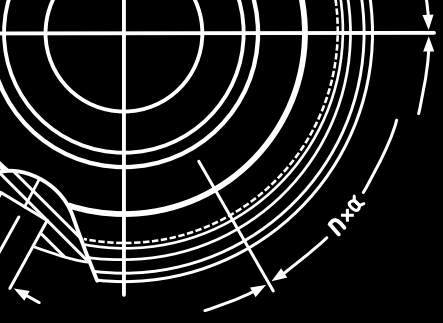
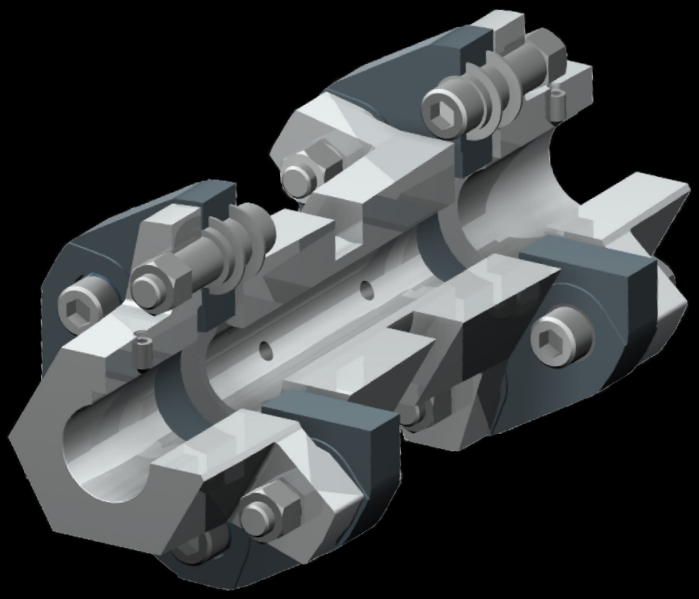


Mönninghoff

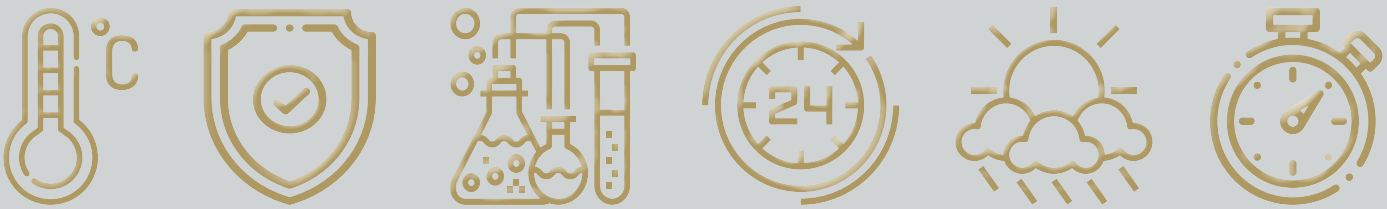
HexaFlex
Type 333



HexaFlex - Type 333

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
- self-supporting up to 2,9 m
- transmitted torque: 100 – 1200 Nm
- especially suitable for reversing operation
- radial mounting possible
- two symetric hubs are connected by a flexible joint disc element
- hub material 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.

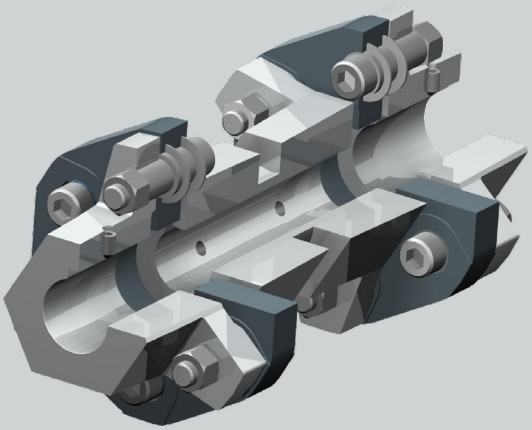
Our technologies are mostly designed to operate under extreme conditions. We offer high precision products for medical robotics, fail-proof security for aerospace technology or synchronization soultions for the packaging or printing industry.

