

DESCH Power Transmission Center

Flexible and torsionally stiff couplings



DESCH Hadeflex®

Type XW and TX



Type FW and FNW



DESCH Hadeflex® XW and TX

Properties of the DESCH Hadeflex - coupling:

- Fail-safe
- Plug-in coupling / Claw coupling with flexible element (Spider, Star)
- Material: EN-GJL-250 (GG-25, cast iron)
- High wear resistance
- Low moments of inertia
- Torques up to 15.000 Nm
- Balancing quality Q16



DESCH flexible couplings

Balancing

- DESCH flexible couplings are generally balanced in one plane (statical) quality Q16 acc. DIN ISO 1940:
with $v \leq 30$ m/s, but with $n_{\max} = 1.500$ rpm
- Balancing in two planes (dynamical) quality Q6,3 is necessary, if:
 $v > 30$ m/s
- After agreement also a finer quality is possible up to Q2,5

DESCH Hadeflex® XW and TX

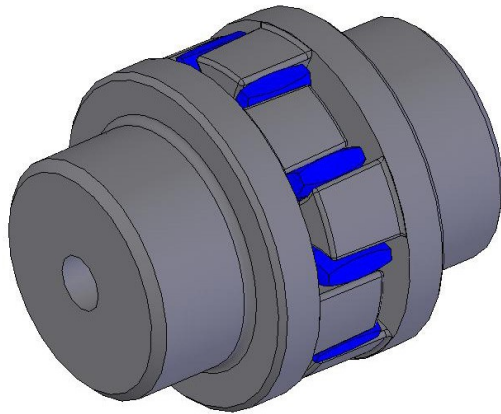
Properties of the DESCH Hadeflex-Stars:

- Material Adiprene (PUA)
- Resistant against oil and ozone
- Temperature resistance from -20°C to +80°C
- Available in hardness 92° and 98° Shore A

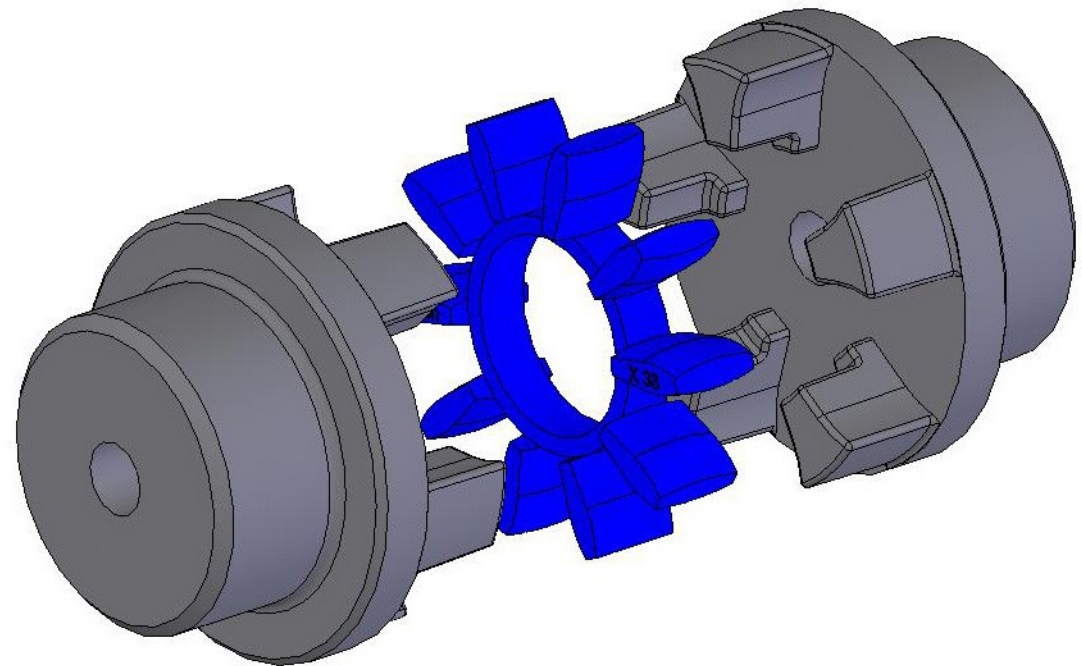
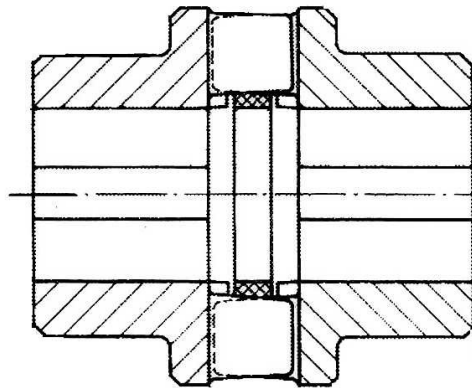


Colour		Hardness (Shore A)	
		92°	98°
Hadeflex	XW	Nature	Blue
	TX	Black	Red

DESCH Hadeflex® X designs

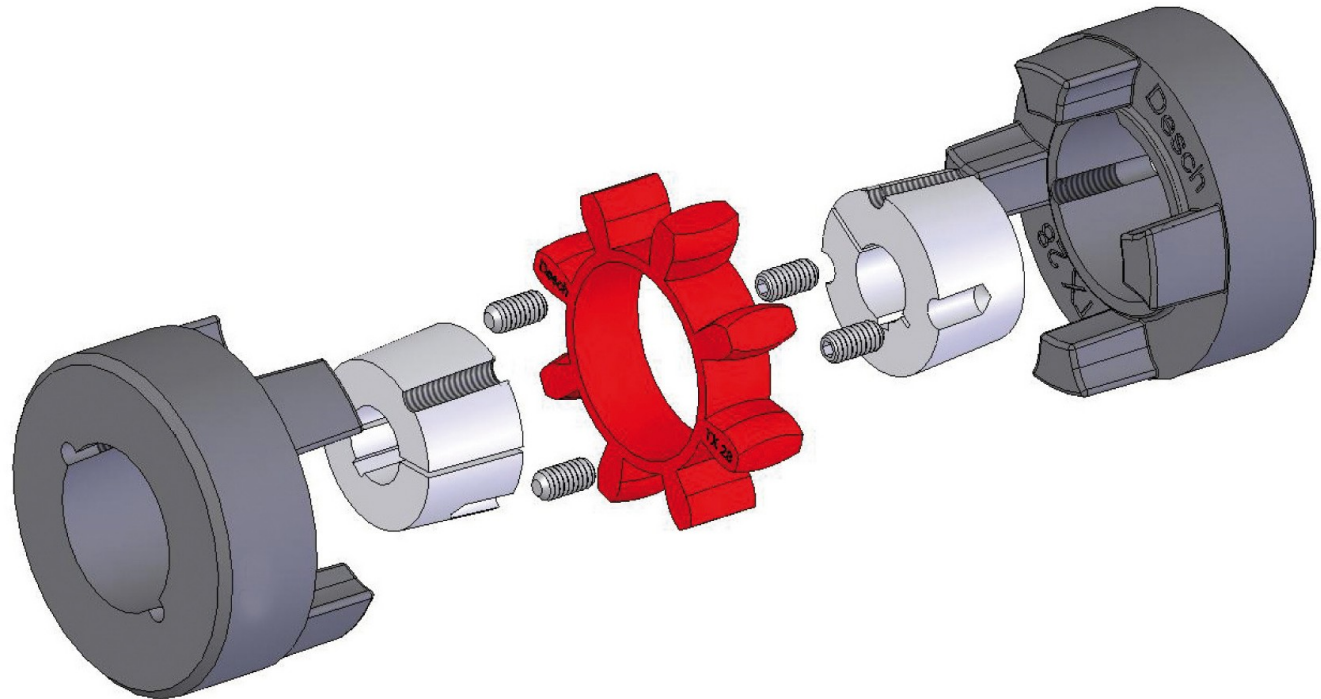
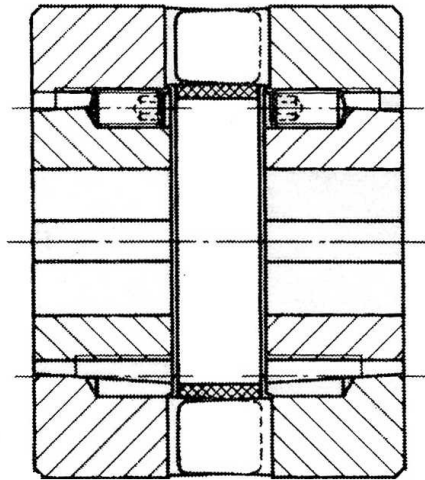


XW1

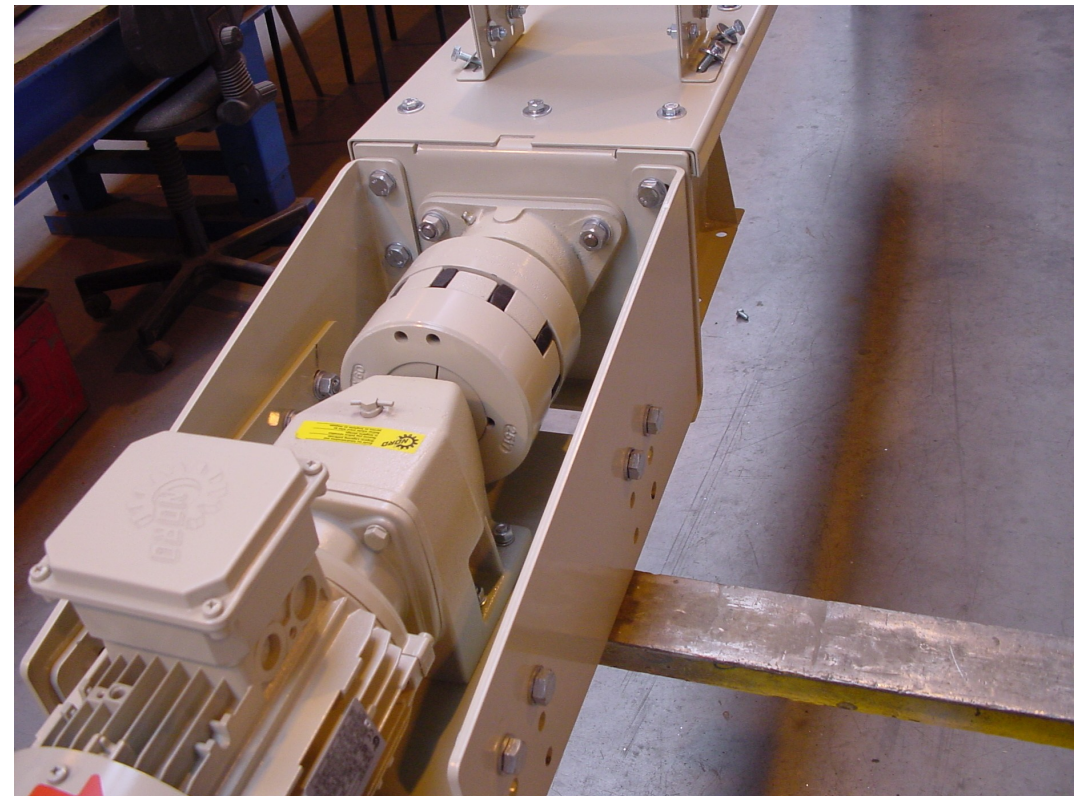
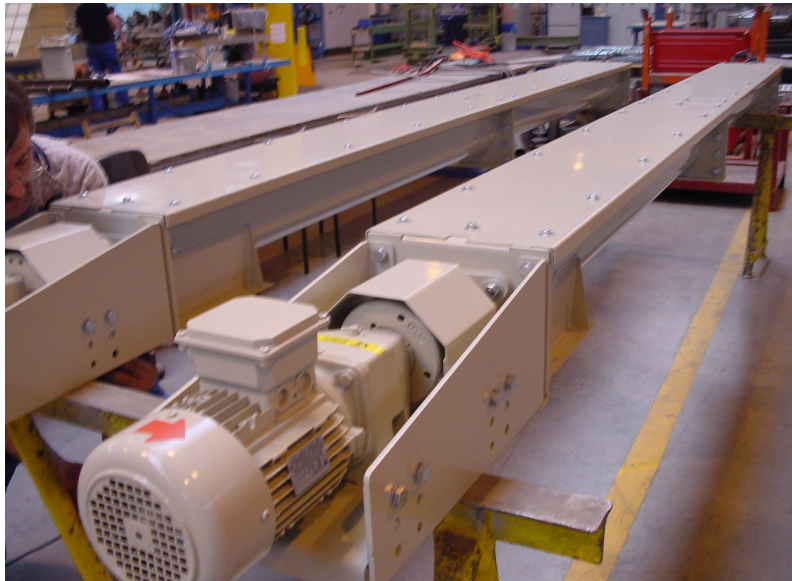


