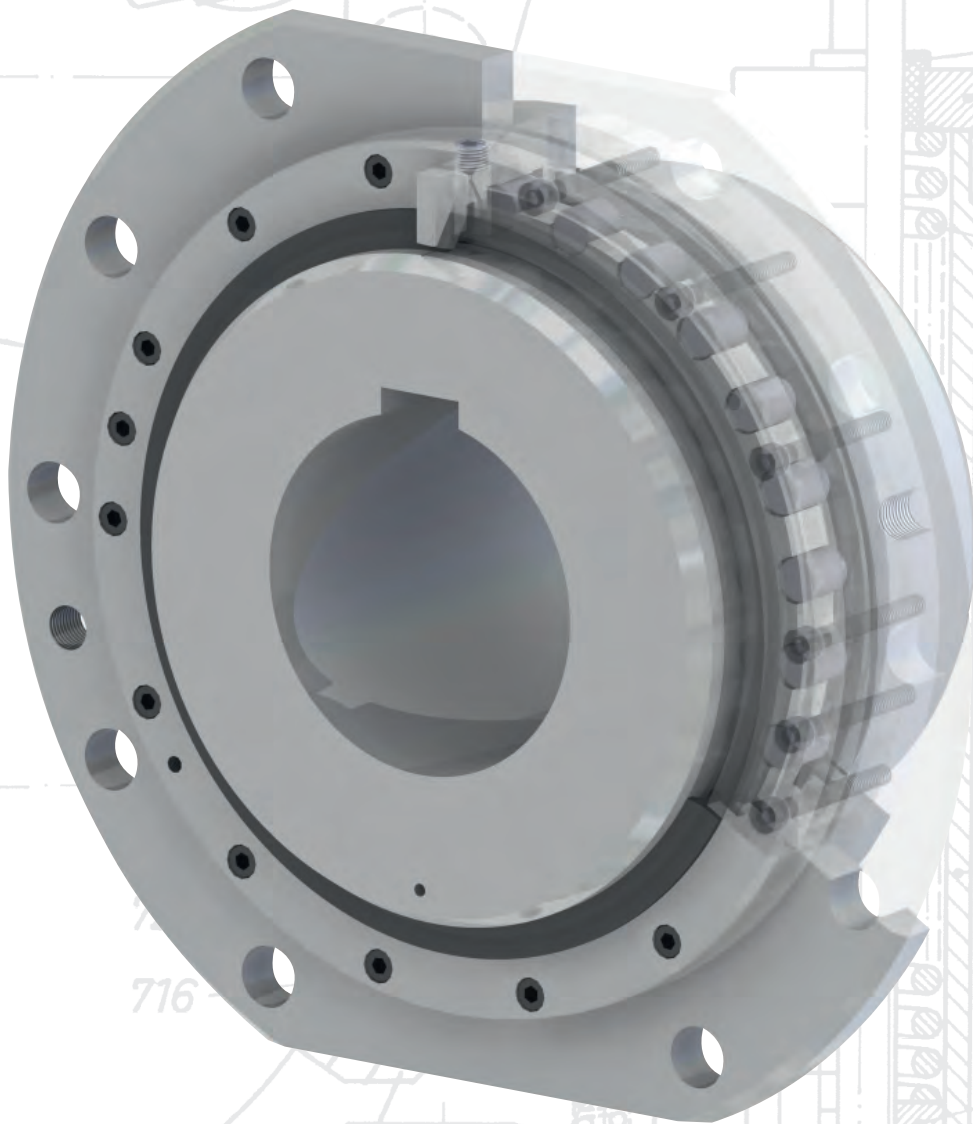


7531 755 7522 753 7871
757 754 7523 7521 752 756 787



KoRo·IBS

MOVING AND BRAKE SYSTEM



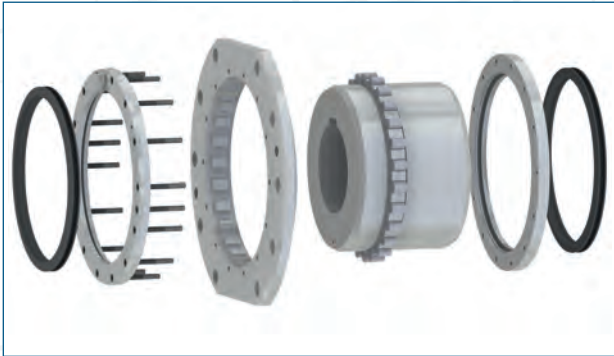
716

Barrel couplings

722 714 715 704 7811

Industrial Brakes · Thrusters · Pressure Oil Pumps · Couplings · Hydraulic Buffers · Cellular Buffers
Rail Pliers · Sheaves · Hook Blocks · Crane Rail Wheels · Rail Clamps · Repairation · Service

Nominal torque from 4,5 kNm to 770 kNm
Admissible radial load from 14,5 to 475,5 kNm



Generally the torque is carried through the housing of flange-drum with two driving surfaces which are diagonal flat and positioned opposite. This is enhanced by friction of connecting screw of both flanges.



Special Characteristics

- ➔ Absorption of high radial load
- ➔ High resistance to wear
- ➔ Construction is very robust
- ➔ Indicator for degree of wear
- ➔ Indicator to control axial position of housing to hub

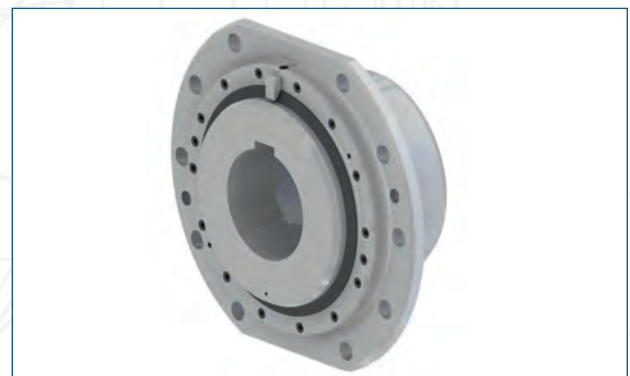
The barrel couplings consists of a flange enclosures with semicircular internal gear and a clutch hub with external teeth of same form, as well as a series of hardened steel roller, the barrels which are between the two parts. Two caps are fixed at the sides with adequate gaskets and care for sealing the interior. Axial play of barrel roller in the housing is defined through two clamp rings on the hubs which are fixed on both sides of gear teeth. Due to vaulted form of barrel rollers and the play of teeth, it is possible to adjust an angular displacement of $\pm 1^{\circ}30'$ and an axial displacement from min ± 3 mm to max. ± 8 mm.

Designs

- ➔ ITK – standard material
- ➔ ITK42 – made of 42CrMo4

Design of ITK

- ➔ ITKB – suitable for absorption of axial forces
- ➔ ITKN – design with tooth hub profile acc. to DIN 5480
- ➔ ITKH – Special design for steel work application
- ➔ ITKSI – acc. to Norm SIDMAR BR3-550 (01-10-1998Reb.D)
- ➔ ITKSG – acc. to Norm SEB 666212 (January 1991)



Application

The barrel coupling type ITK is recommended for installation in the drives of rope drums for cranes, capstans or conveyors.