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 - Type 333

Match code

Mönninghoff HexaFlex couplings are indicated by the following match code:



333 . A . B . 2

A coupling size
B hub material

Other individual characteristics:

- spacer length
- 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
Type 333.48.2.1

Length A	895 mm
Bore d	38 mm H7, keyway acc. to DIN 6885/1
Bore d_1	45 mm H7, keyway acc. to DIN 6885/1

HexaFlex - Type 333

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

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

- 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

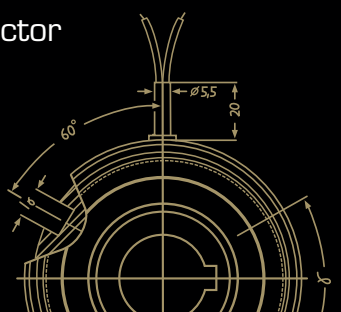
Options of mounting and integration

The HexaFlex couplings allow different options of mounting, depending on the demands of the application:

- option 0 hub with keyway / joint disc / spacer / joint disc / flange
- option 1 hub with keyway / joint disc / spacer/ joint disc / hub with keyway

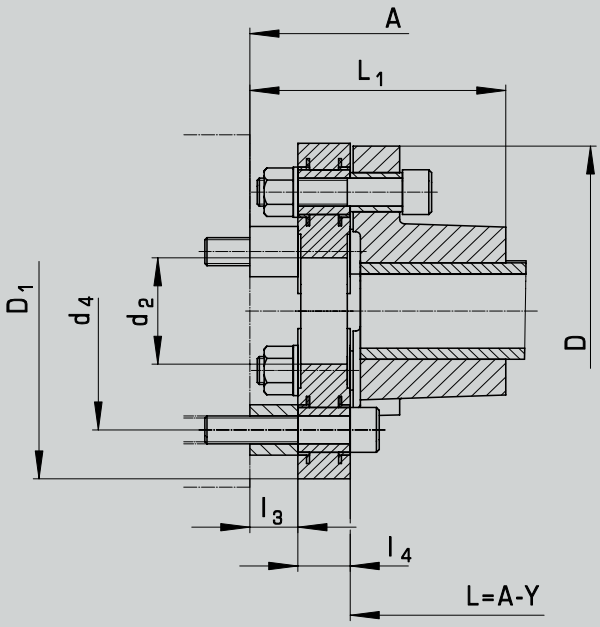
T_K = torque
T_{KN} = nominal torque
P = power of motor [kW]
n = max. coupling speed [min^{-1}]

K_B = operating factor
K_A = starting factor
K_T = temperature factor



HexaFlex - Type 333

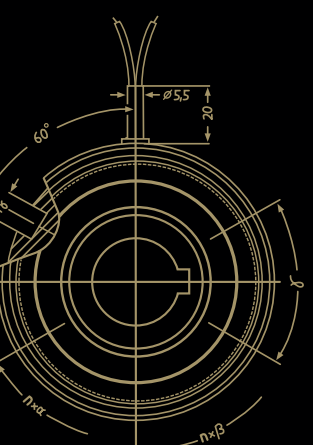
Coupling size



Type 333, option of mounting O

Technical data option O

Size			32	38	48	60	70
torque		$T_{K\,Nenn}$	100	200	350	800	1200
inertia without pipe	type 2.1	[10^{-3} kg m²]	2,2	4,2	8,2	22,2	45,4
	type 2.0		2,0	3,9	7,3	20,0	40,6
inertia with pipe		[10^{-3} kg m²]	0,76	0,76	2,7	2,7	2,7
weight		[kg]	2,2	3,4	5,4	9,4	14,2
weight 1m pipe			3,2	3,2	4,5	4,5	4,5
wind up $T_{K\,Nenn}$		[°]	5	3	3	5	3
radial misalignment / 100 mm pipe		[mm]	5,2	5,2	3,4	3,4	3,4
tightening torque screws		[Nm]	49	60	69	150	150
bore d, d_1 H7 keyway acc. to DIN 6885/1	min.		14	19	22	24	30
	max.		32	38	48	60	70
		D [mm]	101	120	143	162	195
		D_1	100	118	145	170	200
		d_2	39	39	63	65	70
		d_4	75	85	106	120	140
		d_6	42	42	58	58	58
		L	103	125	136	198	232
		L_1	76	88	93,5	137	155,5
		l	40	50	55	80	95
		l_1	43,5	53,5	59	84	95,5
		l_2	11	20	20	30	40
		l_3	12,5	15,5	15,5	22	19
		l_4	16,5	16,5	16,5	23	23
		S 6 - kt	51	60	74	86	100
		X	119	143	154	228	265
		Y	92	106	111,5	167	188,5



