.-	516.-	523.-	531.-	125	
	150	455.-	528.-	538.-	549.-	560.-	569.-	579.-	587.-	598.-	606.-	615.-	624.-	633.-	150	
	175	528.-	613.-	625.-	638.-	650.-	661.-	672.-	683.-	694.-	704.-	714.-	724.-	735.-	175	
	200	602.-	698.-	712.-	726.-	740.-	752.-	765.-	777.-	790.-	802.-	813.-	825.-	836.-	200	
600	100	357.-	369.-	381.-	394.-	406.-	455.-	462.-	470.-	477.-	483.-	490.-	496.-	502.-	100	600
	125	444.-	459.-	474.-	490.-	505.-	566.-	575.-	584.-	592.-	600.-	608.-	616.-	624.-	125	
	150	527.-	545.-	563.-	581.-	599.-	672.-	683.-	693.-	704.-	713.-	723.-	732.-	742.-	150	
	175	610.-	631.-	652.-	673.-	694.-	778.-	791.-	803.-	815.-	826.-	837.-	848.-	859.-	175	
	200	697.-	721.-	745.-	769.-	793.-	889.-	903.-	917.-	931.-	943.-	956.-	968.-	981.-	200	
650	100			464.-	476.-	489.-	501.-	513.-	525.-	538.-	587.-	594.-	601.-	609.-	100	650
	125			575.-	590.-	605.-	621.-	636.-	651.-	666.-	727.-	736.-	745.-	754.-	125	
	150			686.-	704.-	722.-	740.-	759.-	777.-	795.-	867.-	876.-	889.-	899.-	150	
	175			798.-	819.-	839.-	860.-	881.-	902.-	923.-	1008.-	1020.-	1032.-	1045.-	175	
	200			904.-	928.-	952.-	976.-	1000.-	1024.-	1048.-	1144.-	1158.-	1172.-	1186.-	200	
700	100			530.-	547.-	563.-	575.-	588.-	600.-	612.-	624.-	636.-	649.-	661.-	100	700
	125			652.-	673.-	693.-	708.-	724.-	739.-	754.-	769.-	785.-	800.-	815.-	125	
	150			784.-	809.-	833.-	851.-	869.-	887.-	905.-	923.-	941.-	959.-	978.-	150	
	175			912.-	940.-	969.-	990.-	1010.-	1031.-	1052.-	1073.-	1094.-	1115.-	1136.-	175	
	200			1035.-	1067.-	1099.-	1122.-	1146.-	1170.-	1194.-	1218.-	1242.-	1266.-	1290.-	200	

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Standard Prices for Cup Grinders

Wall & Bottom Thickness	mm	25	32	40	45	52	60	65	70	75	82	90	95	100	mm	Wall & Bottom Thickness
Diam.	mm	Standard Price per Unit													mm	Diam.
200	100	71.50													100	200
	125	88.-													125	
	150	105.-													150	
	175	121.-													175	
	200	137.-													200	
Bottom Thickness	6 mm	-.60													Bottom Thickness 6 mm	
225	100	92.25	94.-	95.50											100	225
	125	113.-	115.-	117.-											125	
	150	135.-	137.-	139.-											150	
	175	156.-	159.-	161.-											175	
	200	177.-	180.-	183.-											200	
		-.60		-.60		-.60										
250	100	112.-	114.-	116.-	118.-	119.-									100	250
	125	138.-	140.-	143.-	145.-	146.-									125	
	150	164.-	167.-	169.-	172.-	174.-									150	
	175	190.-	193.-	196.-	198.-	201.-									175	
	200	215.-	219.-	222.-	225.-	228.-									200	
		-.90		-.90		-.60		-.60								
300	100	142.-	150.-	153.-	155.-	157.-	159.-	160.-	161.-*	161.-*					100	300
	125	174.-	184.-	187.-	190.-	193.-	195.-	197.-	198.-	200.-					125	
	150	206.-	218.-	222.-	226.-	229.-	231.-	234.-	235.-	237.-					150	
	175	238.-	252.-	256.-	261.-	265.-	267.-	270.-	272.-	274.-					175	
	200	270.-	286.-	290.-	295.-	300.-	303.-	306.-	309.-	311.-					200	
Bottom Thickness	6 mm	1.90	1.30	1.30	1.10	-.90	-.60	-.60	-.60	-.60						
*Bottom thickness 65 mm **Bottom thickness 90 mm																

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[Table of Ballistics]

