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REVOLEX® KX
Torsionally flexible pin & bush coupling

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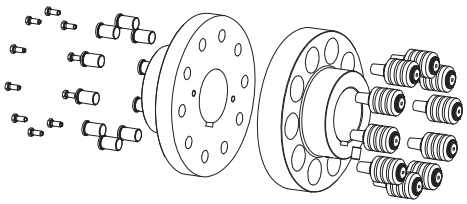
Coupling description

General description

REVOLEX® KX is a torsionally flexible, failsafe pin & bush coupling. It can be plugged in axially and is characterized by its short design. In addition, REVOLEX® KX allows for an easy disassembly of the elastomer rings including the pins while being assembly. Taking into account the transmittable torque, REVOLEX® KX is based on the POLY-NORM® coupling.
The REVOLEX® KX coupling compensates for every kind of shaft misalignment while transmitting the torque safely.



Operation/Arrangement

The coupling consists of two hubs. The torque is transmitted via the steel pins with their taper elastomer rings.
As a result all kinds of shaft misalignment, for example caused by inaccurate alignment of the driving or driven elements, is compensated for reliably and vibrations and shocks are compensated for excellently.
The coupling is maintenance-free and is used in general engineering and the pump industry, conveyor technology, etc. For an optimum adjustment to the different applications, 18-off sizes are available covering torques up to 1.220.000 Nm. Apart from the standard programme customized solutions are available.

General information about the elastomer ring			
Material	Perbunan (NBR)	Natural rubber (NR)	Perbunan (NBR)
Hardness	80 Shore A	80 Shore A	80 Shore A
Permanent temperature range [°C]	- 30 to +80	- 50 to +70	- 30 to +80
Max. temperature (short-term) [°C]	- 50 to +120	–	–
Colour	black	black	blue
Application	STANDARD	Temperatures below zero	Electrically insulating, e. g. ropeway drives
			

Explosion-proof use

REVOLEX® KX couplings are suitable for the use in drives in hazardous areas. The couplings are certified according to EC Standard 94/9/EC (ATEX 95) and belong to category 2G/2D, are confirmed and thus suitable for the use in hazardous areas of zone 1, 2, 21 and 22. Please read our information in the respective Type Examination Certificate and the operating and mounting instructions under www.ktr.com.

Coupling selection

The selection of the REVOLEX® KX coupling has to be dimensioned in a way that the permissible coupling load is not exceeded with any operating condition. For this purpose a comparison between the loads that arise and the permissible coupling parameters has to be performed. The torques T_{KN}/T_{Kmax} mentioned refer to the connection of pins. The shaft-hub-connection needs to be investigated from the part of the customer.

1 **Drives without periodical torsional vibrations**
e. g. centrifugal pumps, fans, screw compressors, etc.
The coupling is selected taking into account the rated torques T_{KN} and maximum torque $T_{K\,max}$.

1.1 **Load by rated torque**

Determination of the actual rated torque T_N of the machine.

$$T_N\ [Nm] = 9550 \cdot \frac{P_{AN/LN}\ [kW]}{n\ [rpm]}$$

Taking into account the operating factor S_B and the temperature factor S_t, the permissible rated torque T_{KN} of the coupling has to be at least as high as the rated torque T_N of the machine.

$$T_{KN} \geq T_N \cdot S_B \cdot S_t$$

1.2 **Taking into account short-term shocks**

As an example: for the start-up or braking of drives two times the rated torque of the coupling is admitted for up to 10 times an hour.

$$T_{K\,max} \geq 2 \cdot T_{KN}$$

1.3 **Determination of the necessary operating factor S_B**

see table
It is necessary to consult with the engineering department of KTR if:

- the operating speed is close to the critical speed (page 64)
- the ambient temperature exceeds 80 °C
- more than 10 starts per hour are performed

2. **Drives with periodical torsional vibrations.**
For drives subject to high torsional vibrations, e. g. diesel engines, piston compressors, piston pumps, generators, etc., it is necessary to perform a torsional vibration calculation to ensure a safe operation. If requested, we perform the torsional vibration calculation and the coupling selection in our company. For necessary details please see KTR standard 20004.

Description	Symbol	Definition or explanation
Rated torque of coupling	T_{KN}	Torque that can continuously be transmitted over the entire permissible speed range
Maximum torque of coupling	$T_{K\,max}$	Torque that can be transmitted as dynamic load $\geq 10^5$ times or 5×10^4 as vibratory load, respectively, during the entire operating life of the coupling
Vibratory torque of coupling	T_{KW}	Torque amplitude of the permissible periodical torque fluctuation with a frequency of 10 Hz and a basic load of T_{KN} or dynamic load up to T_{KN}, respectively
Rated torque of machine	T_N	Stationary rated torque on the coupling

Service factor S_t for temperature				
	-30 °C +30 °C	+40 °C	+60 °C	+80 °C
S_t	1,0	1,2	1,4	1,8

Permissible load on feather key of the coupling hub
The shaft-hub-connection has to be verified by the customer.
Permissible surface pressure according to DIN 6892 (method C).

