

TRANSFLUID



# TRANSFLUID

**trasmissioni industriali**



**drive with us**

**KX**  
FLUID COUPLINGS KX SERIES

# FLUID COUPLINGS

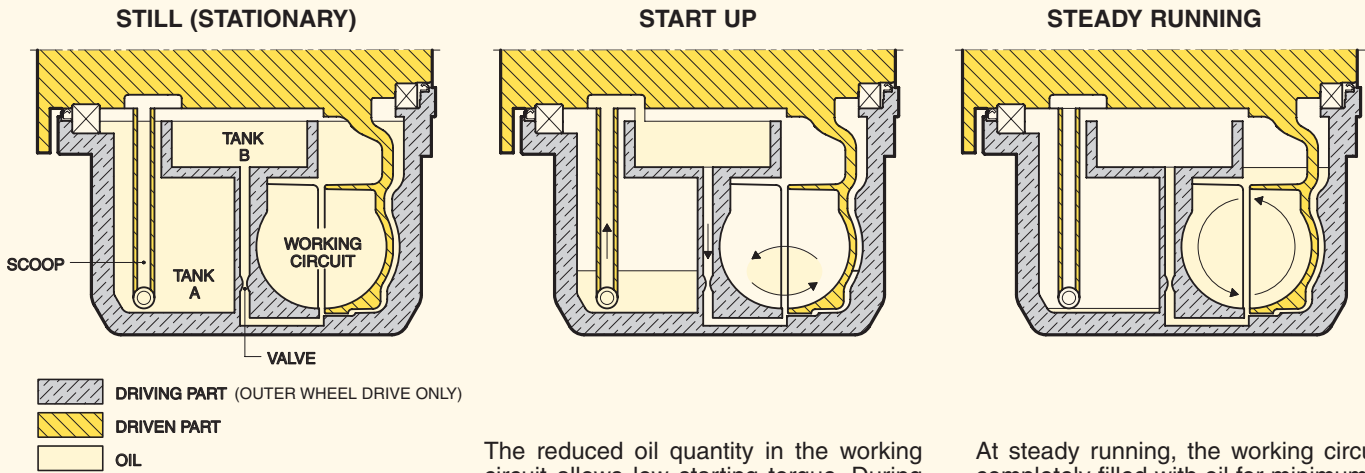
## KX series

### DESCRIPTION

The KX is a fluid coupling with a **special patented** oil 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 **scoops** work like a differential pump transferring oil from one chamber to the other and finally into the coupling **working oil 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 oil quantity in the working circuit is less than in traditional constant fill fluid couplings, as the oil level is much lower than the rotating axle.

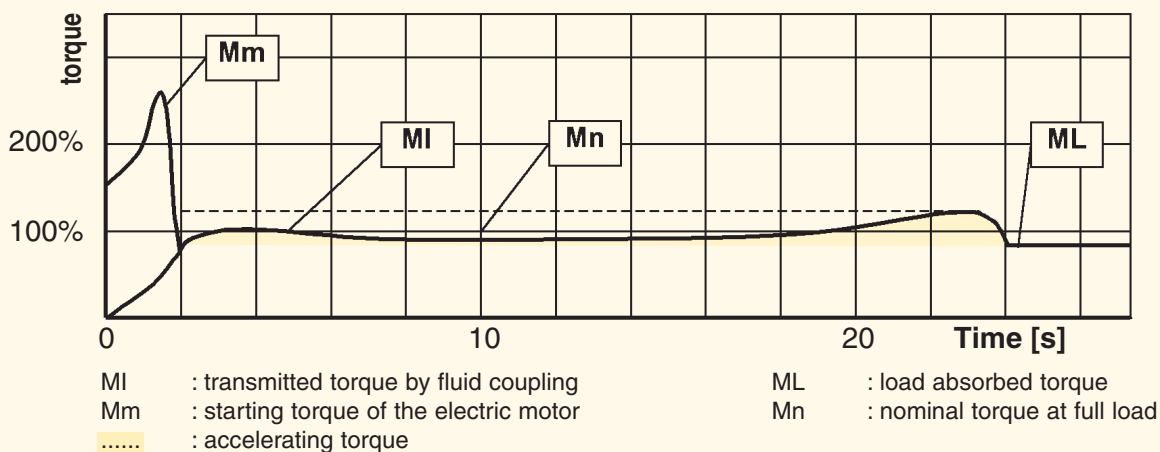
The reduced oil quantity in the working circuit allows low starting torque. During input rotation the scoop transfers the oil from tank A to tank B and then, through an adjustable valve for start up time regulation, to the working circuit.

