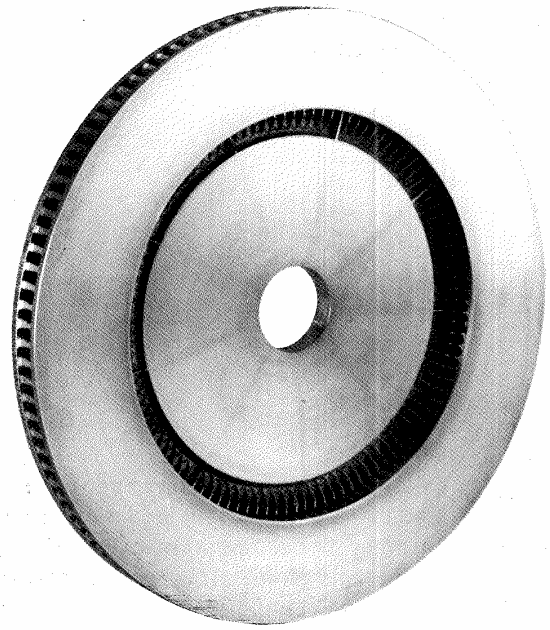
KOBELT MANUFACTURING COMPANY LIMITED

2" x 4" SERIES HEAVY DUTY BRAKE DISC



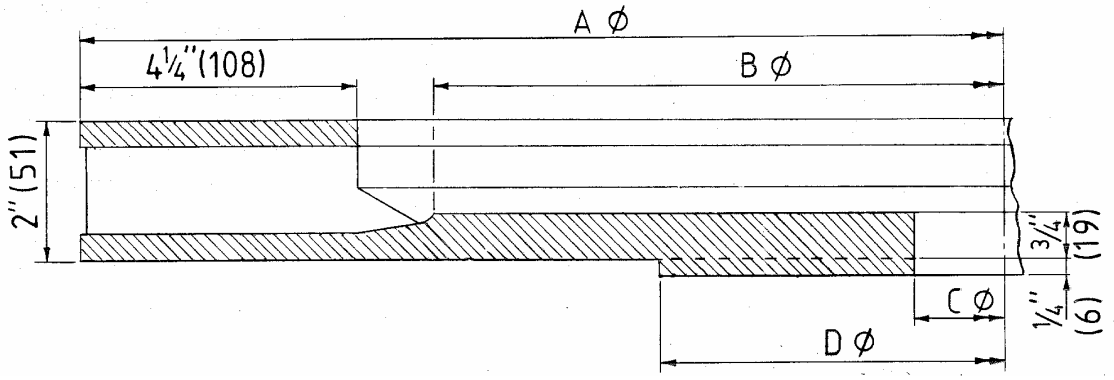
These discs were designed to fit our calipers 5021 through 5024 and also model 5027. This disc series is of the ventilated type, and can be classified because of their fin design as a heavy duty disc series.

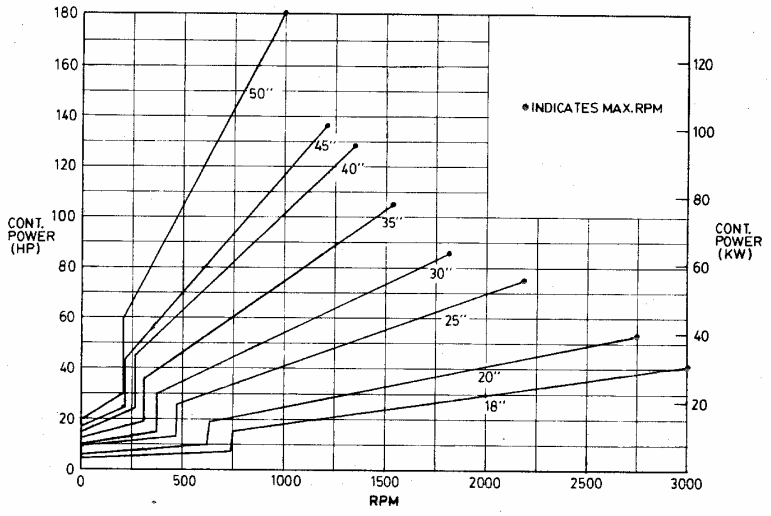
The table on reverse wili indicate basic application characteristics for these discs. It is, however, recommended to contact Kobelt for severe applications to ensure that the proper disc caliper combination is selected.