Cast iron GJL	225 N/mm²
material nodular iron GJS	225 N/mm²
material steel	250 N/mm²
for other steel materials p_{zul} =	$0{,}9 \cdot R_e$ ($R_{p0.2}$)

Example of calculation:

Kneading machine drive with rotary current motor

Details of machine on driving side:

Rotary current	motor size 560
Motor power	P = 1000 kW
Speed	n = 991 rpm

General details:

Ambient temperature	= +40 °C

Coupling selection:
Load by rated torque:

$$T_N = 9550 \cdot \frac{1000\ kW}{991\ rpm} = 9636{,}7\ Nm$$

Operating factor S_B = 1,75 (see page 63)
Temperature factor S_t = 1,2 (see table)

Calculation of coupling torque:

$$T_{KN} \geq T_N \cdot 1{,}75 \cdot 1{,}2 = 20237\ Nm$$

➔ **Selected: REVOLEX® KX-170**

Coupling selection

The operating factors listed are based on experiences estimating the operating behaviour of driving and driven combinations. For a periodic impulse of the machine or driving or braking of big masses it is necessary to perform a selection in accordance with DIN 740.

Operating factor S_B	
Agitator	
Light liquid	1,00
Viscous liquid	1,25
Liquid with constant density	1,25
Liquid with variable density	1,50
Liquid mixed with solids	1,75
Compressors	
Rotary compressors	1,00
Rotary compressors	1,25
Construction machines	
Manoeuvre winches	1,25
Swing gears	1,25
Miscellaneous winches	1,50
Filters, cable winches	1,75
Multi-bucket excavators	1,75
Running gears (caterpillars)	1,75
Impellers	1,75
Cutter heads	1,75
Cutter drives	2,00
Construction lifts	1,25
Concrete mixers	1,25
Road machines	1,25
Conveyors	
Bucket elevators	1,50
Freight lifts	1,75
Hauling winches	1,25
Apron conveyors	1,25
Rubber belt conveyors (bulk)	1,25
Boom plate bucket conveyors	1,25
Rotary conveyors	1,25
Steel plate conveyors	1,25
Worm conveyors	1,25
Steel belt conveyors	1,25
Conveyors	1,75
Rubber belt conveyor (piece goods)	1,75
Inclined lifts	1,75
Shaking slides	2,00
Fans, ventilators and blowers	
Centrifugal fans	1,75
Industrial fans	1,75
Rotary blowers	1,75
Fans (axial / radial)	1,75
Fans for cooling towers	1,75
Induced draught ventilators	1,75
Filters	
Screening drums	1,50
Food-processing industry	
Sugarcane harvesters	1,25
Sugar-beet harvesters	1,25
Sugar-beet washing	1,25
Kneading machines	1,75
Sugarcane breakers	1,75
Sugarcane mills	1,75
Generators	
Frequency converters	1,75
Generators	1,75
Lifters/cranes	
Luffing gears	1,00
Swing and sliding gears	1,25
Running gears	1,75
Lifting gears	1,75
Machine tools	
Scissors	1,25
Dressing rollers	1,50
Bending machines	1,50
Hole punching machines	1,75

Operating factor S_B	
Machine tools	
Levelling machines	1,75
Hammers	1,75
Presses	1,75
Forging presses	1,75
Metal industry	
Plate tilters	1,25
Wire pulls	1,25
Winders	1,25
Crawlersr	1,25
Roller levellers	1,25
Winding drums	1,50
Wire drawing machines	1,75
Roller tables (light)	1,75
Plate shears	1,75
Block pushers	1,75
Blooming and slabbing	1,75
De-scalers	1,75
Cold rolling mills	1,75
Billet shears	1,75
Plugging machines	1,75
Continuous casting machines	1,75
Shifting devices	1,75
Roller tables (heavy)	2,00
Mills	
Centrifugal mills	1,75
Beater mills	1,75
Autogenous mills	1,75
Hammer and ball mills	2,00
Mixers	
Constant density	1,50
Variable density	1,75
Oil industry	
Filter presses for paraffin	1,50
Rotary furnaces	1,75
Paper machines	
Couch rolls	1,75
Calenders	1,75
Wet presses	1,75
Pumps	
Rotary pumps (light liquid)	1,00
Rotary pumps (viscous liquid)	1,25
Gear and vane pumps	1,25
Screw type pumps	1,50
Piston pumps, plunger pumps and press pumps	2,00
Rubber & nylon	
Rubber calenders and rolling mills	1,75
Mixers	1,75
Extruders	1,75
Kneading machines	1,75
Sewage plants	
Rakes	1,00
Spiral pumps	1,25
Concentrators	1,25
Mixers	1,25
Aerators	1,75
Textile industry	
Winders	1,25
Printing and dyeing machines	1,25
Tanning barrels	1,25
Shredders	1,50
Woodworking machinery	
Planing machines	1,25
Barking machines	1,75
Saw frames	1,75