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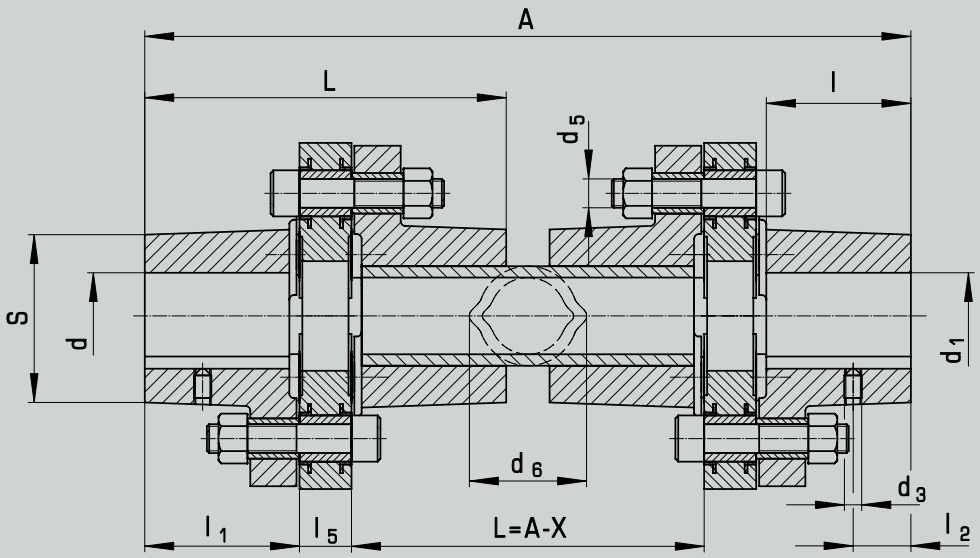
HexaFlex - Type 333

Coupling size



Type 333,
option of mounting 1

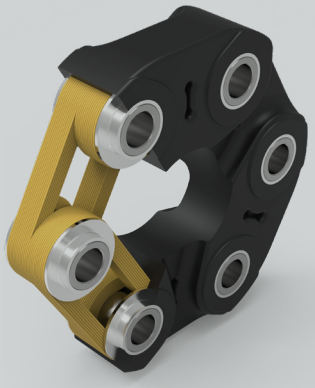
Technical data option 1

Size			32	38	48	60	70
torque		$T_{K\,Nenn}$	100	200	350	800	1200
inertia without pipe	type 2.1	[10^{-3} kg m²]	2,2	4,2	8,2	22,2	45,4
	type 2.0		2,0	3,9	7,3	20,0	40,6
inertia with pipe		[10^{-3} kg m²]	0,76	0,76	2,7	2,7	2,7
weight		[kg]	2,2	3,4	5,4	9,4	14,2
weight 1m pipe			3,2	3,2	4,5	4,5	4,5
wind up $T_{K\,Nenn}$		[°]	5	3	3	5	3
radial misalignment / 100 mm pipe		[mm]	5,2	5,2	3,4	3,4	3,4
tightening torque screws		[Nm]	49	60	69	150	150
bore d, d_1 H7 keyway acc. to DIN 6885/1	min.	[mm]	14	19	22	24	30
	max.		32	38	48	60	70
dimensions	D	[mm]	101	120	143	162	195
	D_1		100	118	145	170	200
	d_2		39	39	63	65	70
	d_3		M5	M6	M6	M8	M8
	d_4		75	85	106	120	140
	d_5		M10	M10	M10	M16	M16
	d_6		42	42	58	58	58
	L		103	125	136	198	232
	L_1		76	88	93,5	137	155,5
	l		40	50	55	80	95
	l_1		43,5	53,5	59	84	95,5
	l_2		11	20	20	30	40
	l_3		12,5	15,5	15,5	22	19
	l_4		16,5	16,5	16,5	23	23
	l_5		16	18	18	30	33
	S_s -kt		51	60	74	86	100
	X		119	143	154	228	265
	Y		92	106	111,5	167	188,5

