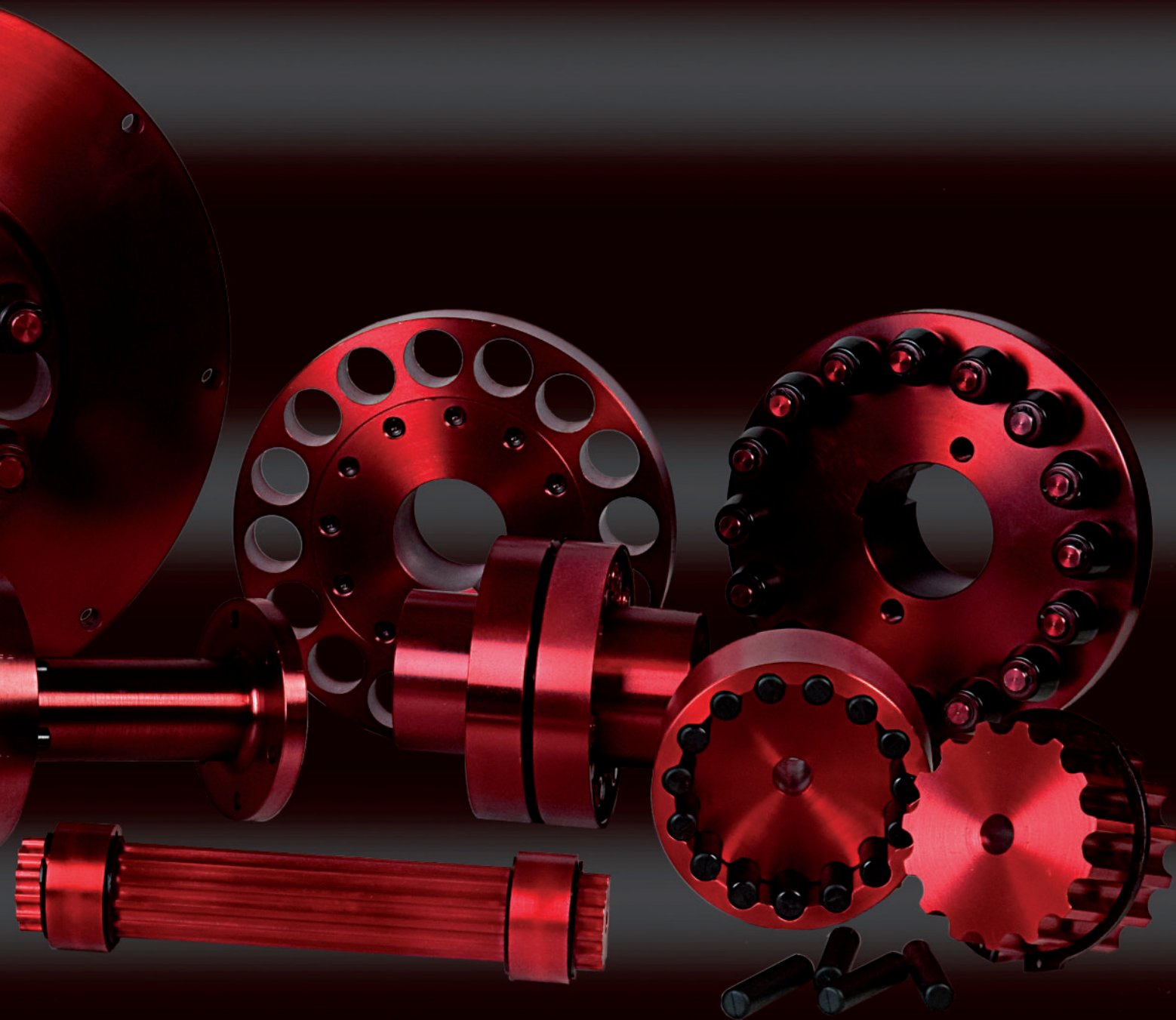


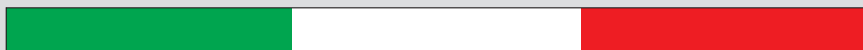
NORTHEN[®]

TRASMISSIONI

UNIVERSAL ELASTIC COUPLINGS



NORTHON



All **NORTHON** couplings
and their components are made exclusively in **ITALY**

NORTHON UNIVERSAL ELASTIC COUPLINGS

NORTHON universal elastic couplings are designed to absorb torsional knocks, vibrations and to compensate for any misalignment in the angular and parallel connection of two shafts rotating machines, guaranteeing at the same time the required transmission of the power.

It is well-known that it is virtually impossible to get a perfect alignment between them, and even more impossible to maintain it over time due to vibration and thermal expansion to which the structures involved are subjected.

NORTHON elastic universal couplings provide a solution to these problems, as they guarantee freedom of movement, total security of transmission and reliability of use.

STANDARD AND SPECIAL PRODUCTIONS

We guarantee the solution for every need, thanks to the availability of a full range of couplings of all types and various sizes, and our industrial capacity to realize in a short time also particular couplings required by the customer.

QUALITY CONTROL

Our service of quality control ensures the strict control of the materials used, the various stages of processing and the finished product.

On request we provide certification of the materials used, the heat treatments, and the dimensional data of the finished product.

SERVICE

Our technical department utilizes modern computational and design tools, in order to provide a solution to any problem of power transmission and to help the customer to select the most appropriate coupling.

NORTHON

HOW TO CHOOSE THE RIGHT COUPLING SIZE

To make a correct choice of the coupling to be used, you firstly need to consider the following factors:

- Loading Parameters (table A)
- Service Factor (table B)
- Correction Factors (table C)

TABLE A: LOADING PARAMETERS IN RELATION TO THE TYPE OF OPERATING MACHINE

Building trade machines M Hoists M Concrete mixers M Machines for road construction Chemical industry M Cooling drums M Mixer L Liquid agitators M Viscous liquid agitators M Drying drums L Light centrifuges M Heavy centrifuges Excavating machines H Bucket excavator M Vehicles on rails H Tracked vehicles M Manoeuvring winches M Suction pumps H Paddle wheels H Cutting heads M Revolving devices H Dredges Oil industry M Pipeline pumps H Drilling systems M Natural-gas pumping station Metal processing M Sheet metal bending machines H Sheet metal straightening machines H Power hammers H Planers H Presses M Shears H Presses for forging H Punching machines L Shaft line L Machines tools	Conveyors M Winches M Belt conveyors for general mixed cargo L Light belt conveyors M Bucket lifts M Chain conveyors M Continuous conveyors M Hoists L Bucket lifts for flour M Lifts M Screw feeders M Bucket lifts for crushed stone H Angled hoists M Conveyors for steel belts M Ducted scraping chain conveyors M Plate conveyors Hoisting machines L Overhead crane H Translation devices L Lifting devices M Revolving device M Tilting unloaders L Bridge crane Machines for plastics M Extruders M Calenders M Mixers M Stamping mill Quarries and bricks H Crushers H Rotating ovens H Ball mills H Centrifuge mills H Presses for bricks	Textile industry M Winders M Machines to colour and print on fabrics M Rag grinders M Frames Compressors H Piston compressors M Turbo-compressors Iron and steel industry M Drawing machines H Sheet metal trains M Piece turners H Ingot pushers H Roller tops for ingots and thick slabs H Cold rolling mills M Light rollerways H Heavy rollerways H Continuous casting system M Tube-straighteners Fans and blowers M Rotating piston blowers L Axial and radial compressors M Cooling tower fans M Tower for suction L Turbo-blowers L Centrifuge fans Food industry L Bottling machines M Mixing machines L Packing machines M Cane crushers M Cane shears M Beet shears H Cane mills M Centrifuges for beet	Converters and generators L Generators H Frequency converters H Welding generators Paper industry H Wet presses H Wood planing machines M Calenders H Rag grinders H Presses for blotting paper H Rollers for blotting paper H Drying cylinders Pumps H Piston pumps L Centrifuge pumps (normal liquid) M Centrifuge pumps (viscous liquid) H Plunger pumps H Delivery pumps Wood processing H Bark-peelers M Veener cutting machines L Wood processing machines H Circular saws Rubber machines H Extruders M Calenders H Masticators M Mixers H Cylinder crushers H Scorifying plants H Handling machines M Belt towns H Tumbling machines for foundries Landry machines M Tumble dryers M Washing machines
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L = light load

M = medium load

H = heavy load

TABLE B: SERVICE FACTOR "S"

Driving machine	Operating machine load parameter		
	L	M	G
Electric motors Turbines Hydraulic motors	1	1,25	1,75
Combustion engines 4 ÷ 8 cylinders	1,25	1,5	2
Combustion engines 1 ÷ 3 cylinders	1,5	2	2,5

TABLE C: CORRECTION FACTORS St, Sa, Ss

Description	Abb	Definition				
Temperature factor	St	Ambient temperature °C	-30 +80	+100	+130	+180
		St	1	1,1	1,2	1,4
Starting factor	Sa	Frequency nr.of starts per hour	120	240	400	800
		Sa	1	1,2	1,4	1,6
Pick-up factor	Ss	Light starting pick-up				1,2
		Medium starting pick-up				1,5
		Heavy starting pick-up				1,8

For the calculation for the choice of the coupling it is necessary to identify:

- type of driving machine
- power (**P**) of the driving machine expressed in kW (*)
- speed of rotation of coupling (**n**) expressed in rpm
- type of machine controlled
- type of loads (peaks, impacts, moments of inertia)
- number of starts per hour
- ambient temperature in °C

(*) If the power of the driving machine is expressed in HP, you have to split HP value per 1,33 in order to find the value expressed in kW.

example:
$$\frac{20\text{HP}}{1,33} = 15 \text{ kW}$$

EXAMPLE OF SIZING

It is required a **NORTHON** elastic coupling “**PN**” series, to control a rolling mill, placed between an electric motor and a gearbox.

Data: Power of electric motor (**P**) = 19 kW
Speed of rotation (**n**) = 450 rpm
Starts per hour = 4
Ambient temperature = + 22°C
Light starting pick-up

From table A) we obtain the load parameter for the rolling mill = **M**

From table B) we obtain the service factor **S** = 1,25

From table C) we obtain the correction factors **St** = 1, **Sa** = 1, **Ss** = 1,2

The coupling must therefore be sized for the power **N** that will be:

$$\mathbf{N} = \mathbf{P} \times \mathbf{S} \times \mathbf{St} \times \mathbf{Sa} \times \mathbf{Ss} = 19 \times 1,25 \times 1 \times 1 \times 1,2 = 28,5 \text{ KW}$$

$$\text{So: } \frac{\mathbf{N}}{\mathbf{n}} = \frac{\text{kW } 28,5}{450 \text{ rpm}} = 0,063$$

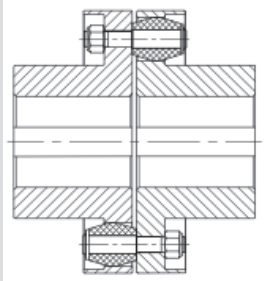
The coupling we choose will then be Type **PN-125**

Finally, check if the chosen coupling can contain the diameters of the shafts to be connected, otherwise choose a higher size coupling.

General information

ELASTIC COUPLING WITH PINS

Series **PN / PNM / PNHP / PNMHP**



- Half couplings steel C40 UNI 7845, hot-pressed or forged and normalized
- Pins steel C40 UNI 7845, lathed and grinded for forced mounting
- Rubber elements in oil-resistant synthetic rubber NBR 70 ShoreA with canvas insertions
- Operating temperature from -30°C to +120°C
- On request be possible to have rubber elements with higher resistance
- Accurate machining by using CNC machines
- Perfect dynamic balance

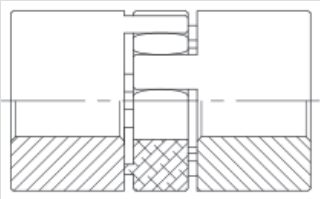


Coupling suitable for potentially explosive environments.
Complies with Directive 2014/34/UE for :

**CE Ex II 2 G Ex h IIB T6..T4 Gb X
II 2 D Ex h IIIC T85°C..T135°C Db X
Tech File : ATXEL01.16**

ELASTIC COUPLING WITH SPIDER

Series **PSA**



- Half couplings steel C40 UNI 7845, forged and normalized
- Elastic element (spider) in polyurethane with different hardnesses :
92 shoreA (yellow) or 98 shoreA (red)
- Operating temperature from -40°C to +90°C
- Accurate machining by using CNC machines
- Perfect dynamic balance

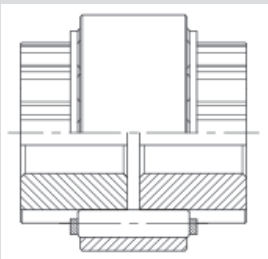


Coupling suitable for potentially explosive environments.
Complies with Directive 2014/34/UE for :

**CE Ex II 2 G Ex h IIB T6..T5 Gb X
II 2 D Ex h IIIC T85°C..T100°C Db X
Tech File : ATXEL01.16**

ELASTIC COUPLING IN ALUMINUM

Series **RE**



- Hubs and sleeves in extruded aluminum and hardened
- Rubber elements in oil-resistant synthetic rubber NBR 70 shoreA
- Operating temperature from -30°C to +120°C
- On request be possible to have rubber elements with higher resistance
- Low moment of inertia and therefore greater speed

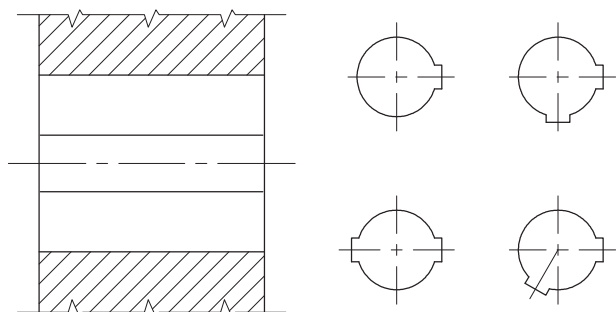


Coupling suitable for potentially explosive environments.
Complies with Directive 2014/34/UE for :

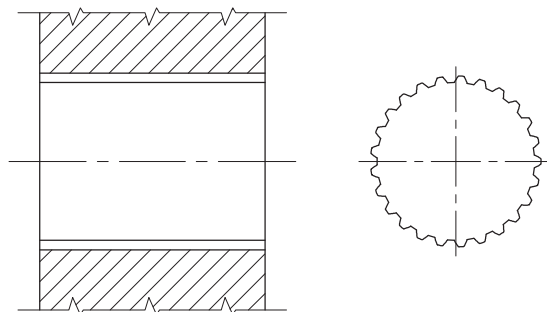
**CE Ex II 2 G Ex h IIB T6..T4 Gb X
II 2 D Ex h IIIC T85°C..T135°C Db X
Tech File : ATXEL01.16**

Working of holes for connection

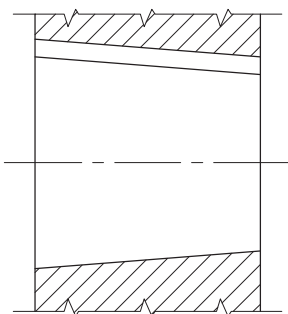
CYLINDRICAL HOLE WITH KEYWAY(S)



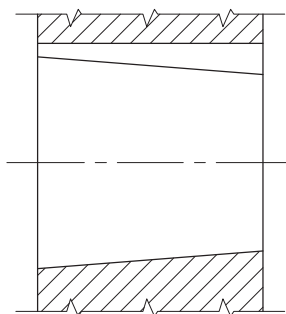
SPLINED HOLE



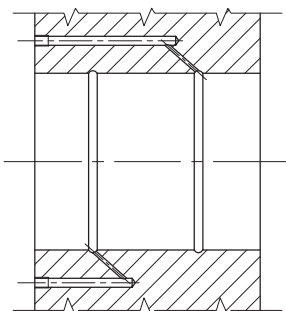
TAPERED HOLE WITH TAPERED KEYWAY(S)



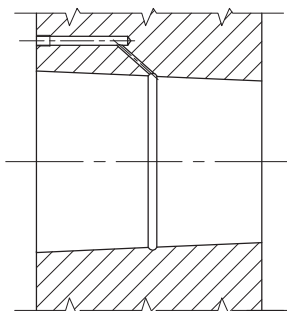
TAPERED HOLE WITH PARALLEL KEYWAY(S)



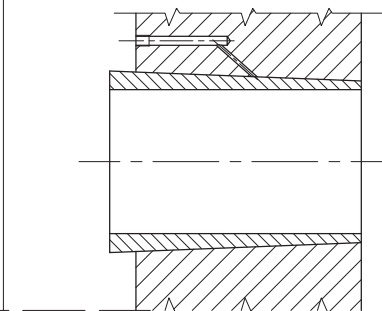
CYLINDRICAL HOLE FOR HOT MOUNTING AND DISMOUNTING WITH OIL PRESSURE



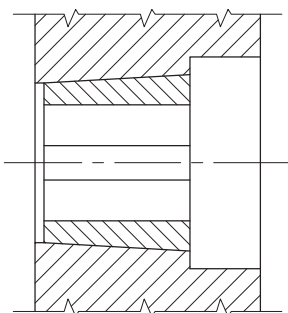
TAPERED HOLE FOR HOT MOUNTING AND DISMOUNTING WITH OIL PRESSURE