DESCH Hadeflex® TX designs

TX 03



Flexible coupling Hadeflex TX in drives of screw conveyors



DESCH Hadeflex® XW and TX

	DESCH	CHIARAVALLI	COLMANT CUVELIER	FLENDER	KTR	RAJA LOVEJOY	REICH	SIT	WYKO
Coupling name	Hadeflex ®	Giflex ®	Coflex	Bipex ®	Rotex ®	Spidex ®	Multi Mont Astra	Trasco ®	Claw coupling
Type(s)	XW TX	GE-T	C CV	BWN BWT BNT	001	CJ	MMA-W MMA-T	GR GRB	SX QF
Design to DESCH		Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Sizes	24 - 160	15 - 90	28 - 90	43 - 227	14 - 180	15 - 125	19 - 90	19 - 125	050 - 225
Torques [Nm]	40 - 15.000	10 - 3.600	80 - 3.400	13,5 - 3.700	7,5 - 35.000	4 - 10.000	10 - 3600	11,5 - 6.000	3,5 - 280
Bores [mm]	6 - 160	6 - 100	10 - 110	10 - 110	6 - 200	6 - 145	6 - 100	6 - 145	9 - 60
Dimensions to DESCH		Smaller	Similar	Similar	Smaller	Smaller	Smaller	Smaller	Bigger
Materials	EN-GJL-250	Alu EN-GJL-250	EN-GJL-250	EN-GJL-250	Alu EN-GJL-250 EN-GJS-400-15 Stahl	Alu EN-GJL-250 EN-GJS-400-15 Stahl	EN-GJL-250	Alu EN-GJL-250 EN-GJS-400-15 Stahl	EN-GJL-250
Taper	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No

DESCH Hadeflex® F



DESCH Hadeflex® FW and FNW

Properties of DESCH Hadeflex F – coupling:

- Claw coupling with flexible elements (Rubber packages)
- Material: EN-GJL-250 (GG-25, cast iron)
- Available in two- and three part design
- High wear resistance
- Balancing quality Q16
- Torques up to 20.000 Nm
- Not fail-safe



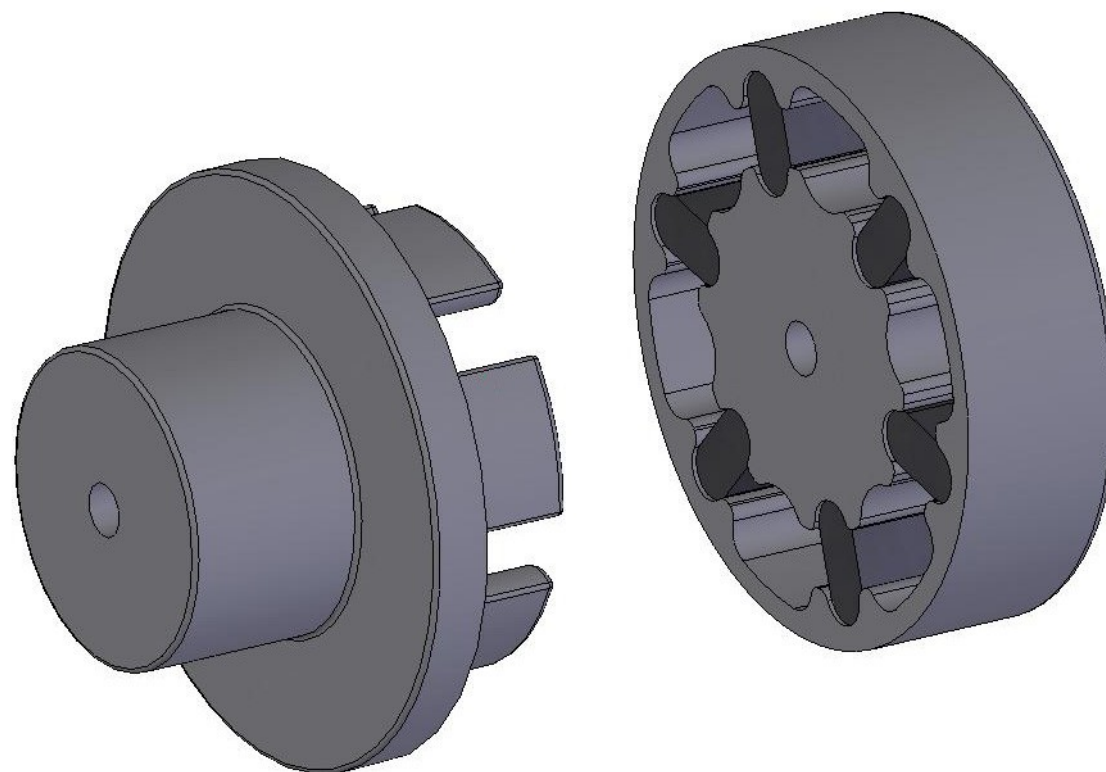
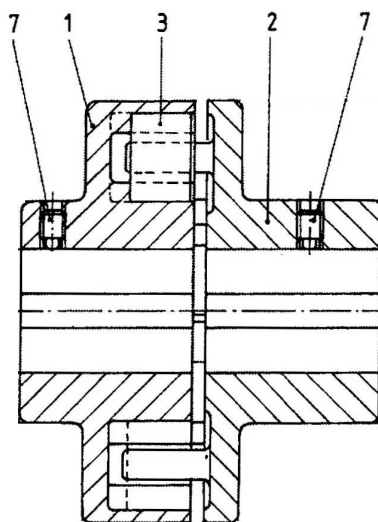
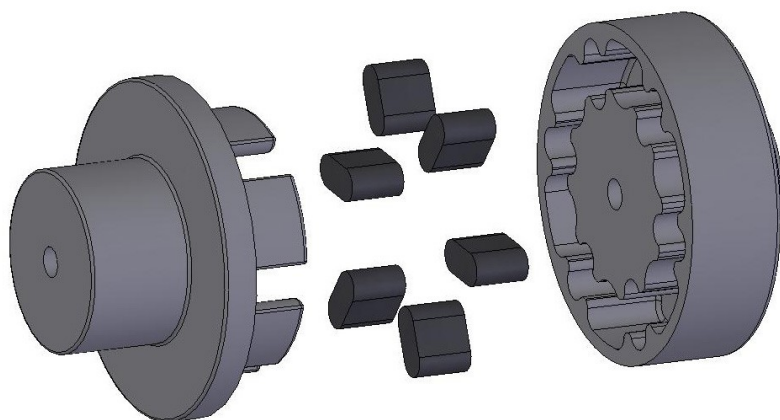
DESCH Hadeflex® FW and FNW

Properties of DESCH Hadeflex-F packages:

- Material: Perbunan (Standard)
- Hardness 80° Shore A
- Colour: black
- Oil resistant
- Temperature resistance from -20°C to +80°C
- Also available in Material Leather
- Changing of the packages without displacement from machine parts (3-part design)

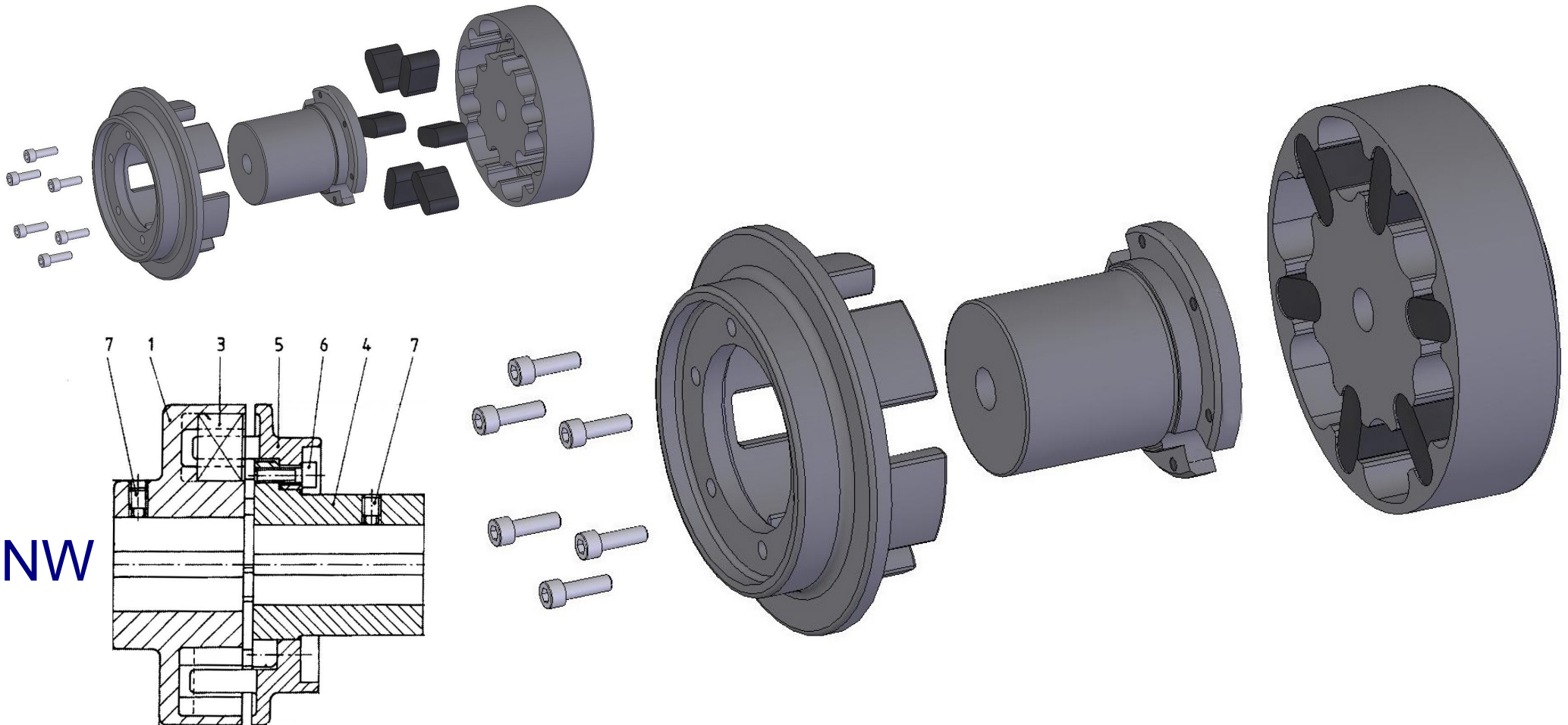


DESCH Hadeflex® F designs



FW

DESCH Hadeflex® F designs



DESCH Habix®

Type HWN, HWT and HWA



DESCH Habix®

Properties of DESCH Habix® - coupling:

- Fail-safe
- Plug-in coupling / claw coupling with flexible element (Star, spider)
- Material: EN-GJL-250 (GG-25, cast iron), Aluminium, Steel
- All over machined claws
- High wear resistance



DESCH Habix®

Properties of DESCH Habix® - coupling:

- Smallest possible outside-Ø with biggest possible bore
- Light weight , low moments of inertia
- Torques up to 3.600 Nm
- Any combination of the coupling halves
- Balancing quality Q16



DESCH Habix®

Properties of the DESCH Habix-Star:

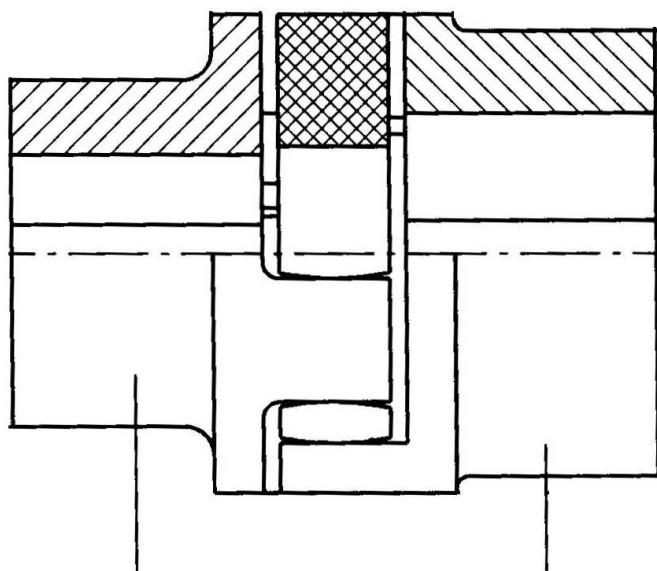
- Material PU
- Resistant against oil and ozone
- Temperature resistance from -20°C to +80°C
- Available in hardness 92° und 98° Shore A

