

Discflex

VULKAN
DRIVE TECH

reliable industrial drives



2010/02

SELECTION PROCEDURE

- Check the service factor appropriate to its application in the table below.
- Calculate the power to be transmitted by using the service factor, as shown below:
- Choose a Vulkan Discflex coupling with transmissible power superior or equal to the calculated one.
- Check if the maximum bores of the coupling comply with the diameters of the machines' shafts.
- Check if the DBSE (Distance Between Shaft Ends) is appropriate to your project.
- Check the coupling's maximum speed and if the balancing is necessary.

Power to be transmitted per 1000 rpm

Rating = $\frac{N \times FS \times 1000}{n}$ $\left[\frac{\text{kW}}{1000 \text{ rpm}} \right]$

N = Power transmitted in [kW]

n = Speed of coupling in [rpm]

FS = Service Factor

SERVICE FACTOR

Application	Service Factor Suggested
Shakers	1.3
Alternative Pumps	2.0
Spinning Pumps	1.2
Fuse Pumps, Lobules	1.5
Calenders and Pressing Roller	2.0
Drying Cylinders	1.75
Alternative Compressors	2.0
Spinning Compressors	1.2
Screw Compressors	1.5
Generators	1.5
Recoilers	2.0
Spinning Blowers	1.2
Lobule Blowers	1.5
Light Carriers	1.5
Heavy Carriers	1.75
Spinning Fans	1.5
Fans for Cooling Towers	1.5

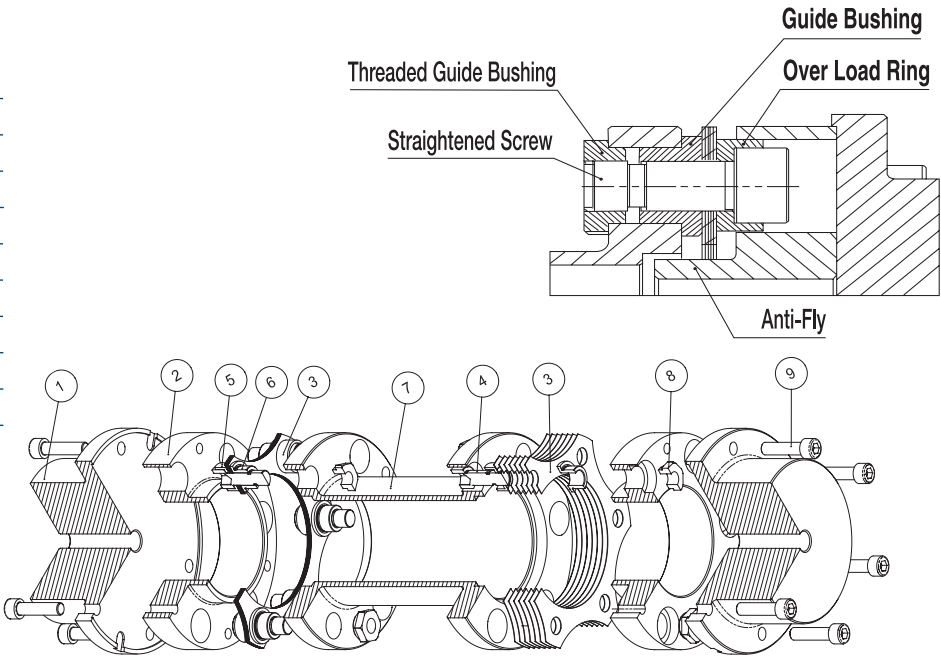
Note:

The service factor values mentioned above represent only a generic orientation.