The installation of such barrel couplings eliminates the occurrence of a statically indeterminate case which appears when the shaft of the reducer is assembled rigid to the drum (fig. 1).

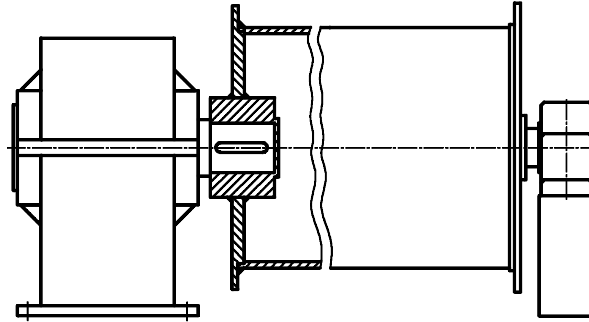


fig. 1

This kind of installation requires an extensive time because of the absolute exact alignment. Even so prejudicial effects over bearings and gear-wheels produced by additional stresses as a consequence of deformations in supports, wear and tear of operating parts cannot be prevented.

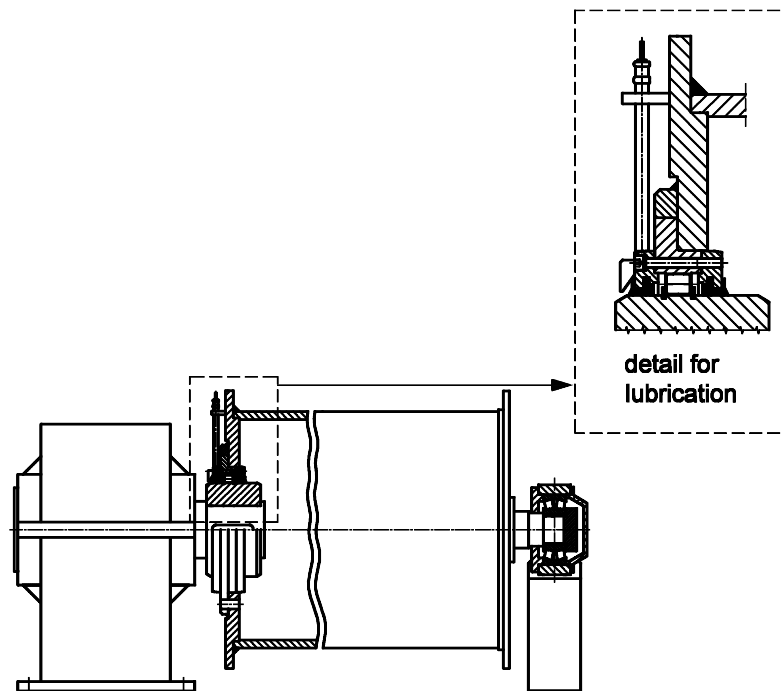
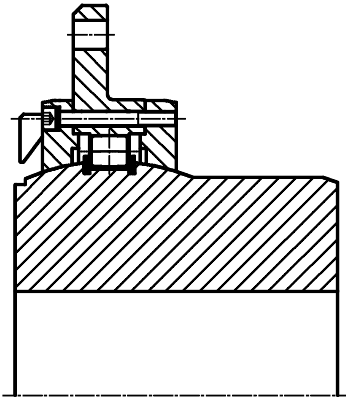


fig. 2

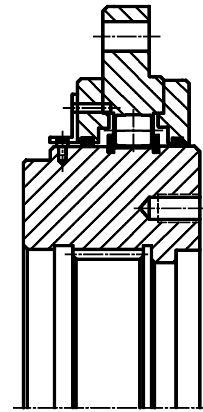
When installing in the recommended way shown in fig. 2 the barrel coupling plays the role of a knuckle which creates a static connection. The jointed coupling operates axially free with the result that the support-bearing of the opposite side of the drum has to absorb the possibly occur axial stresses. As a special design the barrel coupling can be constructed as a joint which can withstand axial stresses in itself.

Types of constructions of the ITK



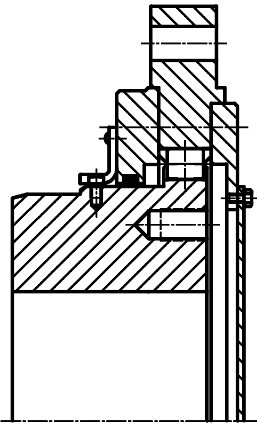
Type ITKB

dedicated to withstand axial stresses in itself



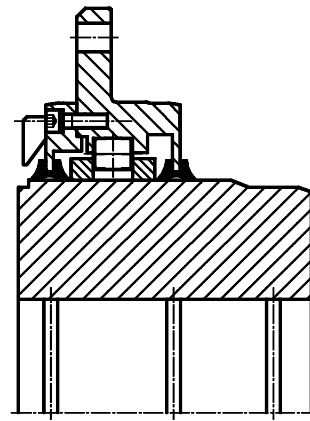
Type ITKN

version with tooth hub profile acc. DIN 5480



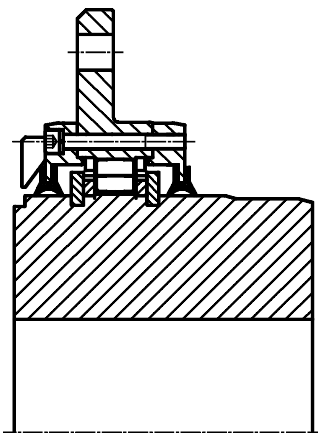
Type ITKH

special design for steel work application



Type ITKSI

acc. standard SIDMAR BR3-550(01-10-1998Reb.D)



Type ITKSG

acc. standard SEB 666212 (January 1991)

Construction and characteristics

The barrel coupling is basically made up by a sleeve-flange with semicircular internal teeth, a hub having external teeth with the same shape and a series of hardened steel rollers, the barrels, which are housed between both parts. Covers at each side with their corresponding retainers seal the internal space. Two retainer rings mounted on the hub one at each side of the teeth limit the axial displacement of the barrel rollers inside their housing. Due to the cambered shape of the barrels and the tolerance between the teeth it is possible to accept an angular misalignment in the coupling of $\pm 1^{\circ}30'$ and an axial displacement which range from ± 3 mm to max. ± 8 mm depending on the size (see table 4, page 10).

The torque is usually transmitted to the receiving flange of the drum by two flat, diametrically opposed carrier faces at the periphery of the coupling flange. The friction effect of the fixing screws of both flanges also take part in this transmission.

Other systems as adjusted bolts or similar can also be used when preparing the flanges accordingly.