TAPERED BUSHING FOR HOT MOUNTING AND DISMOUNTING WITH OIL PRESSURE



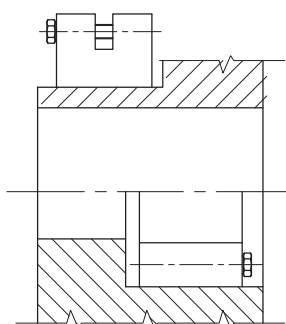
TAPER-LOCK BUSHING



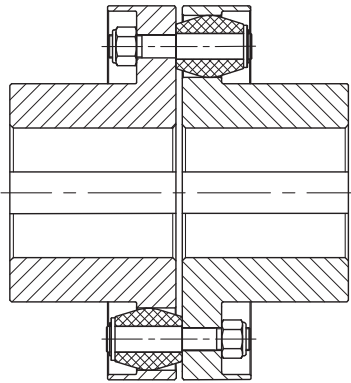
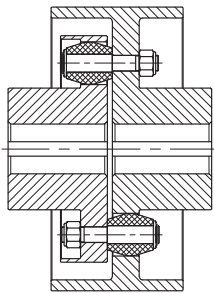
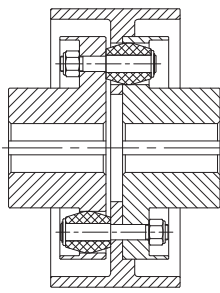
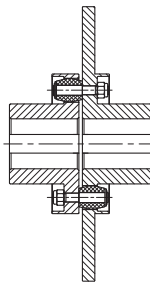
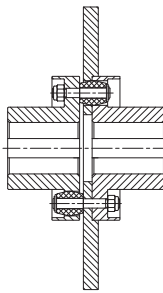
SHRINK DISC

EXTERNAL

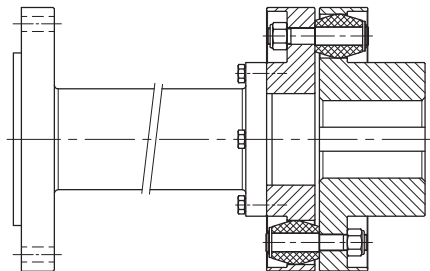
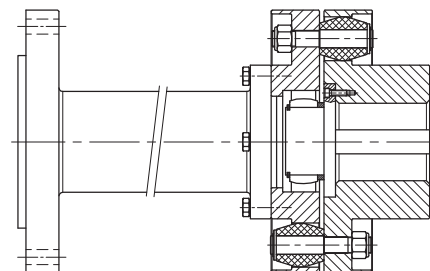
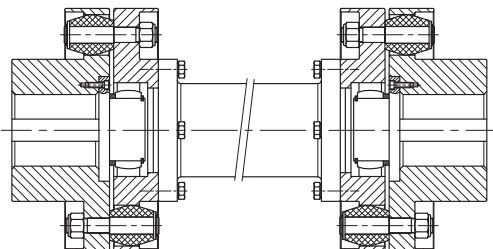
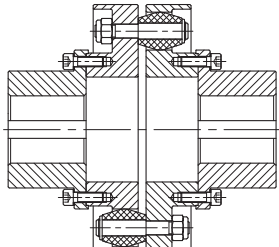
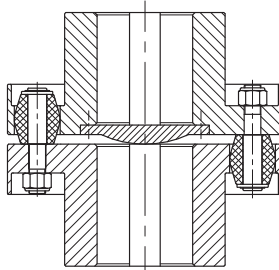
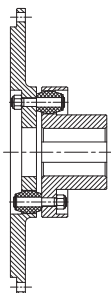
INTERNAL



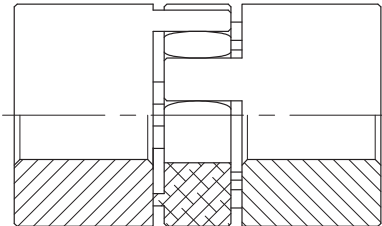
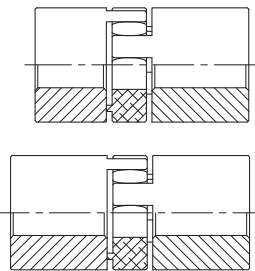
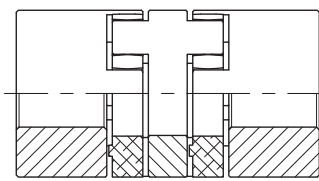
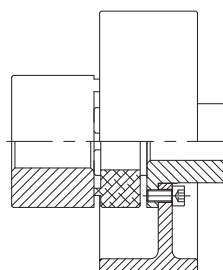
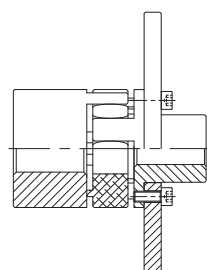
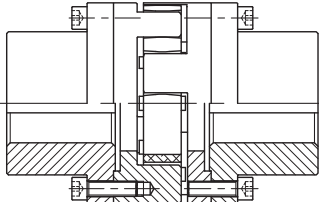
Production standard range

10	Series PN Elastic coupling with pins Standard version	
11	Series PNM Elastic coupling with pins Version with oversized hubs	
12	Series PNHP Elastic coupling with pins Standard version for high torques	
13	Series PNMHP Elastic coupling with pins Version with oversized hubs for high torques	
14	Series PNFF Elastic coupling with pins Version with brake band	
15	Series PNFFS Elastic coupling with pins Version with removable brake band	
16	Series PNDF Elastic coupling with pins Version with brake disk	
17	Series PNDFS Elastic coupling with pins Version with removable brake disk	

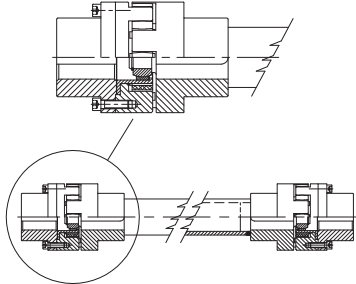
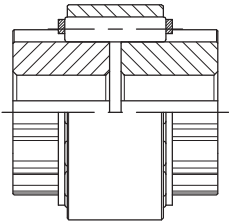
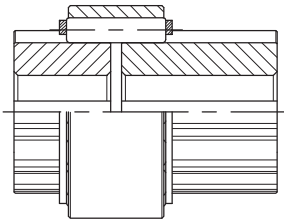
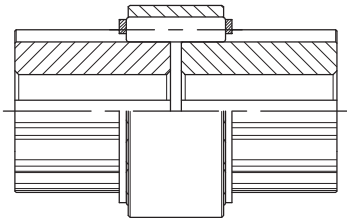
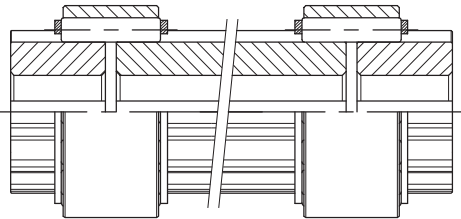
Production standard range

18	Series PNAFL Elastic coupling with pins Version with spacer and flange connection	
19	Series PNAFLS Elastic coupling with pins Version with supported spacer and flange connection	
20	Series PNL Elastic coupling with pins Version with double coupling and spacer supported MAINTENANCE WITHOUT MOVING CONNECTED MACHINES	
21	Series PNMS Elastic coupling with pins Version with screwed hubs MAINTENANCE WITHOUT MOVING CONNECTED MACHINES	
22	Series PNV Elastic coupling with pins Version for vertical fitting	
23	Series PNAF Elastic coupling with pins Version with flange connection	

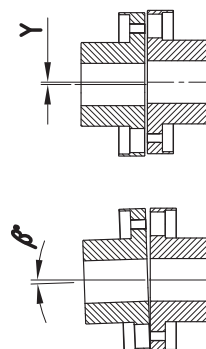
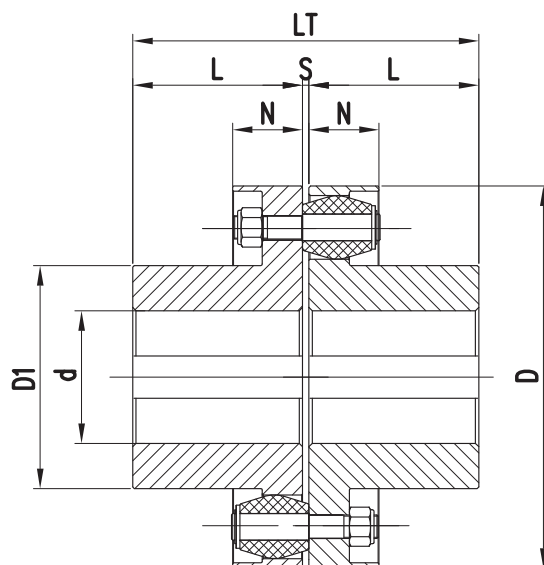
Production standard range

24	Series PSA Elastic coupling with spider Standard version	
25	Series PSAP/PSA2P Elastic coupling with spider Version with one or two extended hubs	
26	Series PSADC Elastic coupling with spider Version with double cardanic	
27	Series PSAFF Elastic coupling with spider Version with brake band	
28	Series PSADF Elastic coupling with spider Version with brake disk	
29	Series PSAS Elastic coupling with spider Version with screwed hubs MAINTENANCE WITHOUT MOVING CONNECTED MACHINES	

Production standard range

30	Series PSAS.AF/PSAS.AT Elastic coupling with spider Version with shaft spacer or tubular spacer and screwed hubs MAINTENANCE WITHOUT MOVING CONNECTED MACHINES	
31	Series REVOLUTION Elastic coupling in aluminum Type RE Standard version MAINTENANCE WITHOUT MOVING CONNECTED MACHINES	
32	Series REVOLUTION Elastic coupling in aluminum Type REP Version with one extended hub MAINTENANCE WITHOUT MOVING CONNECTED MACHINES	
33	Series REVOLUTION Elastic coupling in aluminum Type RE2P Version with two extended hubs MAINTENANCE WITHOUT MOVING CONNECTED MACHINES	
34	Series REVOLUTION Elastic coupling in aluminum Type REAF Version with floating shaft MAINTENANCE WITHOUT MOVING CONNECTED MACHINES	
35	FITTING	
36 - 37	COMPONENTS	
38	SAFETY REGULATIONS	
39 - 40	NOTES	

Elastic couplings with pins
PN series, standard version

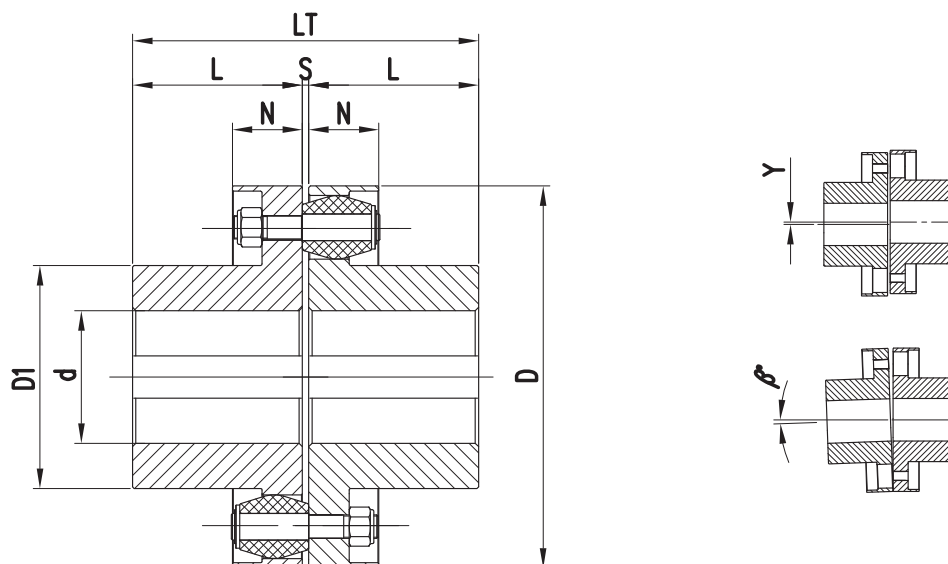


TYPE PN	TECHNICAL DATA				DIMENSIONS (mm)							No. Pins	WEIGHT (kg)	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{\text{kW}}{\text{rpm}}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm ²)	d max	D	D1	L	N	S ± ₀ ²	LT			y(mm)	β(°)
60	0,0048	46	16000	0,0004	17	60	26	25	15	3	53	4	0,5	0,2	1°
70	0,0089	85	13700	0,0005	22	70	35	29	17		61	6	0,8		
80	0,0136	130	12000	0,0030	24	80	40	35	24		73	8	1,2		
90	0,0230	220	10600	0,0068	26	90	39	45			93	8	1,9		
100	0,0335	320	9500	0,0108	35	100	50	50	28		103	10	2,6		
112	0,0492	470	8500	0,0170	40	112	62	55			113	12	4,0		
125	0,0848	810	7680	0,0318	45	125	65	60	36	6	126	12	5,3	0,4	
140	0,116	1110	6800	0,055	55	140	80	70			146	14	8,0		
160	0,147	1400	6000	0,108	60	160	85	80	45		166	12	11,5		
180	0,198	1890	5300	0,191	70	180	104	90			186	14	17		
200	0,226	2160	4800	0,329	75	200	106	100	54		206	12	23		
225	0,304	2900	4260	0,575	90	225	128	110			226	14	32		
250	0,503	4800	3840	0,948	95	250	130	120	66	10	250	12	41	0,8	
280	0,681	6500	3400	1,60	115	280	158	130			270	14	58		
320	0,959	9160	3000	2,94	125	320	172	140	80		290	12	81		
360	1,298	12400	2700	5,21	150	360	210	160			330	14	122		
400	1,466	14000	2400	8,36	160	400	224	180	120	14	374	12	165		
450	1,999	19000	2160	15,9	190	450	265	200			414	14	310		
501	2,617	25000	1920	26,4	200	500	280	220	135		454	16	330		
560	5,424	51800	1740	50,8	210	560	295	240			494	12	450		
630	7,330	70000	1560	80,5	250	630	360	260	150		534	14	650		
710	10,26	98000	1400	148,6	290	710	400	280			574	14	910		
800	13,61	130000	1200	192,2	310	800	430	300	18	614	16	1160	1,2		
900	18,32	175000	1080	438	330	900	460	320		658	16	1530			
1000	23,56	225000	960	697	360	1000	500	350		718	18	1950			
1120	29,95	286000	900	1081	400	1120	560	380		778	20	2530			
1250	37,49	358000	800	1676	440	1250	610	420			858	22	3270		

The Weight and the PD² are calculated considering coupling with pilot bores.
For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.
On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNM series, version with oversized hubs



TYPE PNM	TECHNICAL DATA				DIMENSIONS (mm)							No. Pins	WEIGHT (kg)	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm²)	d max	D	D1	L	N	S ± ₀ ²	LT			y(mm)	B(°)
90	0,0230	220	10600	0,0068	35	90	49	45	17	3	93	12	1,95	0,2	1°
100	0,0314	300	9500	0,0126	40	100	59	50			103	14	2,8		
112	0,0461	440	8500	0,0231	50	112	70	55			113	18	4,2		
125	0,0618	590	7680	0,0343	50	125	70	60	24	6	123	14	5,4		
140	0,0817	780	6800	0,071	60	140	85	70			143	16	8,2		
160	0,154	1470	6000	0,135	70	160	96	80	28	6	166	16	12,2	0,4	
180	0,201	1920	5300	0,268	80	180	116	90			186	18	18,5		
200	0,257	2450	4800	0,407	85	200	120	100	36	6	206	16	24		
225	0,332	3170	4260	0,784	105	225	144	110			226	18	35		
250	0,398	3800	3840	1,208	110	250	153	120	45	6	246	16	46		
280	0,513	4900	3400	1,868	130	280	183	130			266	18	63		
320	0,912	8800	3000	3,451	140	320	198	140	54	10	290	16	90	0,8	
360	1,204	11500	2700	5,626	170	360	240	160			330	18	125		
400	1,696	16200	2400	11,33	180	400	252	180	66	10	370	16	180		
450	2,199	21000	2160	21,71	215	450	302	200			410	18	270		
500	2,597	24800	1920	33,33	230	500	318	220	80	14	454	16	350		
560	3,267	31200	1740	52,87	260	560	360	240			494	18	465		
630	4,20	40100	1560	95,24	300	630	435	260	120	14	534	20	680		
710	8,482	81000	1400	160,1	320	710	442	280			574	14	940		
800	12,67	121000	1200	282	380	800	530	300	135	14	614	18	1340	1,2	
900	17,70	169000	1080	483	430	900	600	320			654	18	1870		
1000	21,78	208000	960	757	480	1000	660	350			714	20	2450		
1120	30,78	294000	900	1510	590	1120	830	380	135	14	774	24	3755		
1250	40,79	389600	800	2685	690	1250	960	420			854	28	5350		

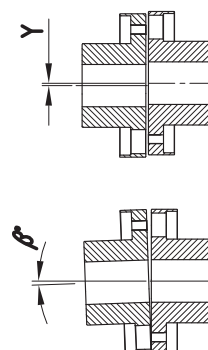
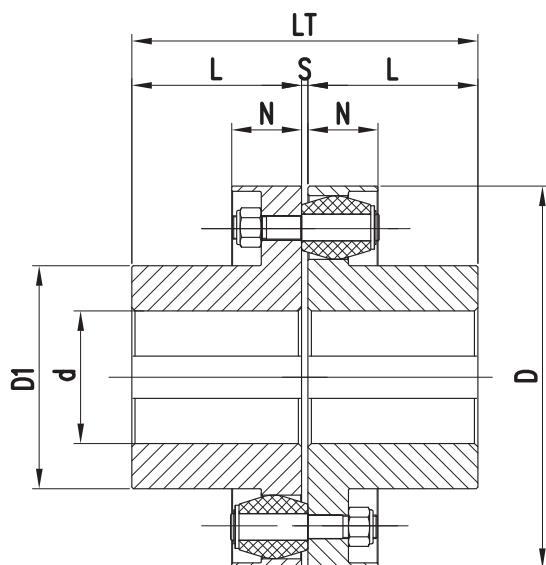
The Weight and the PD² are calculated considering coupling with pilot bores.