Technical data

REVOLEX® KX Technical data

Size	Torque [Nm] NBR 80Sh-A			Casted material		Steel		Dyn. Torsion spring stiffness			
	Nominal T_{KN}	Max. $T_{Kmax.}$	Alternating T_{KW}	Max. speed [rpm] at V = 35 m/s	Max. bore [mm]	Max. speed [rpm] at V = 60 m/s	Max. bore [mm]	0,25xT_{KN} [Nm/rad]	0,50xT_{KN} [Nm/rad]	0,75xT_{KN} [Nm/rad]	1,00xT_{KN} [Nm/rad]
KX 105	6485	12970	2594	2000	110/125	3475	120/135	$1{,}053x10^6$	$1{,}545x10^6$	$2{,}225x10^6$	$3{,}060x10^6$
KX 120	10080	20160	4032	1800	125/145	3100	140/155	$1{,}242x10^6$	$1{,}675x10^6$	$2{,}350x10^6$	$3{,}167x10^6$
KX 135	14030	28060	5612	1600	140/150	2725	160/165	$1{,}728x10^6$	$2{,}331x10^6$	$3{,}270x10^6$	$4{,}407x10^6$
KX 150	17960	35920	7184	1450	160	2500	185	$2{,}213x10^6$	$2{,}985x10^6$	$4{,}187x10^6$	$5{,}643x10^6$
KX 170	26360	52720	10544	1250	180	2150	220	$3{,}250x10^6$	$4{,}480x10^6$	$7{,}500x10^6$	$9{,}970x10^6$
KX 190	36160	72320	14464	1100	205	1900	245	$4{,}458x10^6$	$6{,}145x10^6$	$1{,}029x10^7$	$1{,}367x10^7$
KX 215	48160	96320	19264	1000	230	1725	275	$5{,}938x10^6$	$8{,}185x10^6$	$1{,}370x10^7$	$1{,}822x10^7$
KX 240	65740	131480	26296	900	250	1550	310	$7{,}850x10^6$	$1{,}675x10^7$	$2{,}575x10^7$	$3{,}465x10^7$
KX 265	91480	182960	36592	800	285	1375	350	$1{,}092x10^7$	$2{,}331x10^7$	$3{,}583x10^7$	$4{,}822x10^7$
KX 280	123530	247060	49412	720	315	1225	385	$1{,}475x10^7$	$3{,}147x10^7$	$4{,}838x10^7$	$6{,}511x10^7$
KX 305	152840	305680	61136	675	330	1150	405	$1{,}830x10^7$	$3{,}904x10^7$	$6{,}002x10^7$	$8{,}076x10^7$
KX 330	188470	376940	75388	625	355	1075	435	$2{,}250x10^7$	$4{,}802x10^7$	$7{,}382x10^7$	$9{,}934x10^7$
KX 355	230110	460220	92044	575	380	975	465	$2{,}748x10^7$	$5{,}863x10^7$	$9{,}013x10^7$	$1{,}213x10^8$
KX 370	302500	605000	121000	535	450	900	550	$3{,}614x10^7$	$7{,}712x10^7$	$1{,}186x10^8$	$1{,}595x10^8$

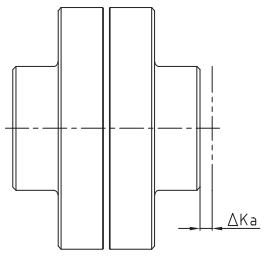
REVOLEX® KX-D Technical data

Size	Torque [Nm] NBR 80Sh-A			Casted material		Steel		Dyn. Torsion spring stiffness			
	Nominal T_{KN}	Max. $T_{Kmax.}$	Alternating T_{KW}	Max. speed [rpm] at V = 35 m/s	Max. bore [mm]	Max. speed [rpm] at V = 60 m/s	Max. bore [mm]	0,25xT_{KN} [Nm/rad]	0,50xT_{KN} [Nm/rad]	0,75xT_{KN} [Nm/rad]	1,00xT_{KN} [Nm/rad]
KX-D 105	8650	17300	3460	2000	110	3475	120	$1{,}404x10^6$	$2{,}060x10^6$	$2{,}967x10^6$	$4{,}081x10^6$
KX-D 120	14110	28220	5640	1800	125	3100	140	$1{,}742x10^6$	$2{,}350x10^6$	$3{,}297x10^6$	$4{,}443x10^6$
KX-D 135	18690	37380	7476	1600	140	2725	160	$2{,}304x10^6$	$3{,}108x10^6$	$4{,}360x10^6$	$5{,}876x10^6$
KX-D 150	23100	46200	9240	1450	160	2500	185	$2{,}880x10^6$	$3{,}885x10^6$	$5{,}450x10^6$	$7{,}345x10^6$
KX-D 170	36900	73800	14760	1250	180	2150	220	$4{,}550x10^6$	$6{,}272x10^6$	$1{,}050x10^7$	$1{,}396x10^7$
KX-D 190	48210	96420	19284	1100	205	1900	245	$5{,}980x10^6$	$8{,}243x10^6$	$1{,}380x10^7$	$1{,}834x10^7$
KX-D 215	61900	123800	24760	1000	230	1725	275	$7{,}634x10^6$	$1{,}052x10^7$	$1{,}762x10^7$	$2{,}342x10^7$
KX-D 240	92030	184060	36812	900	250	1550	310	$1{,}101x10^7$	$2{,}350x10^7$	$3{,}613x10^7$	$4{,}861x10^7$
KX-D 265	121900	243800	48760	800	285	1375	350	$1{,}456x10^7$	$3{,}108x10^7$	$4{,}778x10^7$	$6{,}429x10^7$
KX-D 280	158800	317600	63520	720	315	1225	385	$1{,}896x10^7$	$4{,}047x10^7$	$6{,}221x10^7$	$8{,}371x10^7$
KX-D 305	191060	382120	76424	675	330	1150	405	$2{,}287x10^7$	$4{,}880x10^7$	$7{,}502x10^7$	$1{,}009x10^8$
KX-D 330	251200	502400	100480	625	355	1075	435	$3{,}001x10^7$	$6{,}403x10^7$	$9{,}843x10^7$	$1{,}324x10^8$
KX-D 355	299100	598200	119640	575	380	975	465	$3{,}572x10^7$	$7{,}622x10^7$	$1{,}172x10^8$	$1{,}577x10^8$
KX-D 370	377800	755600	151120	535	450	900	550	$4{,}518x10^7$	$9{,}640x10^7$	$1{,}482x10^8$	$1{,}994x10^8$

