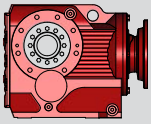
K-085



Ratio	Stages	n_{1N} (1)	n_{1Max} (2)	T_{2N} (3)	T_{2Max} (4)	T_{2E} (5)	F_{RMaxP} (7)	J (8)	C_H (6)	C_P (7)	Δφ	η	M
		rpm	rpm	N·m	N·m	N·m	N	Kg·cm²	N·m/'	N·m/'	'	%	Kg
7.21	3	1400	4378	1300	1495	2210	13200	46.0	156	169	7	96	82 - 119.2
8.29	3	1400	4500	1400	1610	2380	13500	35.0	156	169	7	96	82 - 119.2
10.00	3	1400	4500	1500	1725	2550	14200	26.0	156	169	7	96	82 - 119.2
11.17	3	1400	4500	1500	1725	2550	14900	22.0	156	169	7	96	82 - 119.2
12.56	3	1400	4378	2000	2300	3400	14800	42.0	181	198	6	96	82 - 119.2
14.45	3	1400	4500	2100	2415	3570	15300	32.0	181	198	6	96	82 - 119.2
16.00	3	1400	4500	1800	2070	3060	16000	12.0	156	169	6	96	82 - 119.2
17.42	3	1400	4500	2200	2530	3740	16300	24.0	181	198	6	96	82 - 119.2
19.45	3	1400	4500	2300	2645	3910	16800	20.0	181	198	6	96	82 - 119.2
22.41	3	1400	4500	2300	2645	3910	17900	16.0	181	198	6	96	82 - 119.2
24.92	3	1400	4500	2500	2875	4250	18000	14.0	181	198	6	96	82 - 119.2
27.88	3	1400	4500	2600	2990	4420	18500	12.0	181	198	6	96	82 - 119.2
31.39	3	1400	4500	2700	3105	4590	19200	9.6	181	198	6	96	82 - 119.2
36.52	3	1400	4500	2500	2875	4250	21400	20.0	188	207	6	95	82 - 119.2
44.02	3	1400	4500	2600	2990	4420	22800	16.0	188	207	6	95	82 - 119.2
49.16	3	1400	4500	2700	3105	4590	23500	14.0	188	207	5	95	82 - 119.2
56.64	3	1400	4500	2700	3105	4590	25000	11.0	188	207	5	95	82 - 119.2
63.00	3	1400	4500	2700	3105	4590	26200	9.8	188	207	5	95	82 - 119.2
70.46	3	1400	4500	2700	3105	4590	27300	8.4	188	207	5	95	82 - 119.2
79.34	3	1400	4500	2700	3105	4590	27300	7.1	188	207	5	95	82 - 119.2
86.34	3	1400	4500	2700	3105	4590	27300	6.3	188	207	5	95	82 - 119.2
102.71	3	1400	4500	2700	3105	4590	27300	4.9	188	207	5	95	82 - 119.2
115.82	3	1400	4500	2700	3105	4590	27300	4.0	188	207	5	95	82 - 119.2
126.91	3	1400	4500	2700	3105	4590	27300	3.5	188	207	5	95	82 - 119.2
147.32	3	1400	4500	2700	3105	4590	27300	2.8	188	207	5	94	82 - 119.2
164.34	3	1400	4500	2700	3105	4590	27300	1.8	188	207	5	94	82 - 119.2
174.19	3	1400	4500	2700	3105	4590	27300	1.6	188	207	5	94	82 - 119.2
197.37	3	1400	4500	2700	3105	4590	27300	1.3	188	207	5	94	82 - 119.2

(1) Rated input speed.

(2) Maximum Input Speed.

(3) T_{2N} value is calculated at n_{1n}, continuous duty cycle, uniform operation, KA=1 and unlimited theoretical life time as per ISO-6336 (NL>N00 in the Woehler line). The application factor KA according to DIN-3990-1 must be considered for each duty cycle and machine type.

(4) T_{2Max} only for very short time intervals.