For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNHP series, standard version with high torques



TYPE PNHP	TECHNICAL DATA				DIMENSIONS (mm)							No. Pins	WEIGHT (kg)	MISALIGNMENT (±)		
	$\frac{N}{n} = \frac{\text{kW}}{\text{rpm}}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm ²)	d max	D	D1	L	N	S ± ₀ ⁺²	LT			y(mm)	B(°)	
60	0,0073	70	16000	0,0004	17	60	26	25	15	3	53	4	0,5	0,2	1°	
70	0,0126	120	13700	0,0005	22	70	35	29	17		61	6	0,8			
80	0,0199	190	12000	0,0030	24	80	40	35	24		73	8	1,2			
90	0,0346	330	10600	0,0068	26	90	39	45			93	8	1,9			
100	0,0501	480	9500	0,0108	35	100	50	50	103		10	2,6				
112	0,0701	670	8500	0,0170	40	112	62	55	113		12	4,0				
125	0,127	1200	7680	0,0318	45	125	65	60	28	6	126	12	5,3	0,4		
140	0,168	1600	6800	0,055	55	140	80	70			146	14	8,0			
160	0,220	2100	6000	0,108	60	160	85	80	36		166	12	11,5			
180	0,293	2800	5300	0,191	70	180	104	90			186	14	17			
200	0,335	3200	4800	0,329	75	200	106	100	45		206	12	23			
225	0,450	4300	4260	0,575	90	225	128	110			226	14	32			
250	0,754	7200	3840	0,948	95	250	130	120	54	10	250	12	41	0,8		
280	1,016	9700	3400	1,60	115	280	158	130			270	14	58			
320	1,435	13700	3000	2,94	125	320	172	140	66		290	12	81			
360	1,937	18500	2700	5,21	150	360	210	160			330	14	122			
400	2,209	21100	2400	8,36	160	400	224	180	80		14	374	12			165
450	2,963	28300	2160	15,9	190	450	265	200				414	14			242
501	3,895	37200	1920	26,4	200	500	280	220	120	454		16	310			
560	8,126	77600	1740	50,8	210	560	295	240		494		12	450			
630	10,99	105000	1560	80,5	250	630	360	260	135	534		14	650			
710	15,39	147000	1400	148,6	290	710	400	280		574		14	910			
800	20,52	196000	1200	192,2	310	800	430	300	150	18	614	16	1160	1,2		
900	27,54	263000	1080	438	330	900	460	320			658	16	1530			
1000	35,29	337000	960	697	360	1000	500	350			718	18	1950			
1120	45,03	430000	900	1081	400	1120	560	380			778	20	2530			
1250	56,23	537000	800	1676	440	1250	610	420	858		22	3270				

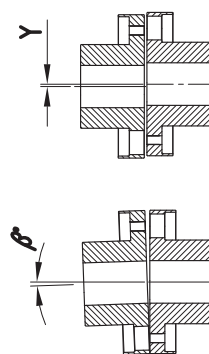
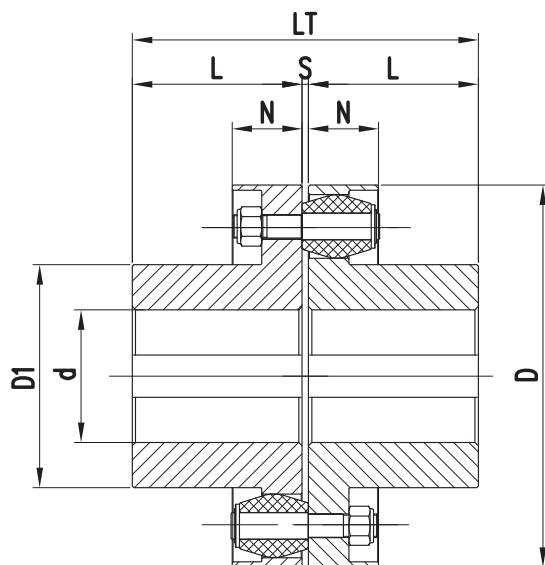
The Weight and the PD² are calculated considering coupling with pilot bores.

For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNMHP series, version with oversized hubs for high torques



TYPE PNMHP	TECHNICAL DATA				DIMENSIONS (mm)							No. Pins	WEIGHT (kg)	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm ²)	d max	D	D1	L	N	S $\pm \frac{2}{0}$	LT			y(mm)	β(°)
90	0,0346	330	10600	0,0068	35	90	49	45	17	3	93	12	1,95	0,2	1°
100	0,0471	450	9500	0,0126	40	100	59	50			103	14	2,8		
112	0,0691	660	8500	0,0231	50	112	70	55			113	18	4,2		
125	0,0921	880	7680	0,0343	50	125	70	60	24	3	123	14	5,4		
140	0,115	1100	6800	0,071	60	140	85	70			143	16	8,2		
160	0,230	2200	6000	0,135	70	160	96	80	28	6	166	16	12,2	0,4	
180	0,304	2900	5300	0,268	80	180	116	90			186	18	18,5		
200	0,387	3700	4800	0,407	85	200	120	100			206	16	24		
225	0,492	4700	4260	0,784	105	225	144	110	36	6	226	18	35		
250	0,597	5700	3840	1,208	110	250	153	120			246	16	46		
280	0,764	7300	3400	1,868	130	280	183	130	45	6	266	18	63		
320	1,372	13100	3000	3,451	140	320	198	140			290	16	90		
360	1,801	17200	2700	5,626	170	360	240	160	54	10	330	18	125	0,8	
400	2,534	24200	2400	11,33	180	400	252	180			370	16	180		
450	3,298	31500	2160	21,71	215	450	302	200	66	10	410	18	270		
500	3,895	37200	1920	33,33	230	500	318	220			454	16	350		
560	4,921	47000	1740	52,87	260	560	360	240	80	14	494	18	465		
630	6,304	60200	1560	95,24	300	630	435	260			534	20	680		
710	12,70	121300	1400	160,1	320	710	442	280	120	14	574	14	940		
800	18,95	181000	1200	282	380	800	530	300			614	18	1340		
900	26,49	253000	1080	483	430	900	600	320	135	14	654	18	1870		
1000	32,67	312000	960	757	480	1000	660	350			714	20	2450		
1120	46,18	441000	900	1510	590	1120	830	380			774	24	3755		
1250	61.19	584400	800	2685	690	1250	960	420			854	28	5350		

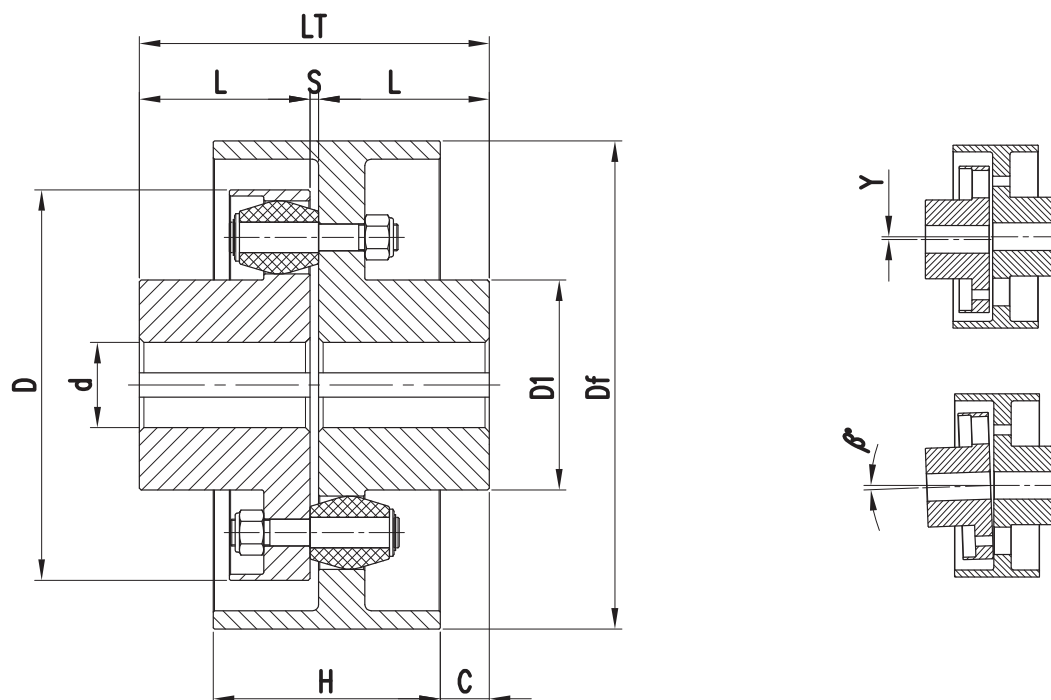
The Weight and the PD² are calculated considering coupling with pilot bores.

For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNFF series, version with brake band



TYPE PNFF	TECHNICAL DATA				DIMENSIONS (mm)										No. Pins	WEIGHT (kg)	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm²)	d max	D	D1	L	Df	H	C	S ± ₀ ²	LT	y(mm)			β(°)	
100D125X60	0,0335	320	7680	0,0125	35	100	50	50	125	60	13	3	103	10	3,8	0,2	1°	
112D160X60	0,0492	470	6000	0,063	40	112	62	55	160				113	12	6,1			
125D200X75	0,0848	810	4800	0,170	45	125	65	60	200	75	15		126	12	9,6	0,4		
140D200X75	0,116	1110		0,187	55	140	80	70										146
140D250X95			0,496	3840					0,588	60	160	85						80
160D250X95	0,147	1400	0,621		70	180	104	90	186	14	25							
180D250X95	0,198	1890	0,774		75	200	106	100			20		206	12	30			
200D250X95	0,226	2160	1,632											226	14			46
200D315X118			0,304	2900	1,807	90	225	128	110	315	118			10	250	12		54
225D315X118	0,503	4800	2,106	95	250	130	120	270	14						87			
250D315X118	0,681	6500	2400	3,963	115	280	158	130	400	150			290	12	107			
280D400X150	0,959	9160		4,302	125	320	172	140					330	14	176			
320D400X150	1,298	12400	1920	16,94	150	360	210	160	500	190	26		14	374	12	244		
360D500X190	1,466	14000	1750	29,45	160	400	224	180	560	200	30				414	14		289
400D560X200			1560	48,62					630	236								
400D630X236	1,999	19000		53,92	190	450	265	200			710			265				
450D630X236			1400	90														
450D710X265	2,617	25000		102	200	500	280	220			800							
501D710X265			1200	149														
501D800X265																		

The Weight and the PD² are calculated considering coupling with pilot bores.

For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request the brake bands are worked with different diameter, width and position.

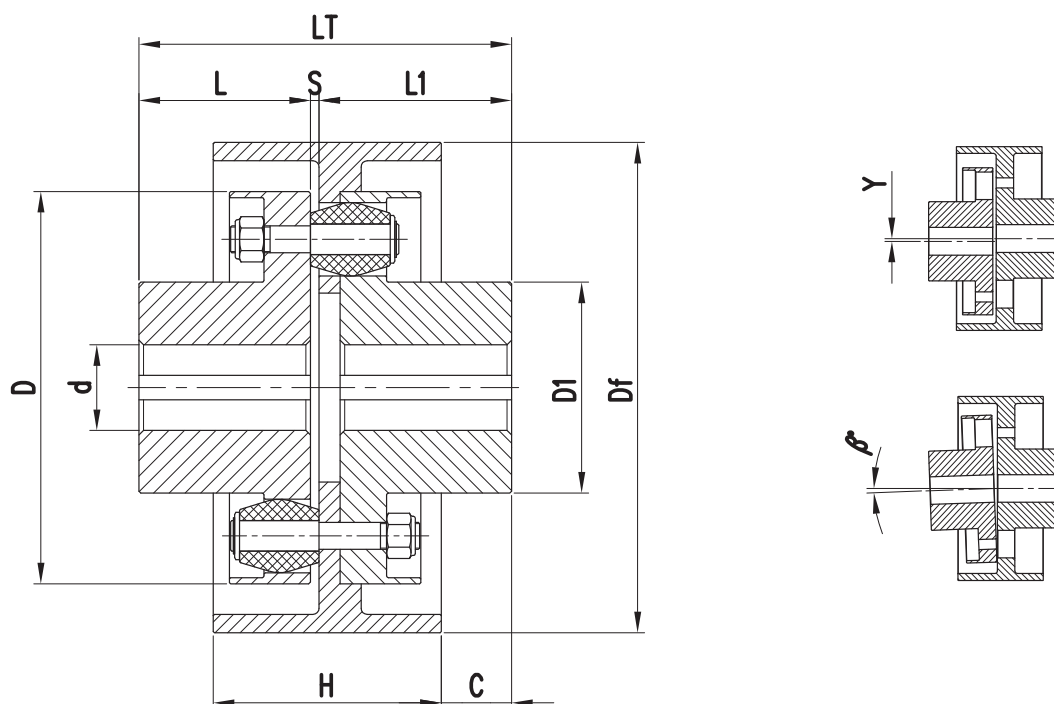
You can also have oversized hubs (see **PNM** series), for high transmission (see **PNHP** series), or with oversized hubs and high transmission (see **PNMHP** series).

On request can be made couplings larger sizes.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNFFS series, version with removable brake band



TYPE PNFFS	TECHNICAL DATA				DIMENSIONS (mm)										No. Pins	WEIGHT (kg)	MISALIGNMENT (±)		
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm ²)	d max	D	D1	L	L1	Df	H	C	S ± ₀ ⁺²	LT			y(mm)	β(°)	
100D125X60	0,0335	320	7680	0,0125	35	100	50	50	63	125	60	13	3	116	10	3,8	0,2	1°	
112D160X60	0,0492	470	6000	0,063	40	112	62	55	68	160				126	12	6,1			
125D200X75	0,0848	810	4800	0,170	45	125	65	60	73	200	75	15		139	12	9,6	0,4		
140D200X75	0,116	1110		0,187	55	140	80	70	83					179	12	12			
140D250X95			0,496	250						95	6	159	14			16,8			
160D250X95	0,147	1400	0,588		60	160	85	80	93			199	14	20					
180D250X95	0,198	1890	0,621	70	180	104	90	103	219	12		25							
200D250X95	0,226	2160	0,774	75	200	106	100	113	20		10	179	12	30					
200D315X118			1,632									219	12	39					
225D315X118	0,304	2900	3030	1,807	90	225	128	110				123	315	118	239	14			46
250D315X118	0,503	4800	2400	2,106	95	250	130	120	133	400	150	26		14	263	12	54		0,8
280D400X150	0,681	6500		3,963	115	280	158	130	143						283	14	87		
320D400X150	0,959	9160	4,302	125	320	172	140	153	303	12	107								
360D500X190	1,298	12400	1920	16,94	150	360	210	160	173	500	190	343	14	176					
400D560X200	1,466	14000	1750	29,45	160	400	224	180	193	560	200	30	14	387	12	244			
400D630X236			48,62	630						236	289								
450D630X236	1,999	19000	1560	53,92	190	450	265	200	213	710	265			427	14	354			
450D710X265			90	427										14	420				
501D710X265	2,617	25000	1400	102	200	500	280	220	233	800				467	16	508			
501D800X265			1200	149						800				467	16	570			

The Weight and the PD² are calculated considering coupling with pilot bores.

For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request the brake bands are worked with different diameter, width and position.

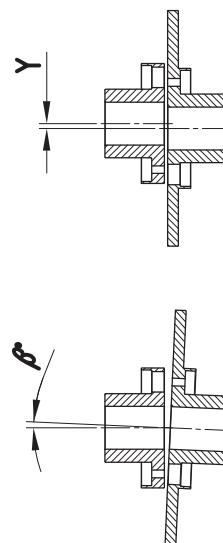
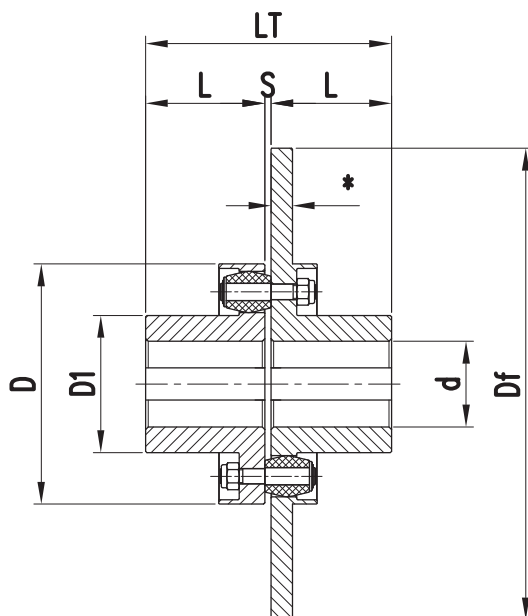
You can also have oversized hubs (see **PNM** series), for high transmission (see **PNHP** series), or with oversized hubs and high transmission (see **PNMHP** series).

On request can be made couplings larger sizes.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNDF series, version with brake disk



* THICKNESS ON REQUEST

TYPE PNDF	TECHNICAL DATA			DIMENSIONS (mm)							No. Pins	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	Max speed (rpm)	d _{max}	D	D1	L	Df	S $\pm \frac{2}{0}$	LT		y(mm)	B(°)
112D250X *	0,0492	470	3840	40	112	62	55	250	3	113	12	0,2	1°
125D250X *	0,0848	810		45	125	65	60		6	126	12		
140D250X *	0,116	1110		55	140	80	70			146	14		
160D300X *	0,147	1400	3180	60	160	85	80	300		166	12		
180D300X *	0,198	1890		70	180	104	90			356	186	14	
180D356X *		2680	75	200	106	100	406	206			12		
200D356X *	0,226							2160		2350	226	14	
200D406X *	0,304	2900					2090	90	225		128	110	
225D406X *			0,503	4800	1850	115				280			
225D457X *	0,681	6500					1560	125	320		172	140	
250D457X *			0,959	9160	1340	150				360			
280D514X *	1,298	12400					1170	160	400		224	180	
320D514X *			1,466	14000	1040	190				450			
320D610X *	1,999	19000					200	500	280		220	240	
360D610X *			2,617	25000	210	560				295			
400D711X *	5,424	51800					250	630	360		260	534	
450D711X *			7,330	70000	250	630				360			
501D812X *	7,330	70000					250	630	360		260	534	
560D812X *			7,330	70000	250	630				360			
560D915X *	7,330	70000					250	630	360		260	534	
630D915X *			7,330	70000	250	630				360			260

The Weight and the PD² will be calculated on request.