Couplings may be dynamically balanced on request (semi-spline balancing G 6,3 with speed acc. customer's specifications). For peripheral speeds exceeding V = 30 m/sec., we would recommend dynamically balancing.

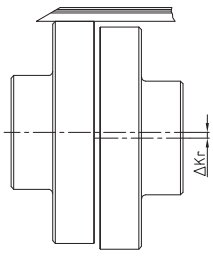
Displacements

Axial displacement ΔKa

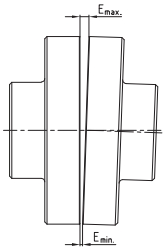


$L_{max./min} = L + \Delta Ka$ [mm]

Radial displacement ΔKr



Angular displacement ΔKw



$\Delta Kw = E_{max.} - E_{min.}$ [mm]

Displacements

Size (KX and KX-D)		105	120	135	150	170	190	215	240	265	280	305	330	355	370
Max. axial displacement ΔKa [mm]		±2	±2	±2	±2	±2,5	±2,5	±2,5	±2,5	±2,5	±2,5	±2,5	±4	±4	±4
Max. radial displacement ΔKr [mm] or max. angualr displacement ΔKw [mm] at speed n	250 rpm	1,2	1,3	1,4	1,5	1,7	1,9	2,0	2,2	2,5	2,7	2,9	3,1	3,3	3,5
	500 rpm	0,9	0,9	1,0	1,1	1,2	1,3	1,4	1,6	1,7	1,9	2,0	2,2	2,3	2,5
	750 rpm	0,7	0,8	0,8	0,9	1,0	1,1	1,2	1,3	1,4	1,6	1,7	1,8	1,9	2,0
	1000 rpm	0,6	0,7	0,7	0,8	0,9	0,9	1,0	1,1	1,2	1,4	1,4	1,5	1,7	1,8
	1500 rpm	0,5	0,5	0,6	0,6	0,7	0,8	0,8	0,9	1,0	–	–	–	–	–
	2000 rpm	0,4	0,5	0,5	0,5	0,6	0,7	–	–	–	–	–	–	–	–
	3000 rpm	0,4	0,4	–	–	–	–	–	–	–	–	–	–	–	–

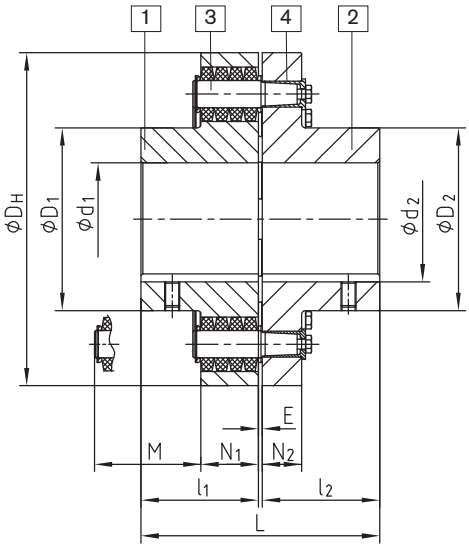
Assembly instructions

The permissible misalignment figures of the flexible REVOLEX® KX couplings mentioned are general standard values, taking into account the coupling load up to the rated torque T_{KN} of the coupling and as well as an ambient temperature of + 30° C. The displacement figures may only be used separately - if various kinds of displacement arise in parallel, the displacement figures may only be used proportionately. For the assembly of the coupling please make sure that the distance dimension E is adhered to accurately to make sure that the coupling remains flexible during operation. See KTR assembly instructions, KTR standard 49410 at our homepage www.ktr.com.