The design described can withstand big radial loads because they are distributed over the wide barrel support surface. In addition it minimizes the reversed bending stress of the torque over the teeth which are short and have a wide root section. Apart from this due to a "flatness polishing" of the hardened barrels over the tooth profile the resistance to wear is greatly improved. The control of the teeth internal wear can be carried out without disassembling any part since there is a pointer fixed to the external cover linked to the sleeve flange which moves between two marks existing in the hub. The same pointer is used in order to control the axial position of the sleeve-flange in relation to the hub.

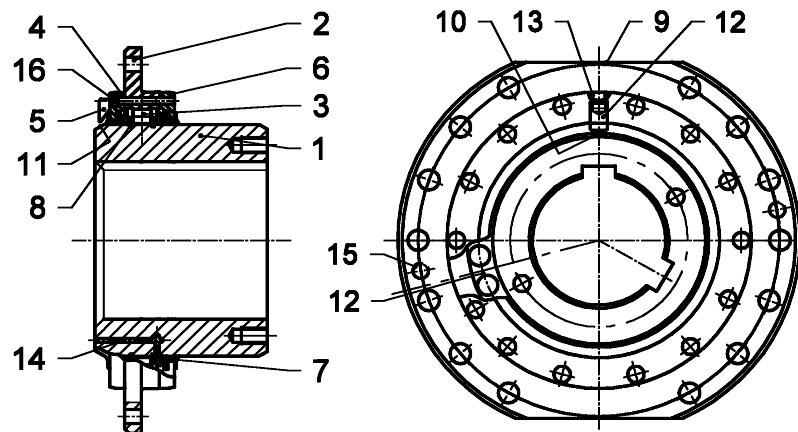


fig. 3

- | | | | |
|----|------------------|-----|---------------------------|
| 1. | - hub | 9. | - carrier face |
| 2. | - sleeve-flange | 10. | - wear marks |
| 3. | - barrels | 11. | - axial adjustment mark |
| 4. | - external cover | 12. | - assembly mark |
| 5. | - pointer | 13. | - lubricant filler |
| 6. | - internal cover | 14. | - lubricant overflow hole |
| 7. | - joint | 15. | - extractor hole |
| 8. | - retainer ring | 16. | - fixing screw |

Defining the ,correct' coupling size

The size of the required coupling depends on the torque transmitted, the radial load it has to be withstand and the geometric consideration of the reducer shaft to be mounted.

Torque of the coupling

Based on the installed power (N_i)

$$1 \quad M_s (\text{daNm}) = 955 \cdot \frac{N_i (\text{kW})}{n (\text{min}^{-1})} \cdot F_1$$

Based on the consumed power (N_c)

$$2 \quad N_c (\text{kW}) = \frac{T_c (\text{daN}) \cdot V_c \left(\frac{\text{m}}{\text{min}} \right)}{6000}$$

$$3 \quad M_s (\text{daNm}) = 955 \cdot \frac{N_c (\text{kW})}{n (\text{min}^{-1})} \cdot F_1$$

or

$$4 \quad M_s (\text{daNm}) = T_c (\text{daN}) \cdot \frac{D (\text{m})}{2} \cdot F_1$$

table 1

working group			factor F_1
DIN 15020 part 1	FEM (1970)	FEM (1987) BS466 (1984)	
1 Bm	IB	M1, M2, M3	1.12
1 Am	IA	M4	1.25
2 m	II	M5	1.40
3 m	III	M6	1.60
4 m	IV	M7	1.80
5 m	V	M8	2.00

with:

N_i (kW)	-	installed motor power
N_c (kW)	-	consumed power
M_s (daNm)	-	selection torque
V_c (m/min)	-	displacement speed of the cable in the drum
n (min^{-1})	-	rotating speed of the drum
D (m)	-	effective winding diameter in the drum
T_c (daN)	-	static total load at the drum including load of the hoist and the drum
F_1	-	service factor acc. table 1

Once the selection torque M_s has been calculated you have to choose from table 4, page 10, the size that suits:

$$M_{\max} \geq M_s$$

In the next step the selected size has to be confirmed depending on the radial load supported.

Determination of the radial load

The value to be calculated always refers to the fraction of the total radial load the coupling has to withstand since the coupling is one of the drum's.

The involved parameters are:

Q (daN)	-	useful load lifted corresponding to the drum system considered
G (daN)	-	own weight of the hoist mechanism
G_T (daN)	-	own weight of the drum with its cabled and coupling parts linked to it
i_g	-	transmission gain ratio of the hoist
η_p (Tab. 2, Page 7)	-	efficiency of the hoist system
η_T	-	efficiency of drum supports $\eta_T = 0,98$ over bearings
L (Fig. 6, Page 6)	-	Distance between drum supports
b (Fig. 6, Page 6)	-	shortest possible distance from the cable in the drum to the centre of the coupling rollers
T_c (daN)	-	total pulling of cables to the drum including η
C_R (daN)	-	radial load supported

5 $T_C = \frac{Q+G}{ig \cdot \eta_P \cdot \eta_T}$

6 $ig = \frac{\text{total amount of strands in the hoist mechanism}}{\text{total amount of strands getting out of the drum}}$

7.1 $C_R = \frac{T_C}{2} + \frac{G_T}{2}$

table 2

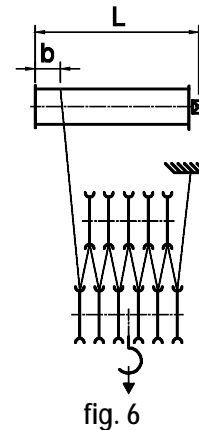
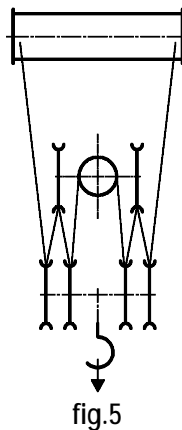
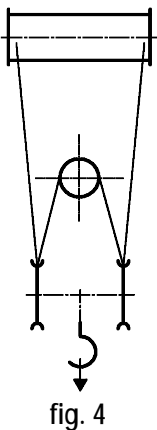
ig	η_p	ig	η_p
1	1.00	8	0.93
2	0.99	9	0.92
3	0.98	10	0.91
4	0.97	11	0.90
5	0.96	12	0.90
6	0.95	13	0.89
7	0.94	14	0.88

for systems of double strands to the drum

7.2 $C_R = \left(T_C \cdot \frac{b}{L} \right) + \frac{G_T}{2}$

for systems of only one strand to the drum

Example



Once the radial load C_R has been calculated the validity of the size of the selected coupling has to be conformed (see table 4, page 10):

$S_T \geq C_R$

Option of corrected radial load

When the value of the radial load C_R is higher than the maximum value S_T from table 4, page 10, but the selection torque M_S still does not reach the maximum M_{max} , before selecting a higher size a final verification can be done by using the value of Corrected Radial load R_C :

$$8 \quad R_C = S_T + (M_{max} - M_S) \cdot C \quad R_C > C_R$$

where C is a factor which changes depending on the coupling size (see table 3):

Table 3: capacity and dimension (mm)

ITK	2.5	5	7.5	10	13	16	20	30	40	50	60	100	150	260	340	420	620
C	10.3	9	8	7.2	6.4	5.8	5.2	4.8	4.1	3.7	3.4	3	2.6	2.4	2.2	2	1.8

If $R_C \geq C_R$ takes place the size previously selected is valid.