Hardness (Shore A)	Colour
92°	white
98°	red



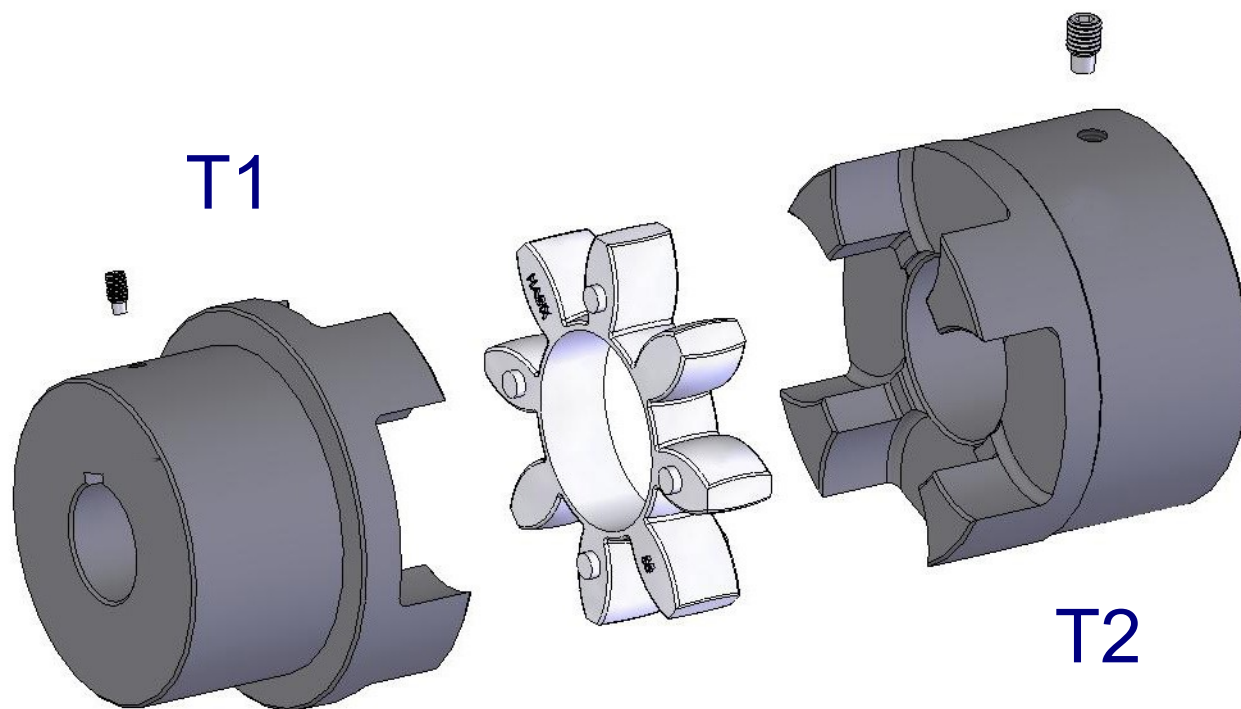
DESCH Habix® designs

HWN / HWA



T1

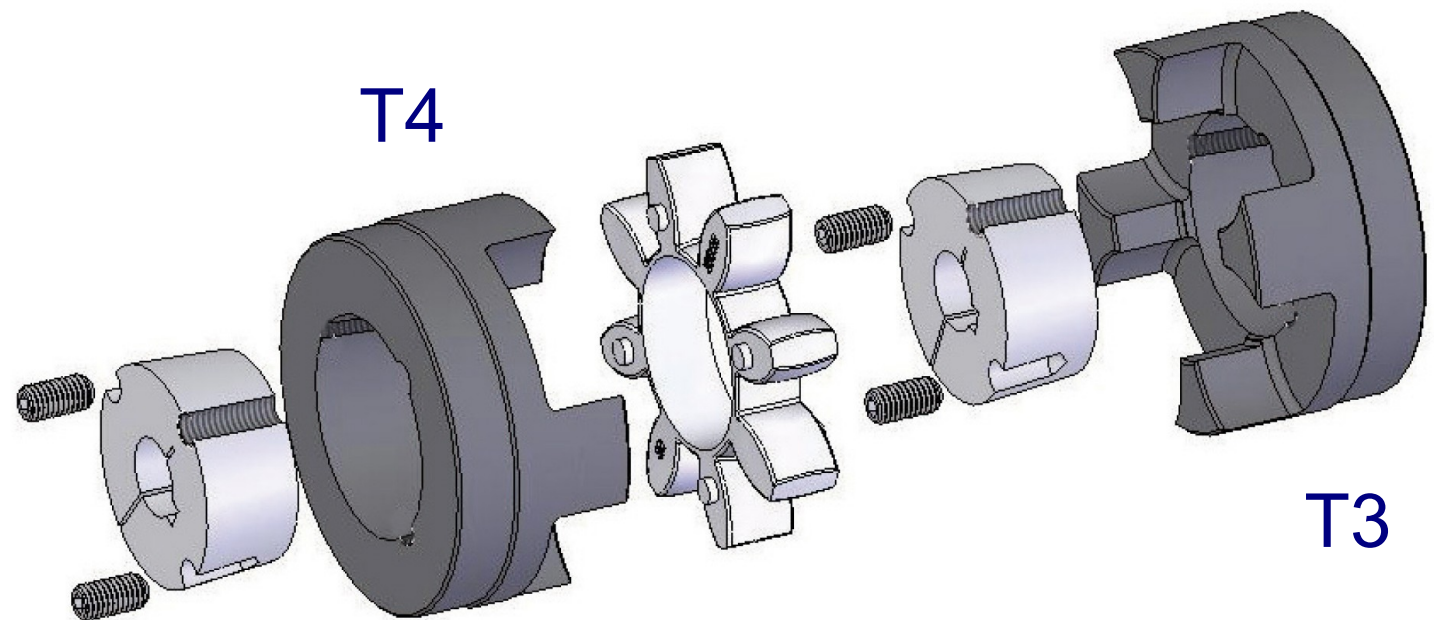
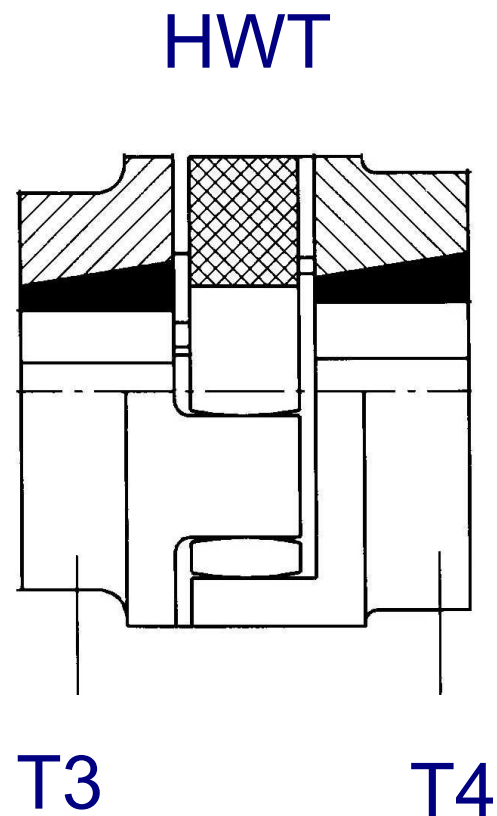
T2



T1

T2

DESCH Habix® designs



DESCH Habix®

	DESCH	CHIARAVALLI	COLMANT CUVELIER	FLENDER	KTR	RAJA LOVEJOY	REICH	SIT	WYKO
Coupling name	Habix ®	Giflex ®	Coflex	Bipex ®	Rotex ®	Spidex ®	Multi Mont Astra	Trasco ®	Klaufenkupplung
Type(s)	HWN HWT HWNT	GE-T	C CV	BWN BWT BNT	001	CJ	MMA-W MMA-T	GR GRB	SX QF
Design to DESCH		Identical	Similar	Similar	Identical	Identical	Identical	Identical	Similar
Sizes	15 - 90	15 - 90	28 - 90	43 - 227	14 - 180	15 - 125	19 - 90	19 - 125	050 - 225
Torques [Nm]	7,5 - 3.600	10 - 3.600	80 - 3.400	13,5 - 3.700	7,5 - 35.000	4 - 10.000	10 - 3600	11,5 - 6.000	3,5 - 280
Bores [mm]	6 - 100	6 - 100	10 - 110	10 - 110	6 - 200	6 - 145	6 - 100	6 - 145	9 - 60
Dimensions to DESCH		Identical	bigger	bigger	Identical	Identical	Identical	Identical	bigger
Materials	Alu EN-GJL-250 Steel	Alu EN-GJL-250	EN-GJL-250	EN-GJL-250	Alu EN-GJL-250 EN-GJS-400-15 Steel	Alu EN-GJL-250 EN-GJS-400-15 Steel	EN-GJL-250	Alu EN-GJL-250 EN-GJS-400-15 Steel	EN-GJL-250
Taper	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No

DESCH-HRC



DESCH-HRC

Properties of DESCH-HRC - coupling:

- Fail-safe
- Plug-in coupling / claw coupling with flexible element (Star, spider)
- Material: EN-GJL-250 (GG-25, cast iron)
- High wear resistance
- Torque up to 3150 Nm



DESCH-HRC

Properties of DESCH-HRC - coupling:

- Combination of the coupling hubs
- Light weight, low moments of inertia
- Balancing quality Q16
- Interchangeable to HRC-coupling from WYKO Fenner



DESCH-HRC

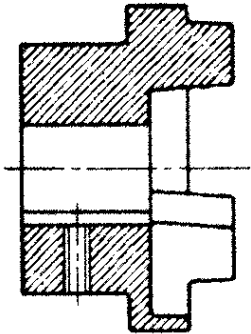
Properties of the DESCH-HRC Star:

- Material: Natural rubber
- Hardness 80° Shore A
- Colour: black
- Oil resistant
- Temperature resistance from -20°C to +80°C

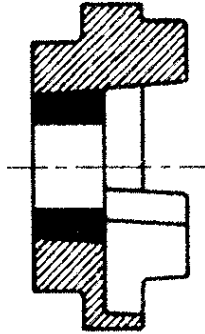


DESCH-HRC designs

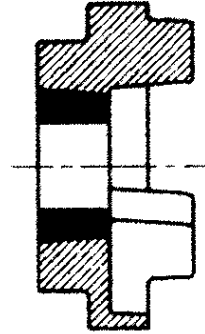
B-Flange



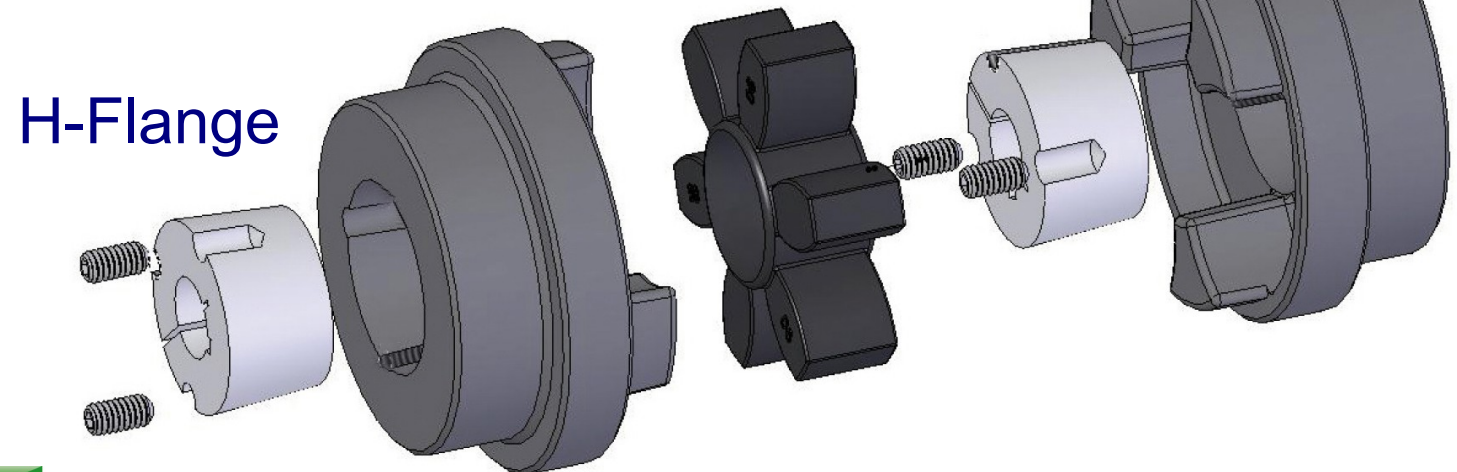
F-Flange



H-Flange



F-Flange



DESCH-HRC

	DESCH	CHALLENGE	COLMANT CUVELIER	FLENDER	KTR	RAJA LOVEJOY	REICH	SIT	WYKO
Coupling name	HRC	HRC	CRC		Poly-Norm ®				HRC
Type(s)	B H F	B H F	B H F		AR				B H F
Design to DESCH		Identical	Identical		Similar				Identical
Sizes	70 - 280	70 - 280	70 - 280		28 - 100				70 - 280
Torques [Nm]	31 - 3150	31 - 3150	31 - 3150		40 - 2900				31 - 3150
Bores [mm]	6 - 115	6 - 115	6 - 115		6 - 100				6 - 115
Dimensions to DESCH		Identical	Identical		smaller				Identical
Materials	EN-GJL-250	EN-GJL-250	EN-GJL-250		EN-GJL-250				EN-GJL-250
Taper	Yes	Yes	Yes		No				Yes