For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request the brake disk are worked with different diameter and position.

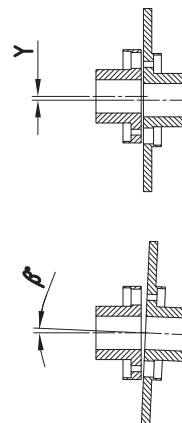
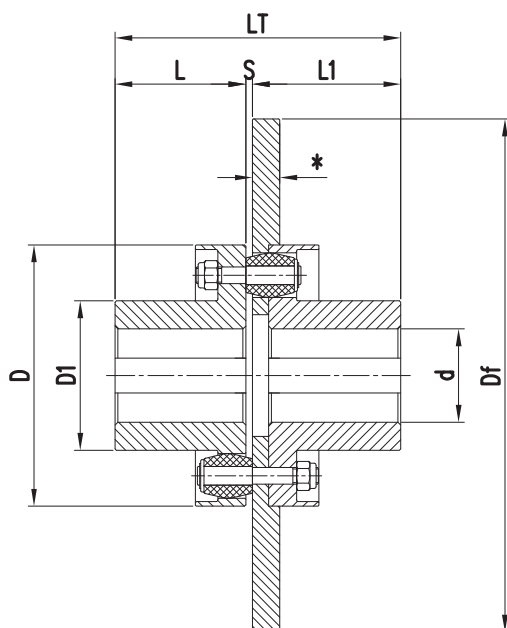
You can also have oversized hubs (see **PNM** series), for high transmission (see **PNHP** series), or with oversized hubs and high transmission (see **PNMHP** series).

On request can be made couplings larger sizes.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNDFS series, version with removable brake disk



* THICKNESS ON REQUEST

TYPE PNDFS	TECHNICAL DATA			DIMENSIONS (mm)								No. Pins	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{kw}{rpm}$	Mt (Nm)	Max speed (rpm)	d max	D	D1	L	L1	Df	$S \pm \frac{2}{0}$	LT		y(mm)	β(°)
112D250X *	0,0492	470	3840	40	112	62	55	68	250	3	126	12	0,2	1°
125D250X *	0,0848	810		45	125	65	60	73		6	139	12		
140D250X *	0,116	1110		55	140	80	70	83			159	14		
160D300X *	0,147	1400	3180	60	160	85	80	93	300		179	12		
180D300X *	0,198	1890		70	180	104	90	103			199	14		
180D356X *			2680						356		219	12		
200D356X *	0,226	2160	2350	75	200	106	100	113	406		239	14		
200D406X *											239	14		
225D406X *	0,304	2900	2090	90	225	128	110	123	457		263	12		
225D457X *											283	14		
250D457X *	0,503	4800	1850	115	280	158	130	143	514		10	303	12	
280D514X *	0,681	6500		125	320	172	140	153				343	14	
320D514X *	0,959	9160	1560	150	360	210	160	173	610			14	387	
320D610X *				160	400	224	180	193			427		14	
360D610X *	1,298	12400	1340	190	450	265	200	213	711		467		16	
400D711X *	1,466	14000		200	500	280	220	233			812		507	
450D711X *	1,999	19000	1170	210	560	295	240	253	915	547		14		
501D812X *	2,617	25000								1040		250	630	
560D812X *	5,424	51800												
560D915X *														
630D915X *	7,33	70000												

The Weight and the PD² are calculated considering coupling with pilot bores.

For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request the brake disk are worked with different diameter, width and position.

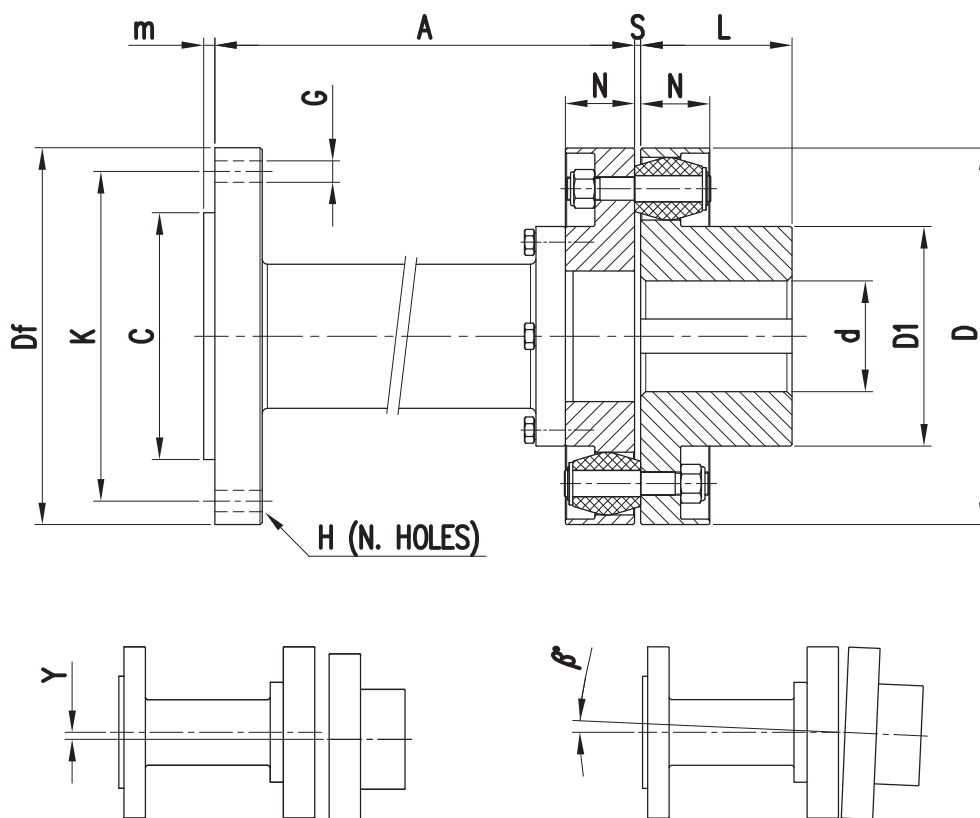
You can also have oversized hubs (see **PNM** series), for high trasmission (see **PNHP** series), or with oversized hubs and high trasmission (see **PNMHP** series).

On request can be made couplings larger sizes.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNAFL series, version with spacer and flange connection



TYPE PNAFL	TECHNICAL DATA			DIMENSIONS (mm)						No. Pins	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	Max speed (rpm)	d max	D	D1	L	N	S $\pm \frac{2}{0}$		y(mm)	B(°)
112	0,0492	470	8500	40	112	62	55	28	3	12	AS FUNCTION OF DIMENSION "A"	1°
125	0,0848	810	7680	45	125	65	60	28	6	12		
140	0,116	1110	6800	55	140	80	70			14		
160	0,147	1400	6000	60	160	85	80	12				
180	0,198	1890	5300	70	180	104	90	14				
200	0,226	2160	4800	75	200	106	100	12				
225	0,304	2900	4260	90	225	128	110	45	14			
250	0,503	4800	3840	95	250	130	120	54	10	12		
280	0,681	6500	3400	115	280	158	130			14		
320	0,959	9160	3000	125	320	172	140	66		12		
360	1,298	12400	2700	150	360	210	160			14		
400	1,466	14000	2400	160	400	224	180	80	14	12		
450	1,999	19000	2160	190	450	265	200			14		
501	2,617	25000	1920	200	500	280	220			16		

Dimensions Df, K, C, G, H (n. holes) and the length A are to be specified with the request.

For the machining of the finished bores it is necessary to specify diameters and tolerances.

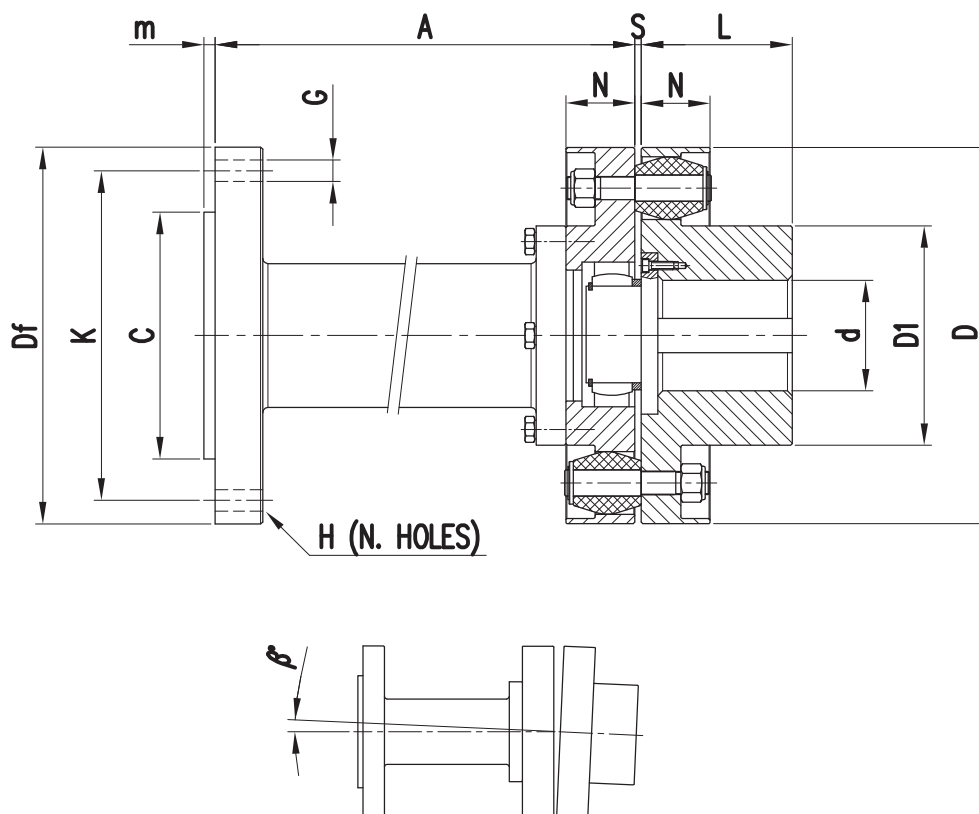
You can also have oversized hubs (see **PNM** series), for high transmission (see **PNHP** series), or with oversized hubs and high transmission (see **PNMHP** series).

On request can be made couplings larger sizes.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNAFLS series, version with supported spacer and flange connection



TYPE PNAFLS	TECHNICAL DATA			DIMENSIONS (mm)						No. Pins	MISALIGNMENT (±)
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	Max speed (rpm)	d max	D	D1	L	N	$S \pm \frac{2}{0}$		B(°)
112	0,0492	470	8500	40	112	62	55	28	3	12	1°
125	0,0848	810	7680	45	125	65	60	28	6	12	
140	0,116	1110	6800	55	140	80	70	36		14	
160	0,147	1400	6000	60	160	85	80	45		12	
180	0,198	1890	5300	70	180	104	90	54		14	
200	0,226	2160	4800	75	200	106	100	66		12	
225	0,304	2900	4260	90	225	128	110	80	10	14	
250	0,503	4800	3840	95	250	130	120	80		12	
280	0,681	6500	3400	115	280	158	130	80		14	
320	0,959	9160	3000	125	320	172	140	80		12	
360	1,298	12400	2700	150	360	210	160	80	14	14	
400	1,466	14000	2400	160	400	224	180	80		12	
450	1,999	19000	2160	190	450	265	200	80		14	
501	2,617	25000	1920	200	500	280	220	80		16	

Dimensions Df, K, C, G, H (n. holes) and the length A are to be specified with the request.

For the machining of the finished bores it is necessary to specify diameters and tolerances.

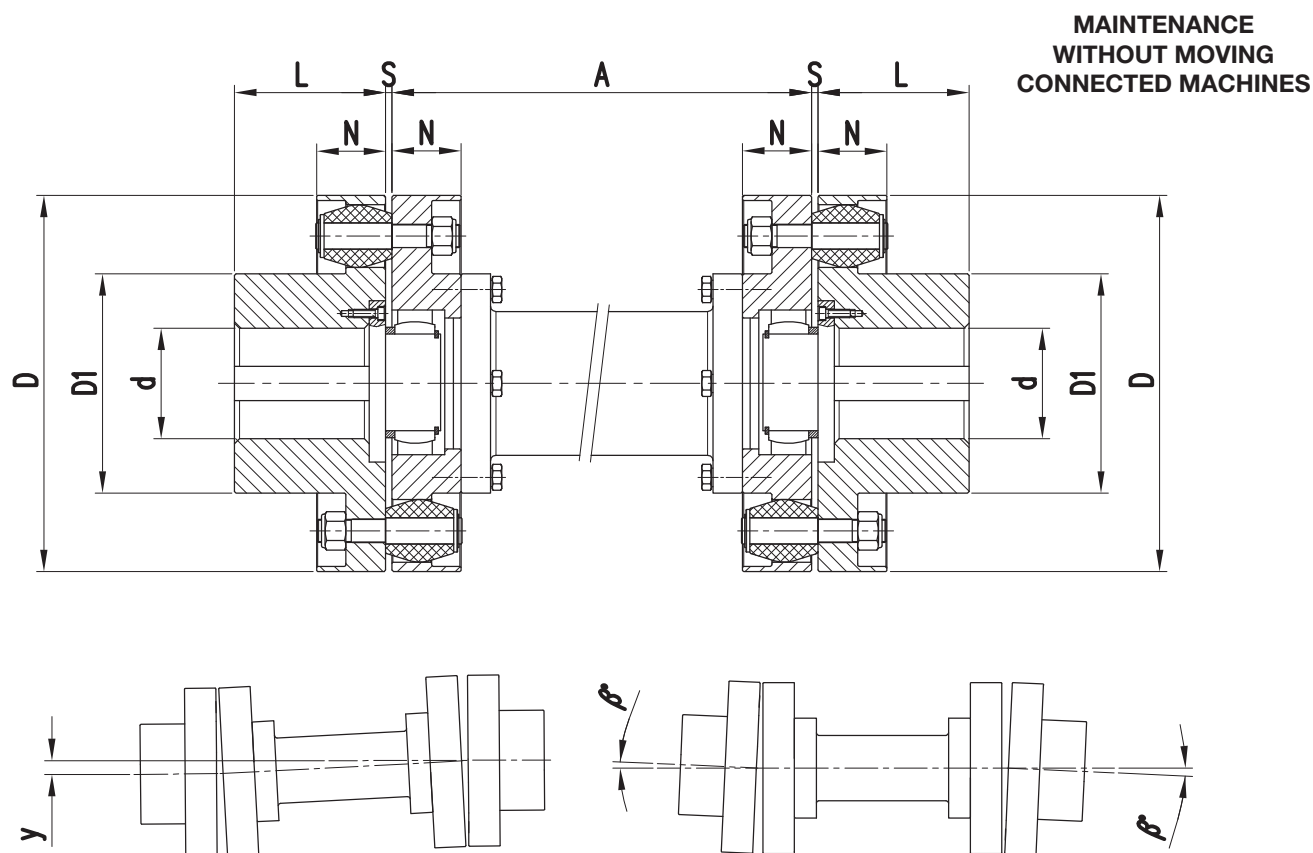
You can also have oversized hubs (see **PNM** series), for high transmission (see **PNHP** series), or with oversized hubs and high transmission (see **PNMHP** series).

On request can be made couplings larger sizes.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNL series, version with double coupling and supported spacer



TYPE PNL	TECHNICAL DATA			DIMENSIONS (mm)						No. Pins	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	Max speed (rpm)	d max	D	D1	L	N	S $\pm \frac{2}{0}$		y(mm)	B(°)
112	0,0492	470	8500	40	112	62	55	28	3	12	AS FUNCTION OF DIMENSION "A"	1°
125	0,0848	810	7680	45	125	65	60	28	6	12		
140	0,116	1110	6800	55	140	80	70			14		
160	0,147	1400	6000	60	160	85	80	36		12		
180	0,198	1890	5300	70	180	104	90			14		
200	0,226	2160	4800	75	200	106	100	45		12		
225	0,304	2900	4260	90	225	128	110			14		
250	0,503	4800	3840	95	250	130	120	54	12			
280	0,681	6500	3400	115	280	158	130		10	14		
320	0,959	9160	3000	125	320	172	140	66		12		
360	1,298	12400	2700	150	360	210	160			14		
400	1,466	14000	2400	160	400	224	180	80	14	12		
450	1,999	19000	2160	190	450	265	200			14		
501	2,617	25000	1920	200	500	280	220			16		

The dimension A is to be specified with the request.

For the machining of the finished bores it is necessary to specify diameters and tolerances.

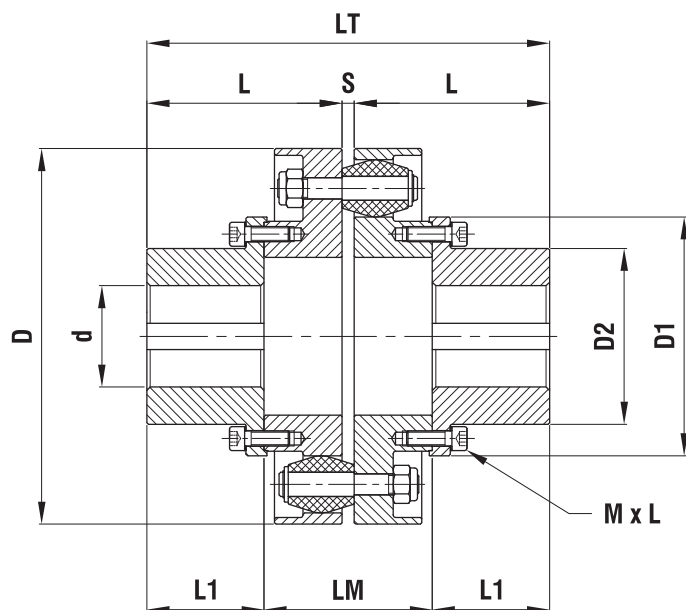
You can also have oversized hubs (see **PNM** series), for high transmission (see **PNHP** series), or with oversized hubs and high transmission (see **PNMHP** series).

