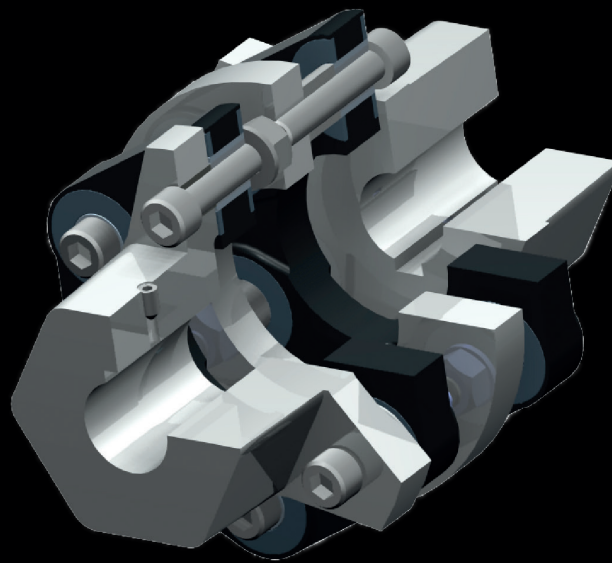


**Mönninghoff**

**HexaFlex - torsionally flexible  
shaft coupling  
Type 323**



## HexaFlex - torsionally flexible shaft coupling - Type 323

### Characteristics and features

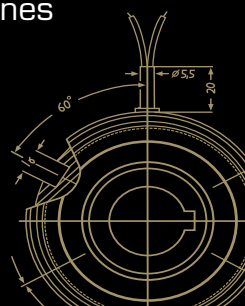
- connects drive shaft and driven shaft like a universal cardan joint
- compensating axial, radial and angular misalignments
- backlash-free
- wear-free
- doublecardanic
- transmitted torque: 100 – 2250 Nm
- especially suitable for reversing operation
- radial mounting possible
- two symmetric hubs are connected by a flexible joint disc element
- hub material can be steel or aluminium
- easy-to-assemble solution  
(joint disc can be assembled or disassembled without axial movement)
- forcelocking and wear-free connection of hub and joint disc by high-tensile screws



Mönninghoff power transmission represents an infinite variant diversity that is applied by all areas of modern mechanical engineering.

Our technologies are mostly designed to operate under extreme conditions. We offer high precision products for medical robotics, fail-proof security for aerospace technology or synchronization solutions for the packaging or printing industry.

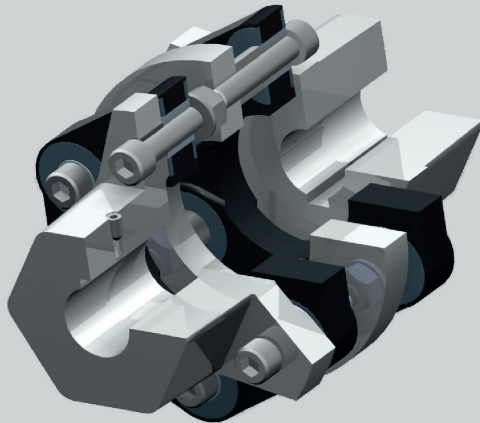
We thus address customers who have the highest standards for their own machines or systems. To them, we can offer highly complex, application-specific solutions.



## HexaFlex - torsionally flexible shaft coupling - Type 323

### Match code

Mönninghoff shaft couplings are indicated by the following match code:



**323 . A . B . 2**

- A** coupling size
- B** hub material

Other individual characteristics:

- nominal torque
- bore size with keyway

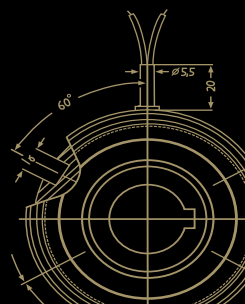
According to these characteristics, we design individual solutions concerning transmitted torque, engaging behavior or rotation speed.

Our engineers can assist with finding an application-specific coupling at any time. Together, we can develop individual and innovative solutions for extreme operating conditions.