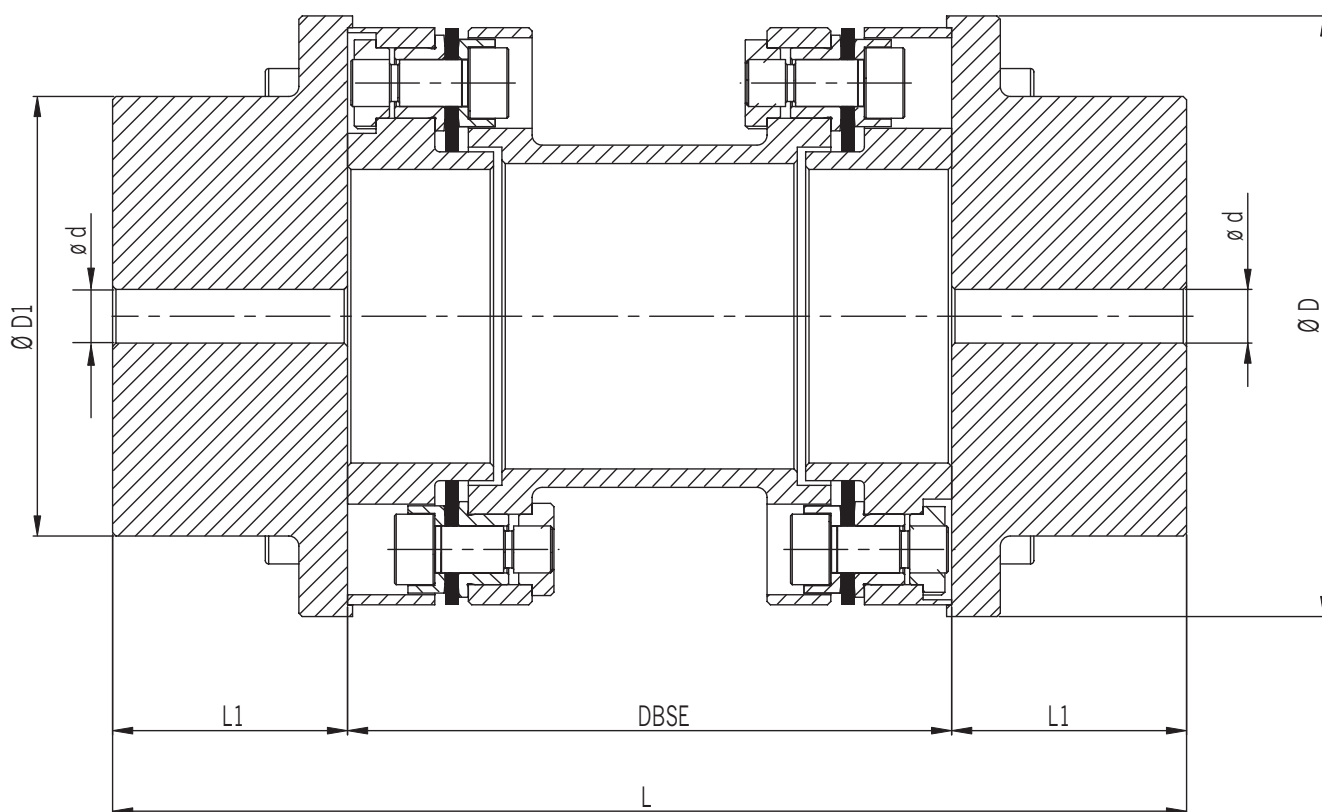
These values apply to electric engines and steam turbines. For diesel, Gas or Gasoline combustion engines up to 4 cylinders, add 2.0 to the service factor.

DESCRIPTION OF COMPONENTS

Items	Name
1	Hub
2	Flange
3	Stainless Steel Membrane
4	Straightened screw
5	Over Load Ring
6	Guide Bushing
7	Tubular Spacer
8	Threaded Guide Bushing
9	Allen Screw