ATTENTION! The inverse compensation between Torque and Radial load **must not** be done!

Capacity of the shaft to be assembled

The coupling size selected according to the previous paragraphs will logically only be valid if the maximum acceptable geometric condition of the shaft will be kept. Table 4, page 10 shows the acceptable maximums for shafts connections by key as per DIN 6885 / 1.

For other connections systems such as splines as per DIN 5480, shrink fit, etc. please do not hesitate to contact us.

In any case the values for the shafts housings indicated on the table do not presuppose that the pressures over the key or keys used are correct. This has to be verified always in every case.

Example of selecting

Data

Q	=	40 T = 39.240 daN	- (useful load to be lifted)
G	=	1.200 daN	- (own weight of hoist)
G_T	=	1.500 daN	- (own weight of drum and cables)
N_i	=	55 kW	- (power of the motor)
n	=	10 min ⁻¹	- (drum speed)
D	=	0.8 m	- (drum diameter)
ig	=	4 (Fig. 5, Page 6)	- (transmission gain ratio of the hoist)
F_1	=	1.8	- (group 4m // IV // M7)
d	=	∅210m6	- (gearbox output shaft with keyways)

Torque of the coupling

Total pulling of cables

$$5 \quad T_C = \frac{Q+G}{ig \cdot \eta_P \cdot \eta_T} = \frac{39240+1200}{4 \cdot 0.97 \cdot 0.98} = 10,635 \text{ daN}$$

$$V_C = \pi \cdot D \cdot n = 3.1416 \cdot 0.8 \cdot 10 = 25.13 \frac{\text{m}}{\text{min}}$$

$$2 \quad N_c = \frac{T_C \cdot V_C}{6000} = \frac{10.635 \cdot 25.13}{6000} = 44.55 \text{ kW}$$

Determination of torque

$$1 \quad M_s = 955 \cdot \frac{N_i}{n} \cdot F_1 = 955 \cdot \frac{55}{10} \cdot 1.8 = 9.455 \text{ daNm} \quad (N_i - \text{installed motor power})$$

$$3 \quad M_s = 955 \cdot \frac{N_c}{n} \cdot 1.8 = 955 \cdot \frac{44.55}{10} \cdot 1.8 = 7.58 \text{ daNm} \quad (N_c - \text{consumed power})$$

or

$$4 \quad M_s = T_C \cdot \frac{D}{2} \cdot F_1 = 10.635 \cdot \frac{0.8}{2} \cdot 1.8 = 7,658 \text{ daNm}$$

Preliminary size (acc. table 4, page 9.):

M_{\max}		M_s
12,000	>	9,455
	or	
12,000	>	7,658

ITK-100 →

Radial load

$$7.1 \quad C_R = \frac{T_C}{2} + \frac{G_T}{2} = \frac{10.635}{2} + \frac{1.500}{2} = 6,68 \text{ daN}$$

Size confirmation (Table 4, Page 10):

$$S_T > C_R$$

$$12,500 > 6,068 \rightarrow \text{ITK-100 OK!}$$

Corrected radial load

Provided that the value $C_R = 14,300 \text{ daN}$ and for the selected coupling ITK-100 $C_R > S_T$ is, you can do a last check by using the corrected radial load R_c :

$$8 \quad R_c = S_T + (M_{\max} - M_s) \cdot C = 12,500 + (12,000 - 9,455) \cdot 3 = 20,135 \text{ daN}$$

$$\begin{array}{ccc} R_c & > & C_R \\ 20,135 & > & 14,300 \rightarrow \text{ITK-100 OK!} \end{array}$$

Capacity of the shaft

Sample value for gearbox output shaft with keyways $d = 210$;
 acc. table 4 (page 10) it is true for ITK-100: $d_{\max} = 230$
 $d_{\max} > d$
 $230 > 210 \rightarrow \text{ITK-100 OK!}$

Remark: check that the pressure stress over the keys is acceptable.

Barrel Coupling

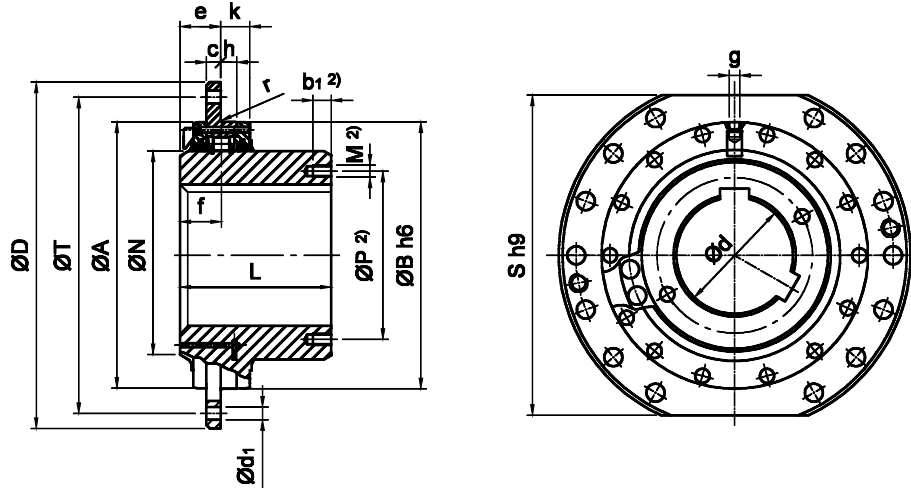


fig. 7 dimensions

Table 4: capacities and dimensions (mm)

Size	ITK		ITK42		d _{max} H7	d _{min} H7	D	L	L _{min}	N	A	B h6	S h9	e	f	c	r	h	k	T	d ₁
	M _{max} [daNm]	S _T ⁽¹⁾ [daN]	M _{max} [daNm]	S _T ⁽¹⁾ [daN]																	
2.5	450	1450	650	1750	65	40	250	95	85	95	159	160	220	42	44	12	2.5	16	31	220	15
5	600	1650	800	2000	75	50	280	100	85	110	179	180	250	42	44	12	2.5	16	31	250	15
7.5	750	1850	950	2150	85	60	320	110	95	125	199	200	280	45	46	15	2.5	17	32	280	19
10	900	2000	1600	2700	95	60	340	125	95	140	219	220	300	45	46	15	2.5	17	32	300	19
13	1550	3100	2100	3700	105	80	360	130	95	160	239	240	320	45	47	15	2.5	19	34	320	19
16	1950	3500	2600	4100	120	80	380	145	95	180	259	260	340	45	47	15	2.5	19	34	340	19
20	2400	3850	3000	4500	135	100	400	170	95	200	279	280	360	45	47	15	2.5	19	34	360	19
30	2800	4200	4100	5300	145	100	420	175	95	220	309	310	380	45	47	15	2.5	19	34	380	19
40	3800	4900	5400	7500	175	100	450	185	120	260	339	340	400	60	61	20	2.5	22	40	400	24
50	5800	8500	7700	11500	190	110	510	220	125	285	399	400	460	60	61	20	2.5	22	42	460	24
60	7000	11500	12000	13000	205	120	550	240	125	310	419	420	500	60	61	20	2.5	22	42	500	24
100	12000	12500	18000	15000	230	140	580	260	130	350	449	450	530	60	61	20	2.5	22	42	530	24
150	18000	15000	24000	18000	280	160	650	315	140	415	529	530	580	60	66	25	2.5	27	47	600	24
260	31000	25000	41000	31500	300	170	680	350	145	445	559	560	600	65	69.5	25	4	34	54	630	24
340	40000	30000	52000	36000	315	200	710	380	165	475	599	600	640	81	85.5	35	4	34	56	660	28
420	50000	34000	65000	40000	355	230	780	410	165	535	669	670	700	81	85.5	35	4	34	56	730	28
620	68500	38000	77000	47500	400	260	850	450	165	600	729	730	760	81	85.5	35	4	34	59	800	28