Diameter	Height	Range (ft)													Diameter
		25	32	40	45	52	60	65	70	75	82	90	95	100	
350	100	194.-	198.-	202.-	205.-	208.-	215.-	217.-	217.-*	218.-*	219.-*	220.-*	220.-*	221.-*	100
	125	237.-	242.-	247.-	251.-	254.-	263.-	266.-	268.-	270.-	271.-	273.-	273.-**	274.-**	125
	150	281.-	286.-	291.-	296.-	301.-	311.-	314.-	317.-	320.-	322.-	324.-	325.-	326.-	150
	175	324.-	330.-	336.-	342.-	347.-	359.-	363.-	366.-	370.-	372.-	374.-	376.-	378.-	175
	200	368.-	375.-	381.-	387.-	393.-	407.-	411.-	415.-	419.-	422.-	425.-	427.-	429.-	200
		2.60	2.30	2.10	1.90	1.90	1.30	1.30	1.-	-90	-90	-60	-60	-60	
400	100	242.-	248.-	254.-	259.-	264.-	267.-	270.-	271.-*	272.-*	273.-*	276.-*	277.-*	278.-*	100
	125	296.-	303.-	309.-	315.-	321.-	325.-	329.-	333.-	336.-	342.-	344.-	344.-**	345.-**	125
	150	350.-	358.-	365.-	372.-	378.-	384.-	388.-	392.-	396.-	404.-	407.-	409.-	411.-	150
	175	405.-	413.-	421.-	429.-	436.-	442.-	447.-	452.-	456.-	466.-	470.-	473.-	475.-	175
	200	459.-	468.-	477.-	486.-	494.-	500.-	506.-	512.-	517.-	529.-	533.-	536.-	540.-	200
		3.40	3.20	3.-	2.80	2.60	2.30	2.10	1.90	1.90	1.30	1.30	1.05	-90	
450	100	294.-	301.-	307.-	314.-	320.-	324.-	329.-	330.-*	332.-*	333.-*	334.-*	335.-*	336.-*	100
	125	360.-	368.-	375.-	383.-	389.-	395.-	400.-	405.-	410.-	414.-	416.-	417.-**	418.-**	125
	150	426.-	435.-	443.-	451.-	458.-	465.-	471.-	477.-	483.-	487.-	491.-	494.-	497.-	150
	175	492.-	502.-	510.-	519.-	527.-	535.-	542.-	549.-	555.-	561.-	565.-	569.-	573.-	175
	200	558.-	568.-	578.-	588.-	597.-	605.-	613.-	621.-	629.-	634.-	639.-	644.-	649.-	200
		4.30	4.-	3.80	3.60	3.40	3.20	3.-	2.80	2.60	2.30	2.10	1.90	1.90	
500	100	354.-	361.-	369.-	376.-	383.-	389.-	395.-	397.-*	398.-*	400.-*	401.-*	403.-*	404.-*	100
	125	434.-	442.-	451.-	459.-	466.-	473.-	480.-	486.-	492.-	497.-	501.-	503.-**	504.-**	125
	150	513.-	523.-	532.-	541.-	549.-	557.-	564.-	571.-	578.-	584.-	589.-	595.-	599.-	150
	175	592.-	603.-	613.-	623.-	632.-	641.-	649.-	657.-	664.-	671.-	677.-	683.-	689.-	175
	200	671.-	683.-	694.-	705.-	715.-	725.-	734.-	743.-	751.-	759.-	766.-	773.-	779.-	200
		5.10	4.90	4.70	4.50	4.25	4.-	3.75	3.50	3.50	3.25	3.-	2.75	2.50	

