

# TRANSFLUID



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## trasmissioni industriali



drive with us

**KX**

FLUID COUPLINGS KX SERIES

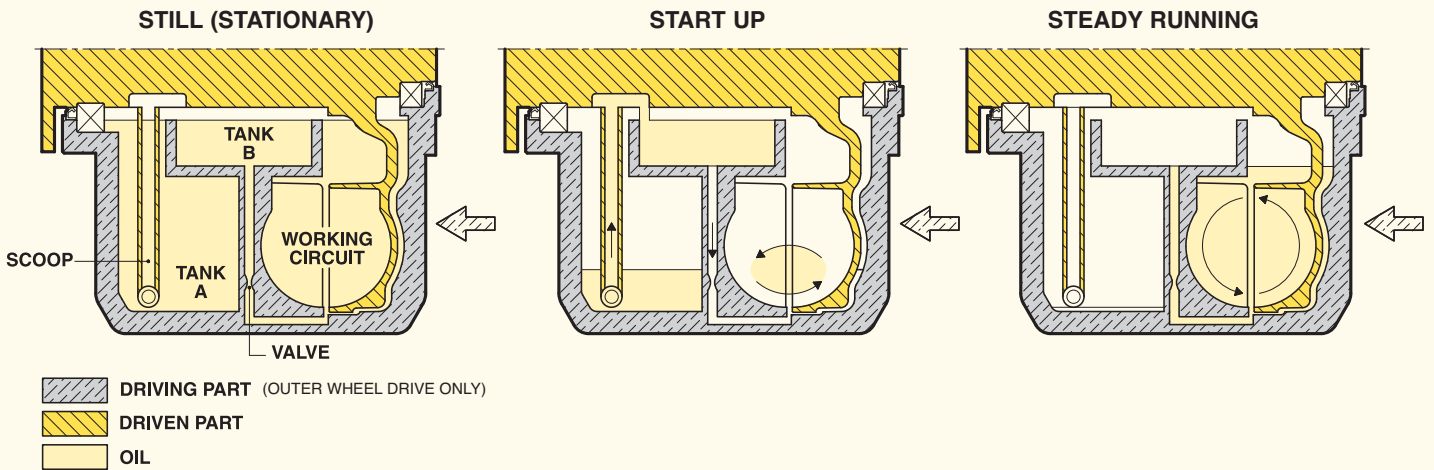
# FLUID COUPLINGS

## KX series

### DESCRIPTION

The KX is a fluid coupling with a **special patented** fluid circuit designed to start up large inertia machines driven by electric motors. The circuit includes two internal tanks connected by two **scoops** allowing bidirectional motor operation.

The **scoop** works like a differential pump transferring fluid from one chamber to the other and finally into the coupling **working fluid circuit** through external adjustable valves. This double passage allows a long starting time with very low **starting torque** and **current absorption** by the electric motor, virtually isolating the effect of the inertia of driven machine.



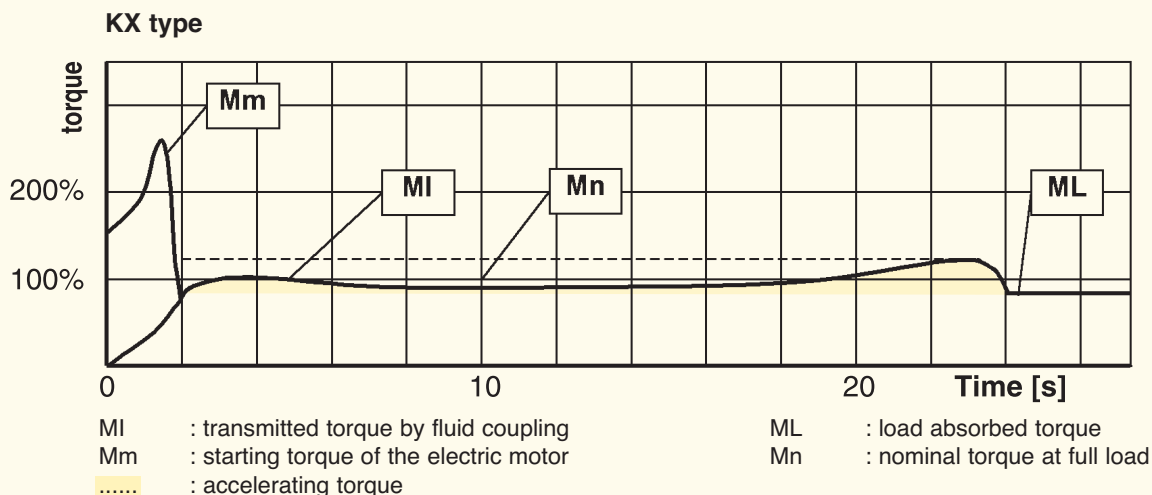
The fluid quantity in the working circuit is less than in traditional constant fill fluid couplings, as the fluid level is much lower than the rotating axis.