DNZ Type

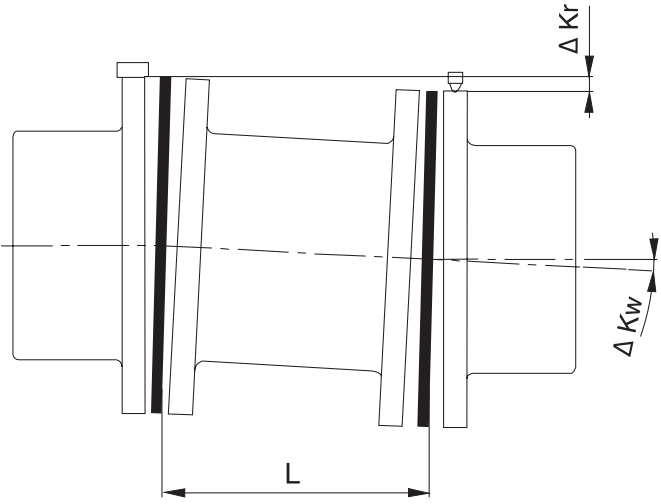


Technical Data

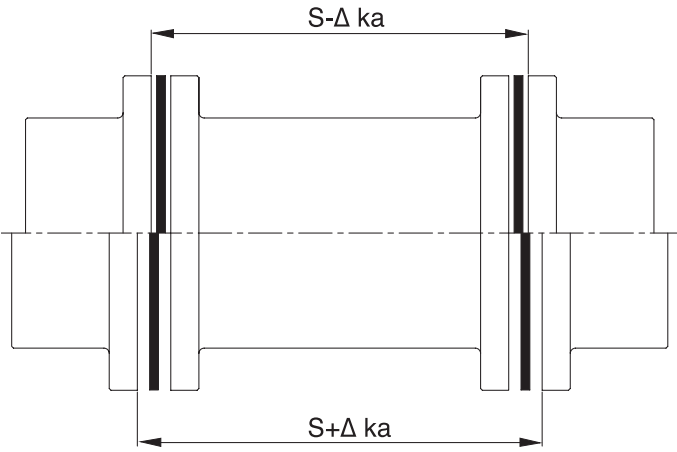
Size	Rating <i>kw</i> 1000 rpm	Max. Speed (rpm)	Nominal Torque <i>T_{kn}</i> (Nm)	Pear Torque (Nm)	Residual moment with $\Delta K_w=0.5$ (Nm)	Inertia moment for <i>S=180</i> (kg.m ²)	Load with max. Axial misalignment (N)	ΔK_a max. Axial misalignment with $K_w=0.5^\circ$ (± mm)	Weight for DBSE=180 (kg)	No. of screws
13	13	25500	124	310	4.1	0.002	210	1	3.5	6
33	33	20000	315	790	6.1	0.006	280	1.25	6.5	6
75	75	16500	716	1790	8.8	0.022	360	1.5	12	6
135	135	14400	1289	3220	11.8	0.052	560	2	20	6
230	230	12000	2197	5490	14.7	0.109	740	2.5	30	6
350	350	10500	3343	8360	34.3	0.218	780	2.75	40	6
500	500	9500	4775	11940	40.7	0.355	1080	3.25	62.5	6
740	740	8000	7066	17670	47.6	0.597	1270	3.75	85	6
930	930	7000	8881	22200	53.9	0.934	1470	4.25	110	6
1400	1400	6000	13369	33400	61.3	1.537	2700	5	158	6

Dimensional Data

Size	d (mm)		D (mm)	D1 (mm)	L1 (mm)	DBSE min. (mm)	L (mm)				
	min.	máx.					DBSE=100	DBSE=140	DBSE=180	DBSE=250	DBSE=460
13	10	36	83	53	40	90	180	220	260	330	540
33	20	46	105	69	45	100	190	230	270	340	550
75	20	65	130	88	55.5	120	-	251	291	361	571
135	25	80	152	112	62	140	-	264	304	374	584
230	30	90	179	131	70	160	-	-	320	390	600
350	30	115	205	163	89	170	-	-	358	428	638
500	40	127	222	181	95	170	-	-	370	440	650
740	40	140	253	206	107	180	-	-	394	464	674
930	45	155	272	223	115	180	-	-	410	480	690
1400	50	172	297	248	130	180	-	-	440	510	720



Angular and Radial Misalignments



Axial Misalignment

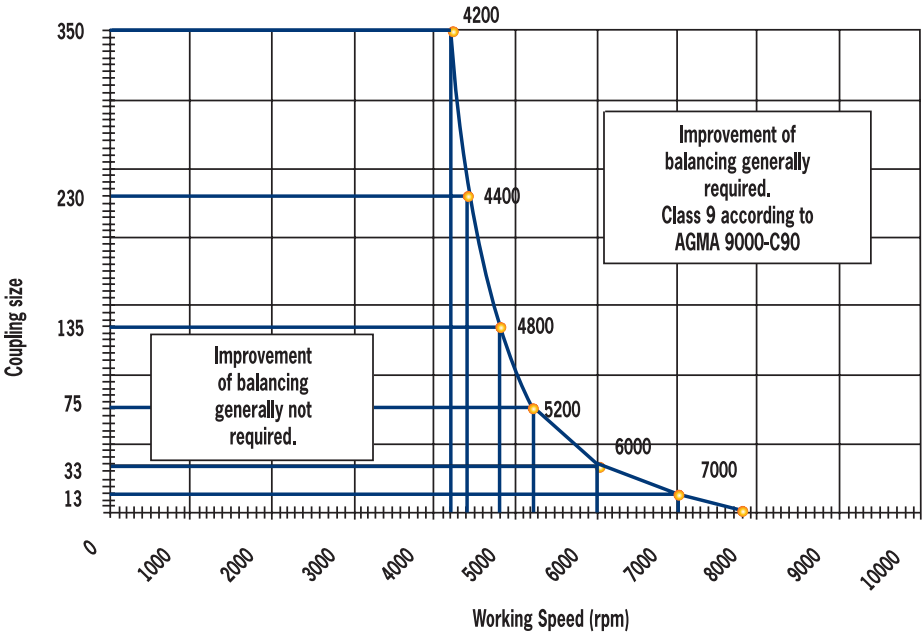
$$\Delta K_w = \arctan \left(\frac{\Delta K_r}{L} \right)$$