At steady running, the working circuit is completely filled with oil 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
- KX has a fusible plug that in case of intervention, releases the oil from the working circuit to a tank preventing oil leakage into the ambient
- the bearings are greased for life and additionally protected by two double seals
- all rotating seals and O-rings are in viton
- instead of oil, the coupling can work using treated water upon request
- KX fluid couplings with ATEX rules for gas and dust explosion protection
- a steel body design suitable for underground mines is available
- the coupling has the external impeller working as a driver always (outer wheel drive) and only horizontal installation is possible
- the oil filling operation is quite easy and apart from some particular cases, it is not required to change the oil during the test starting: the starting time can be optimized by changing on 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

**KX type** (special circuit with scoop)

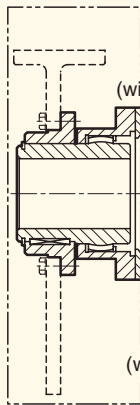
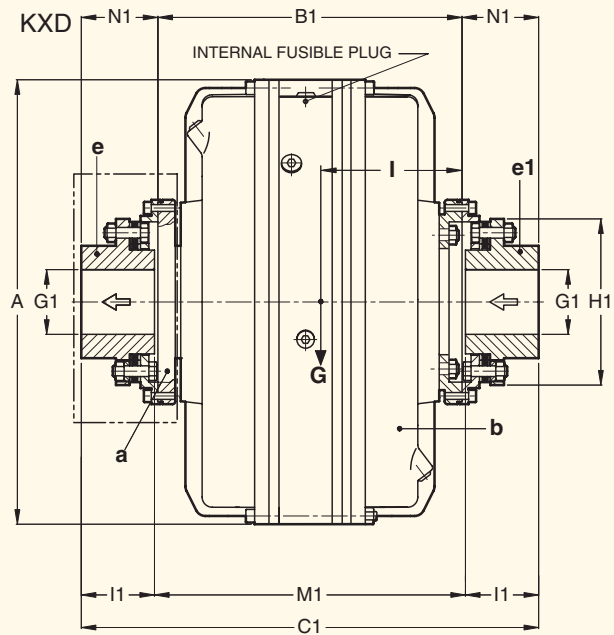
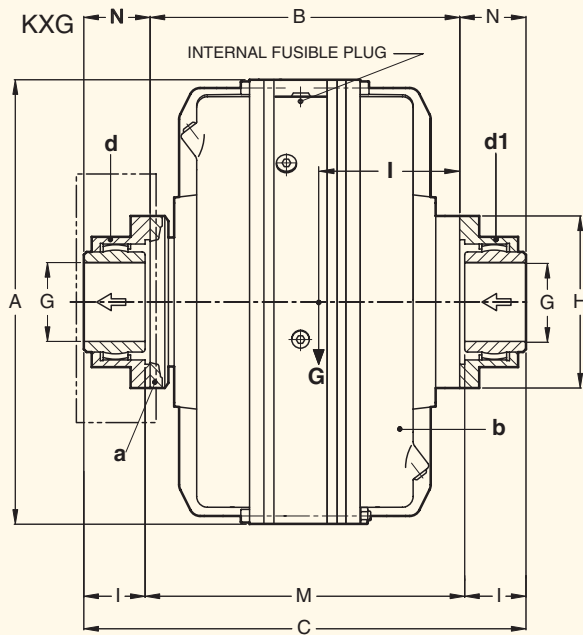


SELECTION TABLE

SIZE	1800 rpm		1500 rpm		1200 rpm		1000 rpm		CENTER OF GRAVITY				MOMENT OF INERTIA J (WR <sup>2</sup> )							
	kW	HP	kW	HP	kW	HP	kW	HP	KXG		KXD		KXG		KXD		KXG		KXD	
									g	l	g	l	a	b	d	d <sub>1</sub>	e	e <sub>1</sub>		
15	75	100	55	75	30	40	22	30	115	155	113	156	0.299	2.863	0.091	0.121	0.091	0.102		
19	160	220	132	180	75	100	45	60	182	188	183	184	0.978	3.713			0.101	0.121		
24	400	544	315	430	200	270	110	150	305	222	320	215	3.233	10.346	0.145	0.375	0.210	0.173		
27	700	952	510	700	250	340	160	220	413	270	436	245	4.163	19.840	0.500	0.934	0.486	0.887		
29	1000	1360	810	1100	440	598	320	435	549	288	580	258	6.023	27.187						

g = Total weight, including oil (max fill)