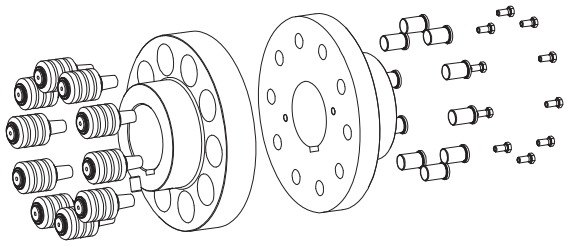
Type KX – casted materials –

- Vibration-reducing, short design
- Radial assembly/disassembly
- Axial plug-in, failsafe
- All-side machining ➜ good dynamical features
- Protected surfaces
- Standard hub material GJL (GJS or steel on request)
- Ex Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)

Components



Components
Type KX
1 = Hub part 1
2 = Hub part 2
3 = Complete pin
4 = KX sleeve (hardened and corrosion-resistant)



REVOLEX® KX

Size	Torques [1] [Nm]		max. speed [2] [rpm]	Finish bore [min. - max.]		Dimensions [mm]									Moment of inertia [3]	Approx. weight [3]
	T_{KN}	$T_{Kmax.}$		d_1	d_2	L	l_1; l_2	E	D_H	D_1	D_2	N_1	N_2	M*	[kgm²]	[kg]
KX 105	6485	12970	2000	34-110	34-125	237	117	3	330	180	202	56	30	76	0,771	62
KX 120	10080	20160	1800	50-125	50-145	270	132	6	370	206	232	76	46	100	1,611	96
KX 135	14030	28060	1600	70-140	70-150	300	147	6	419	230	240	76	46	100	2,685	123
KX 150	17960	35920	1450	82-160		336	165	6	457	256	260	76	46	100	3,887	162
KX 170	26360	52720	1250	95-180		382	188	6	533	292	292	92	63	130	9,165	273
KX 190	36160	72320	1100	110-205		428	211	6	597	330	330	92	63	130	14,765	360
KX 215	48160	96320	1000	125-230		480	237	6	660	368	368	92	63	145	22,771	465
KX 240	65740	131480	900	140-250		534	264	6	737	407	407	122	76	167	43,484	695
KX 265	91480	182960	800	160-285		590	292	6	826	457	457	122	76	170	70,143	910
KX 280	123530	247060	720	180-315		628	311	6	927	508	508	122	76	189	112,637	1183
KX 305	152840	305680	675	180-330		654	324	6	991	533	533	122	76	202	146,974	1369
KX 330	188470	376940	625	200-355		666	330	6	1067	572	572	122	76	208	198,005	1598
KX 355	230110	460220	575	225-380		718	356	6	1156	610	610	122	76	214	293,894	2069
KX 370	302500	605000	535	225-450		770	382	6	1250	720	720	122	76	214	433,554	2629

* Drop-out center dimension
[1] Standard material NBR 80 Shore A
[2] Higher speeds on request
[3] Relating to max. bore

Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9. If requested, coupling is dynamically balanced (semi-wedge balancing G 6,3; speed as per customer's details). For circumferential speeds exceeding 30 m/s we would recommend dynamic balancing.

◣ = with pilot bore available from stock

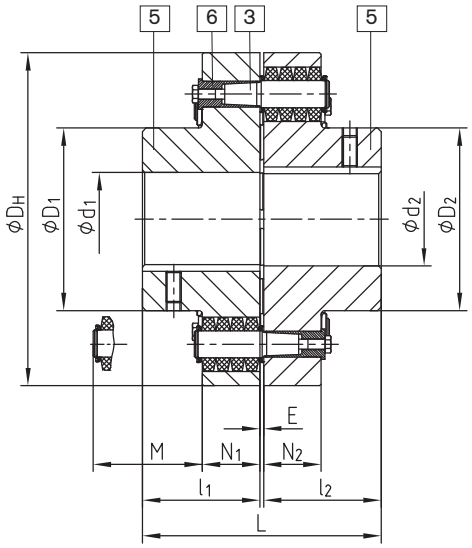
Order form:

REVOLEX® KX 170	GJL	part 1 ∅120	part 2 ∅150
Coupling type/size	Material	Finish bore	Finish bore

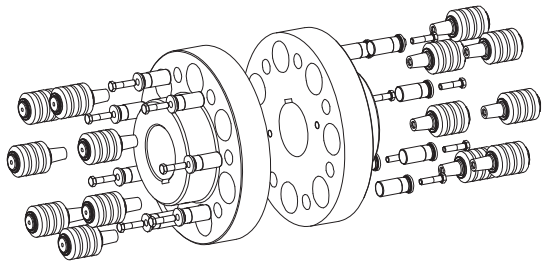
Type KX-D – casted materials –

- Vibration-reducing, short design, protected surfacees
- Radial assembly/disassembly
- Axial plug-in, failsafe
- All-side machining ➜ good dynamical features
- Standard hub material GJL (GJS on request)
- Pins are arranged alternately
- Increase of transmittable torque by up to 40 % compared to REVOLEX® KX
- Ⓔx Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)

Components



Components
Type KX-D
5 = Hub part 5
3 = Complete pin
6 = KX-D sleeve (hardened and corrosion-resistant)