Mönninghoff

HexaFlex - Type 333

Joint disc



- the flexible joint disc allows the compensation of axial, radial and angular misalignment
- it dampens torque shocks and harmful torque oscillations
- the reyon 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	o
acid concentrated	-
lye diluted	+
lye concentrated	o
salt solution brine	+

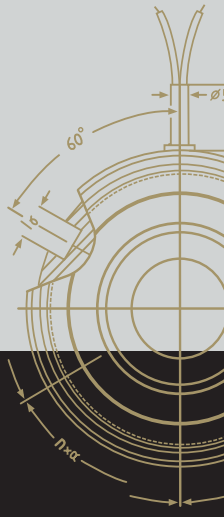
General characteristics

- 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

o moderately suited

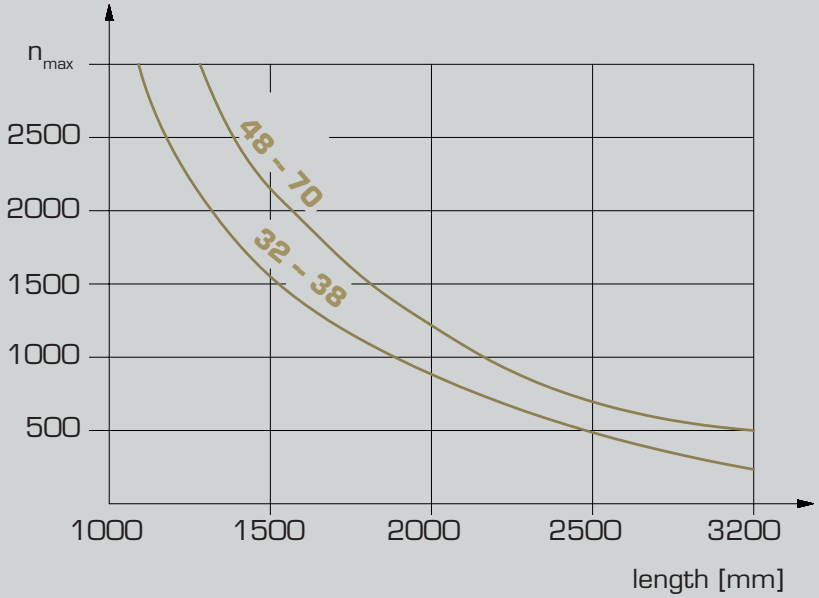
- unsuitable



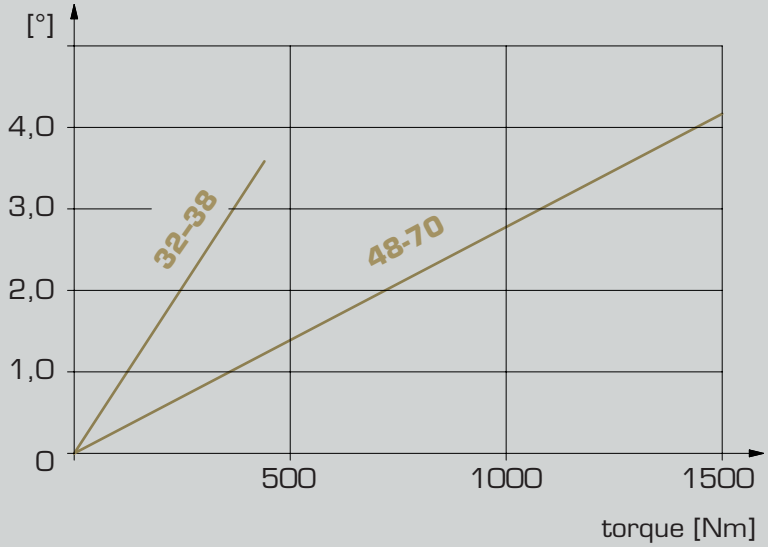
HexaFlex - Type 333

Misalignment

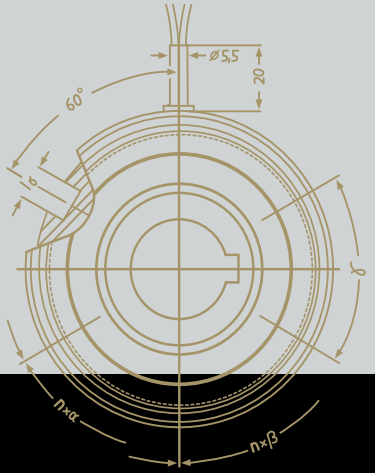
- axial or radial misalignment of the shaft causes acial forces to act on the bearings of the shaft according to the diagram below
- the values displayed are mean values and can vary up tp 30%
- the end points of the graphs indicate the maximum permissible misalignments



selection of max length „L“ as factor of speed „n“



wind up per m pipe



HexaFlex - Type 333

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
Light smooth loads 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
Loads without heavy shock, few reversals 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
Uneven loads, heavy shock, few reversals 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
Severe operating conditions, frequent reversals 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