### Ordering example

Mönninghoff HexaFlex shaft coupling  
Type 323.98.1.2

nominal torque	2250 Nm
bore size d	80 mm H7, keyway acc. to DIN 6885/1
bore size d <sub>1</sub>	90 mm H7, keyway acc. to DIN 6885/1



## HexaFlex - torsionally flexible shaft coupling - Type 323

### Coupling size

When dimensioning a Mönninghoff HexaFlex coupling, several technical preconditions should be considered:

- to select the correct size, the torque to be transmitted has to be taken into account

$$T_K = 9550 \cdot \frac{P}{n} \cdot K_B \cdot K_A \cdot K_T \text{ [Nm]}$$

- general information on operating, starting and temperature factors can be found at the end of this datasheet
- the nominal torque  $T_{KN}$  of the coupling should be equal to or be greater than the calculated torque  $T_K$  of this equation

### Hub material

Mönninghoff HexaFlex shaft couplings are available in different hub materials:

- hub material 1            steel            (only size 98)
- hub material 2            aluminium    (sizes 32 – 70)

$T_K$  = torque

$T_{KN}$  = nominal torque

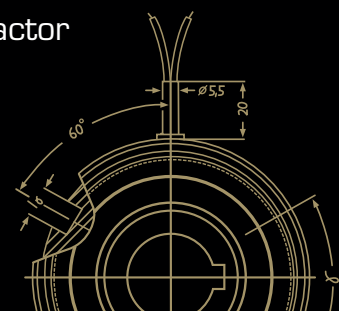
$P$  = power of motor [kW]

$n$  = max. coupling speed [ $\text{min}^{-1}$ ]