⁽¹⁾ S_T = acceptable radial load

g = lubricant filler, size: 1/8"G at ITK ≤ 16 und 1/4"G at ITK ≥ 20

⁽²⁾ M, P, b₁ – dimensions in table 5, page 11, only for sizes ITK ≥ 20

Drilling off lange-sleeve

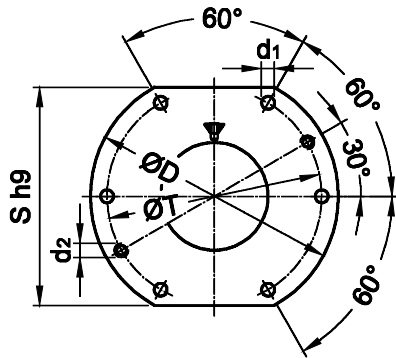


fig. 8 ITK 2.5 – ITK 60

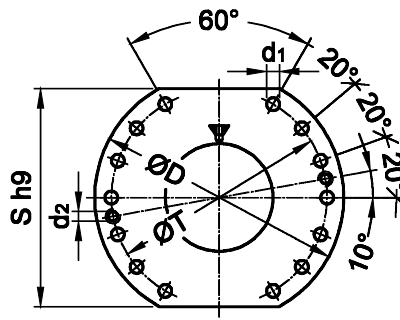


fig. 9 ITK 100 – ITK 150

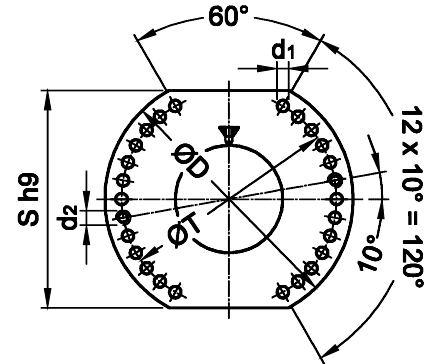


fig. 10 ITK 260 – ITK 620

Drum flange

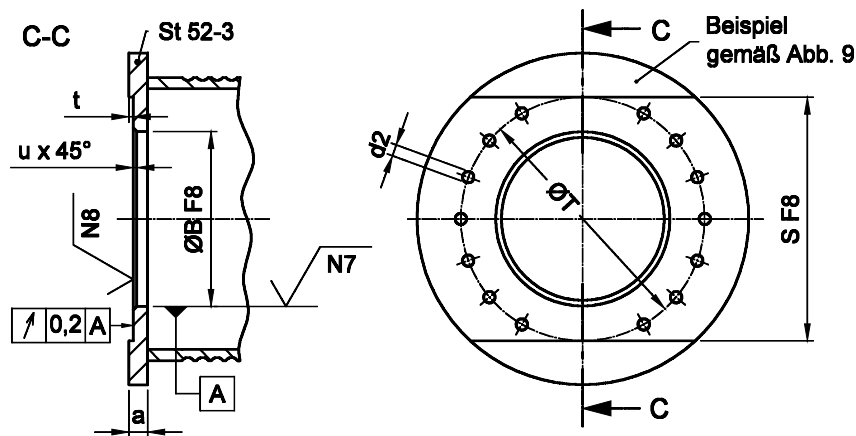


Abb. 11

Table 5: Dimensions (fig. 8 to fig. 11) mm

Size	D	T	S F8/h9	B F8/h6	max axial clearance	lubricant [dm ³]	weight [kg]	J [kgm ²]	a min	t min	u	P	Mxb ₁	d ₁	d ₂		
															thread	No. holes	
																drum	flange
2.5	250	220	220	160	3	0.08	12	0.06	25	10	3	-	-	15	M12	6	2
5	280	250	250	180	3	0.10	19	0.13	25	10	3	-	-	15	M12	6	2
7.5	320	280	280	200	4	0.12	23	0.17	25	10	3	-	-	19	M16	6	2
10	340	300	300	220	4	0.14	27	0.28	25	10	3	-	-	19	M16	6	2
13	360	320	320	240	4	0.15	33	0.36	25	10	3	-	-	19	M16	6	2
16	380	340	340	260	4	0.17	42	0.48	25	10	3	-	-	19	M16	6	2
20	400	360	360	280	4	0.19	54	0.66	25	10	3	165	M16x24	19	M16	6	2
30	420	380	380	310	4	0.23	70	0.93	25	10	3	180	M16x24	19	M16	6	2
40	450	400	400	340	4	0.45	95	1.45	30	10	3	215	M20x30	24	M20	6	2
50	510	460	460	400	6	0.53	142	3.40	30	10	3	240	M20x30	24	M20	6	2
60	550	500	500	420	6	0.57	162	3.93	30	10	3	260	M20x30	24	M20	6	2
100	580	530	530	450	6	0.65	195	5.03	40	20	3	290	M24x36	24	M20	14	2
150	650	600	580	530	6	0.72	305	11.0	50	25	3	350	M24x36	24	M20	14	2
260	680	630	600	560	6	0.90	360	16.0	50	25	5	375	M30x45	24	M20	24	2
340	710	660	640	600	8	1.00	408	20.0	60	35	5	395	M30x45	28	M24	24	2
420	780	730	700	670	8	1.30	580	34.5	60	35	5	445	M30x45	28	M24	24	2
620	850	800	760	730	8	2.00	715	52.0	60	35	5	500	M30x45	28	M24	24	2