On request can be made couplings larger sizes.

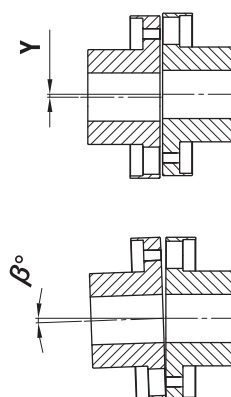
On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNMS series, version with screwed hubs



**MAINTENANCE
WITHOUT MOVING
CONNECTED MACHINES**



TYPE PNMS	TECHNICAL DATA				DIMENSIONS (mm)										SCREWS ISO4017 - 12.9			No. Pins	WEIGHT (kg)	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm²)	d max	D	D1	D2	L	L1	LM	LT	S ± ₀ ²	M x L	No.	Ts (Nm)	y(mm)			β(°)	
160	0,154	1470	6000	0,112	45	160	102	66	90	57	72	186	6	8 x 25	12	34	16	12	0,4	1°	
180	0,201	1920	5300	0,228	60	180	122	88	100	67	72	206		8 x 25	16	34	18	17,5			
200	0,257	2450	4800	0,352	65	200	126	92	110	68	90	226		8 x 25	16	34	16	23,5			
225	0,332	3170	4260	0,604	75	225	150	108	120	78	90	246		10 x 30	12	68	18	33			
250	0,398	3800	3840	0,984	80	250	159	117	130	78	110	266		10 x 30	16	68	16	42			
280	0,513	4900	3400	1,784	105	280	189	146	140	88	110	286		10 x 30	16	68	18	59,5			
320	0,912	8800	3000	3,192	115	320	205	158	160	100	130	330	10	12 x 35	20	125	16	83	0,8		
360	1,204	11500	2700	6,628	135	360	247	200	180	120	130	370		12 x 35	24	125	18	124,5			
400	1,696	16200	2400	9,856	140	400	259	202	200	125	160	410		16 x 50	24	300	16	168,5			
450	2,199	21000	2160	18,68	180	450	309	249	220	145	160	450		16 x 50	32	300	18	314,5			
500	2,597	24800	1920	31,69	190	500	325	265	250	150	214	514	14	16 x 50	32	300	16	336			1,2
560	3,267	31200	1740	48,49	200	560	344	275	280	165	244	574		18 x 55	24	420	18	456,5			
630	4,20	40100	1560	100,4	240	630	414	345	320	205	244	654		18 x 55	32	420	20	658,5			
710	8,482	81000	1400	190,3	270	710	453	376	360	225	284	734		20 x 60	32	600	14	921			
800	12,67	121000	1200	374,2	330	800	543	464	400	265	284	814		20 x 60	36	600	18	1176			1,2
900	17,70	169000	1080	607,5	370	900	613	512	440	290	314	894		24 x 70	32	1100	18	1550			
1000	21,78	208000	960	1033	410	1000	673	572	500	350	314	1014		24 x 70	40	1100	20	1970			
1120	30,78	294000	900	2874	520	1120	845	726	630	480	314	1274		30 x 90	36	2000	24	2565			
1250	40,79	389600	800	4773	610	1250	975	858	670	520	314	1354		30 x 90	44	2000	28	3310			

The Weight and the PD2 are calculated considering coupling with pilot bores.

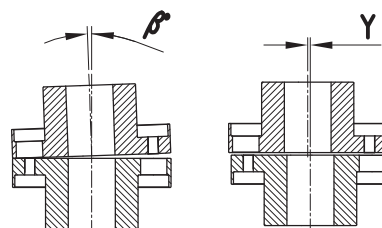
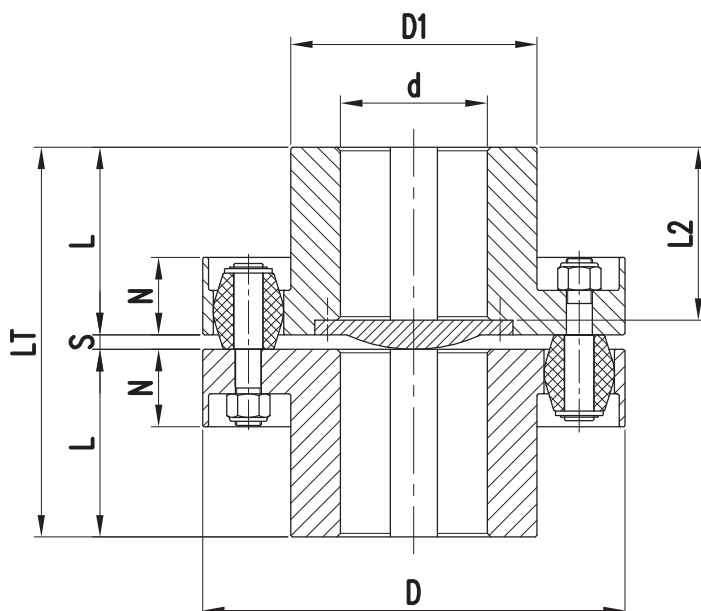
For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

You can also have high transmission (see **PNMHP** series).

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNV series, version for vertical fitting



TYPE PNV	TECHNICAL DATA				DIMENSIONS (mm)								No. Pins	WEIGHT (kg)	MISALIGNMENT (±)		
	$\frac{N}{n} = \frac{KW}{rpm}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm ²)	d max	D	D1	L	L2	N	S ± ₀ ²	LT			y(mm)	β(°)	
160	0,147	1400	6000	0,108	60	160	85	80	73	36	6	166	12	12	0,4	1°	
180	0,198	1890	5300	0,191	70	180	104	90	83			45	186	14			17,5
200	0,226	2160	4800	0,329	75	200	106	100	93	54			206	12			23,5
225	0,304	2900	4260	0,575	90	225	128	110	103				10	226			14
250	0,503	4800	3840	0,984	95	250	130	120	110	66	250	12		42	0,8		
280	0,681	6500	3400	1,60	115	280	158	130	120		80	270	14	59,5			
320	0,959	9160	3000	2,94	125	320	172	140	130	14		290	12	83			1,2
360	1,298	12400	2700	5,21	150	360	210	160	150		18	330	14	124,5			
400	1,466	14000	2400	8,36	160	400	224	180	170	120		374	12	168,5			
450	1,999	19000	2160	15,90	190	450	265	200	190		135	414	14	314,5			
501	2,617	25000	1920	26,40	200	500	280	220	208	150		454	16	336			
560	5,424	51800	1740	50,80	210	560	295	240	228		18	494	12	456,5			
630	7,33	70000	1560	80,50	250	630	360	260	248	150		534	14	658,5			
710	10,26	98000	1400	148,6	290	710	400	280	268		18	574	14	921			
800	13,61	130000	1200	192,2	310	800	430	300	285	150		614	16	1176			
900	18,32	175000	1080	438,0	330	900	460	320	305		18	658	16	1550			
1000	23,56	225000	960	697,0	360	1000	500	350	335	150		718	18	1970			
1120	29,95	286000	900	1081	400	1120	560	380	360		18	778	20	2565			
1250	37,49	358000	800	1676	440	1250	610	420	400			858	22	3310			

The Weight and the PD² are calculated considering coupling with pilot bores.

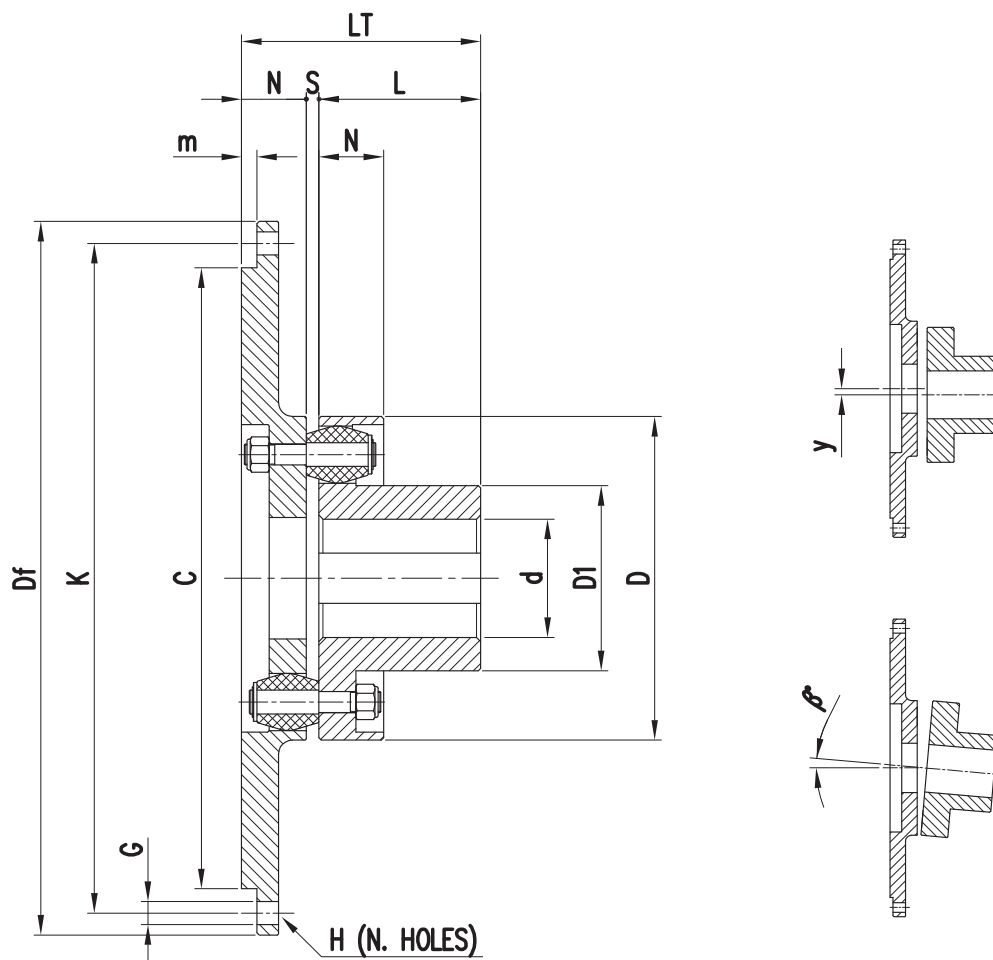
For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

You can also have oversized hubs (see **PNM** series), for high trasmission (see **PNHP** series), or with oversized hubs and high trasmission (see **PNMHP** series).

On request is possible to have one or both hubs with different lengths.

Elastic couplings with pins

PNAF series, version with flange connection



TYPE PNAF	TECHNICAL DATA			DIMENSIONS (mm)							No. Pins	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{kw}{rpm}$	Mt (Nm)	Max speed (rpm)	d max	D	D1	L	N	S $\pm \frac{2}{0}$	LT		y(mm)	B(°)
112	0,0492	470	8500	40	112	62	55	28	3	86	12	0,2	1°
125	0,0848	810	7680	45	125	65	60	28	6	94	12	0,4	
140	0,116	1110	6800	55	140	80	70			104	14		
160	0,147	1400	6000	60	160	85	80	36		122	12		
180	0,198	1890	5300	70	180	104	90			132	14		
200	0,226	2160	4800	75	200	106	100	45		151	12		
225	0,304	2900	4260	90	225	128	110		161	14			
250	0,503	4800	3840	95	250	130	120	54	10	184	12	0,8	
280	0,681	6500	3400	115	280	158	130			194	14		
320	0,959	9160	3000	125	320	172	140	66		216	12		
360	1,298	12400	2700	150	360	210	160			236	14		
400	1,466	14000	2400	160	400	224	180	80		14	274		
450	1,999	19000	2160	190	450	265	200		294		14		
501	2,617	25000	1920	200	500	280	220		314		16		

Dimensions Df, K, C, G, N and H (n. holes) are to be specified with the request.

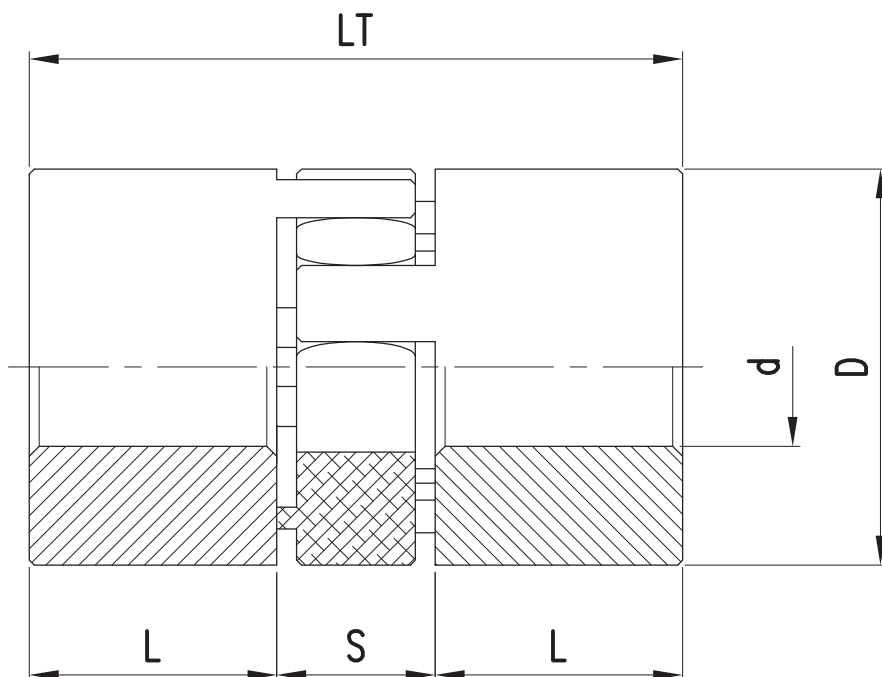
For the machining of the finished bores it is necessary to specify diameters and tolerances.

You can also have oversized hubs (see **PNM** series), for high transmission (see **PNHP** series), or with oversized hubs and high transmission (see **PNMHP** series).

On request can be made couplings larger sizes.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with spider
PSA series, standard version



TYPE PSA	TECHNICAL DATA						DIMENSIONS (mm)					WEIGHT (kg)	MISALIGNMENT (±)		
	SPIDER 92 Sh A		SPIDER 98 Sh A		Max speed (rpm)	PD ² (kgm²)	d max	D	L	S	LT		axial (mm)	angular (°)	radial (mm)
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)											
40	0,00104	10	0,0017	17	19100	0,00049	25	40	25	16	66	0,6	0,50	1°	0,20
55	0,00366	35	0,0062	60	13900	0,00187	35	55	30	18	78	1,1			0,20
65	0,0099	95	0,0167	160	11750	0,0046	40	65	35	20	90	1,9	0,75		0,25
80	0,0198	190	0,0340	325	9550	0,0118	48	80	45	24	114	3,8			0,30
95	0,0277	265	0,0471	450	8040	0,0269	55	95	50	26	126	5,9	1,0		0,30
105	0,0324	310	0,0549	525	7270	0,0476	62	105	56	28	140	8			0,35
120	0,0429	410	0,0717	685	6360	0,0920	74	120	65	30	160	12			0,40
135	0,0654	625	0,0984	940	5660	0,1641	80	135	75	35	185	17,8			0,40
160	0,1340	1280	0,2010	1920	4770	0,3617	95	160	85	40	210	27,5	1,5		0,50
200	0,2513	2400	0,3769	3600	3820	1,0381	110	200	100	45	245	49,3			0,50

The Weight and the PD² are calculated considering coupling unbored.

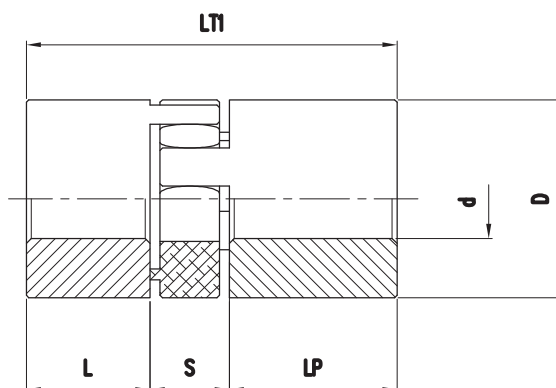
For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both hubs with different lengths.