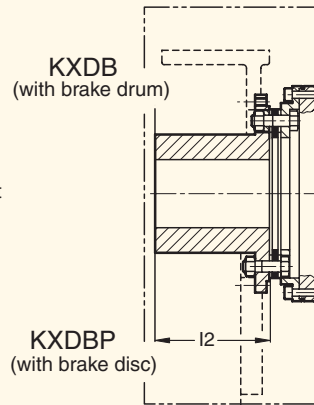
a = Internal element - b = external element  
d - e = half flexible coupling (output)  
d<sub>1</sub> - e<sub>1</sub> = half flexible coupling (input)



KXGB (with brake drum)

Brake drum or disc upon request

KXGBP (with brake disc)



KXDB (with brake drum)

KXDBP (with brake disc)

Size	I <sub>2</sub>	
	st.	max
15	150	170
19	160	210
24		240
27		
29	180	

KXG series

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

KXD series

Size	A	B <sub>1</sub>	C <sub>1</sub>	G <sub>1</sub> max	H <sub>1</sub>	I <sub>1</sub>	M <sub>1</sub>	N <sub>1</sub>	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	135	300	140	582	143	1140
29	890	605	891				611		

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

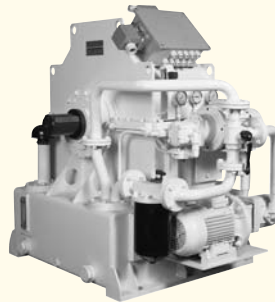
**FLUID COUPLING  
K SERIES**

Constant fill  
up to 2300 kW



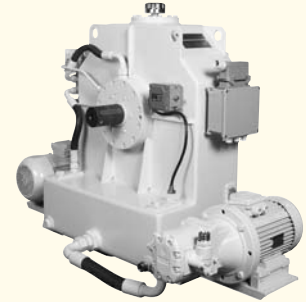
**FLUID COUPLING  
KSL SERIES**

Start up and variable  
speed drive up to 3300 kW



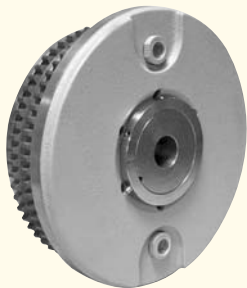
**FLUID COUPLING  
KPT SERIES**

Start up and variable  
speed drive up to 1700 kW



**PNEUMATIC CLUTCH  
TPO SERIES**

Up to 11500 Nm



**HYDRAULIC CLUTCH  
HYDRAULIC BRAKE  
SHC - SL SERIES**

Up to 2500 Nm  
Up to 9000 Nm



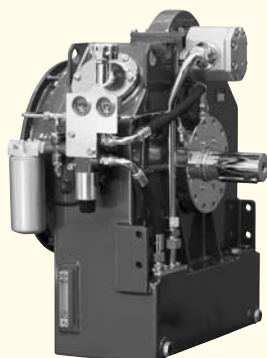
**OIL OPERATED POWER  
TAKE OFF  
HF SERIES**

Up to 800 kW



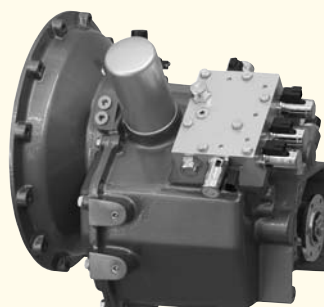
**FLUID COUPLING  
KPTO SERIES**

For internal combustion engine  
P.T.O. for pulley and cardan shaft  
up to 1700 kW



**POWER SHIFT  
TRANSMISSION**

With torque converter  
one or more gears  
manual electric selector  
up to 75 kW



**ELASTIC COUPLING  
RBD SERIES**

For internal combustion engine  
up to 16000 Nm