$K_B$  = operating factor

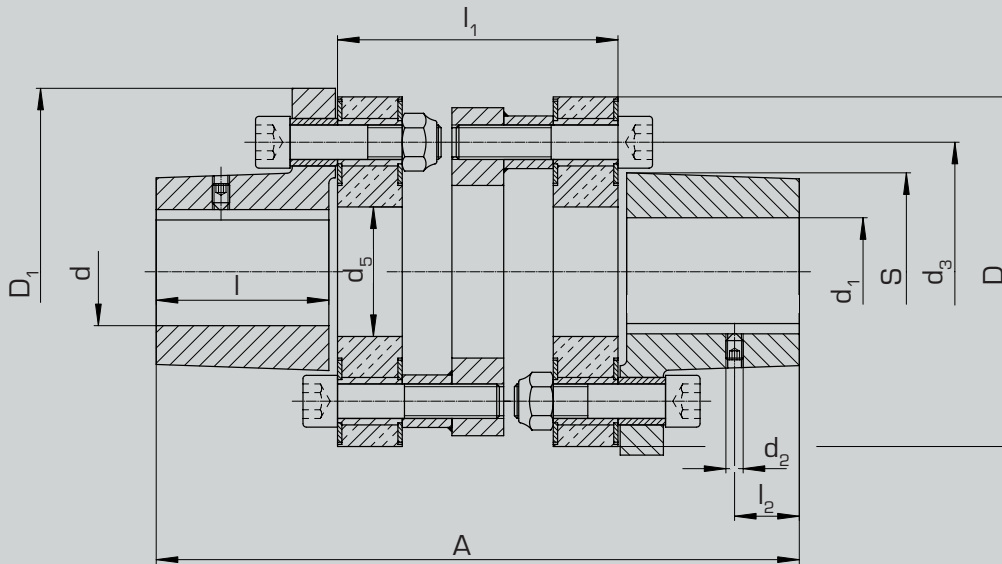
$K_A$  = starting factor

$K_T$  = temperature factor



## HexaFlex - torsionally flexible shaft coupling - Type 323

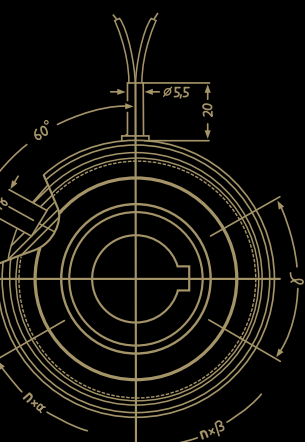
### Coupling size



Type 323

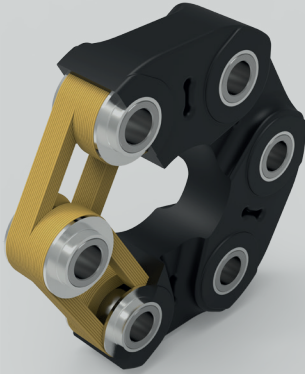
### Technical data

Size		32	38	48	60	70	98
torque	$T_{K \text{ Nenn}}$	100	200	350	800	1200	2250
max. speed	$n$ [min <sup>-1</sup> ]	3000	3000	2250	2000	1800	1200
inertia	[10 <sup>-3</sup> kg m <sup>2</sup> ]	3,2	6,1	10,6	26,9	53	296
weight	[kg]	3,5	4,5	7,5	13	18	50
wind up $T_{K \text{ Nenn}}$		5	3	3	5	3	3
max. diffraction angle	[°]	3	3	2	2	2	3
tightening torque screws	[Nm]	49	60	69	150	150	300
bore $d$ , H7 keyway acc. to DIN 6885/1	min. [mm]	14	19	22	24	30	40
	max. [mm]	32	38	48	60	70	95
dimensions	$D$ [mm]	101	120	143	162	195	244
	$D_1$	100	118	145	170	200	250
	$d_2$	M5	M6	M6	M8	M8	M8
	$d_3$	75	85	106	120	140	200
	$d_5$	39	39	63	65	70	112
	DIN 912	M10	M10	M10	M16	M16	M24
$A$		165	192	202	298	329	426
$l$		40	50	55	80	95	120
$l_1$		78	85	84	130	130	176
$l_2$		11	20	20	30	40	50
S 6 - kt		51	60	74	86	100	150



## HexaFlex - torsionally flexible shaft coupling - Type 323

### Joint disc



- the flexible joint disc allows the compensation of axial, radial and angular misalignment
- it dampens torque shocks and harmful torque oscillations
- the rayon textile loops are strengthened by steel bushes at the joints
- this arrangement of the flexible element is coated with styrene-butadiene rubber (SBR)

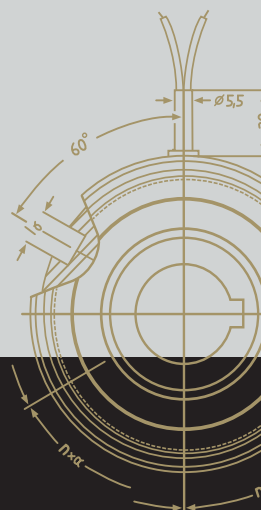
### Joint disc characteristics

Resistant against	
water	+
steam	+
hydraulic oils	-
mineral greases and oils	-
vegetable and animal greases and oils	-
ozone	-
aliphatic hydrocarbons	-
aromatic hydrocarbons	-
halide hydrocarbons	-
alcohols	+
ketones	+
ester	-
acid diluted	0
acid concentrated	-
lye diluted	+
lye concentrated	0
salt solution brine	+

### General characteristics

- shore of 60 - 92°
- temperature stability of -30 to +80 °C (short-term also up to 100 °C)
- wear and tearing strength resistance
- good resistance to heat and creep