Diameter	Height	Range (ft)													Diameter
		25	32	40	45	52	60	65	70	75	82	90	95	100	
550	100	389.-	447.-	456.-	464.-	472.-	479.-	486.-	488.-*	490.-*	491.-*	493.-*	495.-*	496.-*	100
	125	474.-	547.-	557.-	566.-	575.-	583.-	590.-	598.-	604.-	611.-	616.-	618.-**	620.-**	125
	150	557.-	647.-	658.-	668.-	678.-	687.-	695.-	703.-	703.-	711.-	718.-	724.-	731.-	150
	175	640.-	746.-	758.-	770.-	781.-	791.-	800.-	809.-	818.-	825.-	833.-	840.-	846.-	175
	200	724.-	846.-	859.-	871.-	883.-	894.-	905.-	914.-	924.-	932.-	941.-	948.-	956.-	200
		9.80	6.-	5.70	5.25	5.-	5.-	4.75	4.50	4.25	4.-	3.75	3.50	3.50	
600	100	456.-	475.-	493.-	510.-	525.-	568.-	576.-	578.-*	580.-*	581.-*	583.-*	585.-*	587.-*	100
	125	557.-	579.-	599.-	618.-	635.-	693.-	702.-	710.-	718.-	725.-	732.-	734.-**	736.-**	125
	150	653.-	677.-	699.-	721.-	741.-	815.-	824.-	834.-	842.-	850.-	858.-	865.-	872.-	150
	175	748.-	774.-	799.-	823.-	846.-	935.-	946.-	957.-	967.-	976.-	984.-	992.-	999.-	175
	200	847.-	876.-	903.-	929.-	955.-	1060.-	1072.-	1084.-	1095.-	1105.-	1114.-	1123.-	1132.-	200
		12.-	11.70	11.-	10.50	9.75	6.-	5.75	5.25	5.-	5.-	4.75	4.50	4.25	
650	100			599.-	618.-	636.-	653.-	669.-	673.-*	677.-*	705.-*	707.-*	709.-*	711.-*	100
	125			725.-	747.-	767.-	786.-	803.-	820.-	835.-	878.-	886.-	888.-**	890.-**	125
	150			851.-	875.-	897.-	919.-	939.-	958.-	975.-	1033.-	1042.-	1050.-	1058.-	150
	175			975.-	1032.-	1027.-	1051.-	1073.-	1095.-	1115.-	1189.-	1198.-	1208.-	1216.-	175
	200			1096.-	1124.-	1152.-	1178.-	1203.-	1227.-	1250.-	1339.-	1350.-	1361.-	1371.-	200
			13.50	12.75	12.-	11.75	11.-	10.50	9.75	6.-	5.75	5.25	5.-		
700	100			696.-	717.-	739.-	757.-	776.-	779.-*	783.-*	788.-*	792.-*	796.-*	800.-*	100
	125			835.-	862.-	885.-	906.-	927.-	945.-	963.-	980.-	996.-	1000.-**	1004.-**	125
	150			983.-	1012.-	1041.-	1064.-	1086.-	1108.-	1128.-	1147.-	1165.-	1181.-	1196.-	150
	175			1125.-	1159.-	1190.-	1217.-	1242.-	1266.-	1288.-	1310.-	1330.-	1349.-	1366.-	175
	200			1265.-	1031.-	1336.-	1365.-	1392.-	1418.-	1443.-	1467.-	1490.-	1511.-	1532.-	200
			16.25	15.25	14.50	13.75	13.50	12.75	12.-	11.75	11.-	10.50	9.75		

x Ratio ... as Both ...

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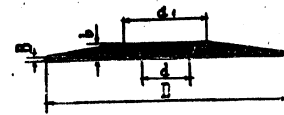
Standard Prices of German Industry Standard (D.I.B.)

Grinding Discs

(For grinding tools such as milling cutters, broaches, screw taps, gauges, twist drills, lathe and planing cutters, etc.)

Flat Plate Form (for backed off and pointed tooth cutters, etc.)

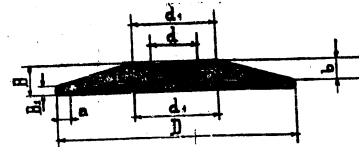
St.	Diam. D/d ₁	Width b/B	Hole d	Price
A 75	75/30	5/1	13	4.30
A 100	100/50	6/1.5	20	6.-
A 125	125/68	7/2	20	8.50
A 150	150/82	8/2	20	11.-
A 175	175/95	10/3	20	13.50
A 200	200/98	12/3	20	18.-
A 250	250/125	14/3	32	23.50



D. I. Norm 181
Form A

Concave Plate Form (for backed off cutters, etc.)

St.	Diam. D/d ₁	Width B/B ₁	Hole d	Price
B 75	75/28	8/2	13	4.90
B 100	100/35	12/3	20	7.20
B 125	125/40	14/3	20	10.75
B 150	150/50	15/3	20	13.75
B 175	175/60	18/3	20	18.25
B 200	200/70	19/3	20	22.50
B 250	250/100	21/3	32	34.75



D. I. Norm 181
Form B

Two-side Tapered Form (for backed off, spiral grooved cutters, etc.)

St.	Diam. D	Width b/B	Hole d	Price
C 75	75	8/2	13	4.90
C 100	100	9/2	20	6.40
C 125	125	10/2	20	8.50
C 150	150	12/2	20	12.25
C 175	175	14/3	20	16.50
C 200	200	16/3	20	20.25
C 250	250	19/4	32	31.75



D. I. Norm 182
Form C

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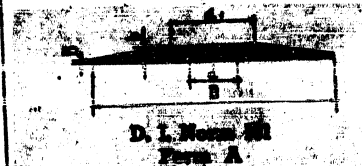
Standard Prices of German Industry Standard (D.I.N.)

Grinding Discs

(For grinding tools such as milling cutters, broaches, screw taps, gauges, twist drills, lathes and planing cutters, etc.)

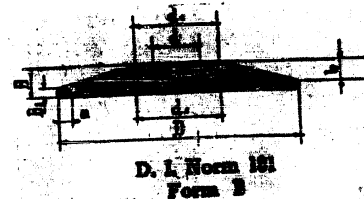
Flat Plate Form (for backed off and pointed tooth cutters, etc.)