The reduced fluid quantity in the working circuit allows low starting torque. During input rotation the scoop transfers the fluid from tank A to tank B and then, through an adjustable valve for start up time regulation, to the working circuit.

At steady running, the working circuit is completely filled with fluid for minimum slip.

### MAIN FEATURES

- starting stall torque below 50% of the electric motor nominal torque
- starting torque limitation also below nominal torque
- dynamically balanced
- two versions: KXG with gear couplings and KXD with maintenance free disc couplings. Both designs allow the fluid coupling removal without moving the electric motor or the driven machine avoiding the realignment
- the bearings are greased for life and additionally protected by two double seals
- all rotating seals and O-rings are in viton
- the coupling can work either with oil or water (or glycol)
- KX fluid couplings with ATEX certification for gas and dust explosion protection
- a steel body design suitable for underground mines is available
- the coupling has the external impeller working as driver (outer wheel drive); only horizontal installation is possible
- the fluid filling operation is quite easy and apart from some particular cases, it is not required to change fluid during the commissioning: the starting time can be optimized by changing the externally adjustable valves
- both brake disc or drum can be mounted upon request
- KX fluid coupling is very suitable for driving machines having large powers and inertias: typical applications are mills and belt conveyors



**SELECTION TABLE**

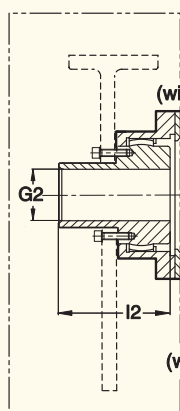
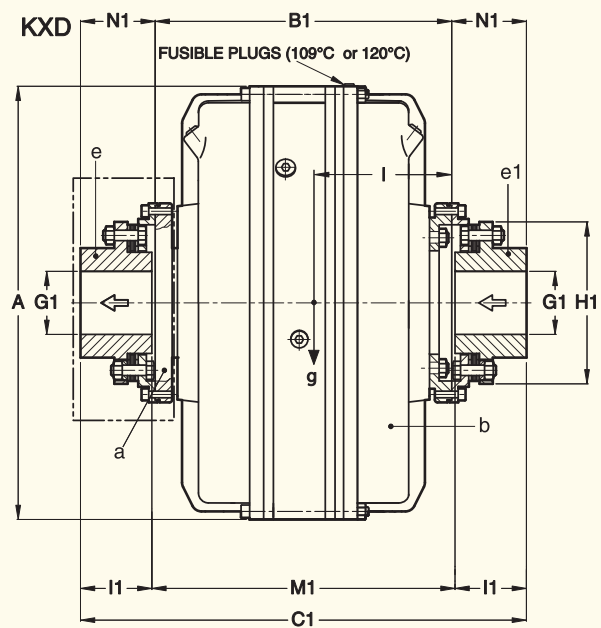
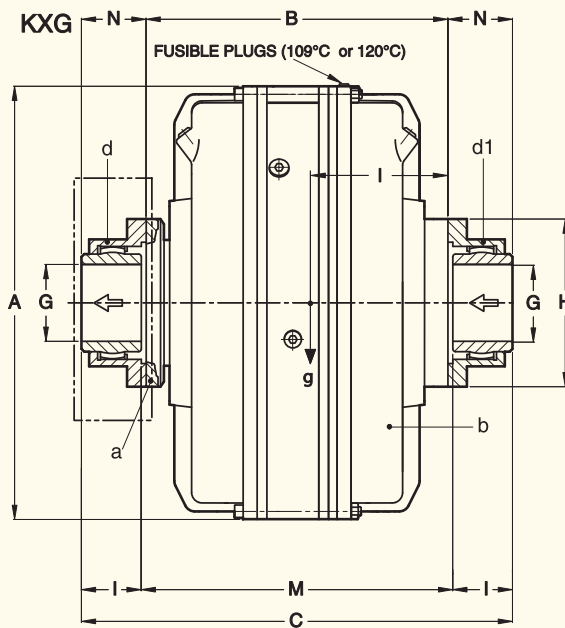
SIZE	1800 rpm		1500 rpm		1200 rpm		1000 rpm	
	kW	HP	kW	HP	kW	HP	kW	HP
15	75	100	55	75	30	40	22	30
19	160	220	132	180	75	100	45	60
24	400	544	315	430	200	270	110	150
27	700	952	510	700	250	340	160	220
29	1000	1360	810	1100	440	598	320	435

CENTER OF GRAVITY			
KXG		KXD	
g	l	g	l
115	155	113	156
182	188	183	184
305	222	320	215
413	270	436	245
549	288	580	258

MOMENT OF INERTIA J (WR <sup>2</sup> )					
KXG			KXD		
a	b	d	d1	e	e1
0.299	2.863	0.091	0.121	0.091	0.102
0.978	3.713			0.101	0.121
3.233	10.346	0.145	0.375	0.210	0.173
4.163	19.840	0.500	0.934	0.486	0.887
6.023	27.187				

g = Total weight, including fluid (max fill)

a = Internal element - b = external element  
d - e = half flexible coupling (output)  
d1 - e1 = half flexible coupling (input)