Barrel coupling

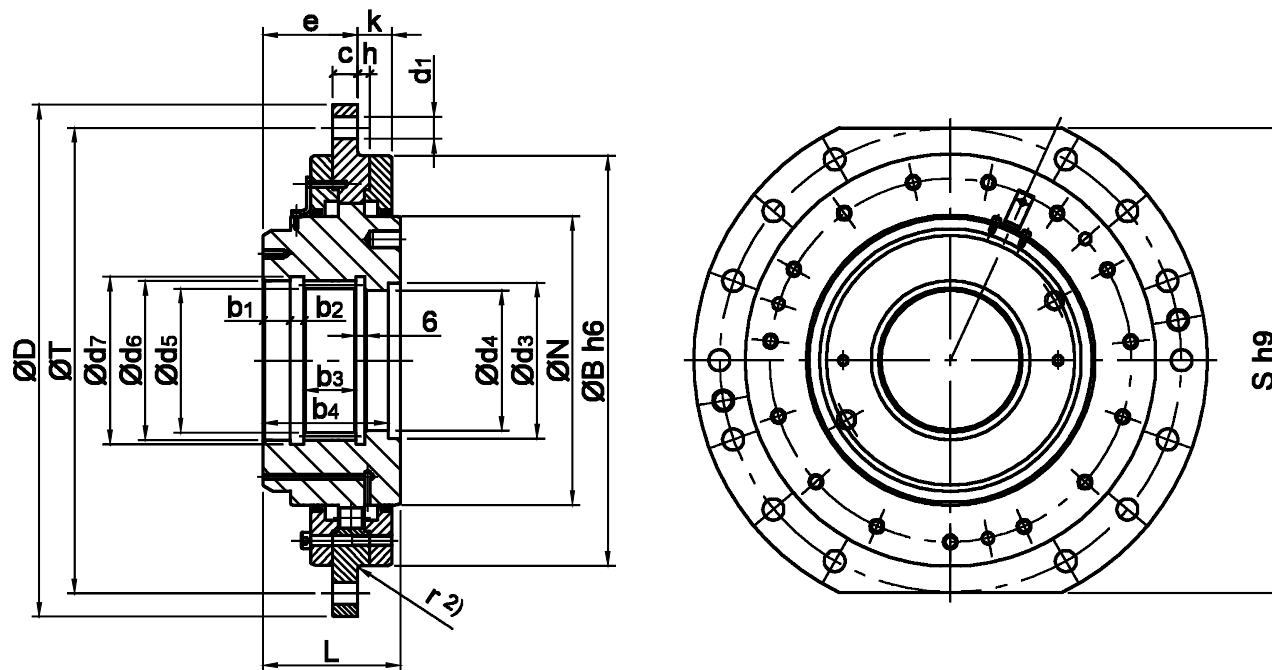


fig. 12 Dimensions

Table 6: capacities and dimensions (mm)

Size	ITKN		ITKN42		D	L	N	B h6	S h9	e	c	h	k	T	b ₁	b ₂	b ₃	b ₄	d ₃	d ₄ H7	d ₅ H1	Gear shaft m x z DIN 5480	d ₆ K6	d ₇
	M _{max} [daNm]	S _T ⁽¹⁾ [daN]	M _{max} [daNm]	S _T ⁽¹⁾ [daN]																				
20	2400	3850	3000	4500	400	125	200	280	360	90	32	10	25	360	39	15	32	110	101	85	90	5x18	100	105
30	2800	4200	4100	5300	420	120	220	310	380	85	32	10	25	380	39	15	32	110	121	105	110	5x22	120	125
40	3800	4900	5400	7500	450	130	260	340	400	92	32	10	28	400	40	15	40	121	141	125	130	5x26	140	145
50	5800	8500	7700	11500	510	129	285	400	460	89	32	10	30	460	38	15	42	121	161	145	150	5x30	160	165
60	7000	11500	12000	13000	550	129	310	420	500	89	32	10	30	500	38	15	42	121	166	150	154	8x20	170	175
100	12000	12500	18000	15000	580	131	350	450	530	91	32	10	30	530	26	15	50	116	200	180	184	8x24	200	205
150	18000	15000	24000	18000	650	150	415	530	580	108	40	12	32	600	27	15	60	129	240	220	224	8x28	240	245
260	31000	25000	41000	31500	680	162	445	560	600	111	40	19	39	630	26	15	70	138	280	260	264	8x34	280	285
340	40000	30000	52000	36000	710	162	475	600	640	109	50	19	41	660	26	15	70	138	280	260	264	8x34	280	285
420	50000	34000	65000	40000	780	190	535	670	700	137	50	19	41	730	33	15	80	161	350	320	324	8x41	340	345
620	68500	38000	77000	47500	850	220	600	730	760	152	50	19	41	800	38	15	100	190	390	360	364	8x46	380	385