St.	Diam. D/d ₁	Width b/B	Hole d	Price
A 75	75/30	5/1	13	4.30
A 100	100/50	6 1/2	20	6.-
A 125	125/68	7/2	20	8.50
A 150	150/82	8/2	20	11.-
A 175	175/95	10/3	20	13.50
A 200	200/98	12/3	20	18.-
A 250	250/125	14/3	32	28.50



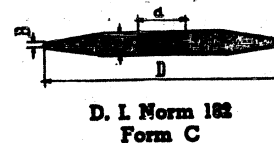
Concave Plate Form (for backed off cutters, etc.)

St.	Diam. D/d ₁	Width B/B ₁	Hole d	Price
B 75	75/28	8/2	13	4.90
B 100	100/35	12/3	20	7.20
B 125	125/40	14/3	20	10.75
B 150	150/50	15/3	20	13.75
B 175	175/60	18/3	20	18.25
B 200	200/70	19/3	20	22.50
B 250	250/100	21/3	32	34.75



Two-side Tapered Form (for backed off, spiral grooved cutters, etc.)

St.	Diam. D	Width b/B	Hole d	Price
C 75	75	8/2	13	4.90
C 100	100	9/2	20	6.40
C 125	125	10/2	20	8.50
C 150	150	12/2	20	12.25
C 175	175	14/3	20	16.50
C 200	200	16/3	20	20.25
C 250	250*	19/4	32	31.75

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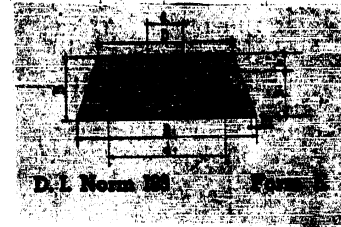
Plain Cup Form (for milling cutters, broaches, etc.)

St.	Diam D	Width B	Hole d	Cup		Price
				Diam. d ₁	Depth B ₁	
D 40	40	25	13	34	20	4.70
D 50	50	30	13	44	24	6.80
D 75	75	40	20	67	32	9.50
D 100	100	50	20	90	40	15.75
D 125	125	60	20	110	48	23.25
D 150	150	80	20	130	64	41.-
DD 100	100	40	13	2x88	2x16	16.-



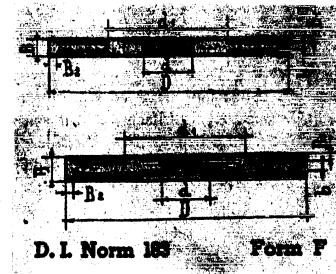
Tapered Cup Form (for formers, gauges, etc.)

St.	Diam D/D ₁	Width B	Hole d	Cup		Price
				Diam. d ₁	Depth B ₁	
E 75	75/53	30	20	45	22	8.50
E 100	100/75	35	20	65	25	12.75
E 125	125/92	45	20	80	33	19.25
E 150	150/114	50	20	100	38	27.75



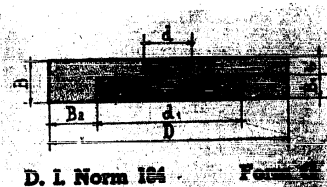
Gauge Grinding with Two-Side Recess

St.	Diam D/D ₁	Width B	Hole d	Rim B ₂	Recess B ₁	Price
F 100/10	100/50	10	20	3	3	8.-
F 150/6	150/70	6	20	3	1.5	12.25
F 150/10	150/70	10	20	3	3	13.75
F 150/15	150/50	15	20	3	4.5	17.20
F 175/20	150/50	20	20	4	6	22.80
F 175/25	150/50	25	20	6	7.5	27.50



Twist Drill Grinding Discs

St.	Diam. D	Width B	Hole d	Recess		Price
				Diam. d ₁	Depth B ₁	
G 150	150	30	20	80	20	20.-
G 175	175	30	32	90	20	24.75
G 200	200	35	40	120	20	35.25
G 225	225	40	40	135	25	43.-
G 250	250	40	40	150	25	52.-
G 300	300	50	40	180	30	85.-



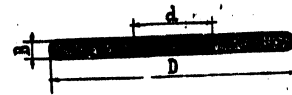
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Twist Drill Grinding Discs (for pointing, etc)

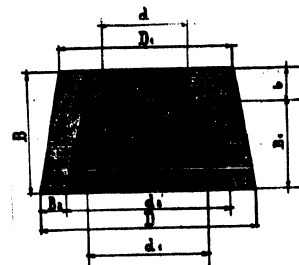
St.	Diam. D	Width B	Hole d	Price
Ga 100	100	6	32	6.-
Ga 150	150	8	40	11.-
Ga 200	200	10	40	16.-