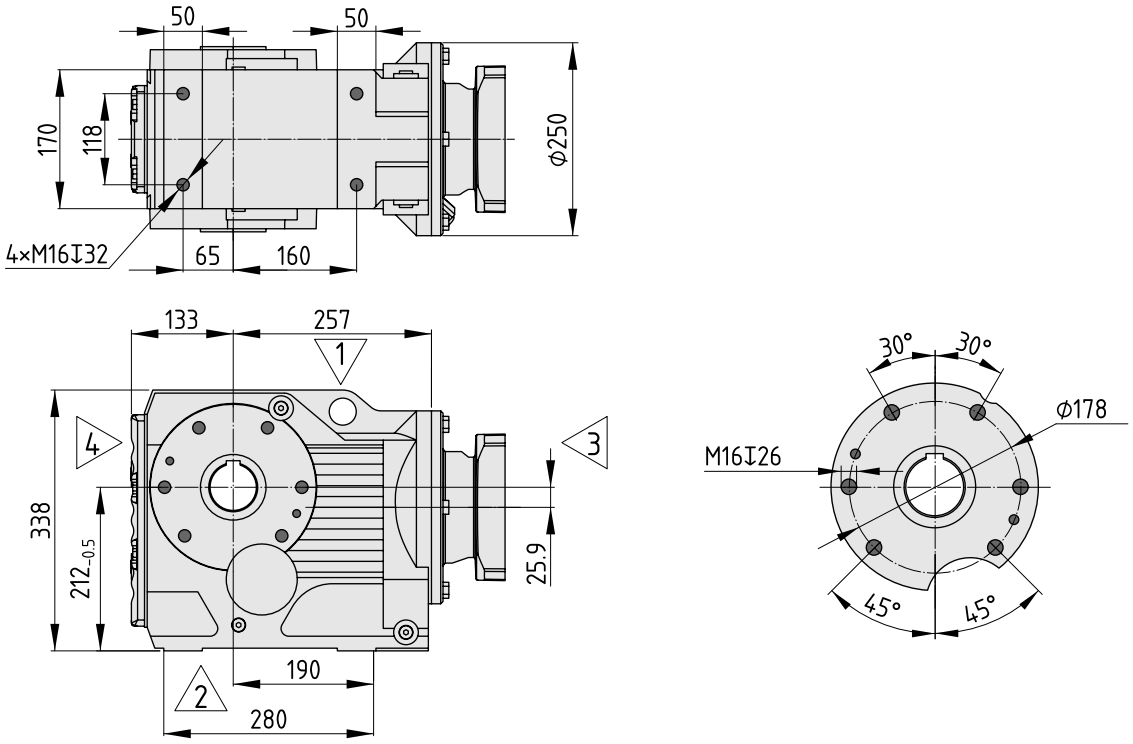
(5) Up to 1000 times during the gearbox's lifetime.

(6) F_{RMax} for gearboxes with flange and hollow output shaft

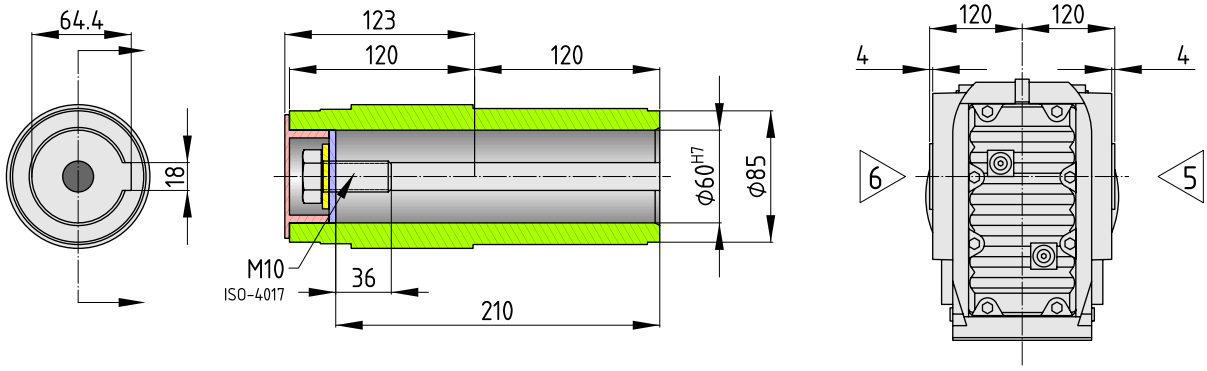
(7) F_{RMax} for gearboxes without flanges and with solid output shaft

(8) Varies depending on input.