⁽¹⁾ S_T – acceptable radial load

⁽²⁾ r – dimensions acc. table 7, page 13

Drilling of flange-sleeve

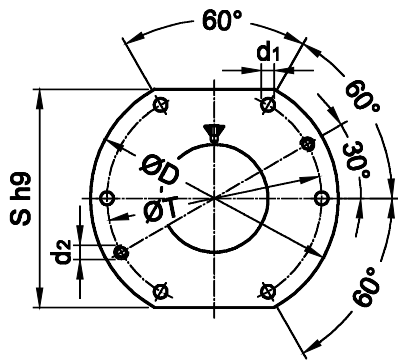


fig. 13 ITKN 20 – ITKN 60

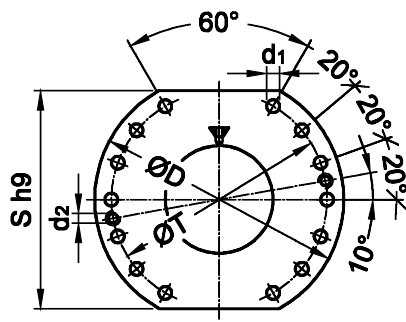


fig. 14 ITKN 100 – ITKN 150

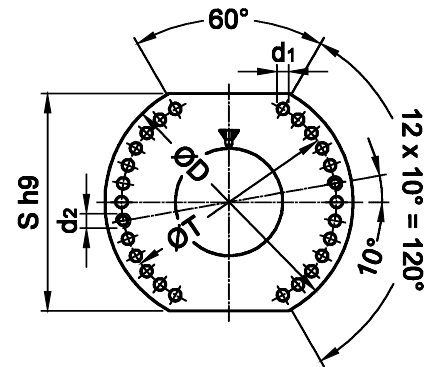


fig. 15 ITKN 260 – ITKN 620

Drum flange

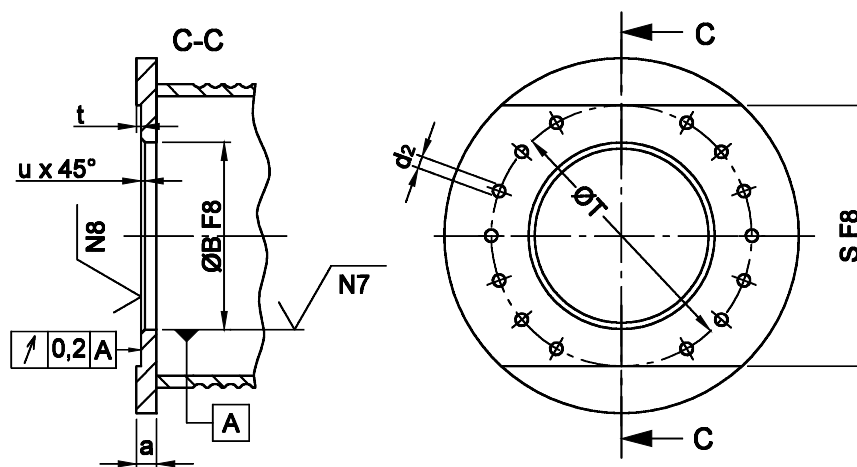


fig. 16

Table 7: Dimensions (fig. 13 to fig. 16) mm

Size	D	T	S h9	B h6	lubricant [dm ³]	r	weight [kg]	J [kgm ²]	a min	t min	u	d ₁	d ₂		
													thread	No. holes	
														drum	flange
20	400	360	360	280	0.19	2.5	53	0.81	25	10	3	19	M16	6	2
30	420	380	380	310	0.23	2.5	58	1.02	25	10	3	19	M16	6	2
40	450	400	400	340	0.45	2.5	74	1.5	30	10	3	24	M20	6	2
50	510	460	460	400	0.53	2.5	97	2.6	30	10	3	24	M20	6	2
60	550	500	500	420	0.57	2.5	112	3.3	30	10	3	24	M20	6	2
100	580	530	530	450	0.65	2.5	128	4.3	40	20	3	24	M20	14	2
150	650	600	580	530	0.72	2.5	195	9.0	50	25	3	24	M20	14	2
260	680	630	600	560	0.90	4	219	11.0	50	25	5	24	M20	24	2
340	710	660	640	600	1.00	4	265	15.0	60	35	5	28	M24	24	2
420	780	730	700	670	1.30	4	340	24.0	60	35	5	28	M24	24	2
620	850	800	760	730	2.00	4	460	40.0	60	35	5	28	M24	24	2

Barrel Coupling

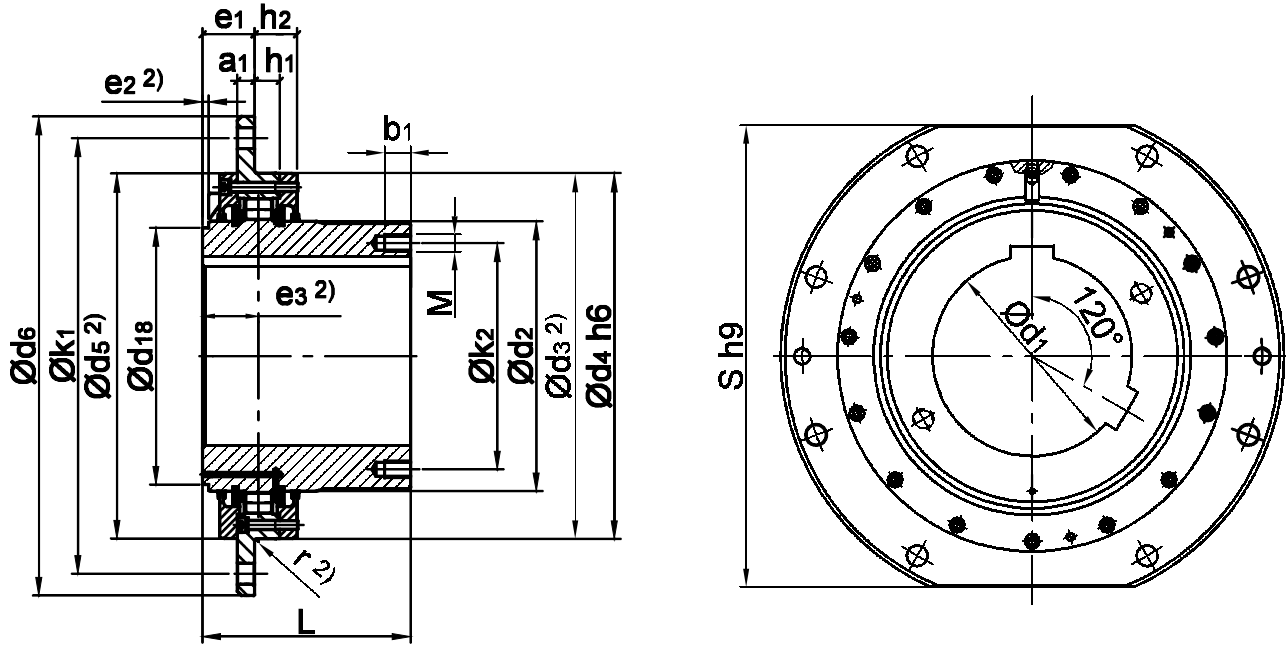


fig. 17 Dimensions

Table 8: capacities and dimensions (mm)

Size	Norm SEB 666212	ITKSG		ITKSG42		d _{1max} H7	d _{1min} H7	d ₆	L	d ₂	d ₁₈	d ₄ h6	k ₁	e ₁	k ₂	a ₁	h ₁	h ₂	S h9	M x b ₁	± max. axial clear.
		M _{max} [daNm]	S _T ⁽¹⁾ [daN]	M _{max} [daNm]	S _T ⁽¹⁾ [daN]																
20	SG-130	2400	3850	3000	4500	135	100	400	170	200	190	280	360	45	165	15	20.5	37	360	M16x2 4	4
40	SG-140	3800	4900	5400	7500	175	100	450	185	260	250	340	400	60	215	20	21	39	400	M20x3 0	4
60	SG-185	7000	11500	12000	13000	205	120	550	240	310	295	420	500	60	260	20	29	49	500	M20x3 0	6
100	SG-200	12000	12500	18000	15000	230	140	580	260	350	335	450	530	60	290	20	29.5	49.5	530	M24x3 6	6
150	SG-240	18000	15000	24000	18000	280	160	650	315	410	395	530	600	65	350	25	31.5	51.5	580	M24x3 6	6
260	SG-270	31000	25000	41000	31500	300	170	680	350	440	425	560	630	65	375	25	50	70	600	M30x4 5	6
340	SG-315	40000	30000	52000	36000	315	200	710	380	470	450	600	660	81	395	35	38	68	640	M30x4 5	8
420	SG-355	50000	34000	65000	40000	355	230	780	410	530	510	670	730	81	445	35	40	72	700	M30x4 5	8
620	SG-400	68500	38000	77000	47500	400	260	850	450	600	580	730	800	81	500	35	42	72	760	M30x4 5	8