D. I. Norm 184 Form Ga

Tapered Cup Form (for lathe tool grinders, milling cutters, etc)

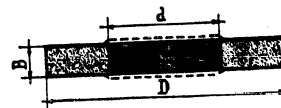
St.	Diam. D/D ₁	Height B	Hole d	Cup		Price
				Diam. d ₂ /d ₁	Depth B ₁	
H 180	180/120	55	32	135/90	40	48.-
H 250	250/200	140	100	190/140	102	169.-



D. I. Norm 185 Form H

Grinding Discs (for lathe tool grinders)

St.	Diam. D	Width B	Hole d	Price
H 500	500	65	229	263.-

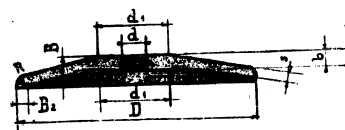


D. I. Norm 185 Form H₁

The outlined projections are on discs for machines with recessed flanges. Prices can be obtained from list for plain grinding discs, at width ca. 80 mm.

Grinding Discs (for wood milling cutters)

St.	Diam. D/d ₁	Width B/b/s	Hole d	Price
H 175	175/50	22/12/8	20	20.25
H 200	200/60	22/12/8	20	26.50



D. I. Norm 185 Form H₂

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[Tables and illustration, p 23 of original]

Gear Tooth Grinding Discs



Diameter	Thickness	Hole	Price
110/50	15/2	15	9.40
110/67	15/2	15	9.40
180/120	12/4	40	15.-
220/150	17/4	40	23.75
420/206	24/5	120	103.-

Special Cutting Discs for Cutting
through Rods and Tubes (peripheral
velocity up to 80 meters per second)

Standard Prices

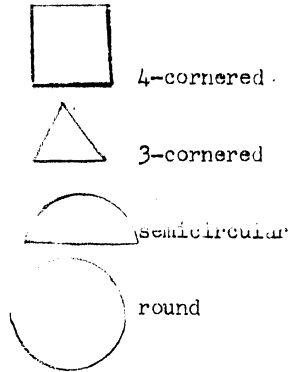
	Diam. mm	100	120	150	175	200	250	300	350	400
T h i c k n e s s	3	5.30	6.80	8.50	10.60	12.75	17.-	21.25	25.50	34.-
	3 2-6	6.-	7.60	9.80	11.75	13.75	18.25	23.50	27.50	36.-

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Files, Plates, Slip Stones, Whetstones



Files

No.	Size mm	Prices			
		□	△	◐	○
1	100x6	1.50	1.50	1.85	2.05
2	150x10	1.80	1.80	2.30	2.50
3	150x12	2.15	2.15	2.45	3.-
4	150x15	2.70	2.70	3.30	3.80
5	200x15	3.60	3.60	4.25	5.-
6	200x20	4.65	4.65	5.-	5.55
7	250x20	5.80	5.80	6.20	6.90
8	250x25	6.30	6.30	6.90	7.20
9	300x25	7.-	7.-	7.60	8.30
10	300x30	8.20	8.20	8.80	9.50
11	350x35	8.70	8.70	9.50	10.50
12	350x40	9.20	9.20	10.20	11.20

Flat Files

No.	Size mm	Price
01	100x15x6	2.40
02	150x20x10	3.25
03	150x25x12	3.25
04	150x30x15	3.80
05	200x30x15	4.90
06	200x40x20	6.-
07	250x40x20	7.50
08	250x50x25	9.50
09	300x50x25	11.20

Slip Stones

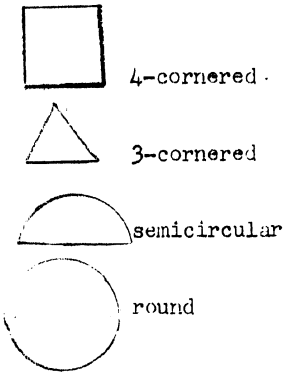
No.	Size mm	Price
001	75x25x6	1.80
002	100x30x10	2.25
003	100x30x12	2.50
004	100x40x15	2.80
005	125x40x15	3.50
006	125x40x20	4.25
007	150x40x20	5.-
008	150x50x25	6.65
009	200x50x25	8.35
010	200x75x30	13.70
011	200x75x40	15.20
012	200x75x50	19.-
013	200x100x50	25.-
014	250x100x50	31.50

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[Tables and drawings, p 24 of original]

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Files, Plates, Slip Stones, Whetstones