DESCH-Flex



DESCH-Flex

Properties of DESCH-Flex - coupling:

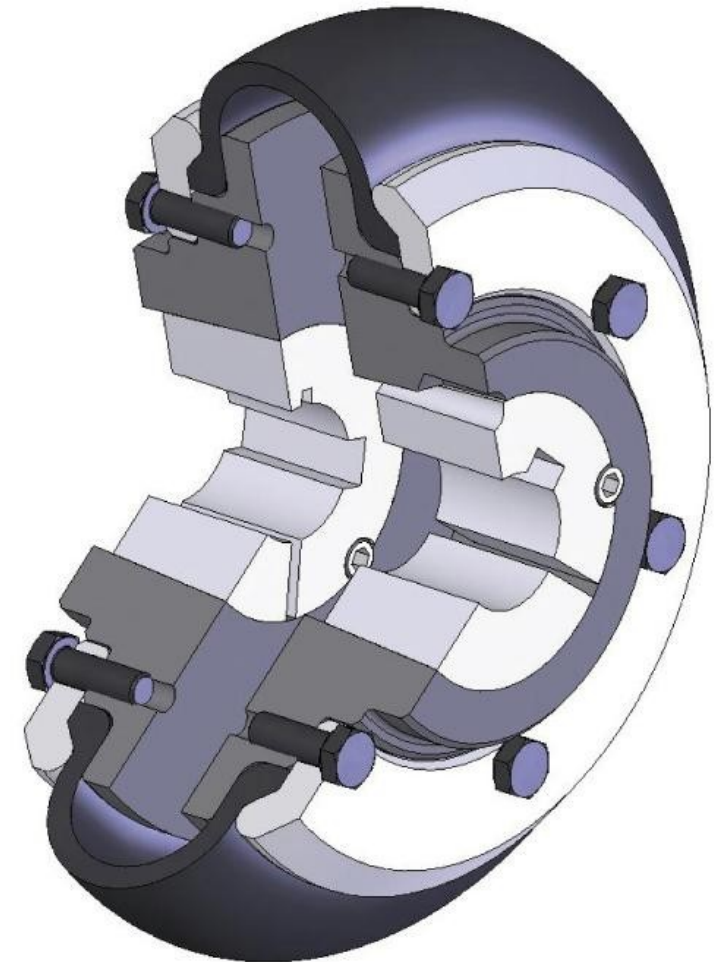
- High flexible tyre coupling
- Material of the flanges are C45
- Backlash-free
- Practically maintenance free
- Extreme big compensation from radial, axial and angular shaft misalignments
- Balancing quality Q16
- Machine parts and tyre can be radial disassemble



DESCH-Flex

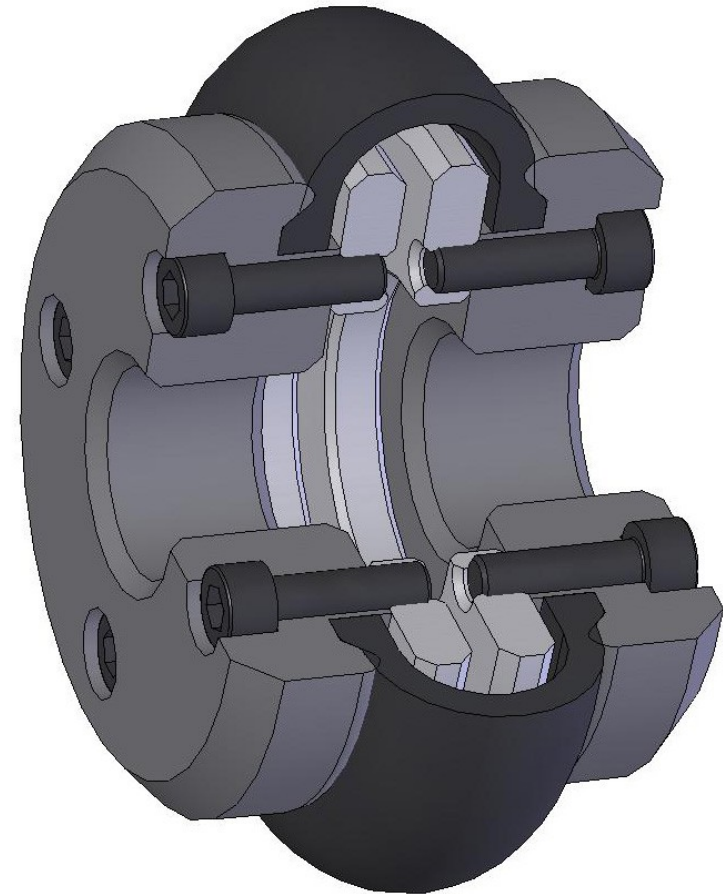
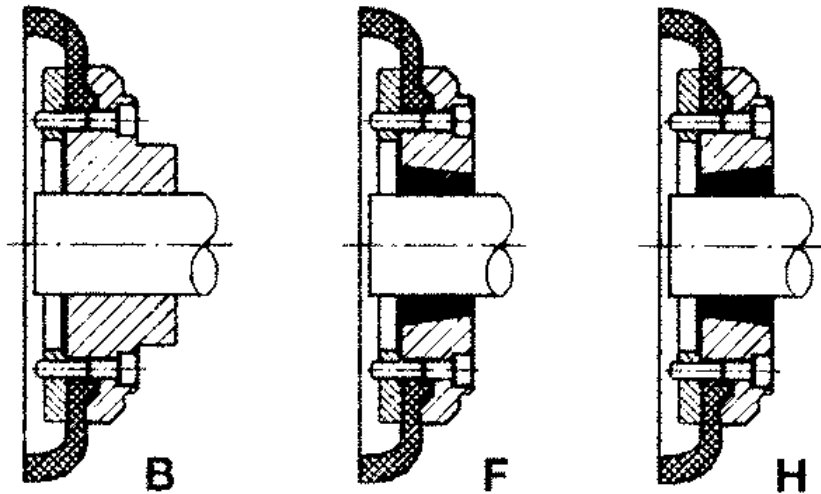
Properties of DESCH-Flex - coupling:

- Combination of the Flanges
- Tyre radial exchangeable
- Tyre in standard made of natural rubber
Temperature resistance -50° to $+50^{\circ}\text{C}$
- Tyre in FRAS made of Neopren
Fire resistant, antistatic, oil resistant
Temperature resistance -15° to $+70^{\circ}\text{C}$



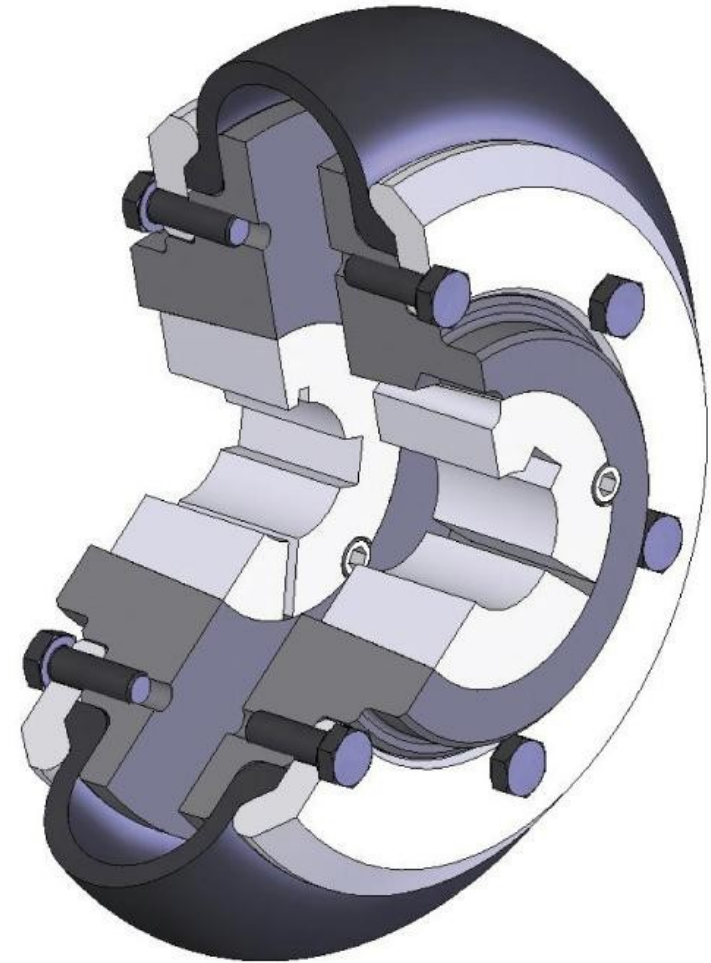
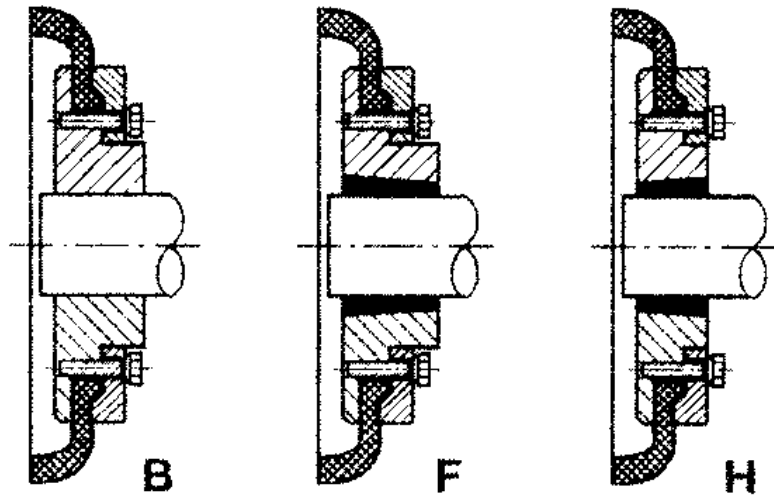
DESCH-Flex designs

Size D40 - D60



DESCH-Flex designs

Size D70 - D200



DESCH-Flex

	DESCH	CHALLENGE	DODGE	COLMANT CUVELIER	FLENDER	RATHI	REICH	STROMAG	WYKO
Coupling name	Desch-Flex	FFX	Para-Flex	Pneumabloc	Elpex-B ®	Tyre-Flex	Multi Cross Rillo	Periflex ®	Fenaflex ®
Type(s)	B H F	B H F	FBX H F	PP PV	EBWN EBWT	B H F	B H F	PNA PNS	B H F
Design to DESCH		Identical	Identical	Similar	Identical	Identical	Identical	Similar	Identical
Sizes	40 - 250	40 - 250	PX40 - PX320	40 - 240	105 - 630	T4 - TO-25	40 - 250	1 - 1500	40 - 250
Torques [Nm]	24 - 14675	24 - 14675	24 - 56625	30 - 17390	24 - 14675	24 - 14675	24 - 14675	25 - 15000	24 - 14675
Bores [mm]	6 - 190	6 - 190	6 - 200	6 - 225	6 - 190	6 - 190	6 - 190	6 - 180	6 - 190
Dimensions to DESCH		Identical	Identical	Similar	Identical	Identical	Identical	Similar	Identical
Materials	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
Taper	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

DESCH ORPEX®



DESCH ORPEX®

Properties of DESCH Orpex® - coupling:

- Fail-safe
- Pin coupling with flexible elements (Buffers)
- Material: EN-GJL-250, Steel
- High wear resistance



DESCH ORPEX®

Properties of DESCH Orpex® - coupling:

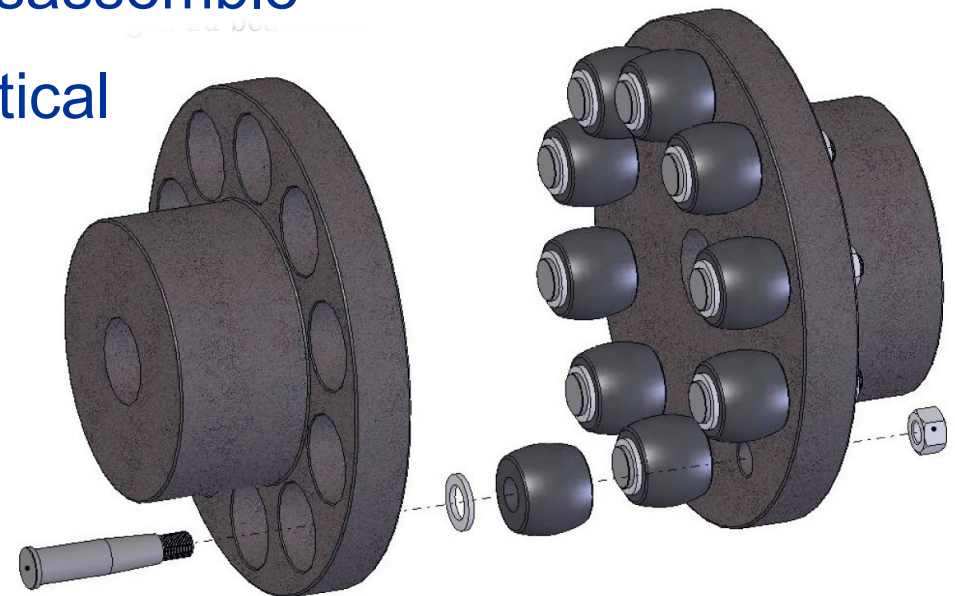
- Practically maintenance free
- Balancing quality Q16
- Available with Keyway and set screw



DESCH ORPEX®

Properties of DESCH Orpex® - coupling:

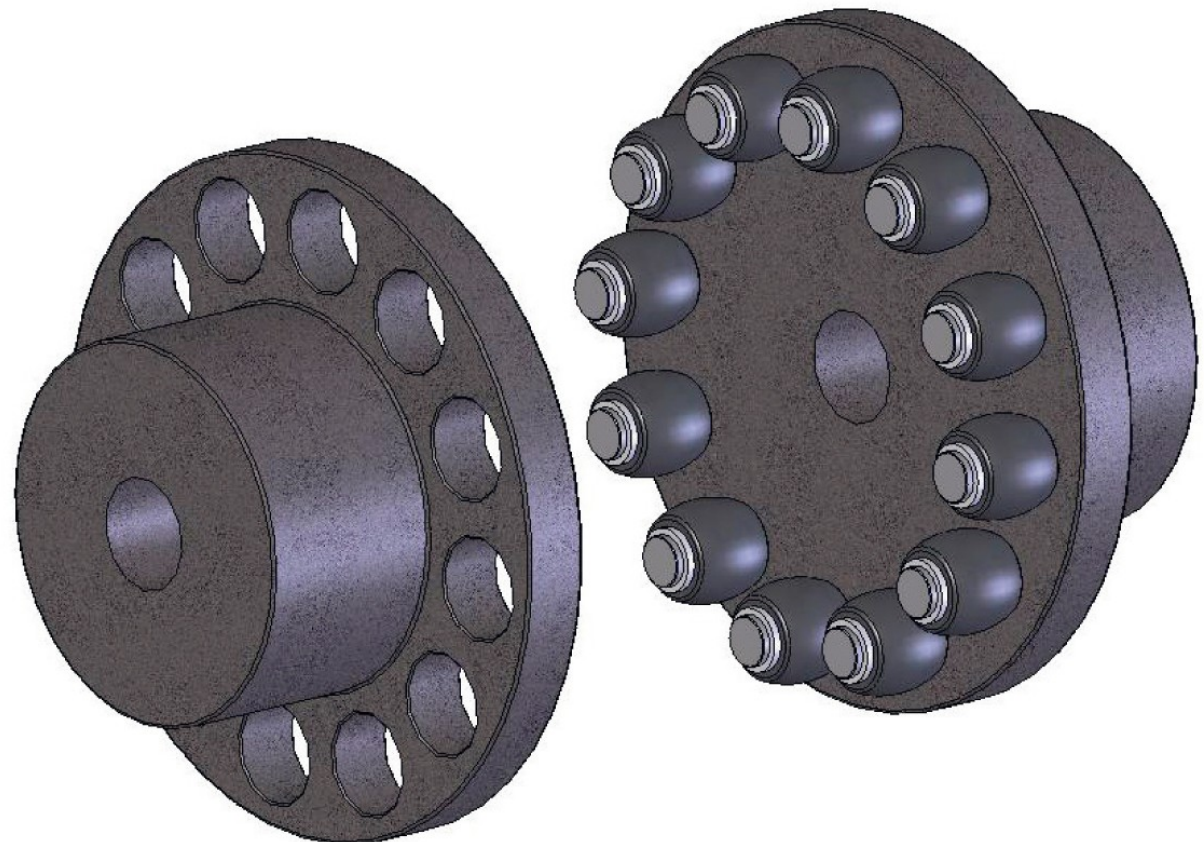
- Buffers can be pluggable mounted
- Machine parts can be radial disassemble
- Assembling horizontal and vertical



DESCH ORPEX® designs



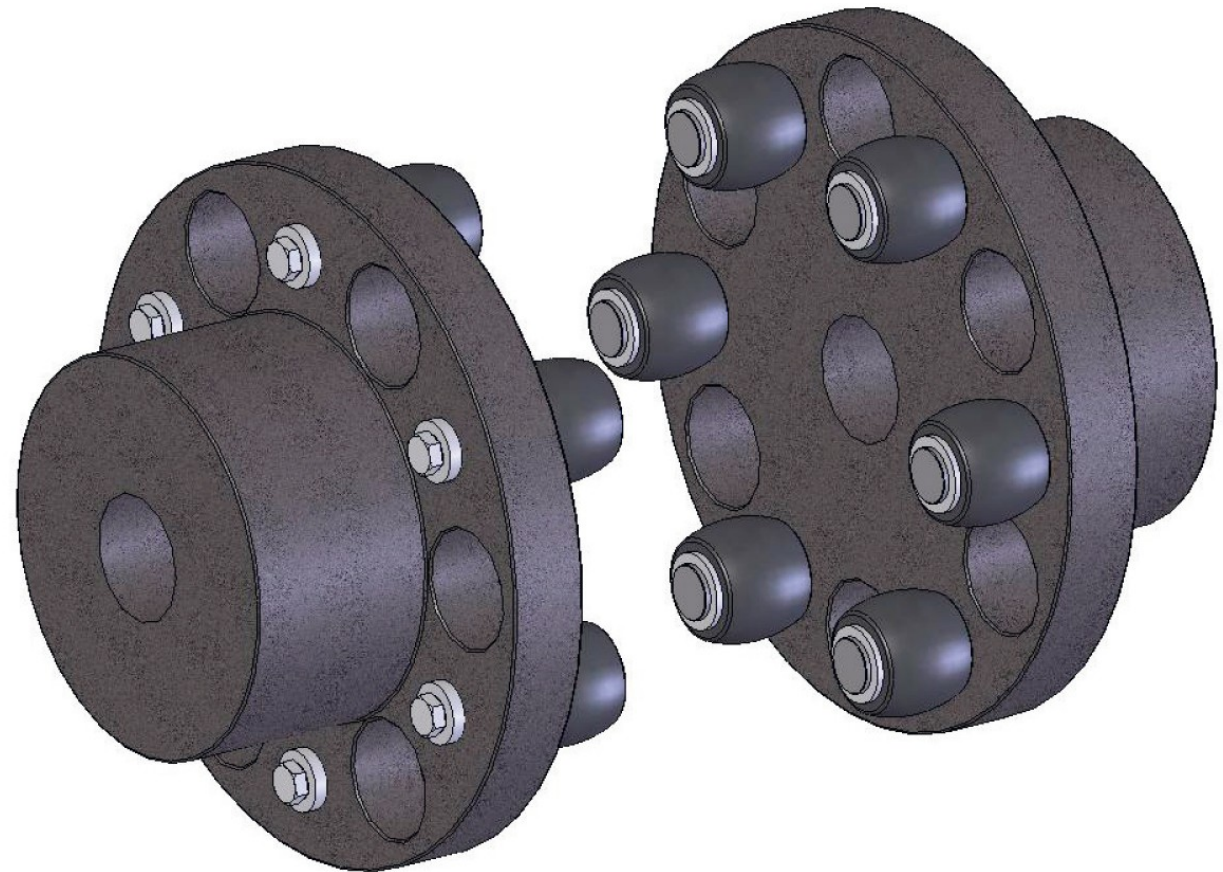
Size 105 - 360



DESCH ORPEX® designs

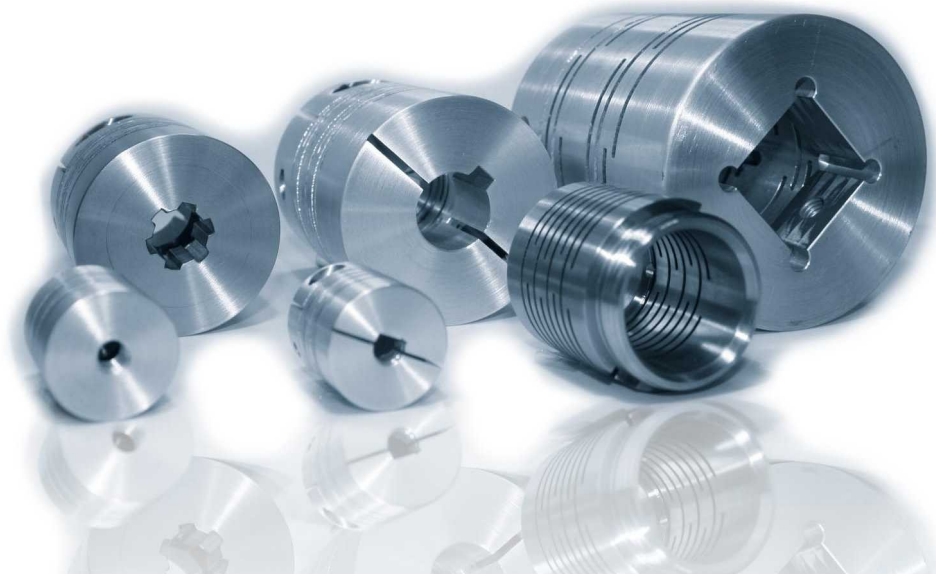


Size 400 - 2000



DESCH Mini

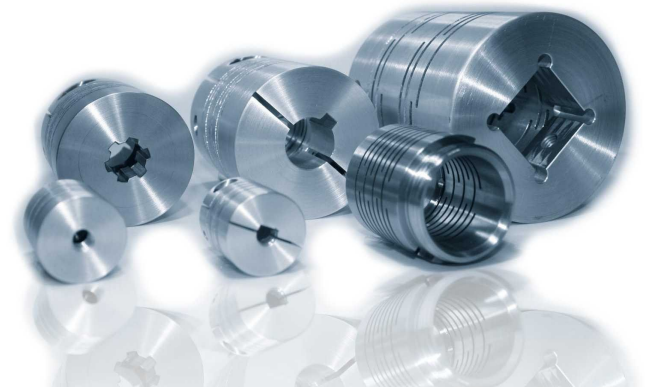
Type MWK, MWH



DESCH Mini

Properties of DESCH Mini:

- Patent design of slot structure
- Absolute free of backlash
- Torsion proof and bending elastic
Compensation of misalignments
- Maintenance free and economic
- Steel coupling
made in one piece
- Material: Aluminium, stainless steel, steel



DESCH Mini

Properties of DESCH Mini:

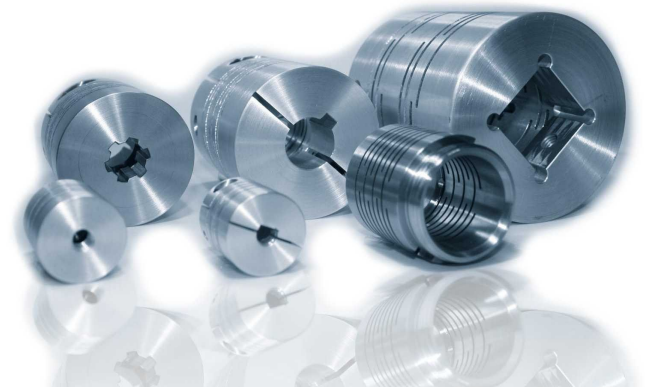
- High concentricity
- Light weight, low moments of inertia
- Drehmoment bis 220 Nm
- Temperature resistance -55° to $+150^{\circ}$ C
- Variable shaft fixings possible