REVOLEX® KX-D													
Size	Torque [1] [Nm]		Max. speed [2] [rpm]	Finish bore [min. - max.]	Dimensions [mm]							Moment of inertia [3]	Approx. weight [3]
	T_{KN}	$T_{Kmax.}$		$d_1; d_2$	L	$l_1; l_2$	E	D_H	$D_1; D_2$	$N_1; N_2$	M*	[kgm²]	[kg]
KX-D 105	8650	17300	2000	34-110	237	117	3	330	180	56	76	0,907	68
KX-D 120	14110	28220	1800	50-125	270	132	6	370	206	76	100	1,867	108
KX-D 135	18690	37380	1600	70-140	300	147	6	419	230	76	100	3,144	145
KX-D 150	23100	46200	1450	82-160	336	165	6	457	256	76	100	4,573	180
KX-D 170	36900	73800	1250	95-180	382	188	6	533	292	92	130	10,259	291
KX-D 190	48210	96420	1100	110-205	428	211	6	597	330	92	130	16,601	385
KX-D 215	61900	123800	1000	125-230	480	237	6	660	368	92	130	25,495	498
KX-D 240	92030	184060	900	140-250	534	264	6	737	407	122	170	50,147	760
KX-D 265	121900	243800	800	160-285	590	292	6	826	457	122	170	80,796	997
KX-D 280	158800	317600	720	180-315	628	311	6	927	508	122	170	129,979	1301
KX-D 305	191060	382120	675	180-330	654	324	6	991	533	122	170	170,016	1509
KX-D 330	251200	502400	625	200-355	666	330	6	1067	572	122	170	227,451	1755
KX-D 355	299100	598200	575	225-380	718	356	6	1156	610	122	170	338,145	2275
KX-D 370	377800	755600	535	225-450	770	382	6	1250	720	122	170	492,353	2853

* Drop-out center dimension
[1] Standard material NBR 80 Shore A
[2] Higher speeds on request
[3] Relating to max. bore

Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9. If requested, coupling is dynamically balanced (semi-wedge balancing G 6,3; speed as per customer's details). For circumferential speeds exceeding 30 m/s we would recommend dynamic balancing.

◣ = with pilot bore available from stock

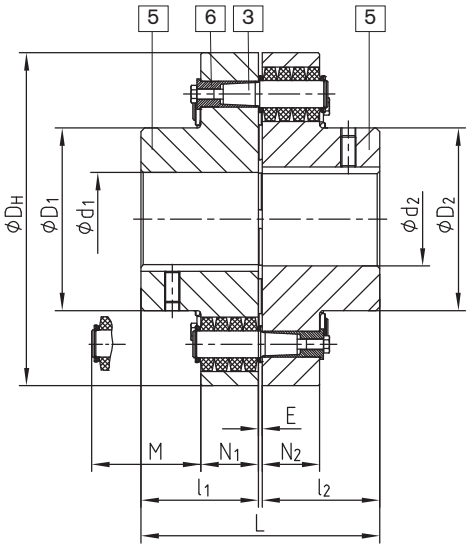
Order form:

REVOLEX® KX-D 170	GJL	∅120	∅150
Coupling type/size	Material	Finish bore	Finish bore

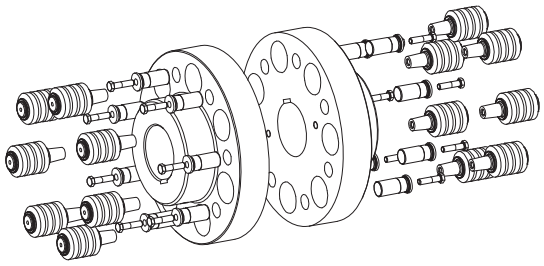
Type KX-D – material steel –

- Vibration-reducing, short design, protected surfacees
- Radial assembly/disassembly, axial plug-in, failsafe
- All-side machining ➜ good dynamical features
- Hubs from steel, specifically suitable for drive elements subject to high loads or high circumferential speeds
- Particularly suitable for drive components with high loads and high speeds due to hub material steel
- Pins are arranged alternately
- Increase of transmittable torque by up to 40 % compared to REVOLEX® KX
- Ex Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)

Components



Components
Type KX-D
5 = Hub part 5
3 = Complete pin
6 = KX-D sleeve (hardened and corrosion-resistant)



REVOLEX® KX-D

Size	Torque [1] [Nm]		Max. speed [2] [rpm]	Finish bore [min. - max.]	Dimensions [mm]							Moment of inertia [3]	Approx. weight [3]
	T_{KN}	$T_{Kmax.}$		$d_1; d_2$	L	$l_1; l_2$	E	D_H	$D_1; D_2$	$N_1; N_2$	M*	[kgm²]	[kg]
KX-D 105	8650	17300	3475	0-120	237	117	3	330	180	56	76	0,907	80
KX-D 120	14110	28220	3100	0-140	270	132	6	370	206	76	100	1,867	124
KX-D 135	18690	37380	2725	70-160	300	147	6	419	230	76	100	3,144	165
KX-D 150	23100	46200	2500	82-185	336	165	6	457	256	76	100	4,573	205
KX-D 170	36900	73800	2150	95-220	382	188	6	533	292	92	130	10,259	322
KX-D 190	48210	96420	1900	110-245	428	211	6	597	330	92	130	16,601	431
KX-D 215	61900	123800	1725	125-275	480	237	6	660	368	92	130	25,495	559
KX-D 240	92030	184060	1550	140-310	534	264	6	737	407	122	170	50,147	833
KX-D 265	121900	243800	1375	160-350	590	292	6	826	457	122	170	80,796	1099
KX-D 280	158800	317600	1225	180-385	628	311	6	927	508	122	170	129,979	1436
KX-D 305	191060	382120	1150	180-405	654	324	6	991	533	122	170	170,016	1669
KX-D 330	251200	502400	1075	200-435	666	330	6	1067	572	122	170	227,451	1954
KX-D 355	299100	598200	975	225-465	718	356	6	1156	610	122	170	338,145	1967
KX-D 370	377800	755600	900	225-550	770	382	6	1250	720	122	170	492,353	2367
KX-D 470	545000	1090000	870	240-470	969	480	9	1316	705	164	220	734,260	3775
KX-D 520	740000	1480000	760	240-520	1089	540	9	1501	780	164	220	1264,725	5155
KX-D 590	970000	1940000	680	260-590	1212	600	12	1685	885	164	220	2081,885	6895
KX-D 650	1220000	2440000	610	280-650	1332	660	12	1869	975	164	220	3228,297	8893