Files

No.	Size mm	Prices			
		□	△	◐	○
1	100x6	1.50	1.50	1.85	2.05
2	150x10	1.80	1.80	2.30	2.50
3	150x12	2.15	2.15	2.45	3.-
4	150x15	2.70	2.70	3.30	3.80
5	200x15	3.60	3.60	4.25	5.-
6	200x20	4.65	4.65	5.-	5.55
7	250x20	5.80	5.80	6.20	6.90
8	250x25	6.30	6.30	6.90	7.20
9	300x25	7.-	7.-	7.60	8.30
10	300x30	8.20	8.20	8.80	9.50
11	350x35	8.70	8.70	9.50	10.50
12	350x40	9.20	9.20	10.20	11.20

Flat Files

No.	Size mm	Price
01	100x15x6	2.40
02	150x20x10	3.25
03	150x25x12	3.25
04	150x30x15	3.80
05	200x30x15	4.90
06	200x40x20	6.-
07	250x40x20	7.50
08	250x50x25	9.50
09	300x50x25	11.20

Slip Stones

No.	Size mm	Price
001	75x25x6	1.80
002	100x30x10	2.25
003	100x30x12	2.50
004	100x40x15	2.80
005	125x40x15	3.50
006	125x40x20	4.25
007	150x40x20	5.-
008	150x50x25	6.65
009	200x50x25	8.35
010	200x75x30	13.70
011	200x75x40	15.20
012	200x75x50	19.-
013	200x100x50	25.-
014	250x100x50	31.50

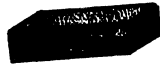
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Whetstones

for honing very fine tools, flat, one side rough, one side fine



Type	Length mm	Width mm	Thick- ness mm	Price
a.	125	40	25	7.40
b.	150	50	25	11.40
c.	175	50	25	12.95
d.	200	50	25	14.60

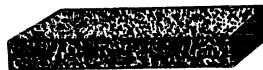
Knifeblade form with rounded edges



Type	Length mm	Width mm	Thick- ness mm	Price
h	150	55	20/10	11.85
i	150	70	13/2	11.10
j	150	50	16/6	9.25
k	150	38	10/3	6.65
l	125	40	10/3	5.95
m	115	45	6/2	5.55
n	100	50	16/5	6.65
o	100	38	10/3	5.20
p	100	25	4/1	4.05

Dressing stones

for medium and fine grain, medium hard grinding discs to
medium size



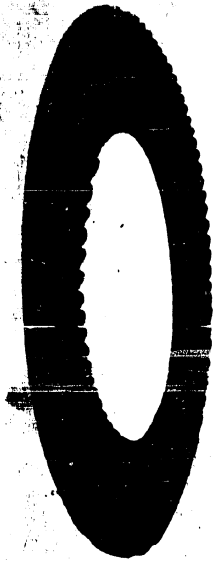
Type	Length mm	Width mm	Thick- ness mm	Price
e	200	20	20	4.65
f	200	50	20	6.50
g	200	50	25	8.35

Sizes and compositions in regular demand are kept in stock. When ordering, please indicate exactly how item is to be used so that we can determine the most suitable grain size and hardness.

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[Table and illustration, p. 26 of original]

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Heavy Duty Abrasive Plates

Corundum and silicon carbide grains, for surface grinding machines with steel discs, for grinding rough castings, stampings, cast iron, wrought iron, steel, brass, bronze, etc., and for facing chamotte, porcelain, artificial stone, etc.

Outside diam. mm	Hole diam. mm	Price		Outside diam. mm	Hole diam. mm	Price	
		Plate	Fabric base			Plate	Fabric base
900	700	50.-	1.80	600	300	51.-	1.10
900	500	69.-	1.80	500	300	27.-	-.90
800	500	62.-	1.60	500	200	35.-	-.90
800	400	76.-	1.60	450	200	28.-	-.75
800	300	88.-	1.60	400	200	22.-	-.50
700	500	40.-	1.40	350	150	20.-	-.45
700	400	49.-	1.40	300	100	18.-	-.40
700	250	69.-	1.40	250	100	15.-	-.40
600	350	38.-	1.10	200	120	12.-	-.40
600	250	48.-	1.10	200	75	12.50	-.40

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[Table and illustrations, p. 27 of original]

Grinding segments

(corundum and silicon carbide, in ceramic, elastic and silicate binders)



Form No.	Size in mm					Price
	Width B/C	Thickness D	Length L	Outside radius R	Inside radius r	
101	218/182	70/60	300	600	—	92.-
102	206/158	59	180	400	341	51.-
103	206/158	59	250	400	341	66.-
104	206/158	59	280	400	341	72.50
105	149/111	42	200	300	258	33.-
106	149/111	42	140	300	258	24.-
107	141/113	28	180	225	197	21.-
108	141/104	38	180	225	187	26.30
109	127/92	42	200	250	208	28.-
110	90/60	32	160	150	118	14.50
111	88/58	32	175	150	118	15.30
112	88/50	50	180	210	160	20.70
113	154/115	40	106	160	120	19.50
114	135/100	30	120	200	170	15.70
115	118/94	30	150	300	270	17.-
116	115/90	25	150	175	150	14.70
117	110/69	35	150	205	170	14.30
118	110/80	22	120	147	125	10.50
119	89/59	30	160	140	110	13.80
120	83/57	20	100	160	80	7.80
121	80	25/21	150	200	—	11.30
122	78/48	26	90	110	84	8.-
123	75/45	30	150	125	95	11.10
124	70/41	25	130	87.5	62.5	9.-
125	70/47	26/16	75	100	74	6.50
126	61/44	15	100	100	85	6.10
127	60	20/17	150	187.5	—	8.70
128	55	15/12	130	100	85	6.90