KB-085-OO: Basic Design

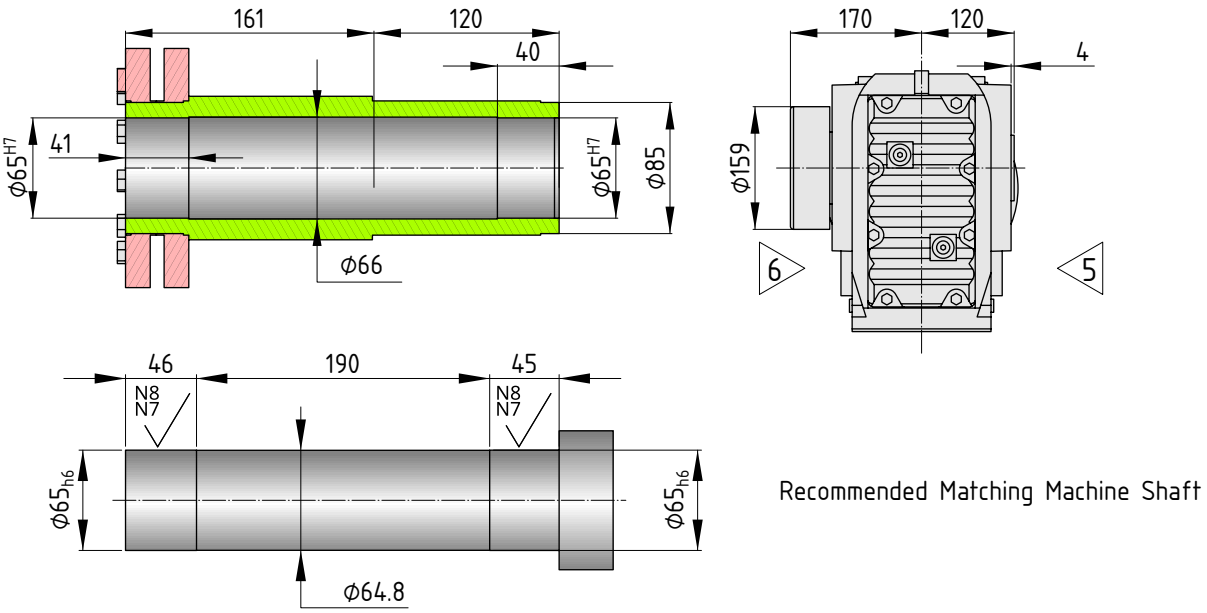


KB-085-OO-H: Hollow Shaft with Keyway



K8B-05-OO-HS□: Hollow Shaft with Shrink Disk

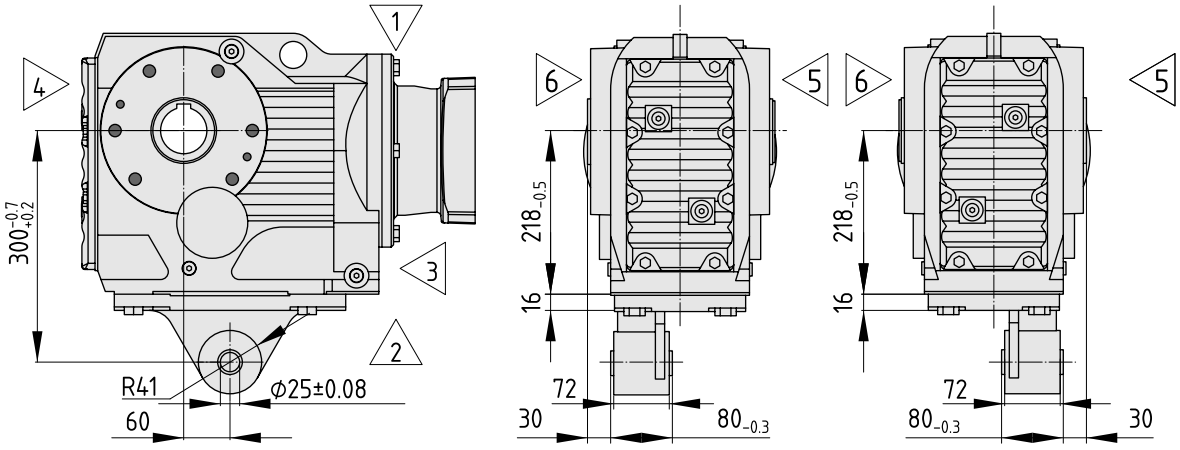
The drawings depict the shrink disk on side 6 (HS56), but it can also be installed on side 5 (HS5).