DESCH Mini

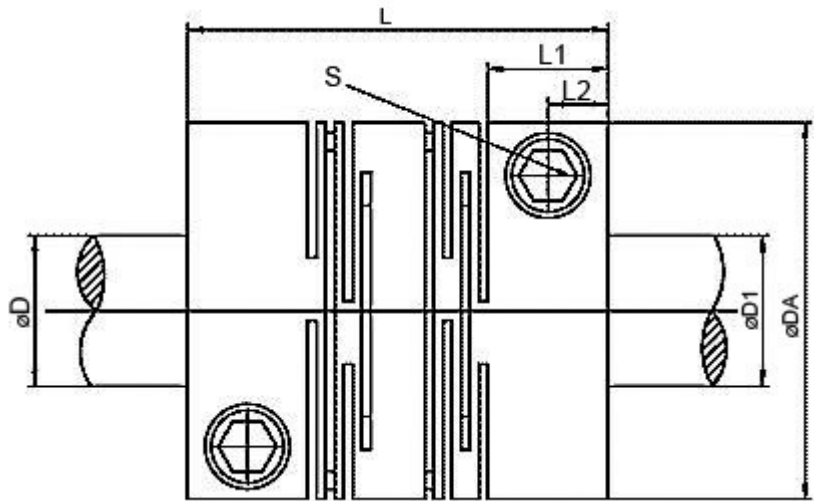
Application areas of DESCH Mini:

- Shaft encoder
- Positioning systems, linear systems
- Medical equipment
- Small grinding and boring machines
- CNC machine tools
- Robotics, conveyor systems
- Jig manufacturing



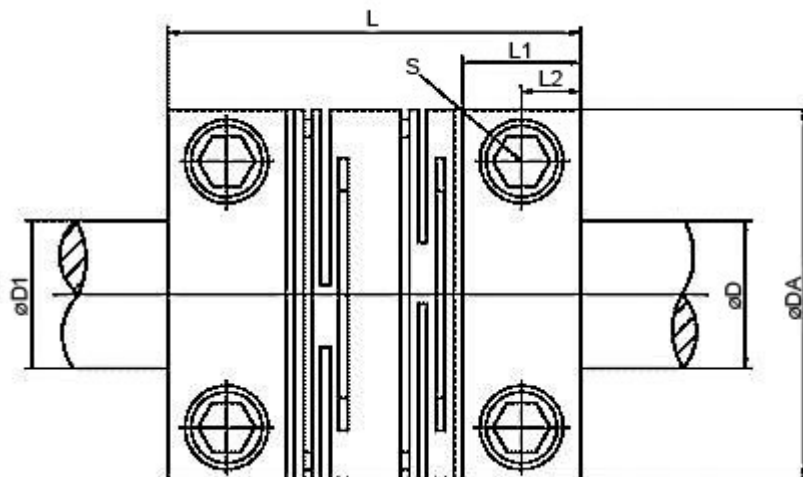
DESCH Mini types

MWK

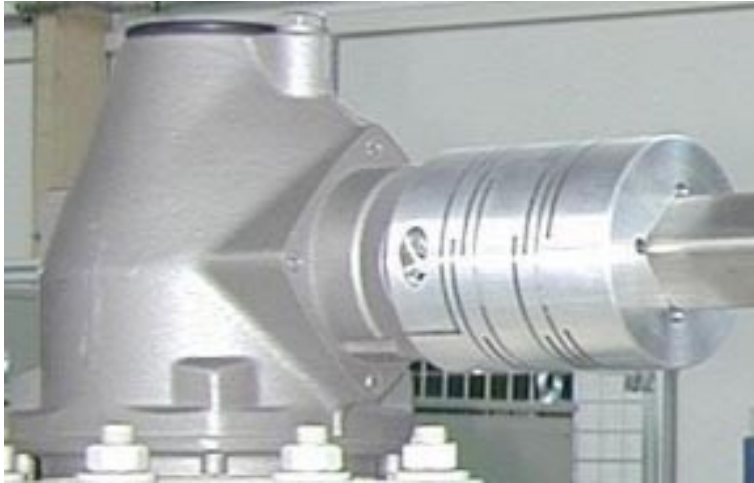


DESCH Mini types

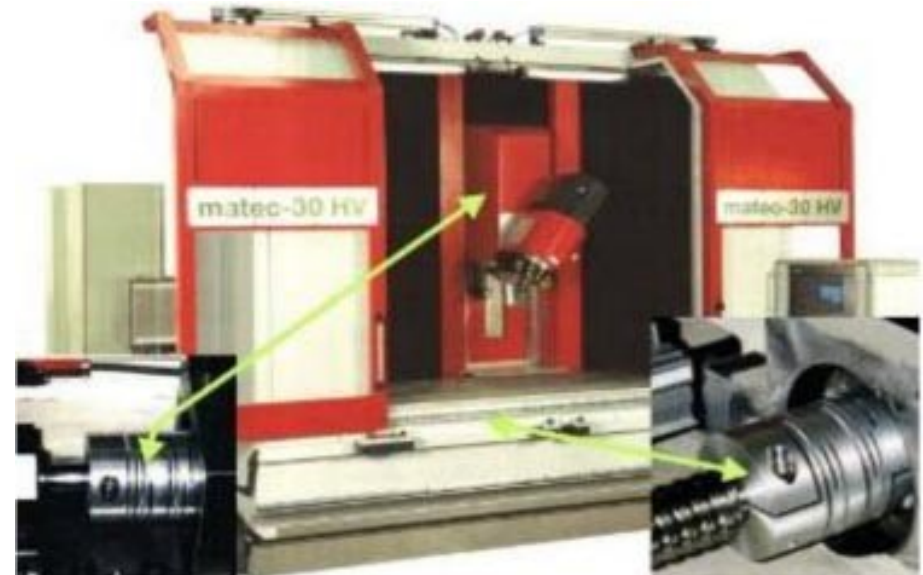
MWH



DESCH Mini using in a high voltage test rig



**DESCH Mini
in CNC machining centre**



**DESCH Mini for the regulation of air supply in a
heating installation**

DESCH Mini-coupling

	DESCH	Ringfeder / GERWAH	JAKOB	KTR	KTR	mayr	R+W	RINGSPANN	RULAND	RULAND	TSCHAN
Coupling name	Mini	Metal bellow coupling	Miniature coupling	TOOLFLEX®	Rotex® GS (application dependent)	smartflex®	Miniature-/ Metal bellow coupling	HELI-CAL®	Beam- Coupling	Bellow coupling	POSIMIN-F
Type(s)	MWK MWH	AKN / CKN / DKN / EKN	KM / KP / MKM / MKP	Miniatur M / S		932.333 932.343 932.433	MK BK	Serie A / W / DS / MC / X	Serie P / F / MC	MBC MBS	PF-K PF-H
Design to DESCH		Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar	Similar
Sizes	16 - 80	4 - 500	0,4 - 1800	5 - 55	5 - 75	0 - 5	0,5 - 1500	15 - 225	10 - 38	15 - 51	16 - 80
Torques [Nm]	3 - 220	0,4 - 500	0,4 - 1.800	0,1 - 340	0,2 - 2.400	16 - 700	0,05 - 1.500	0,15 - 51	0,85 - 21,5	2,5 - 45	3 - 220
Bores [mm]	3 - 40	3 - 60	3 - 85	3 - 55	3 - 80	8 - 85	2 - 80	3 - 40	3 - 16	3 - 25	3 - 40
Dimensions to DESCH		Bigger	Bigger	Bigger	Bigger	Bigger	Bigger	Bigger	Bigger	Bigger	Identical
Materials	Alu Stainless steel Steel	Alu Stainless steel	Alu Stainless steel	Alu Stainless steel	Alu Stainless steel	Alu Stainless steel	Alu Stainless steel Steel	Alu Stainless steel	Alu Stainless steel	Alu Stainless steel	Alu Stainless steel Steel
Coupling type	Slot coupling	Bellow coupling	Bellow coupling	Bellow coupling	Claw coupling	Bellow coupling	Bellow coupling	Spiral cut coupling	Spiral cut coupling	Bellow coupling	Slot coupling

DESCH torsionally stiff couplings

Clamp coupling
DIN 115



Flange coupling
DIN 116



Application areas of torsionally stiff couplings

Transmission shafts

Agitators



DESCH clamp coupling DIN 115

Properties of DESCH clamp coupling:

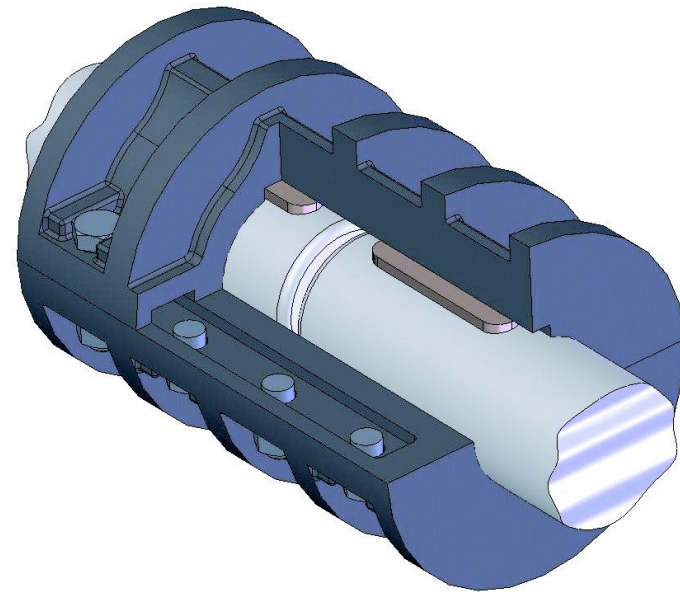
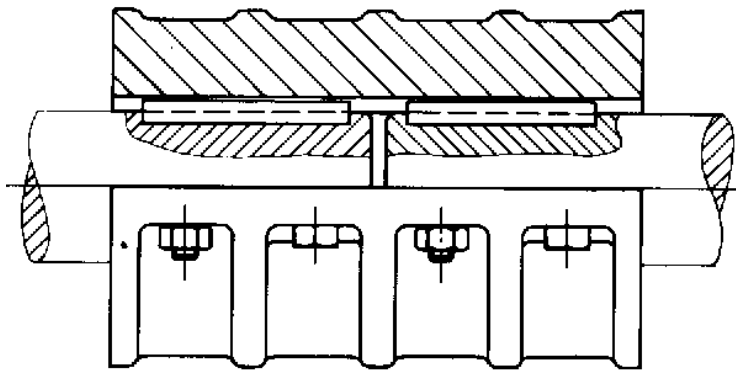
- Very easy assembling
- Robust and reliable shaft connection
- Available in EN-GJL-250 und GS-45 (Steel)
- Bores up to Ø 220 mm
- Torque up to 80.000 Nm



DESCH clamp coupling DIN 115

Assembly possibilities

Horizontal assembly



Form A – for shaft ends with same diameters

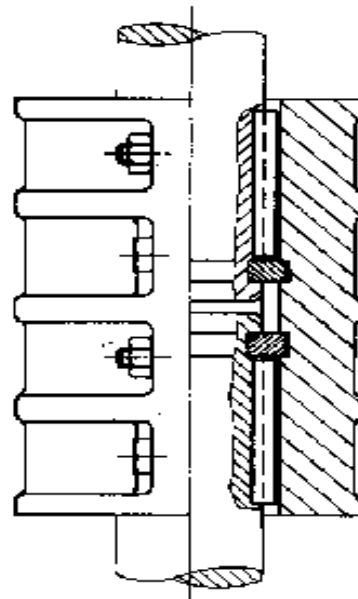
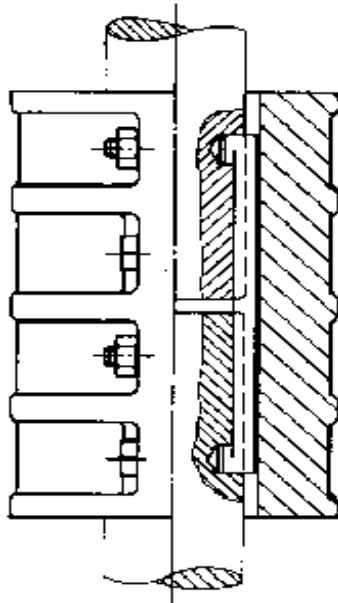
Form B – for shaft ends with different diameters