Information on other dimensions upon request

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[Table and illustration, p 28 of original]

Stone Cutting Discs

(Steel base with silicon carbide cutting face, for marble,
granite, syenite, slate, artificial stone, etc.)



The usable width of the face is 25 mm for all sizes; the grain and hardness are chosen to give a sharp, smooth cut. When ordering please state type of stone to be cut. The steel bases of used discs can be refaced.

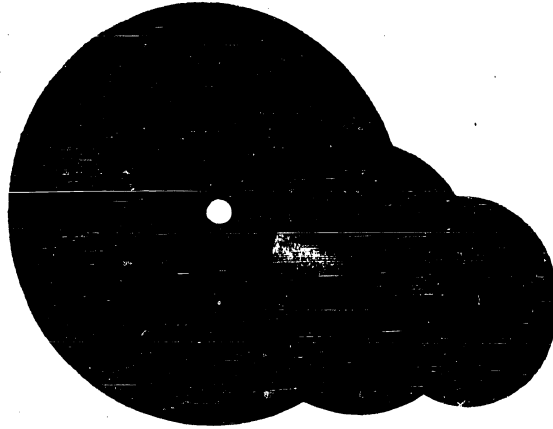
Outside diam. of disc, mm	Diam of steel base, mm	Thickness of cutting face, mm	Price for steel base	Price of facing
200	150	3	5.30	8.20
250	200	4	5.80	10.15
300	250	5	6.95	12.90
350	300	5	8.40	16.15
400	350	6	10.95	19.35
450	400	6	15.30	22.90
500	450	7	19.35	27.10
600	550	7	38.75	36.30

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Figure 1 - Illustration, part of unit 17

... cutting blades
 ... granite, slate, ...



The usable width of the face is 25 mm for all sizes; the grain and hardness are chosen to give a sharp, smooth cut. The bearing plate is of the type of stone to be cut. The steel bases of used blades can be replaced.

cut. dia. (diam. of face, mm)	diam. of steel base, mm	thickness of cutting face, mm	price for steel base	price of facing
200	150	3	5.30	8.20
250	200	4	5.80	10.15
300	250	5	6.95	12.90
350	300	5	8.40	16.15
400	350	6	10.95	19.35
450	400	6	15.30	22.90
500	450	7	19.35	27.10
600	550	7	38.75	36.20

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[Handwritten text, possibly a reference or title]

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CARBIDUM

Grade	Width	Thickness	Weight per hundred	Price per hundred
220	35	13	17	102.-

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[Table and illustrations, p 29 of original]

Cutting Discs, Segments, and Shaped Stones
for the Stone Industry



Prices upon request.

Scythe Stones

Corundum and silicon carbide, ceramic bonded, better and more durable than natural stone, uniform and grainless.



Length mm	Width mm	Thickness mm	Weight per hundred	Price per hundred
230	35	13	17	102.-

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Insert Stones

(for abrasive brushes, ~~for~~ silicon carbide, for smoothing the bores in automobile, pump, compressor cylinders^{ers}, etc.)



No.	Length mm	Width mm	Thickness mm	Price
501	50	6	6	3.15
502	50	8	8	3.35
503	60	6	6	3.35
504	65	8	6	3.50
505	75	6	6	3.50
506	75	10	10	3.70
507	80	6	6	3.50
508	80	8	8	3.70
509	100	6	6	3.50
510	100	10	8	3.70
511	100	10	10	3.70
512	100	10	12	4.05
513	100	10	16	4.45
514	125	10	10	4.05
515	125	12	12	4.65
516	125	15	15	5.55
517	135	8	6	4.05
518	135	10	10	4.45
519	135	10	12	4.65
520	150	10	10	4.80
521	150	12	12	5.20
522	150	13	16	5.55
523	150	15	15	6.10
524	150	15	20	6.50

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[Table and illustration, p 30 of original]

insert stones

(For abrasive brushes, ~~the~~ silicon carbide, for smoothing the
 boras in automobile, pump, compressor cylinders, etc.)