* Drop-out center dimension
[1] Standard material NBR 80 Shore A
[2] Higher speeds on request
[3] Relating to max. bore

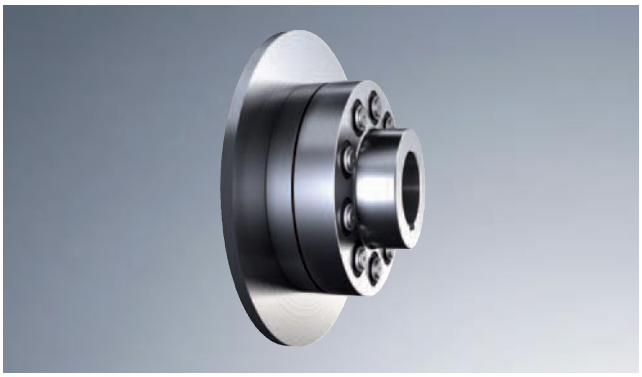
Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9. If requested, coupling is dynamically balanced (semi-wedge balancing G 6,3; speed as per customer's details). For circumferential speeds exceeding 30 m/s we would recommend dynamic balancing.

◣ = with pilot bore available from stock

Order form:

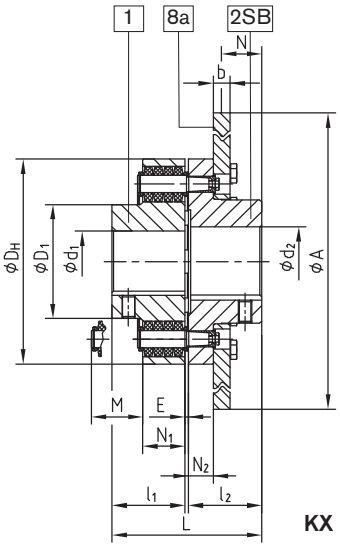
REVOLEX® KX-D 170	Steel	∅120	∅150
Coupling type/size	Material	Finish bore	Finish bore

Type KX and KX-D with disk brake

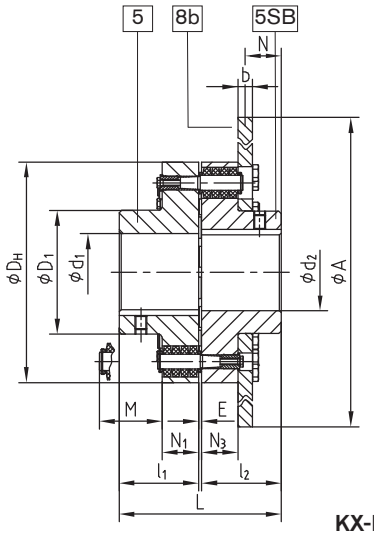


- Shaft coupling with disk brake
- The maximum brake torque must not exceed the maximum torque of the coupling
- The disk brake has to be placed onto the shaft end with the biggest mass moment of inertia
- Radial assembly/disassembly
- Axial plug-in, failsafe
- Pins can be replaced while being assembled
- All-side machining ➜ good dynamical features
- Examples of applications are large fans, turbine drives, belt conveyor drives, etc.

Components



KX



KX-D

REVOLEX® KX and KX-D Type SB

Size	Torque [1] [Nm] KX		Torque [1] [Nm] KX-D		Finish bore KX GJL [min. - max.]		Finish bore KX-D [min. - max.] GJL	Steel	Dimensions [mm]								
	T_{KN}	$T_{Kmax.}$	T_{KN}	$T_{Kmax.}$	d_1	d_2	d_1; d_2	d_1; d_2	L	l_1; l_2	E	D_H	D_1	N_1	N_2	N_3	M*
105	6485	12970	8650	17300	34-110	34-125	34-110	0-120	237	117	3	330	180	56	29	55	76
120	10080	20160	14110	28220	50-125	50-145	50-125	0-140	270	132	6	370	206	76	45	75	100
135	14030	28060	18690	37380	70-140	70-150	70-140	70-160	300	147	6	419	230	76	45	75	100
150	17960	35920	23100	46200	82-160		82-160	82-185	336	165	6	457	256	76	45	75	100
170	26360	52720	36900	73800	95-180		95-180	95-220	382	188	6	533	292	92	62	91	130
190	36160	72320	48210	96420	110-205		110-205	110-245	428	211	6	597	330	92	62	91	130
215	48160	96320	61900	123800	125-230		125-230	125-275	480	237	6	660	368	92	62	91	145
240	65740	131480	92030	184060	140-250		140-250	140-310	534	264	6	737	407	122	75	121	167

* Drop-out center dimension

[1] Standard material NBR 80 Shore A

[2] Higher speeds on request

[3] Relating to max. bore

Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9. If requested, coupling is dynamically balanced (semi-wedge balancing G 6,3; speed as per customer's details). For circumferential speeds exceeding 30 m/s (referring to outside diameter ØA) we would recommend dynamic balancing.