**KXGB**  
(with brake drum)

**KXDB**  
(with brake drum)

Brake drum or disc upon request

**KXGBP**  
(with brake disc)

**KXDBP**  
(with brake disc)

Size	G2	I2	G3	I3	
				std.	max
15	65	149,4	80	150	170
19	65	149,4	95	160	210
24	90	165,1	120	160	240
27	110	184,2	145	180	240
29	110	184,2	145	180	240

**KXG series**

Size	A	B	C	G max	H	I	M	N	Gear coupling size
15	490	367	526	95	213	77	372	79.5	2" 1/2 E
19	595	435	594				440		
24	745	506	693	111	240	91	511	93.5	3" E
27	810	626	845				632	109.5	3" 1/2 E
29	890	655	874	134	280	106.5	661		

**KXD series**

Size	A	B1	C1	G1 max	H1	I1	M1	N1	Disc coupling size
15	490	362	507	75	166	70	367	72.5	1075
19	595	429	604	90	192	85	434	87.5	1085
24	745	505	730	115	244	110	511	112.5	1110
27	810	576	862				582	143	1140
29	890	605	891	135	300	140	611		

Weight kg (Without fluid)	Fluid max lt	
	KXG	KXD
107	105	8.5
168	169	15.5
276	291	32
371	394	46
495	526	59

Dimensions are subject to alteration without notice

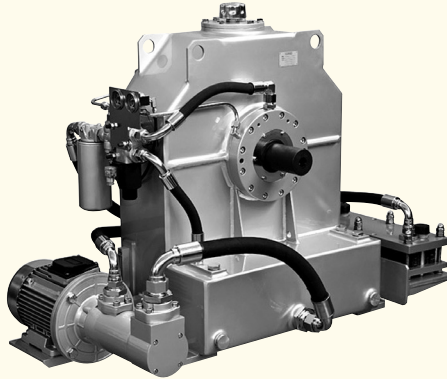
**FLUID COUPLING  
K SERIES**

Constant fill  
up to 2500 kW



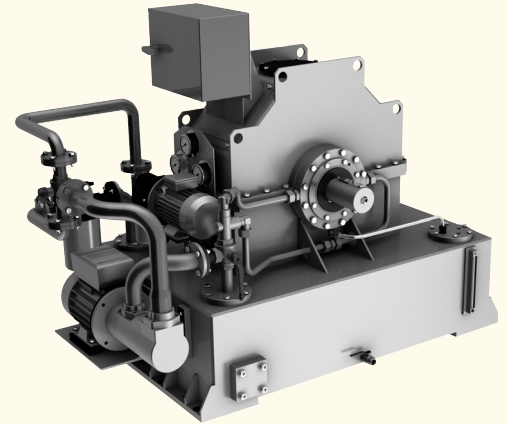
**FLUID COUPLING  
KPT SERIES**

Start up and variable  
speed drive up to 1700 kW



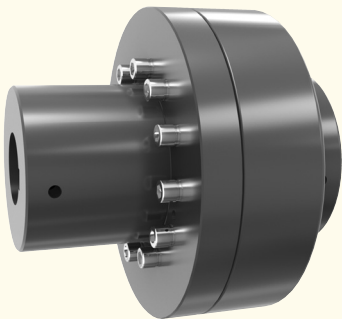
**FLUID COUPLING  
KSL SERIES**

Start up and variable  
speed drive up to 3500 kW



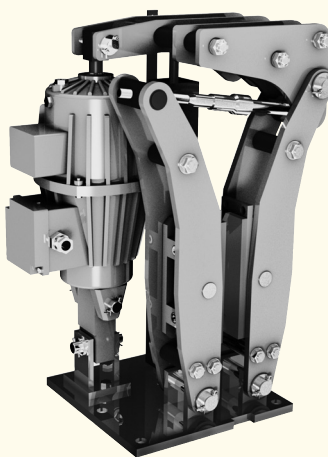
**FLEXIBLE COUPLING  
BM-B3M SERIES**

Up to 33100 Nm



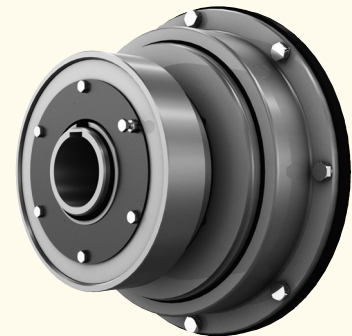
**DISC AND DRUM BRAKE  
TFDS-NBG SERIES**

Up to 19000 Nm



**PNEUMATIC CLUTCH  
TP SERIES**

Up to 11500 Nm



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