SPECIFICATIONS

A diam		B max diam		C min diam		D max diam		Max RPM	Weight		Act. Rad.		WR^2		Single Stop Energy Absorb.	
inch	mm	inch	mm	inch	mm	inch	mm		lbs	Kgs	ft.	m	lb-ft²	Kg-m²	hp-sec	KJ
18	457	7	178	3.25	83	7.75	197	3070	74	34	0.58	0.18	24	1.01	6700	5000
20	508	9	229	4	102	9.75	248	2750	86	39	0.67	0.20	35	1.47	7800	5800
25	635	14	356	3.5	89	9.75	248	2200	118	54	0.88	0.27	78	3.29	9600	7200
30	762	19	483	4.5	114	13	330	1800	165	75	1.08	0.33	163	6.87	12660	9400
35	889	24	610	5.5	140	13.75	349	1550	212	96	1.29	0.39	291	12.26	15000	11200
40	1016	29	737	6	152	15	381	1350	263	119	1.50	0.46	470	19.81	16800	12500
45	1143	34	864	8.25	210	15.75	400	1200	302	137	1.71	0.52	693	29.20	17900	13300
50	1270	39	991	10.25	260	19.5	495	1070	358	162	1.92	0.58	1040	43.83	20600	15400

Note: WR^2 and Weight may vary due to machining.





The graph above indicates the horsepower handling capacity of the brake discs in relation to various RPMs. Please note that the horsepower capacity drastically increases when the disc goes from laminar to turbulent flow. The energy indicated is based on a continuous input with a maximum disc temperature of 600°F (315°C) and does not require any stopping or brake release time. It is important to remember that disc brake installations running on a continuous power input should not exceed 700°F (370°C) disc temperature.

MAXIMUM ENERGY CAPACITY FOR A SINGLE STOP FROM CRITICAL RPM (LAMINAR FLOW)
Maximum Temperture 700°F (370°C)

Disc	Critical rpm	1 sec		2 sec		5 sec		10sec		30sec		1min		2 min		5 min		10 min	
		hp-sec	kJ	hp-sec	kJ	hp-sec	kJ	hp-sec	kJ	hp-sec	kJ	hp-sec	kJ	hp-sec	kJ	hp-sec	kJ	hp-sec	kJ
2 x 4 x 18	740	2340	1740	3315	2470	5240	3910	6730	5020	6865	5120	7075	5280	7500	5590	8850	6600	11060	8250
2 x 4 x 20	620	2800	2090	3960	2950	6260	4670	7775	5800	7900	5890	8080	6030	8460	6310	9590	7150	11385	8490
2 x 4 x 25	480	3690	2750	5220	3890	8250	6150	9645	7190	9820	7320	10085	7520	10635	7930	12230	9120	14905	11110
2 x 4 x 30	380	4580	3420	6475	4830	10240	7640	12590	9390	12780	9530	13085	9760	13720	10230	15580	11620	18585	13860
2 x 4 x 35	320	5470	4080	7735	5770	12230	9120	15000	11190	15225	11350	15590	11630	16340	12180	18570	13850	22170	16530
2 x 4 x 40	280	6360	4740	8990	6700	14215	10600	16845	12560	17130	12770	17580	13110	18510	13800	21240	15840	25780	19220
2 x 4 x 45	200	7250	5410	10250	7640	16200	12080	17895	13340	18200	13570	18660	13910	19610	14620	22300	16630	26810	19990
2 x 4 x 50	210	8135	6070	11505	8580	18190	13560	20600	15360	20980	15640	21570	16080	22790	16690	26280	19600	32270	24060

The calculations indicating disc temperature or energy capability are based on the rubbing face and the fins of the disc only. The mounting flange of the disc and the rotating element that the disc is attached to are not considered in our calculations. Also in air flow we have allowed for some restrictions because normally guards and obstructions are imposed to the air flow in most instances. Because of this, in many cases up to three times more energy can be absorbed by the disc, but since all of these items are unknown to us, we feel that we must offer the utmost in security, as far as brake performance is concerned. If specific details are available of your brake installation, we will be pleased to do a computer run and give you precise performance criterias.

If a brake disc and brake caliper are properly selected, many years of trouble-free service can be expected. Early disc failure can occur if for example a disc cycles continuously, and goes from extremely hot to cold conditions constantly, (metal fatigue). Because of these constant thermo-stresses, heat checks will occur and major cracks will appear after some time of operation. If a brake disc and brake caliper are properly selected, this can all be avoided.

Please visit our website ***www.kobelt.com*** for more information.