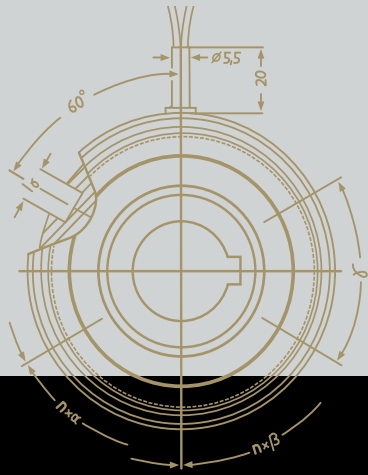
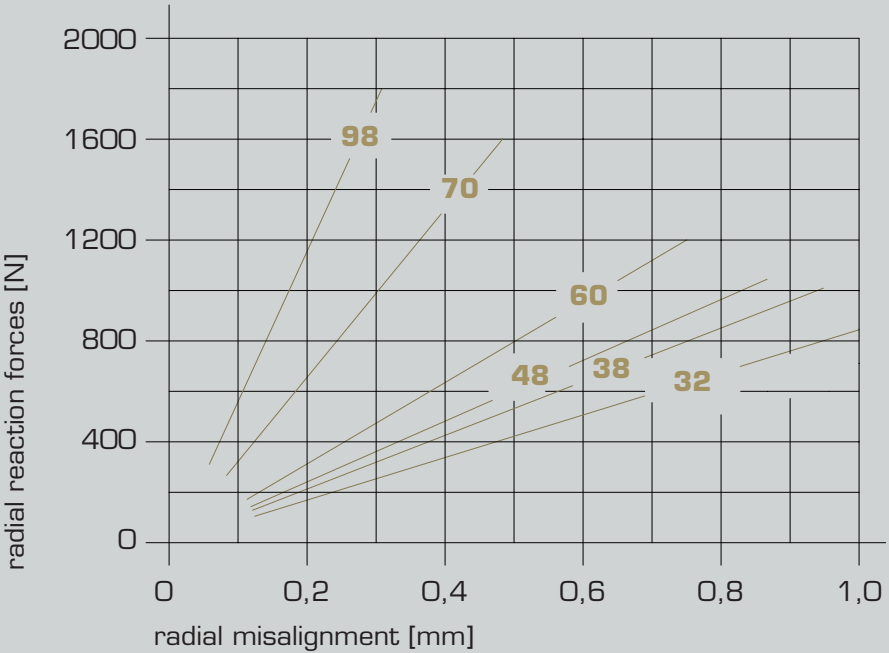
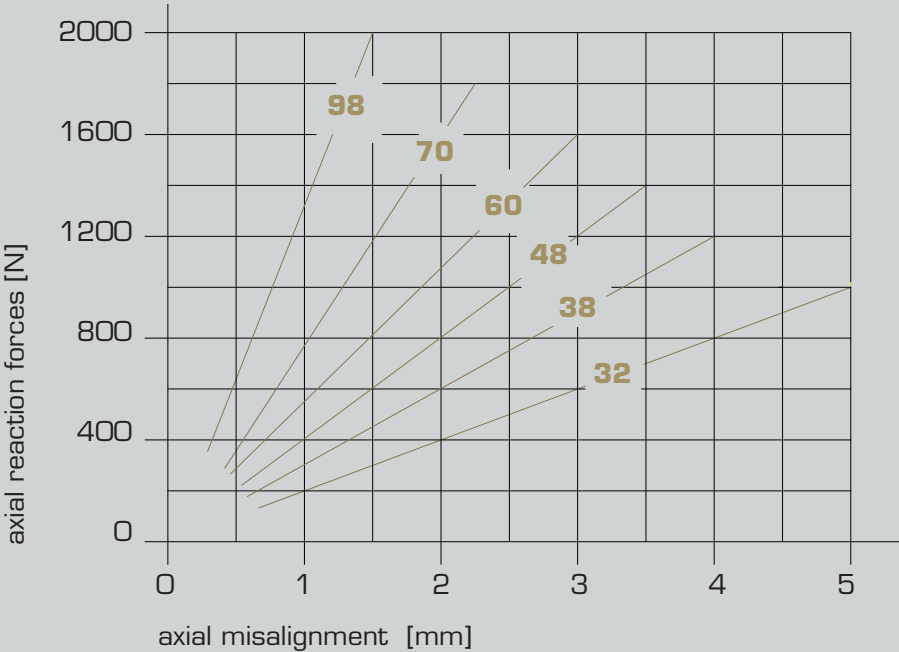
- + suitable
- 0 moderately suited
- unsuitable



## HexaFlex - torsionally flexible shaft coupling - Type 323

### Misalignment

- axial or radial misalignment of the shaft causes axial forces to act on the bearings of the shaft according to the diagram below
- the values displayed are mean values and can vary up to 30%
- the end points of the graphs indicate the maximum permissible misalignments



## HexaFlex - torsionally flexible shaft coupling - Type 323

### Operating factor

	operating hours per day	operating factor $K_B$		
		electric motor transmission line	multi-cylinder internal combustion engine hydraulic / air motor	1-2 cylinder internal combustion engine
<b>Light smooth loads</b> small generators, centrifugal pumps, centrifugal compressors, conveyors	4	0,8	1,0	1,25
	8	1,0	1,25	1,5
	24	1,25	1,5	1,75
<b>Loads without heavy shock, few reversals</b> screw conveyors, mixers, woodworking machines, machine tools	4	1,0	1,25	1,5
	8	1,25	1,5	1,75
	24	1,5	1,75	2,0
<b>Uneven loads, heavy shock, few reversals</b> reciprocating pumps and compressors, textile machines, large mixers, centrifuges	4	1,25	1,5	1,75
	8	1,5	1,75	2,0
	24	1,75	2,0	2,25
<b>Severe operating conditions, frequent reversals</b> reciprocating compressors without fly wheels, mills, rolling mills	4	1,5	1,75	2,0
	8	1,75	2,0	2,25
	24	2,0	2,25	2,5

For coupling size 98:  $K_B \cdot 1,2$

### Starting factor

Starts / hour	up to 30	up to 60	up to 120	up to 180
Starting factor $K_A$	1,0	1,2	1,5	2,0

### Temperature factor

Atmospheric temp. in °C	-40 to -10	-10 to +40	+40 to +60	+60 to +80
Temperature factor $K_T$	1,25	1,0	1,25	1,4