⁽¹⁾ S_T – acceptable radial load

⁽²⁾ r, e₂, e₃, d₃, d₅ – Dimensions acc. table 9, page 15

Drilling of flange-sleeve

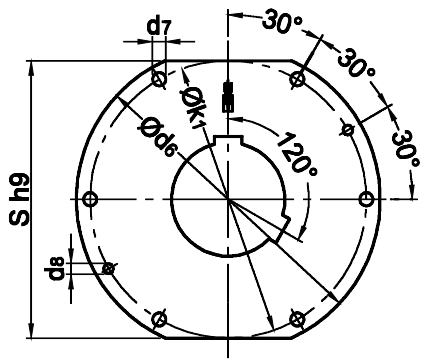


fig. 18 ITKSG 20 – ITKSG 60

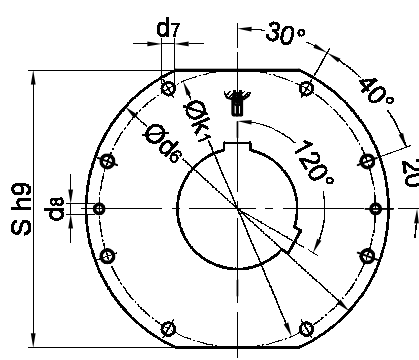


fig. 19 ITKSG 100 – ITKSG 150

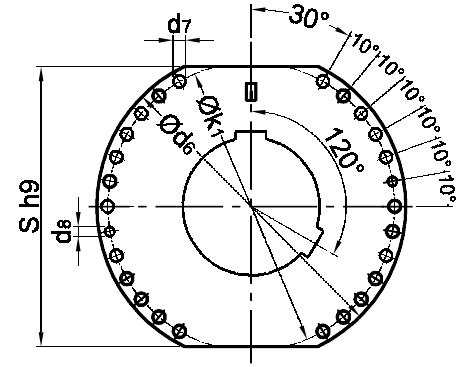


fig. 20 ITKSG 260 – ITKSG 620

Drum flange

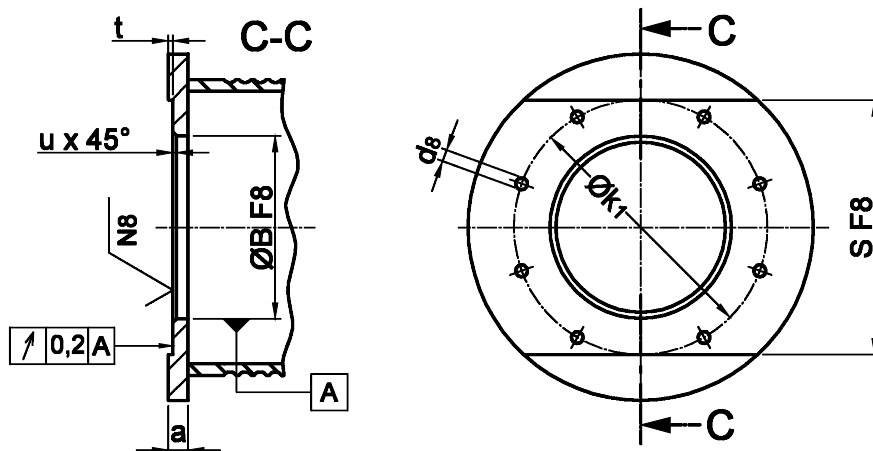
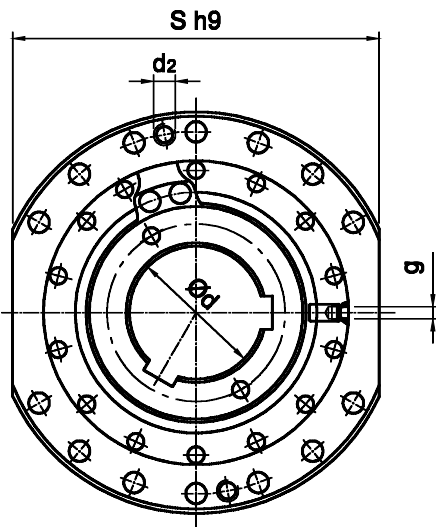
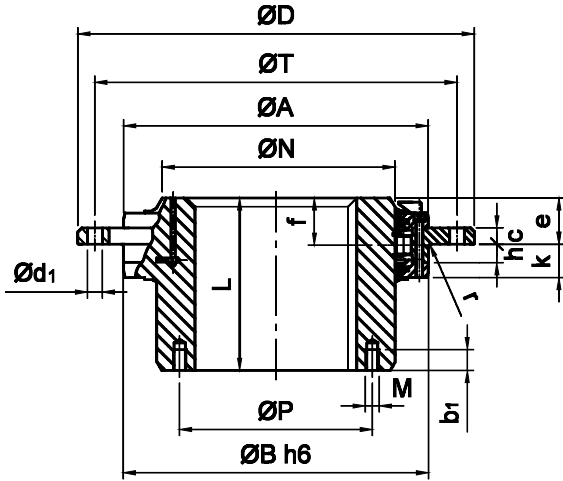


fig. 21

Table 9: dimensions (fig. 18 to fig. 21) mm

Size	d_6	k_1	S F8/h9	B F8/h6	d_3/d_5	e_2	e_3	r	lubricant [dm ³]	weight [kg]	J [kgm ²]	a min	t min	u	d_7	d_8		
																thread	No. holes	
																	drum	flange
20	400	360	360	280	279	4	48	2.5	0.19	43.5	0.57	25	10	3	19	M16	6	2
40	450	400	400	340	339	9	60.5	2.5	0.45	68.5	1.3	30	10	3	24	M20	6	2
60	550	500	500	420	419	7	64.5	2.5	0.57	127	3.4	30	10	3	24	M20	6	2
100	580	530	530	450	449	7	65	2.5	0.65	160	4.8	40	20	3	24	M20	8	2
150	650	600	580	530	529	7	68.5	2.5	0.72	249	10.0	50	25	3	24	M20	8	2
260	680	630	600	560	559	6	77.5	4	0.9	312	14.0	50	25	5	24	M20	24	2
340	710	660	640	600	599	10	87.5	4	1.0	396	20.0	60	35	5	28	M24	24	2
420	780	730	700	670	669	10	89.5	4	1.3	523	33.0	60	35	5	28	M24	24	2
620	850	800	760	730	729	10	89.5	4	2.0	680	52.0	60	35	5	28	M24	24	2



Barrel coupling type ITK

Please emit the following data:

1. radial load (daN)

2. power (kW)

3. rotation speed (min^{-1})

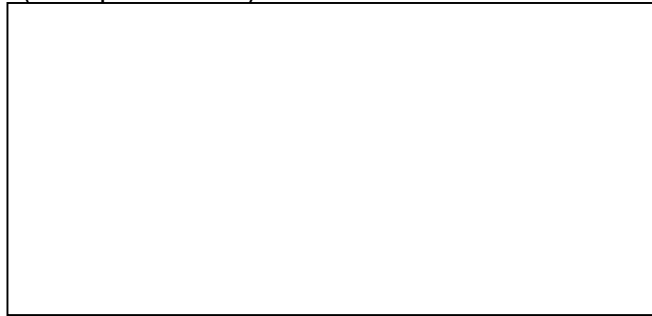
4. norm (FEM/DIN)

5. hub drill d (mm)

Please send as a fax to: IBS, Wetter,

Telefax: 0049 2335 80 12 12

(Stamp of sender)



Further requests