DESCH clamp coupling DIN 115

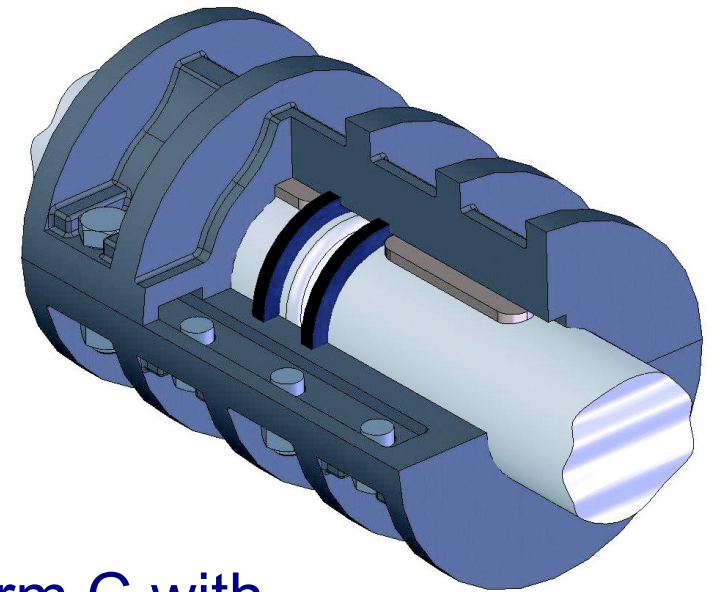
Assembly possibilities

Vertical assembly

Form A with
suspension
key acc. DIN
28134



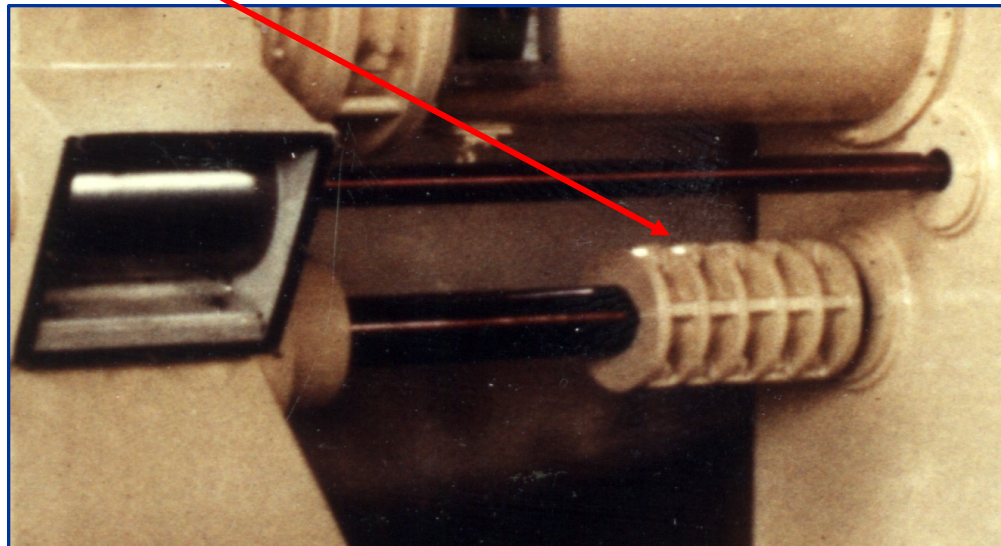
Form C with
insert rings acc.
DIN 115/2



DESCH clamp coupling DIN 115

Branch example

Clamp coupling in a screw press in the Porcelain industrie



DESCH flange coupling DIN 116

Properties of DESCH flange coupling:

- Easy assembling
- Especially robust and reliable shaft connection
- Available in EN-GJL-250 and Steel as the case may be GS-45 up from size 100
- Bores up to $\varnothing 500$ mm
- Torque up to 1.425.000 Nm

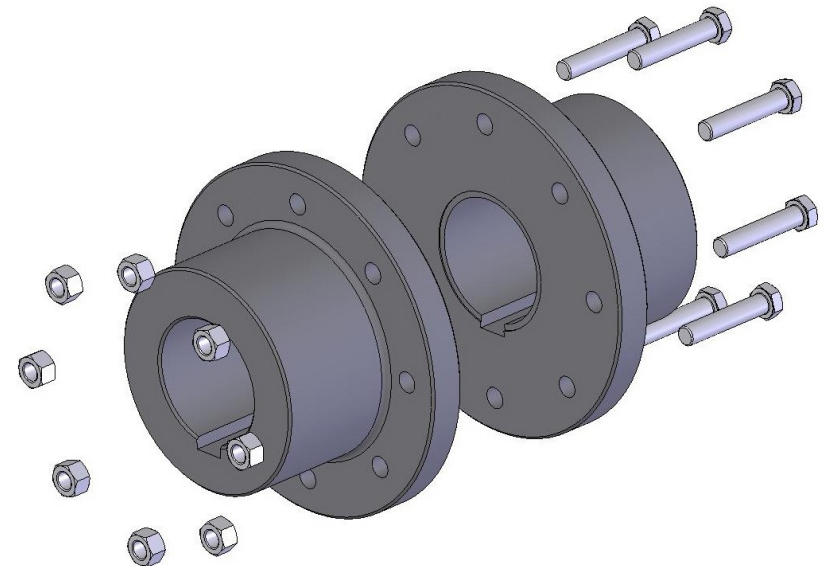
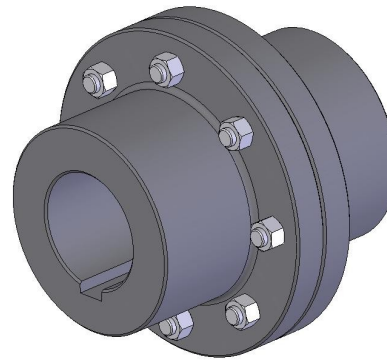
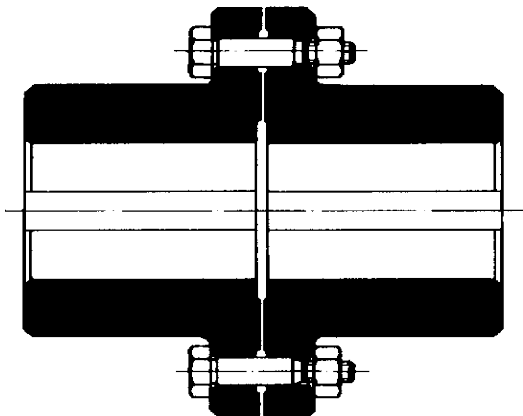


DESCH flange coupling DIN 116

Assembly possibilities

Horizontal assembly

Form A

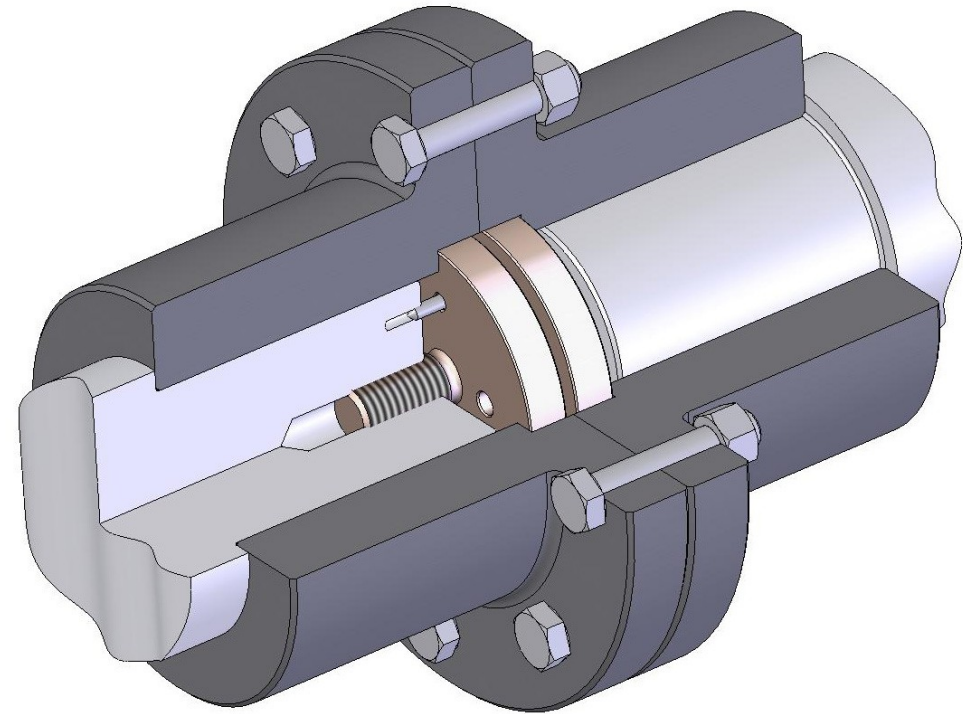
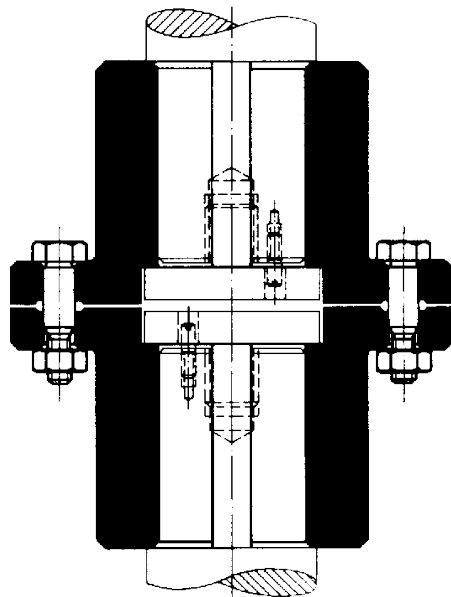


DESCH flange coupling DIN 116

Assembly possibilities

Vertical assembly

Form C



DESCH grease lubricated slide bearings

DESCH flange bearing
DIN 502



DIN 503



DESCH eye-type bearing
DIN 504



DESCH Cap bearing
DIN 505 L



DIN 506



Application areas of DESCH slide bearings

- Conveyors
- Food industry
- Chemical industry
- Steel industry
- Wood industry



DESCH grease lubricated slide bearings

Properties of DESCH slide bearings:

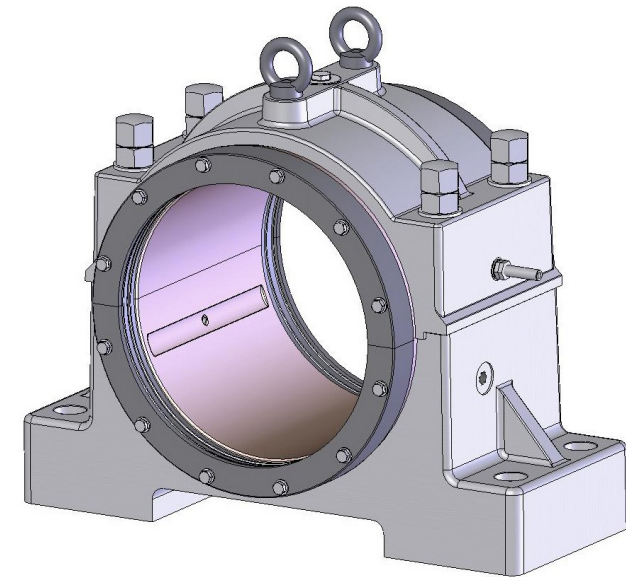
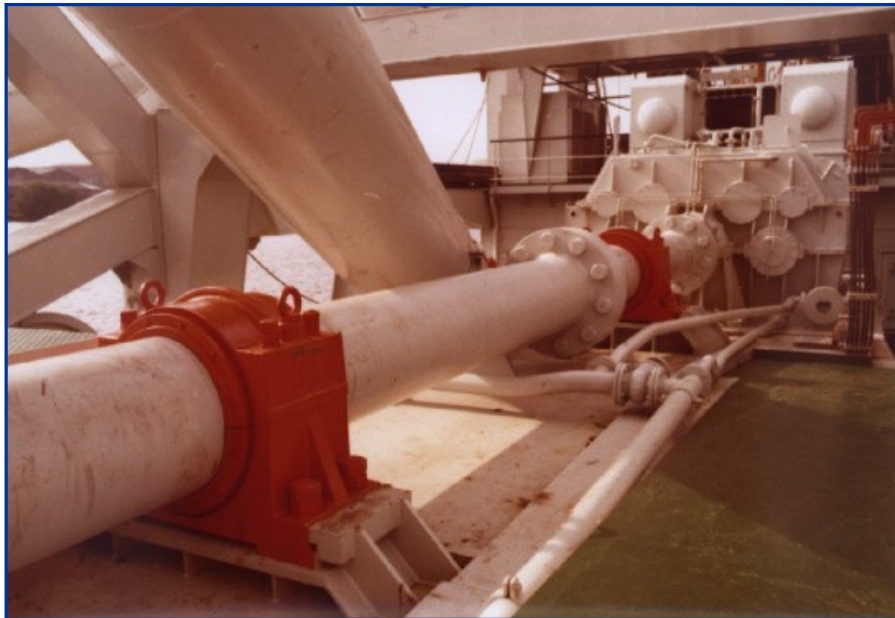
- Housings made of EN-GJL-250
- Bearing shells made of red bronze (RG 7)
- The structural design guarantees high durability
- DIN 502-504 can be used with and without bearing shells
- sliding speed up to 1,5 m/s