Admissible Misalignment Data

Misalignments	Sizes									
	13	33	75	135	230	350	500	740	930	1000
Axial Δk_a (mm)	1	1.25	1.5	2	2.5	2.75	3.25	3.75	4.25	5
Radial Δk_r (mm)	0.4	0.45	0.54	0.63	0.72	0.77	0.77	0.82	0.82	0.82
Angular Δk_w (°)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

BALANCING

According to API 671 Standard.
Balanced according to
AGMA Standard
9000 - C90 class 9.



VULKAN DISCFLEX COUPLINGS

ADVANTAGES

- Applicable to high speed
- Low inertia and high torque

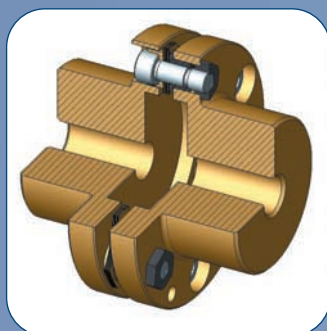
OPTIONAL CHARACTERISTICS:

The Discflex couplings can be supplied in different designs in order to adapt to your application:

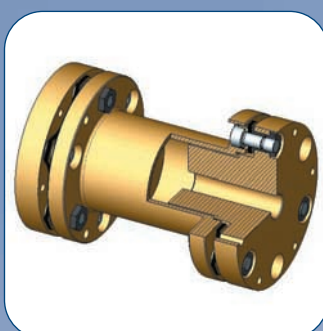
- No wearing
- No lubrication
- No back lash

- With shearing pins
- With windage protection rings

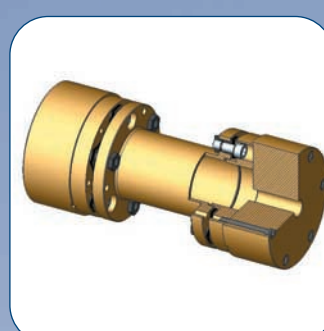
OTHER CONFIGURATIONS



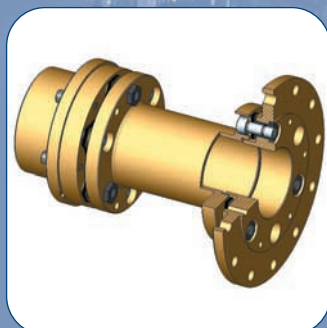
DS



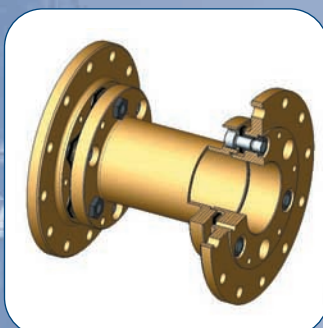
DII



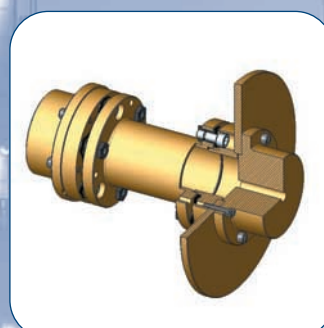
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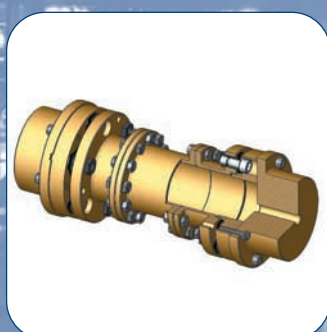
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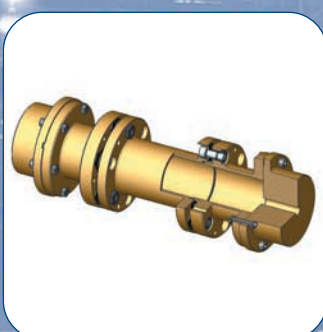
D2F



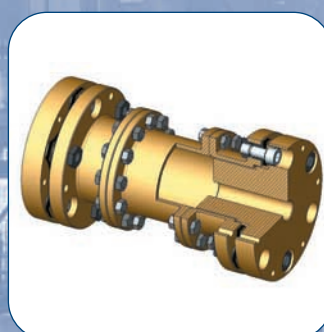
DTB



DEP



DFP



DEPI



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