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

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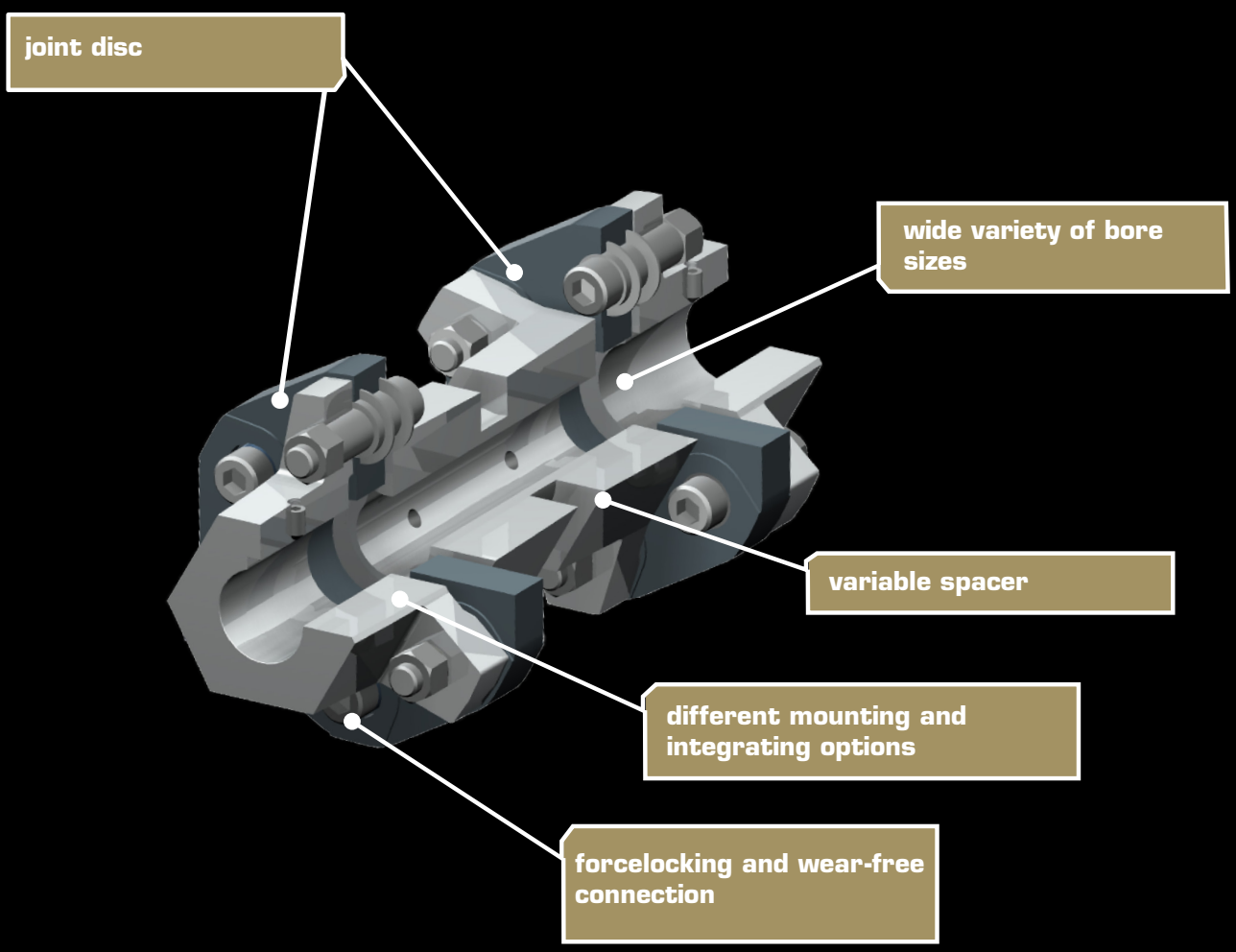
HexaFlex - Type 333