DESCH grease lubricated slide bearings

Branch example

Special guide bearings Ø440 in a suction dredger



DESCH motor slides

Motor slide rails made of
EN-GJL-250



The rough

Motor slide rails made of
Steel



The light

Motor slides made of
Steel



The compact

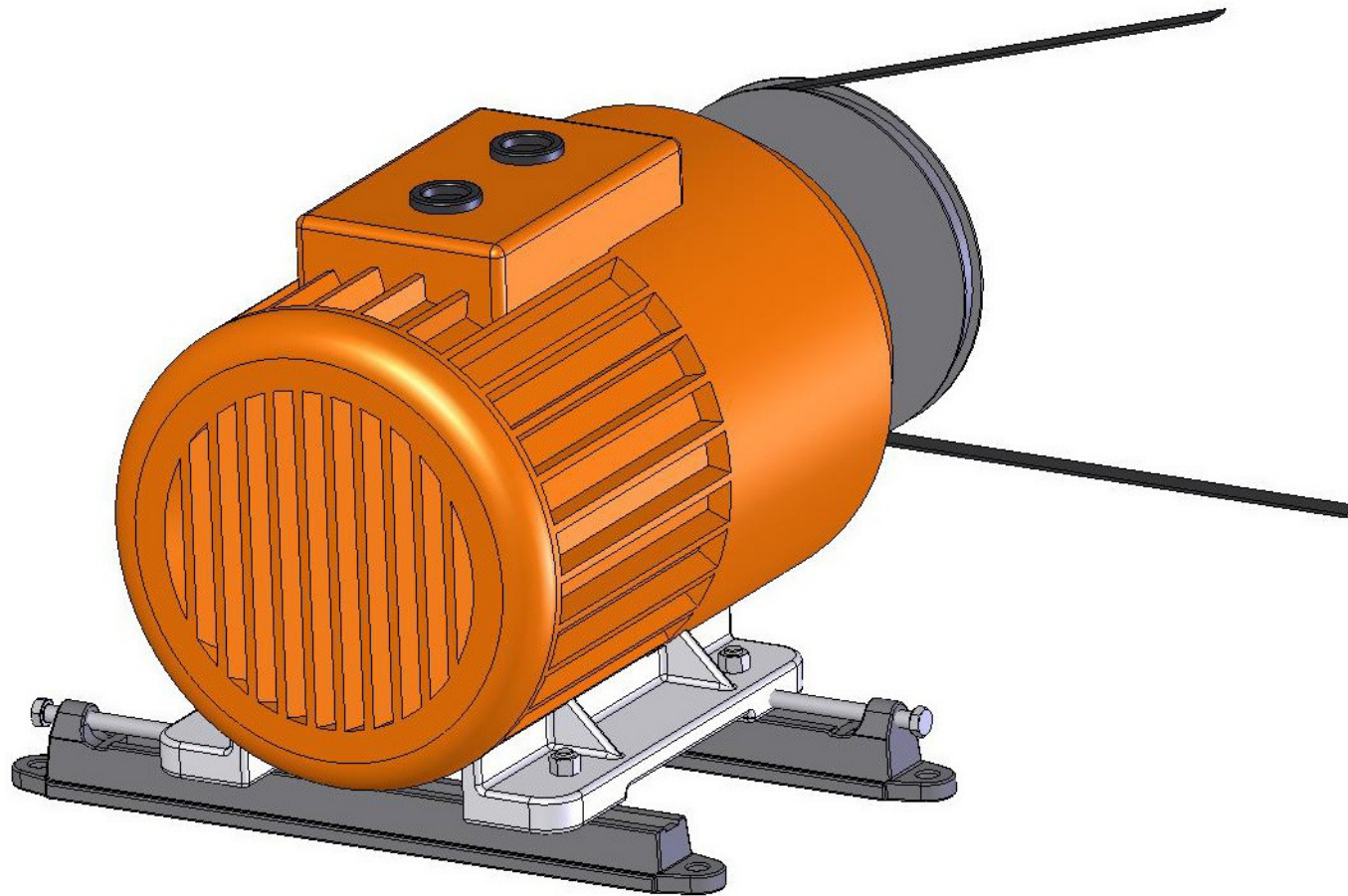
DESCH motor slides

Properties of DESCH motor slides:

- available in many nominal lengths ex stock
- simple to assemble
- noise damping
- long life
- low price and therefore economic



Arrangement of DESCH motor slide rails



DESCH Bolt-on hubs and Weld-on hubs

DESCH Bolt-on hub



DESCH Weld-on hub



Favourable shaft-connection for taper-bushes

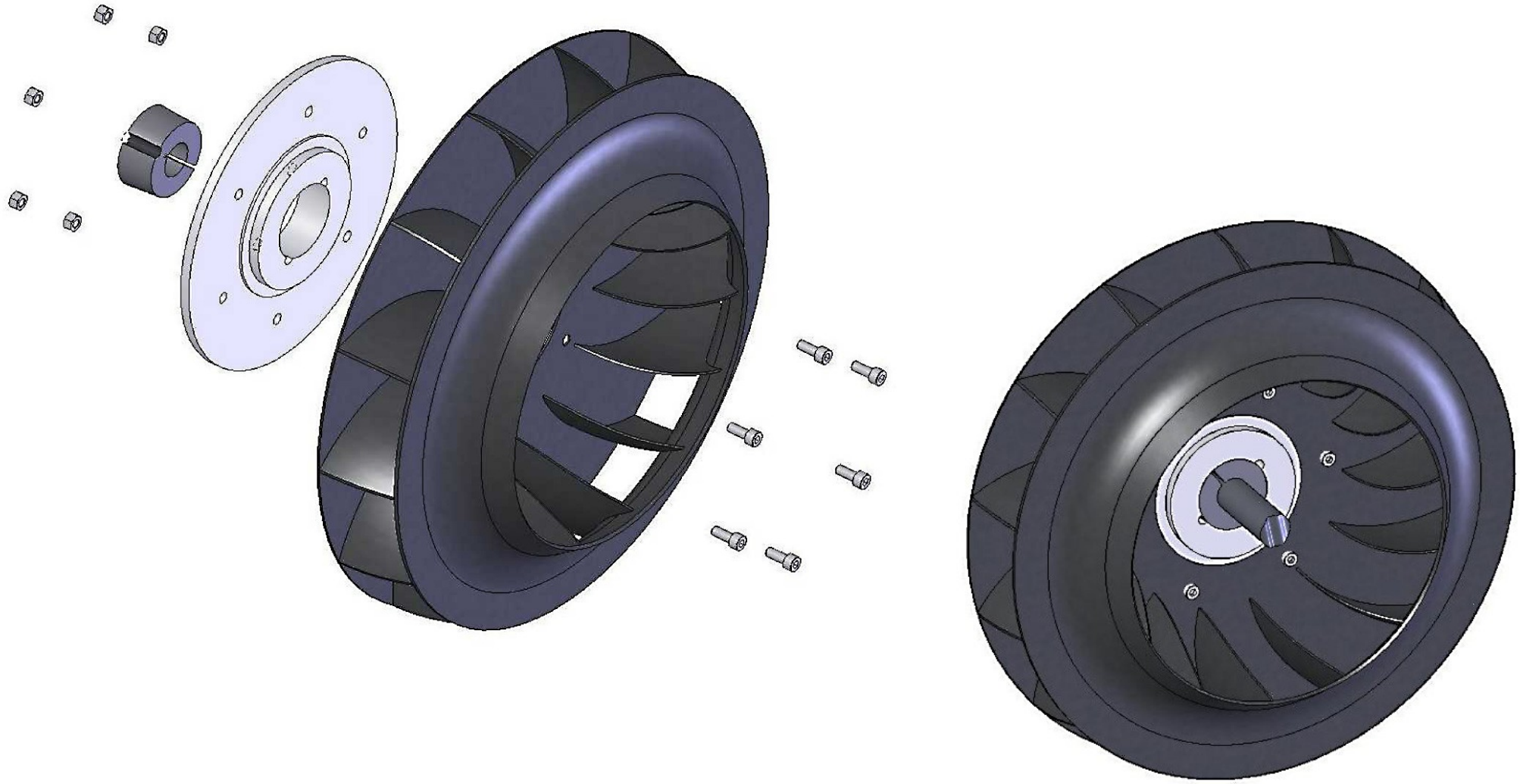
Application areas

DESCH Bolt-on hubs and Weld-on hubs

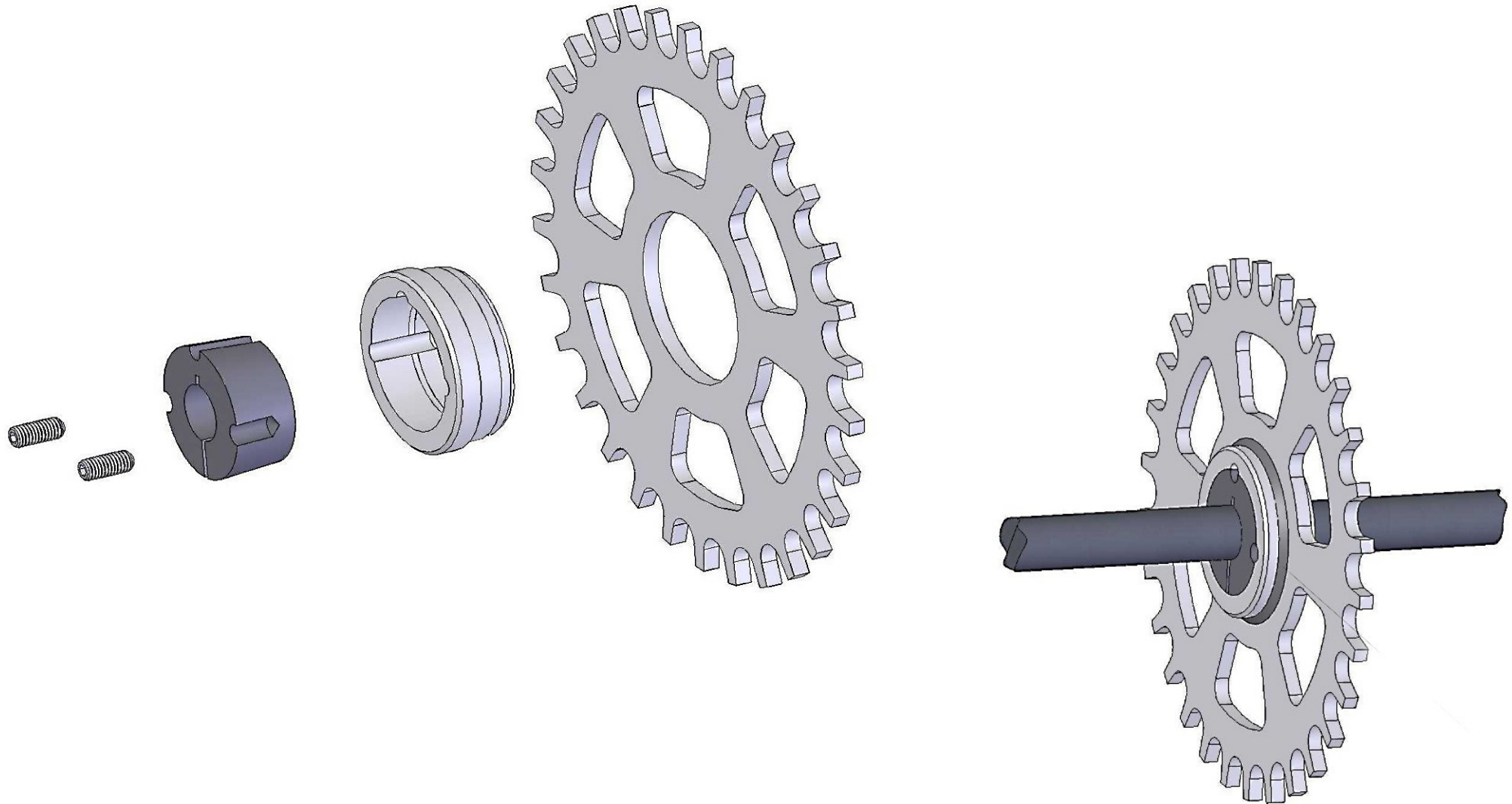
- Fans
- Fanwheels
- Steel discs
- Plate wheels
- other devices



Assembly example for Bolt-on hub



Assembly example for weld-on hub



Many thanks for your attention