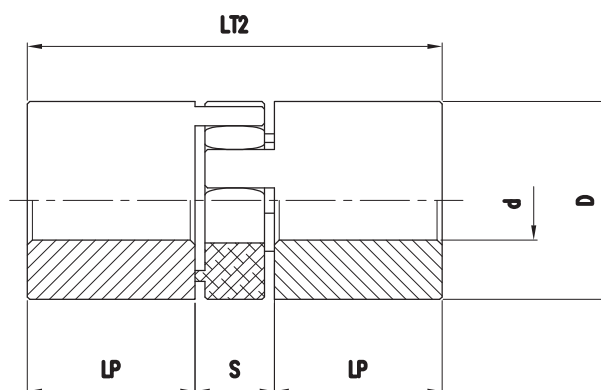
Elastic couplings with spider

PSAP / PSA2P series, version with one or two extended hubs

TYPE PSAP
(ONE EXTENDED HUB)



TYPE PSA2P
(TWO EXTENDED HUBS)



TYPE PSAP PSA2P	TECHNICAL DATA							DIMENSIONS (mm)							WEIGHT (kg)		MISALIGNMENT (±)		
	SPIDER 92 Sh A		SPIDER 98 Sh A		Max speed (rpm)	PD ² (kgm²)		d max	D	L	LP	S	LT1	LT2	PSAP	PSAP2	axial (mm)	angular (°)	radial (mm)
	N n = kW rpm	Mt (Nm)	N n = kW rpm	Mt (Nm)		PSAP	PSAP2												
40	0,00104	10	0,0017	17	19100	0,00064	0,00080	25	40	25	50	16	91	116	0,8	1	0,50	1°	0,20
55	0,00366	35	0,0062	60	13900	0,00264	0,00348	35	55	30	60	18	108	138	1,7	2,3			0,20
65	0,0099	95	0,0167	160	11750	0,00604	0,00788	40	65	35	70	20	125	160	2,8	3,7	0,75		0,25
80	0,0198	190	0,0340	325	9550	0,0175	0,0228	48	80	45	90	24	159	204	5,5	7,2			0,30
95	0,0277	265	0,0471	450	8040	0,0389	0,0508	55	95	50	100	26	176	226	8,6	11,3	1,0		0,30
105	0,0324	310	0,0549	525	7270	0,0648	0,0849	62	105	56	112	28	196	252	11,7	15,4			0,35
120	0,0429	410	0,0717	685	6360	0,1282	0,1682	74	120	65	130	30	225	290	17,7	23,4			0,40
135	0,0654	625	0,0984	940	5660	0,2382	0,3123	80	135	75	150	35	260	335	26	34,2			0,40
160	0,1340	1280	0,2010	1920	4770	0,5280	0,6944	95	160	85	170	40	295	380	40,4	53,3	1,5		0,50
200	0,2513	2400	0,3769	3600	3820	1,5178	1,9975	110	200	100	200	45	345	445	72,7	96,1			0,50

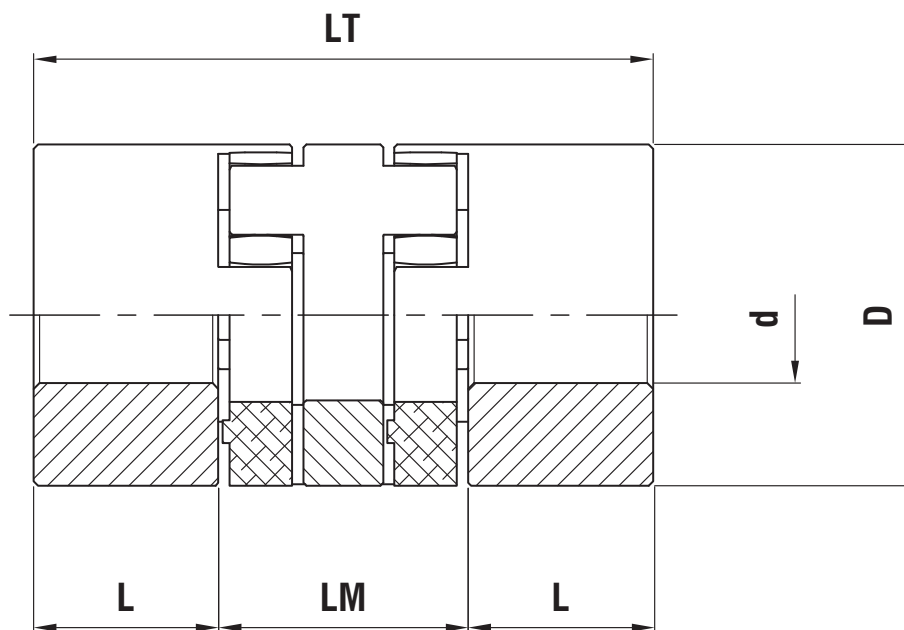
The Weight and the PD² are calculated considering coupling unbored.

For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with spider

PSADC series, version with double cardanic



TYPE PSADC	TECHNICAL DATA						DIMENSIONS (mm)					WEIGHT (kg)	MISALIGNMENT (±)		
	SPIDER 92 Sh A		SPIDER 98 Sh A		Max speed (rpm)	PD ² (kgm ²)	d max	D	L	LM	LT		axial (mm)	angular (°)	radial (mm)
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)											
40	0,00104	10	0,0017	17	19100	0,00056	25	40	25	42	92	0,7	1	1°	0,5
55	0,00366	35	0,0062	60	13900	0,00248	35	55	30	52	112	1,5			0,6
65	0,0099	95	0,0167	160	11750	0,00556	40	65	35	58	128	2,5	1,5		0,7
80	0,0198	190	0,0340	325	9550	0,0157	48	80	45	68	158	4,6			0,8
95	0,0277	265	0,0471	450	8040	0,0348	55	95	50	74	174	7,2	2		0,8
105	0,0324	310	0,0549	525	7270	0,0576	62	105	56	80	192	9,8			0,9
120	0,0429	410	0,0717	685	6360	0,1128	74	120	65	88	218	14,7			1
135	0,0654	625	0,0984	940	5660	0,1720	80	135	75	102	252	17,4			1,2
160	0,1340	1280	0,2010	1920	4770	0,4565	95	160	85	116	286	33	3		1,3
200	0,2513	2400	0,3769	3600	3820	1,2957	110	200	100	130	330	59,2			1,5

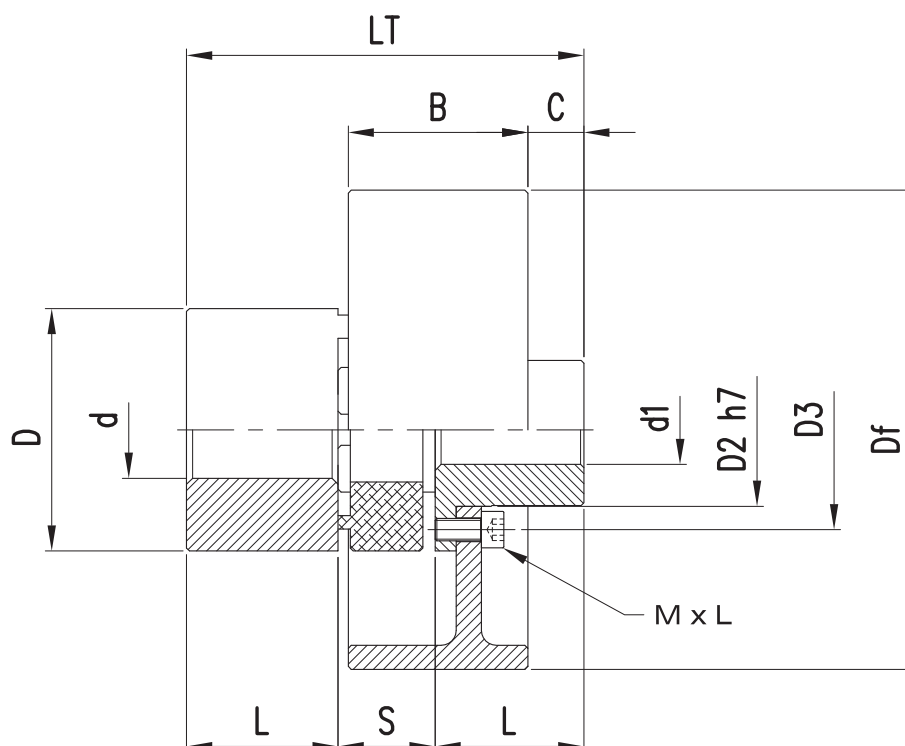
The Weight and the PD² are calculated considering coupling unbored.

For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both hubs with different lengths and greater LM.

Elastic couplings with spider

PSAFF series, version with brake band



TYPE PSAFF	TECHNICAL DATA				DIMENSIONS (mm)								SCREWS ISO4017 - 12.9			MISALIGNMENT (±)		
	SPIDER 92 Sh A		SPIDER 98 Sh A		d max	d1 max	D	L	S	LT	D2	D3	M x L	No.	Ts (Nm)	axial (mm)	angular (°)	radial (mm)
	N n = kW rpm	Mt (Nm)	N n = KW rpm	Mt (Nm)														
80	0,0198	190	0,0340	325	48	30	80	45	24	114	50	66	8 x 20	8	41	0,75	1°	0,30
95	0,0277	265	0,0471	450	55	38	95	50	26	126	60	80	8 x 25	12	41	1,0		0,30
105	0,0324	310	0,0549	525	62	45	105	56	28	140	68	90	8 x 25	12	41			0,35
120	0,0429	410	0,0717	685	74	55	120	65	30	160	78	102	10 x 30	8	83			0,40
135	0,0654	625	0,0984	940	80	65	135	75	35	185	92	116	10 x 30	12	83			0,40
160	0,1340	1280	0,2010	1920	95	75	160	85	40	210	106	136	12 x 40	15	120			0,50
200	0,2513	2400	0,3769	3600	110	95	200	100	45	245	140	172	16 x 40	15	295	0,50		

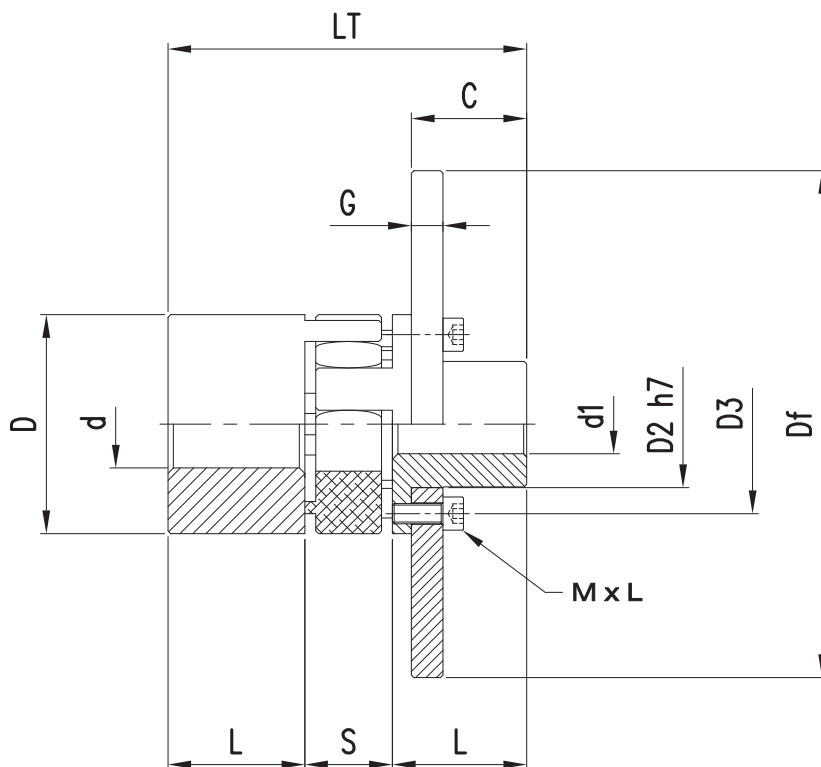
The dimension C is to be specified with the request.

Brake bands are available with different diameter, width and position.

BRAKE BANDS		MOUNTING VARIANT OF THE BRAKE BANDS							MAX SPEED (rpm)
Df x B		Size Coupling PSA							
160	60	80							4770
200	75	80	95	105	120				3800
250	95		95	105	120	135	160		3050
315	118			105	120	135	160	200	2420
400	150						160	200	1900
500	190							200	1520

Elastic couplings with spider

PSADF series, version with brake disk



TYPE PSADF	TECHNICAL DATA				DIMENSIONS (mm)								SCREWS ISO4017 - 12.9			MISALIGNMENT (±)		
	SPIDER 92 Sh A		SPIDER 98 Sh A		d max	d1 max	D	L	S	LT	D2	D3	M x L	No.	Ts (Nm)	axial (mm)	angular (°)	radial (mm)
	N n = kW rpm	Mt (Nm)	N n = kW rpm	Mt (Nm)														
80	0,0198	190	0,0340	325	48	30	80	45	24	114	50	66	8 x 20	8	41	0,75	1°	0,30
95	0,0277	265	0,0471	450	55	38	95	50	26	126	60	80	8 x 25	12	41	1,0		0,30
105	0,0324	310	0,0549	525	62	45	105	56	28	140	68	90	8 x 25	12	41			0,35
120	0,0429	410	0,0717	685	74	55	120	65	30	160	78	102	10 x 30	8	83			0,40
135	0,0654	625	0,0984	940	80	65	135	75	35	185	92	116	10 x 30	12	83	0,40		
160	0,1340	1280	0,2010	1920	95	75	160	85	40	210	106	136	12 x 40	15	120	1,5		0,50
200	0,2513	2400	0,3769	3600	110	95	200	100	45	245	140	172	16 x 40	15	295			0,50

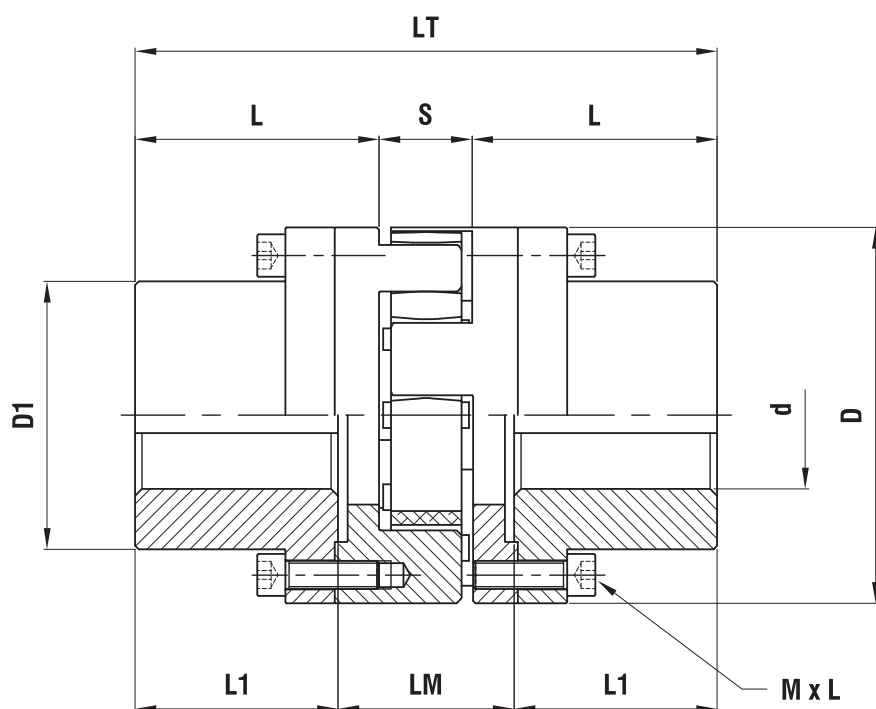
Brake disks are available with different diameter, width and position.

BRAKE DISK		VARIANT DIMENSION “C” AS A FUNCTION OF THE BRAKE DISK MOUNTED							MAX SPEED (rpm)
		Size Coupling PSA							
Df	G	80	95	105	120	135	160	200	
200	12,7	37,5							3800
250	12,7	37,5	40,5	45,5					3050
310	12,7		40,5	45,5	52,5	61,5	69,5		2460
356	12,7			45,5	52,5	61,5	69,5	81,5	2140
406	12,7				52,5	61,5	69,5	81,5	1880
457	12,7				52,5	61,5	69,5	81,5	1670
514	12,7					61,5	69,5	81,5	1480

Elastic couplings with spider

PSAS series, version with screwed hubs

**MAINTENANCE
WITHOUT MOVING
CONNECTED MACHINES**



TYPE PSAS	TECHNICAL DATA						DIMENSIONS (mm)								SCREWS ISO4017 - 12.9			WEIGHT (kg)	MISALIGNMENT (±)		
	SPIDER 92 Sh A		SPIDER 98 Sh A		Max speed (rpm)	PD² (kgm²)	d max	D	D1	L	L1	S	LM	LT	M x L	No.	Ts (Nm)		axial (mm)	angular (°)	radial (mm)
	N n = kW rpm	Mt (Nm)	N n = kW rpm	Mt (Nm)																	
65	0,0099	95	0,0167	160	11750	0,008	28	65	42	45	35,5	20	39	110	6 x 20	8	17	1,6	0,75	1°	0,25
80	0,0198	190	0,0340	325	9550	0,020	38	80	52	55	45,5	24	43	134	8 x 20	8	41	2,9			0,30
95	0,0277	265	0,0471	450	8040	0,040	42	95	62	60	51	26	44	146	8 x 25	12	41	4,8	1,0		0,30
105	0,0324	310	0,0549	525	7270	0,064	48	105	70	68	57	28	50	164	8 x 25	12	41	6,2			0,35
120	0,0429	410	0,0717	685	6360	0,132	55	120	80	81	66	30	60	192	10 x 30	8	83	9,5			0,40
135	0,0654	625	0,0984	940	5660	0,252	65	135	94	91	76	35	65	217	10 x 30	12	83	13,8	1,5		0,40
160	0,1340	1280	0,2010	1920	4770	0,536	75	160	108	104	86,5	40	75	248	12 x 40	15	120	22,2			0,50
200	0,2513	2400	0,3769	3600	3820	1,384	100	200	142	120	101,5	45	82	285	16 x 40	15	295	41			0,50

The Weight and the PD² are calculated considering coupling with pilot bores.