No.	Length mm	Width mm	Thickness mm	Price
501	50	6	6	3.15
502	50	8	8	3.35
503	60	6	6	3.35
504	65	8	6	3.50
505	75	6	6	3.50
506	75	10	10	3.70
507	80	6	6	3.50
508	80	8	8	3.70
509	100	6	6	3.50
510	100	10	8	3.70
511	100	10	10	3.70
512	100	10	12	4.05
513	100	10	16	4.45
514	125	10	10	4.05
515	125	12	12	4.65
516	125	15	15	5.55
517	135	8	6	4.05
518	135	10	10	4.45
519	135	10	12	4.65
520	150	10	10	4.80
521	150	12	12	5.20
522	150	13	16	5.55
523	150	15	15	6.10
524	150	15	20	6.50

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Dressing Tools



This tool may be satisfactorily substituted for diamonds for dressing and profiling fine and medium grain, medium hard, medium size grinding discs. It consists of a brass tube, 250x24 mm with handgrip, coated with a very hard, crystalline dressing compound. The tool is used freehand for dressing abrasive surfaces.

Price each 21.- P

Dressing Millers

Various types and sizes available, either in lathe supports, or freehand style, in simple fork-type holders, for dressing abrasive discs.



No.	Description	Price
1	4 wheel, crucible-cast steel, 50 mm diam., one piece, milled and tempered, with 3 spacing discs	20.-
2	2 wheel, crucible cast steel, 70 mm diam., one piece, milled and tempered, with 1 spacing disc	24.-
3	2 wheel, corrugated, chill casting, 70 mm diam.	2.-
4	4 wheel, corrugated, chill casting, 50 mm diam.	1.50
5	5 wheel, corrugated, chill casting, 45 mm diam.	1.50
6	4 serrated wheels, tempered steel, 35 mm diam, with 3 spacing discs	2.-
7	4 serrated wheels, tempered steel, 30 mm diam, with 3 spacing discs	1.20
	Holder for Nos. 1, 4, 5, 6, 7	5.-
	Holder for Nos. 2, 3	6.-

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Dressing Tools



This tool may be satisfactorily substituted for diamonds for dressing and profiling fine and medium grain, medium hard, medium size grinding discs. It consists of a brass tube, 250x24 mm with handgrip, coated with a very hard, crystalline dressing compound. The tool is used freehand for dressing abrasive surfaces.

Price each 21.- P

Dressing Millers

Various types and sizes available, either in lathe supports, or freehand style, in simple fork-type holders, for dressing abrasive discs.



No.	Description	Price
1	4 wheel, crucible-cast steel, 50 mm diam., one piece, milled and tempered, with 3 spacing discs	20.-
2	2 wheel, crucible cast steel, 70 mm diam., one piece, milled and tempered, with 1 spacing disc	24.-
3	2 wheel, corrugated, chill casting, 70 mm diam.	2.-
4	4 wheel, corrugated, chill casting, 50 mm diam.	1.50
5	5 wheel, corrugated, chill casting, 45 mm diam.	1.50
6	4 serrated wheels, tempered steel, 35 mm diam, with 3 spacing discs	2.-
7	4 serrated wheels, tempered steel, 30 mm diam, with 3 spacing discs	1.20
	Holder for Nos. 1, 4, 5, 6, 7	5.-
	Holder for Nos. 2, 3	6.-

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[Tables and illustration, p. 32 of original]

Abrasive Grains and Grain Dust

(high grade corundum and silicon carbide, for various grinding and polishing work)

Grade	Grain Number	Price
Bk ₁	12-250	3.35
	250-300, 1/0-6/0	6.70
Bl	12-250	4.--
	250-300, 1/0-6/0	8.--
As	12-250	5.--
	250-300, 1/0 -- 6/0	10.--

Grinding Compound (Paste)

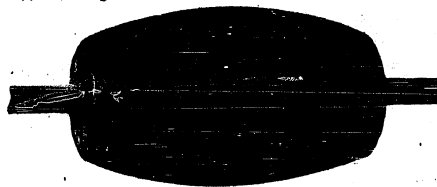
(for grinding valves and for other, similar grinding work, packaged in tin boxes)

Grain Number	Price
80 x 250	5.40
250-300, 1/0 -- 6/0	6.80

Grinding Rolls for Leather Processing

(equally suitable for dry and wet grinding, uniform in texture and economical to use)

The rolls are produced chiefly in the sizes indicated below. The best operating speed is 15-20 meters per second.



Oval form diam. mm	Length mm	Aperture mm	Price		
			Extra	Bk	As
400/320	440	270	255.--	415.--	550.--
330/220	550	60	265.--	440.--	590.--
350/230	550	60	280.--	470.--	645.--

Price information on other sizes available upon request.

We also manufacture for the leather industry, grinding discs and stones for sharpening knives and tools of all types.

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