Selection of coupling/disk brake dimension "N"

Size	Brake disk ∅A x b [3]											
	∅560x30		∅630x30		∅710x30		∅800x30		∅900x30		∅1000x30	
	KX	KX-D	KX	KX-D	KX	KX-D	KX	KX-D	KX	KX-D	KX	KX-D
105	73	47	73	47								
120	72	42	72	42								
135			87	57	87	57						
150					105	75	105	75				
170					111	82	111	82				
190							134	105	134	105		
215							160	131	160	131	160	131
240							174	128	174	128	174	128

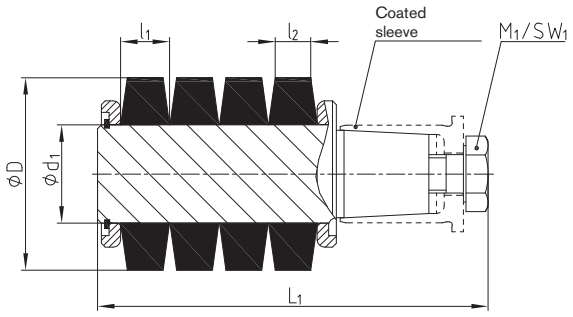
[3] Maximum circumferential speed = 60 m/s referring to maximum outside diameter

Order form:

REVOLEX® KX 170	SB	∅710x30	1 - ∅120	2SB - ∅150
Coupling type/size	Type	Disk brake	Finish bore	Finish bore

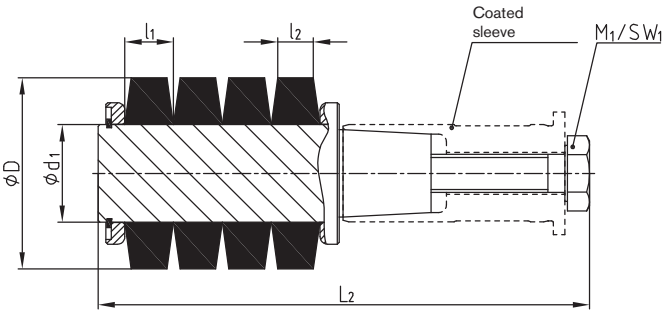
Technical data pin

KX



Taper pin design B

KX-D



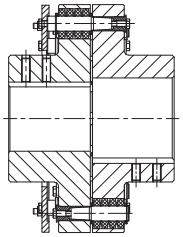
Taper pin design B

Technical data

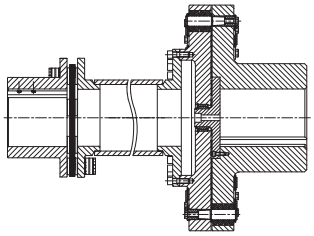
Size	Pin			Component 3.2			Component 3.1b			Component 3.4b		Tightening torque
	Size	Number		Elastomer ring NBR 80 Shore A			Pin			Screw DIN EN ISO 4017		
		KX	KX-D	D	l_1	l_2	d_1	L_1	L_2	M_1	SW_1	T_A [Nm]
KX 105	3	12	16	50,0	12,7	9,0	25,40	101	116	M10	16	67
KX 120	4	10	14									
KX 135	4	12	16	63,0	17,8	12,5	30,60	147,5	158,5	M12	18	115
KX 150	4	14	18									
KX 170	5	10	14									
KX 190	5	12	16	85,5	22,9	15,2	43,20	190	205	M16	24	290
KX 215	5	14	18									
KX 240	6	10	14									
KX 265	6	12	16									
KX 280	6	14	18									
KX 305	6	16	20	113,7	30,5	20,3	58,40	242	255	M24	36	970
KX 330	6	18	24									
KX 355	6	20	26									
KX 370	6	24	30									

Futher types

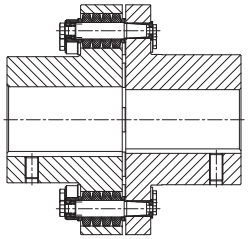
Type AB
with limited axial backlash



Intermediate shaft type
with RADEX®-N

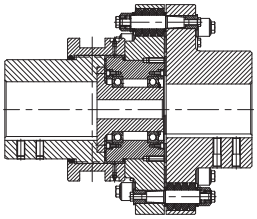


Backlash-free type

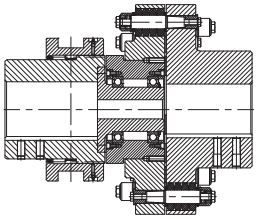


Type KX-D SD
shiftable

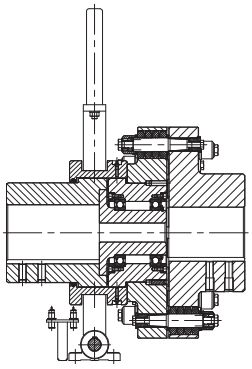
connected



separated



Type KX-D SD
shiftable with shiftable linkage



Type KX-D
with cardan shaft connection