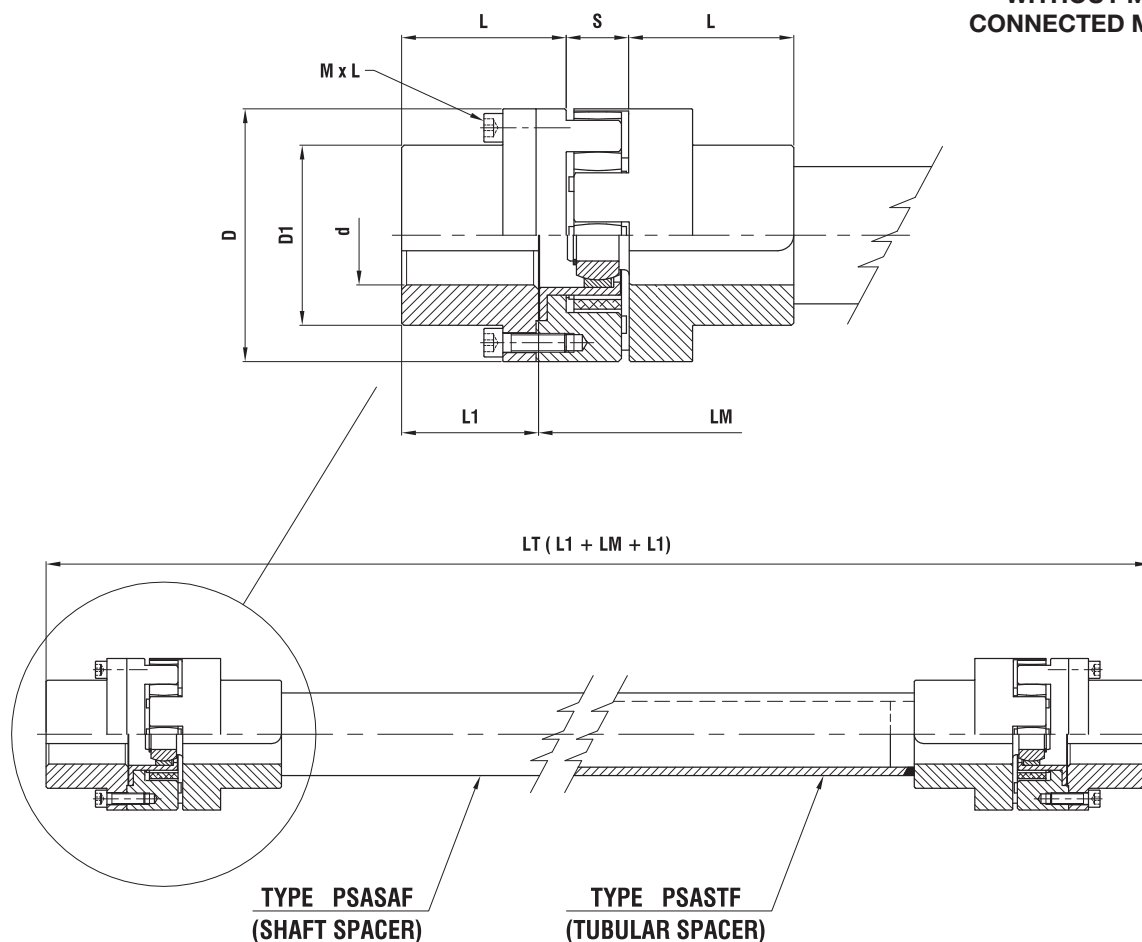
For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both hubs with different lengths.

Elastic couplings with spider

PSAS.AF / PSAS.TF series, version with shaft spacer or tubular spacer and screwed hubs

**MAINTENANCE
WITHOUT MOVING
CONNECTED MACHINES**



The type of spacer (AF or TF) and the dimension LM (DBSE) are to be specified with the request.

TYPE PSAS.AF PSAS.TF	TECHNICAL DATA					DIMENSIONS (mm)						SCREWS ISO4017 - 12.9			MISALIGNMENT (±)		
	SPIDER 92 Sh A		SPIDER 98 Sh A		Max speed (rpm)	d max	D	D1	L	L1	S	M x L	No.	Ts (Nm)	axial (mm)	angular (°)	radial (mm)
	$\frac{N}{n} = \frac{KW}{rpm}$	Mt (Nm)	$\frac{N}{n} = \frac{KW}{rpm}$	Mt (Nm)													
65	0,0099	95	0,0167	160	11750	28	65	42	45	35,5	20	6 x 20	8	17	1,5		
80	0,0198	190	0,0340	325	9550	38	80	52	55	45,5	24	8 x 20	8	41			
95	0,0277	265	0,0471	450	8040	42	95	62	60	51	26	8 x 25	12	41			
105	0,0324	310	0,0549	525	7270	48	105	70	68	57	28	8 x 25	12	41	2	1°	AS FUNCTION OF DIMENSION "A"
120	0,0429	410	0,0717	685	6360	55	120	80	81	66	30	10 x 30	8	83			
135	0,0654	625	0,0984	940	5660	65	135	94	91	76	35	10 x 30	12	83			
160	0,1340	1280	0,2010	1920	4770	75	160	108	104	86,5	40	12 x 40	15	120			
200	0,2513	2400	0,3769	3600	3820	100	200	142	120	101,5	45	16 x 40	15	295	3		

The Weight and the PD² will be calculated on request.

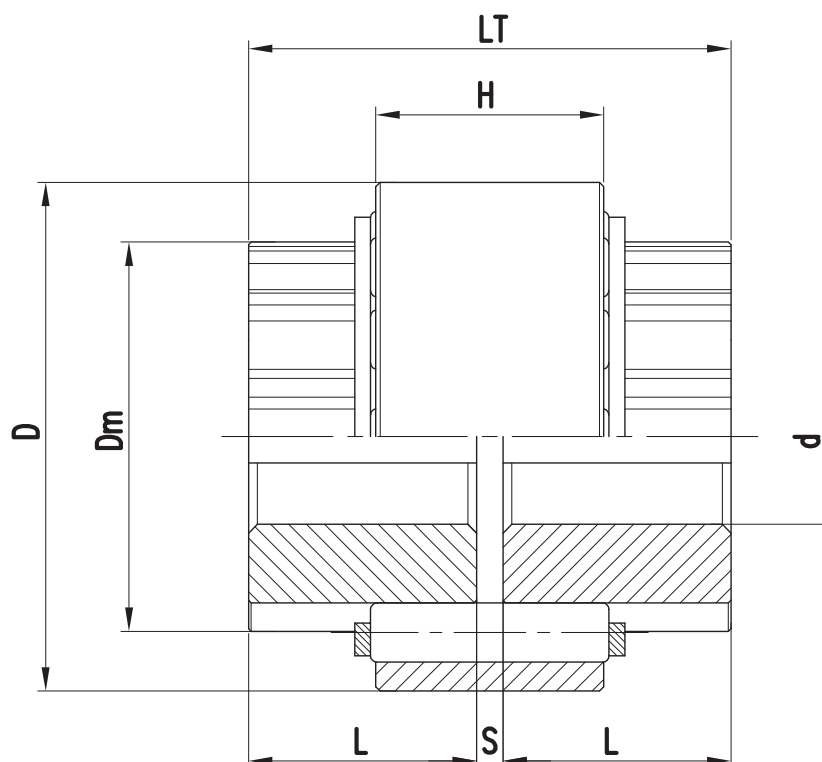
For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both external hubs with different lengths.

Elastic couplings in aluminum

REVOLUTION TYPE **RE** series, standard version

**MAINTENANCE
WITHOUT MOVING
CONNECTED MACHINES**



TYPE RE	TECHNICAL DATA				DIMENSIONS (mm)								No. elastic elements	WEIGHT (Kg)	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{KW}{rpm}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm ²)	d min	d max	D	Dm	L	LT	s	H			axial (mm)	angular (°)
58	0,012	110	16470	0,00034	11	25	58	44	26	55	3	26	12	0,29	1	4°
67	0,019	180	14260	0,00087	13	30	67	51	35	74	4	35	12	0,45	1,2	
86	0,045	430	11100	0,0032	21	42	86	67	47	98	4	47	12	0,99	1,5	
104	0,089	850	9180	0,0078	26	50	104	81	55	114	4	55	15	1,66	2	
129	0,173	1650	7400	0,0233	36	65	129	104	65	135	5	65	15	3,58	2,5	

The Weight and the PD² are calculated considering coupling with pilot bores.

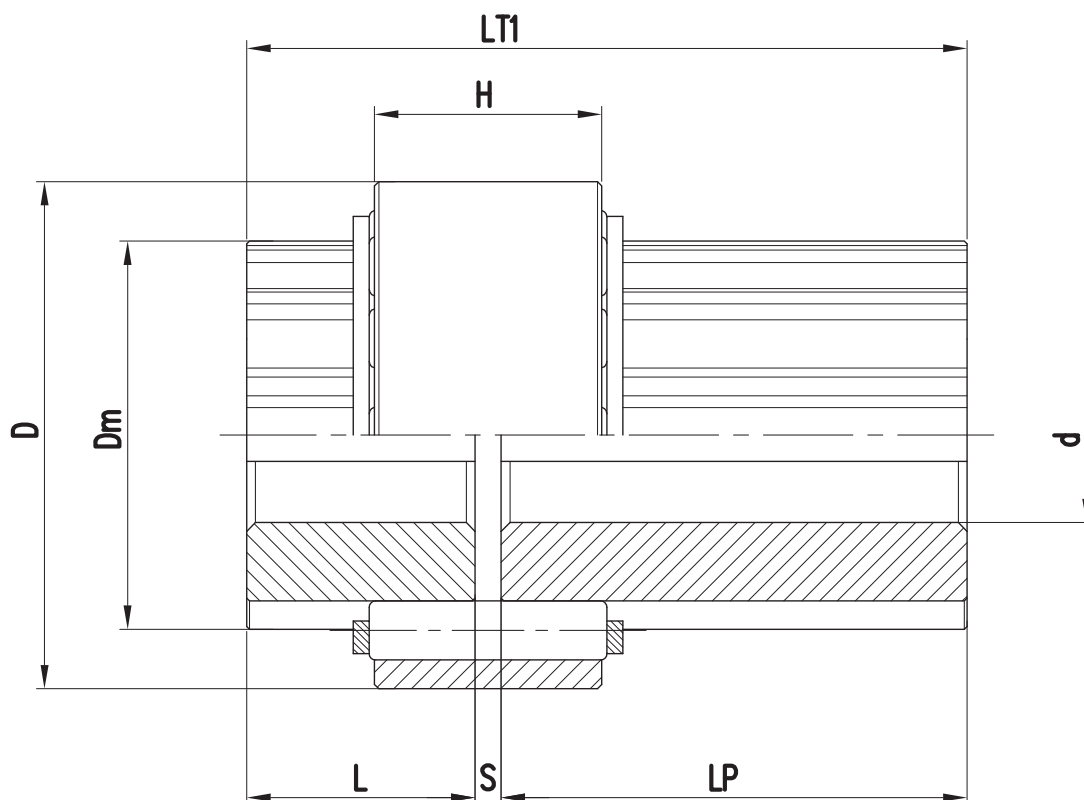
For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both hubs with different lengths.

Elastic couplings in aluminum

REVOLUTION TYPE REP series, version with one extended hub

**MAINTENANCE
WITHOUT MOVING
CONNECTED MACHINES**



TYPE REP	TECHNICAL DATA				DIMENSIONS (mm)										No. elastic elements	WEIGHT (Kg)	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{kW}{rpm}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm ²)	d min	d max	D	Dm	L	LP	LT1	s	H	axial (mm)			angular (°)	
58	0,012	110	16470	0,00041	11	25	58	44	26	50	79	3	26	12	0,37	1	4°	
67	0,019	180	14260	0,00099	13	30	67	51	35	60	99	4	35	12	0,56	1,2		
86	0,045	430	11100	0,0038	21	42	86	67	47	80	131	4	47	12	1,24	1,5		
104	0,089	850	9180	0,0110	26	50	104	81	55	110	169	4	55	15	2,24	2		
129	0,173	1650	7400	0,0340	36	65	129	104	65	140	210	5	65	15	4,88	2,5		

The Weight and the PD² are calculated considering coupling with pilot bores.

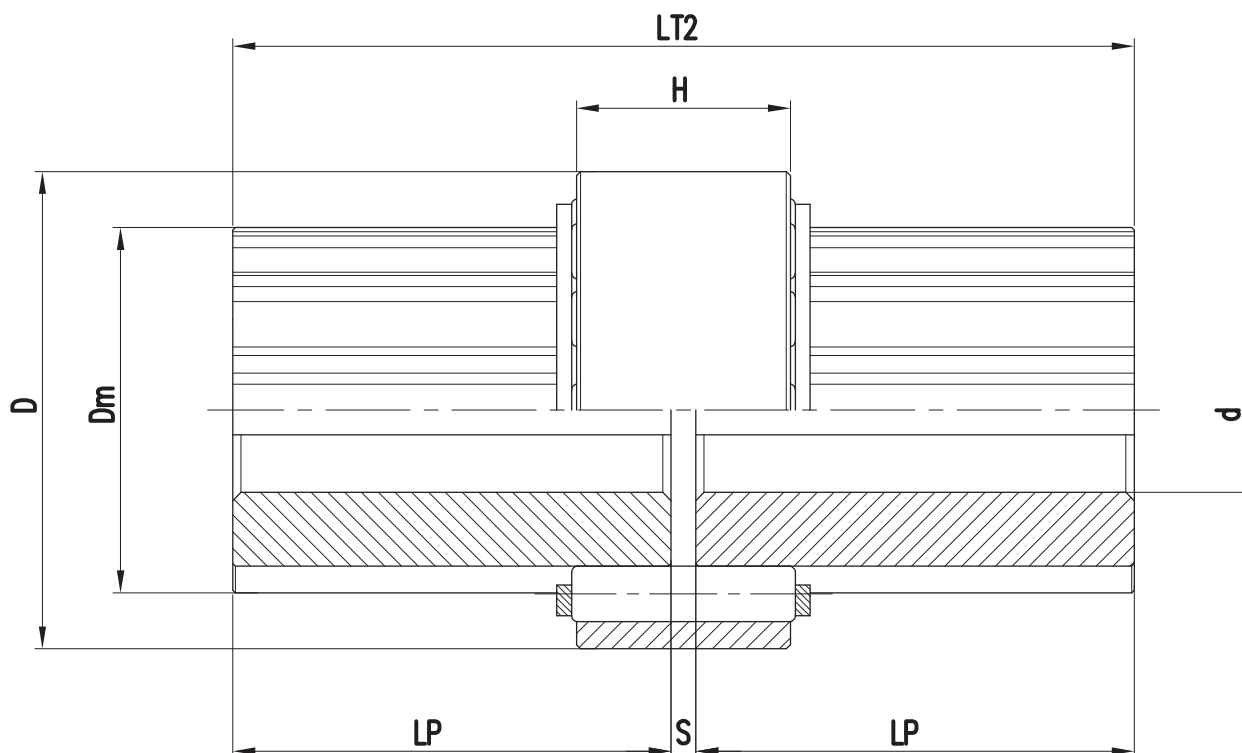
For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both hubs with different lengths.

Elastic couplings in aluminum

REVOLUTION TYPE **RE2P** series, version with two extended hubs

**MAINTENANCE
WITHOUT MOVING
CONNECTED MACHINES**



TYPE RE2P	TECHNICAL DATA				DIMENSIONS (mm)								No. elastic elements	WEIGHT (Kg)	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{KW}{rpm}$	Mt (Nm)	Max speed (rpm)	PD ² (kgm ²)	d min	d max	D	Dm	LP	LT2	s	H			axial (mm)	angular (°)
58	0,012	110	16470	0,00049	11	25	58	44	50	103	3	26	12	0,45	1	4°
67	0,019	180	14260	0,0011	13	30	67	51	60	124	4	35	12	0,67	1,2	
86	0,045	430	11100	0,0043	21	42	86	67	80	164	4	47	12	1,5	1,5	
104	0,089	850	9180	0,014	26	50	104	81	110	224	4	55	15	2,82	2	
129	0,173	1650	7400	0,0448	36	65	129	104	140	285	5	65	15	6,18	2,5	

The Weight and the PD² are calculated considering coupling with pilot bores.

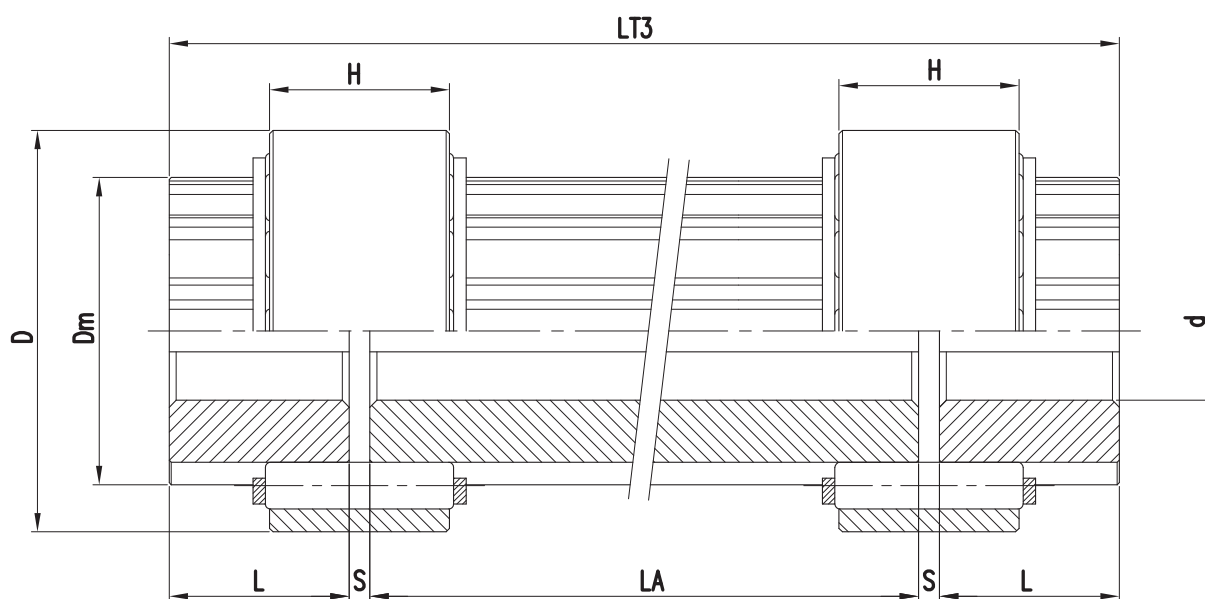
For the machining of the finished bores it is necessary to specify diameters and keyways with tolerances.