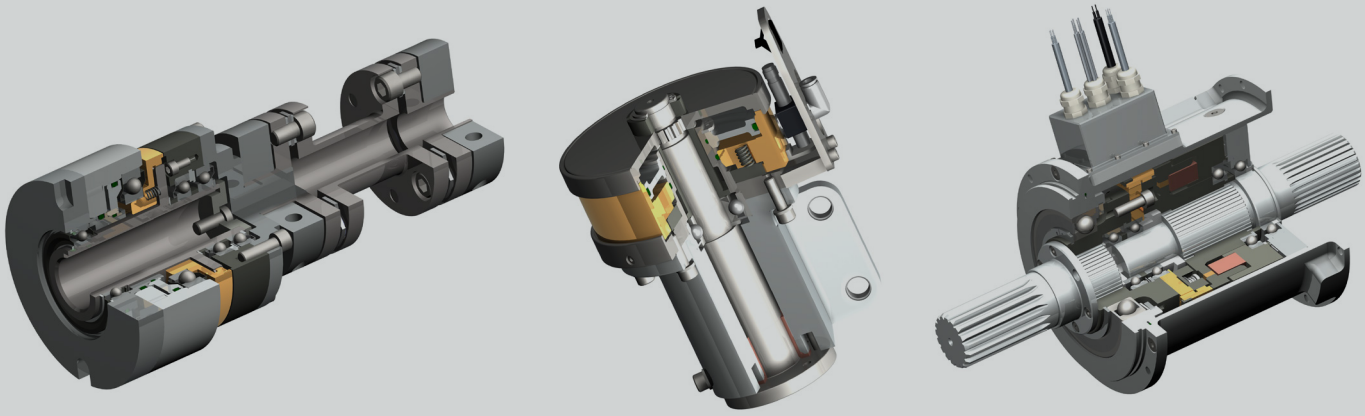
At a glance



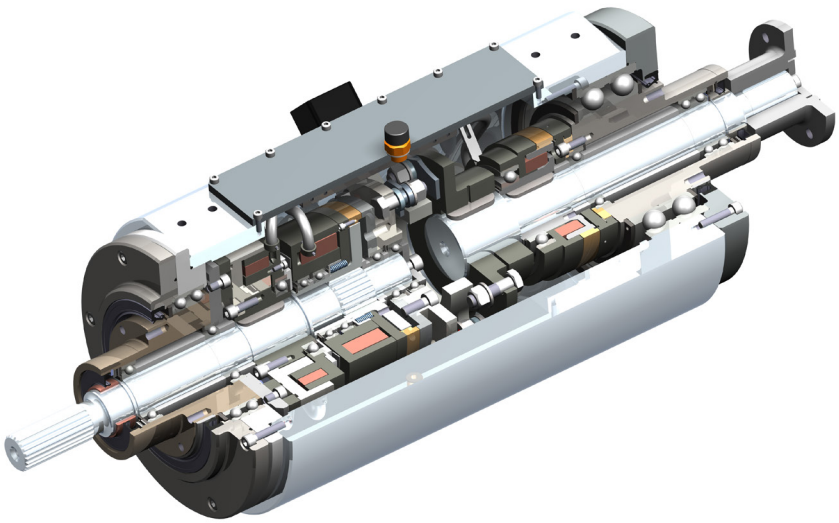
System solutions

You need more?

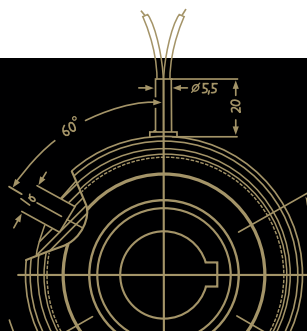
Mönninghoff clutches can be combined with a variety of many other power transmission elements. Such complex high-tech systems can solve any application-specific tasks and can fulfill any customer-specific wishes.



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.



Mönninghoff

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 2327 3033-250

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

Order Management
confirmation@moenninghoff.de
+49 2327 3033-353

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

Service
service@moenninghoff.de
+49 2327 3033-333

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

www.moenninghoff.de/en