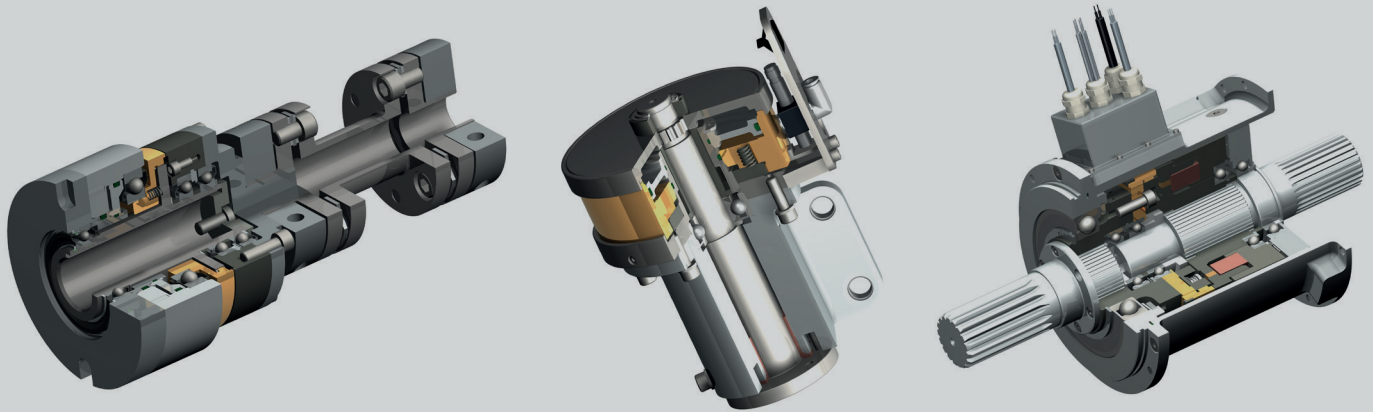




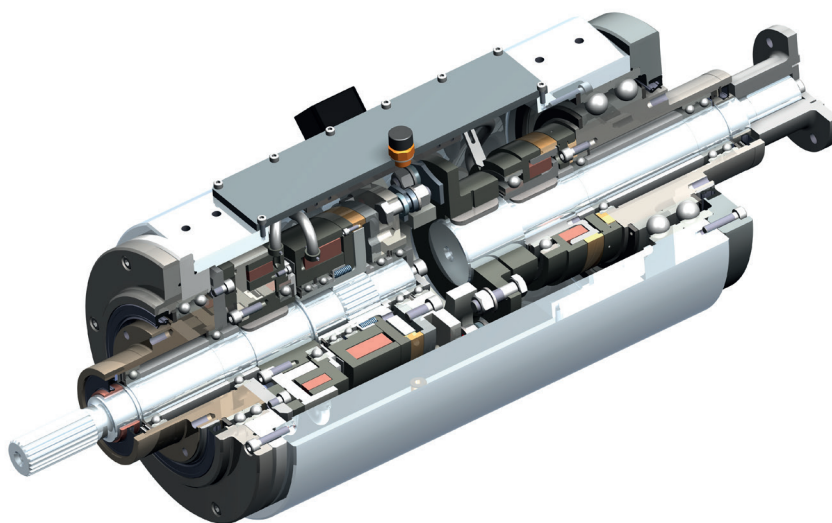
## System solutions

### You need more?

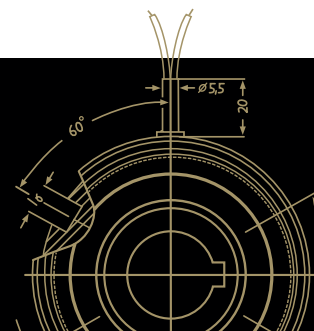
Mönninghoff clutches can be combined with a variety of many other power transmission elements. Such complex high-tech systems can solve any application-specific tasks and can fulfill any customer-specific wishes.



In many cases, a combination of different drive elements is needed to solve the applications particular problems and difficulties. Being not just supplier but technological partner to our customers, our extensive engineering is part of extraordinary and challenging power transmission projects.



**Our product is the know-how,  
with hardware as an added bonus.**



## Driven by excellence

### Why Mönninghoff

- intensive dialog with our customers' engineers
- decades of experience and competence
- deep understanding for all areas of mechanical engineering
- highly modern and flexible machine park
- enthusiasm for quality
- flexibility, inventiveness and communication skills of our employees
- commitment to Germany and Bochum as industrial location

### How to reach us

#### Sales

sales@moenninghoff.de  
+49 234 3335-250



Helps you find a customer-specific power transmission solution for extraordinary circumstances.

#### Order Management

confirmation@moenninghoff.de  
+49 234 3335-353



For the competent processing and smooth handling of your orders and delivery dates.

#### Service

service@moenninghoff.de  
+49 234 3335-333



Feels committed to protect and preserve the high value of your machine and to secure its availability.