On request is possible to have one or both hubs with different lengths.

Elastic couplings in aluminum

REVOLUTION TYPE REAF series, version with floating shaft

**MAINTENANCE
WITHOUT MOVING
CONNECTED MACHINES**



TYPE REAF	TECHNICAL DATA			DIMENSIONS (mm)								No. elastic elements	MISALIGNMENT (±)	
	$\frac{N}{n} = \frac{\text{kW}}{\text{rpm}}$	Mt (Nm)	Max speed (rpm)	d min	d max	D	Dm	L	LT3	s	H		axial (mm)	angular (°)
58	0,012	110	16470	11	25	58	44	26	L + 58	3	26	12	2	8°
67	0,019	180	14260	13	30	67	51	35	L + 78	4	35	12	2,4	
86	0,045	430	11100	21	42	86	67	47	L + 102	4	47	12	3	
104	0,089	850	9180	26	50	104	81	55	L + 118	4	55	15	4	
129	0,173	1650	7400	36	65	129	104	65	L + 140	5	65	15	5	

Dimension LA must be specified with the request.

For the machining of the finished bores it is necessary to specify diameters and tolerances.

On request is possible to have one or both hubs with different lengths.

FITTING

In mounting the couplings **Northon** please follow these instructions:

- 1) Clear accurately the shafts to be connected and the holes of the two half-couplings.
- 2) Heat the coupling halves to the temperature indicated below depending on the tolerances adopted.

Tolerance H7/m6	Tolerance H7/n6	Tolerance H7/r6	Tolerance H7/s6
+ 90°C	+ 110°C	+ 160°C	+ 200°C

- 3) Fitting the half-couplings at the end of each shaft.
- 4) When the half-couplings are cold, bring them together to get the value of “s” as indicated in the table. In order to check this value, use a feeler gauge and verify that the share is identical in 4 points placed at 90 ° to each other (Fig 1).
- 5) Check with a straight edge, on 2 points of the external diameter of the half-coupling, situated at 90° with each other, the parallel and angular misalignment of the shafts.
The alignment can be considered correct when you will not notice the passage of light between the straight edge and the external diameter of the two half-couplings. (Fig 2).

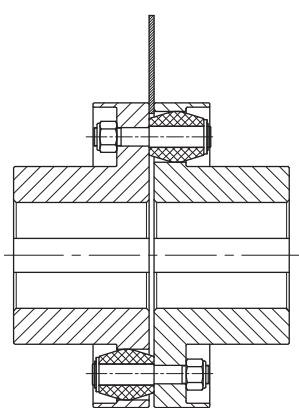


Fig. 1

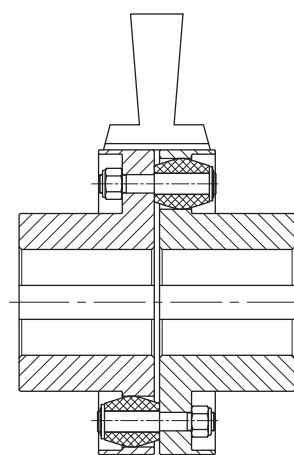
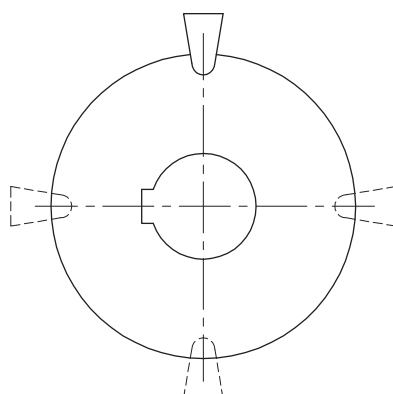
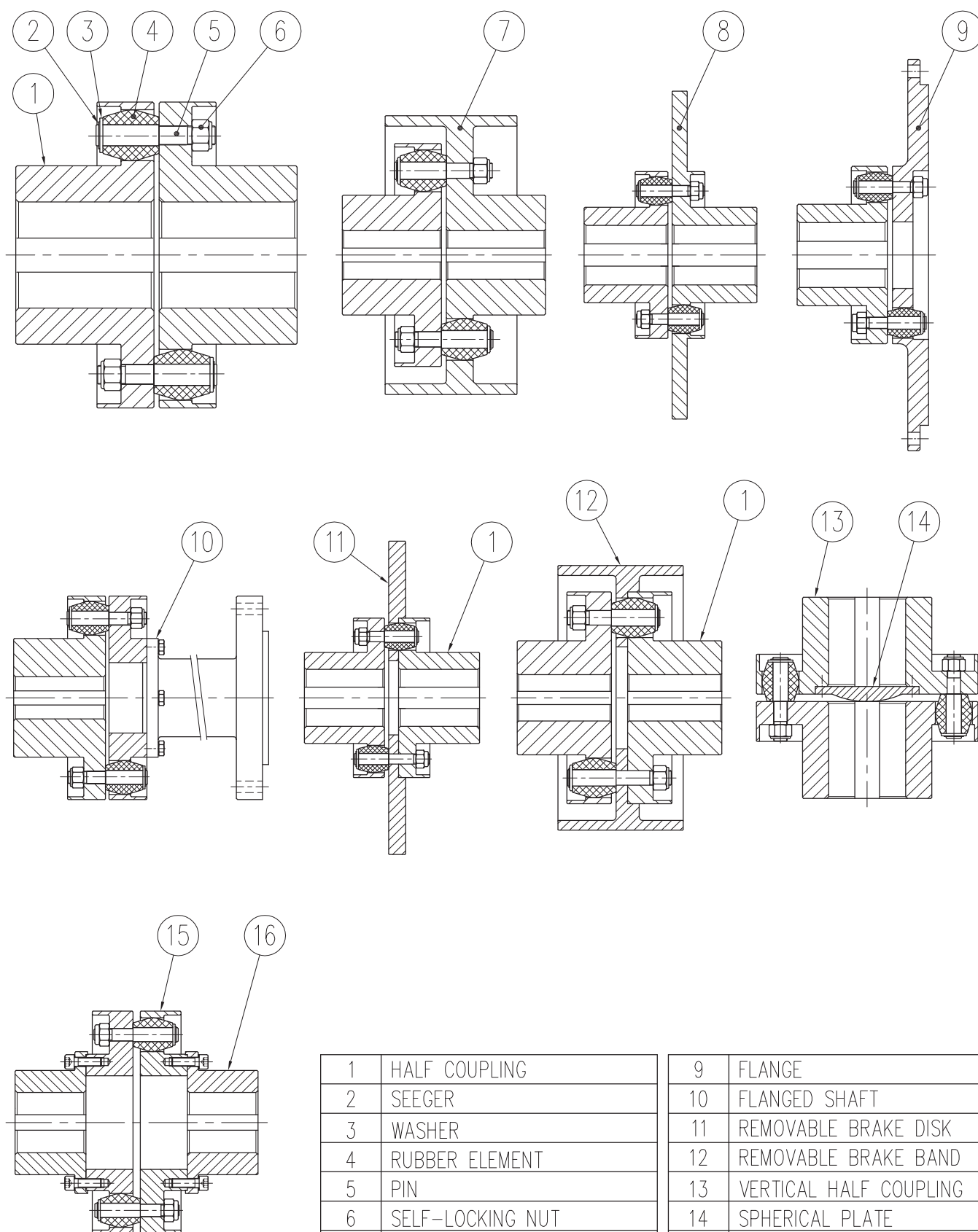


Fig. 2

It is unnecessary to say that a **better alignment** corresponds to a **longer life** of the coupling.

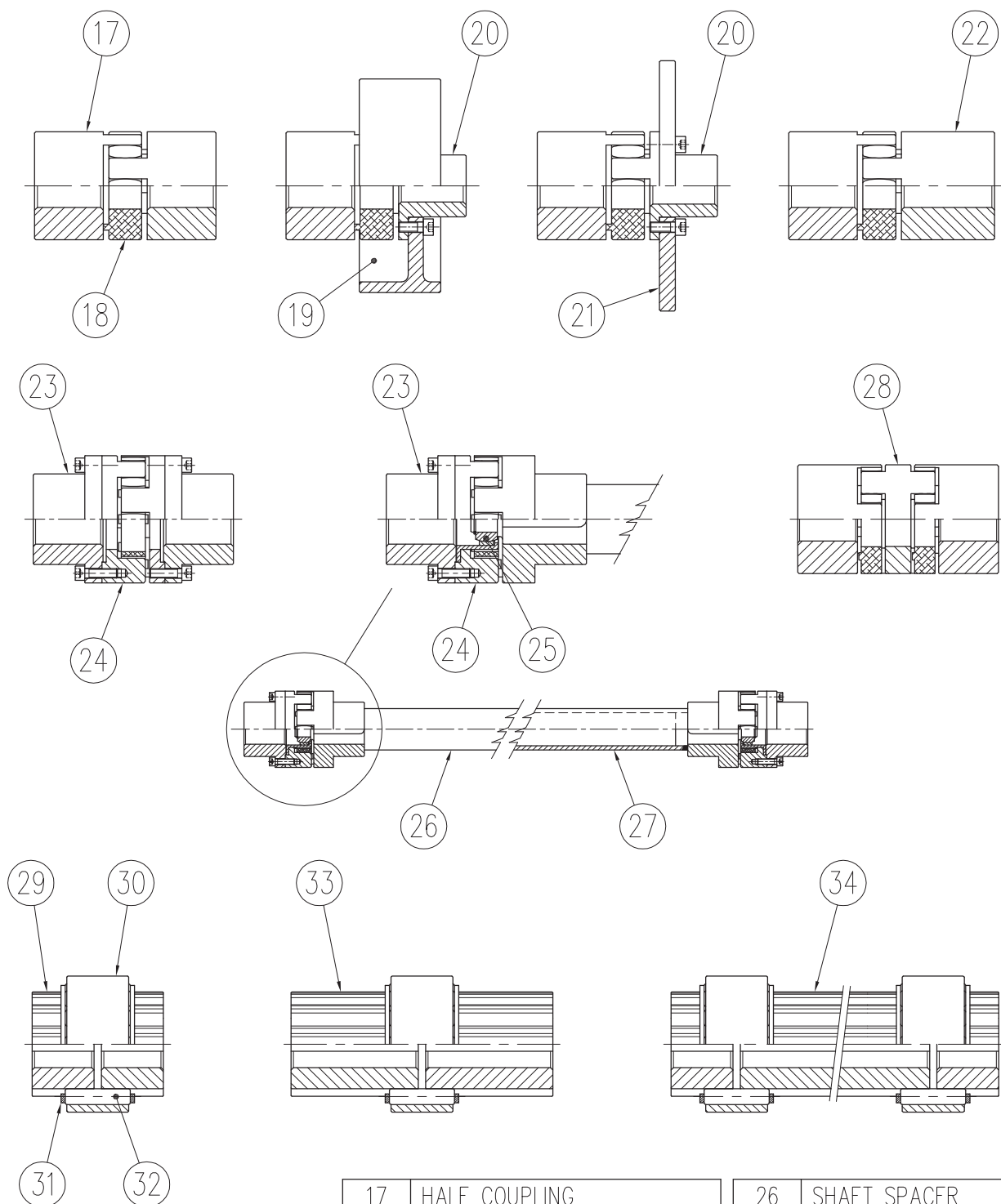
COMPONENTS



1	HALF COUPLING
2	SEEGER
3	WASHER
4	RUBBER ELEMENT
5	PIN
6	SELF-LOCKING NUT
7	HALF COUPLING BRAKE BAND
8	HALF COUPLING BRAKE DISK

9	FLANGE
10	FLANGED SHAFT
11	REMOVABLE BRAKE DISK
12	REMOVABLE BRAKE BAND
13	VERTICAL HALF COUPLING
14	SPHERICAL PLATE
15	FLANGED HALF COUPLING
16	RIGID HUB

COMPONENTS



17	HALF COUPLING	26	SHAFT SPACER
18	SPIDER	27	TUBULAR SPACER
19	BRAKE BAND	28	CARDANIC HALF COUPLING
20	DRILLED HALF COUPLING	29	HUB
21	BRAKE DISK	30	SLEEVE
22	EXTENDED HALF COUPLING	31	SEEGER
23	RIGID HUB	32	RUBBER ELEMENT
24	FLANGED HALF COUPLING	33	EXTENDED HUB
25	UNIBAL	34	FLOATING SHAFT

SAFETY REGULATIONS

- 1.) Before performing any assembling operation of NORTHON couplings, make sure that machines to be connected cannot start running in any way.
Verify that the power supply is off.
- 2.) Assembling operations must be done exclusively by qualified and trained personnel.
- 3.) Personnel that take part in the assembling operations must wear adequate clothes and should have personal safety devices.
- 4.) The couplings are normally supplied with corrosion inhibitor for the internal warehousing.
If toxic chemicals are utilized for cleaning the couplings and for removal of the inhibitor, it is required to protect adequately both assembling personnel and the working environment.
- 5.) The use of lifting equipment in order to position and assemble the coupling requires a complete respect of the safety rules.
- 6.) In case of use of flames respect safety rules. Keep in mind that is forbidden to use flames in saturated environments with a high risk of explosions.
- 7.) In any case of manumission or modification of the couplings from its original state, the constructor will not be liable for any kind of possible direct or indirect damage caused to people, animals or things.
- 8.) During the first starting of the installation make sure that there are no risks for the personnel in charge of assembling. It is absolutely necessary to keep a certain safety distance from the point of the installation of the coupling.
- 9.) The couplings, being rotating parts, are subject to the present EU industrial injury legislation that provides the use of the protection carter.
- 10.) Finally, it is important to remember that the coupling should not exceed the values of the working torque, speed or angular misalignment indicated by the constructor.

This catalogue replaces every previous edition.
NORTHON TRASMISSIONI S.R.L. reserves the right to modify it without any prior notice.
2019 edition

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Northon Trasmissioni s.r.l.
has the quality management system certifies from DNV GL.

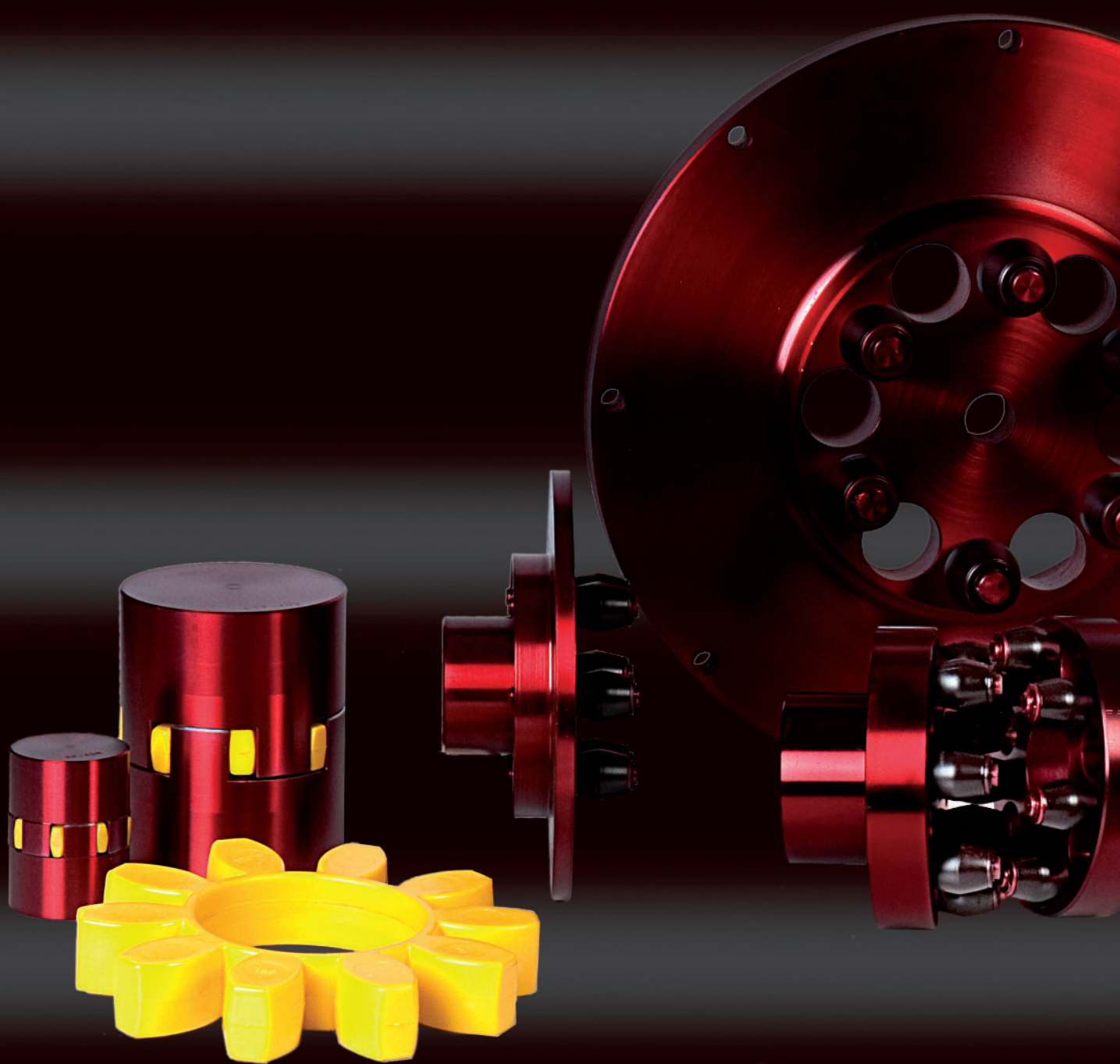
Certificate No. **108598-2011-AQ-ITA-ACCREDIA**

Conforms to the quality management systems standard **UNI EN ISO 9001**

This certificate is valid for the following products or services :

**Design and manufacture of transmission couplings.
Mechanical machining and assembling on customer's specification
(Sector EA : 17 - 18)**

Initial Certification Date : **2011-12-27**



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