Recommended Matching Machine Shaft

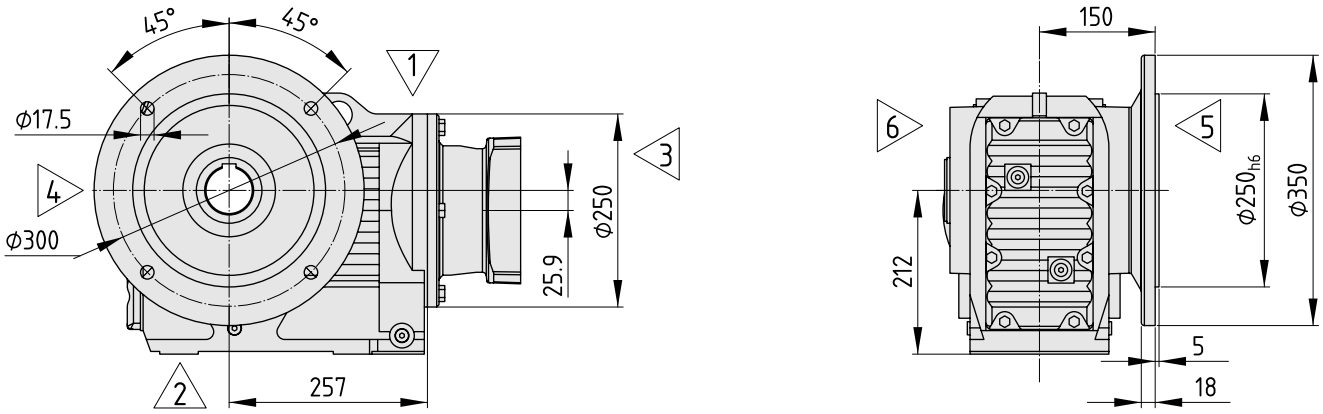
Accessory: Torque Arm

Customer must specify if the torque arm should be placed closer to side 5 or 6.

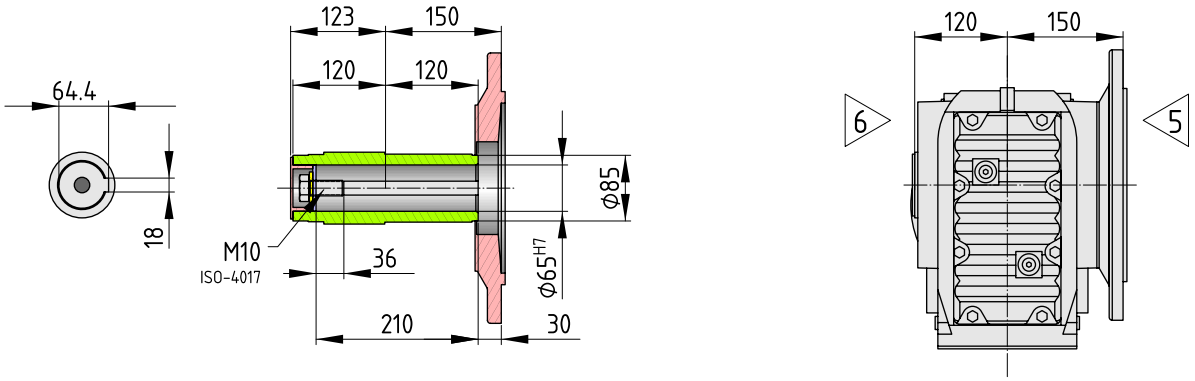


KB-085-F□: B5 Flange Mounted

The drawings depict the flange on side 5 (F5), but it can also be installed on side 6 (F6).

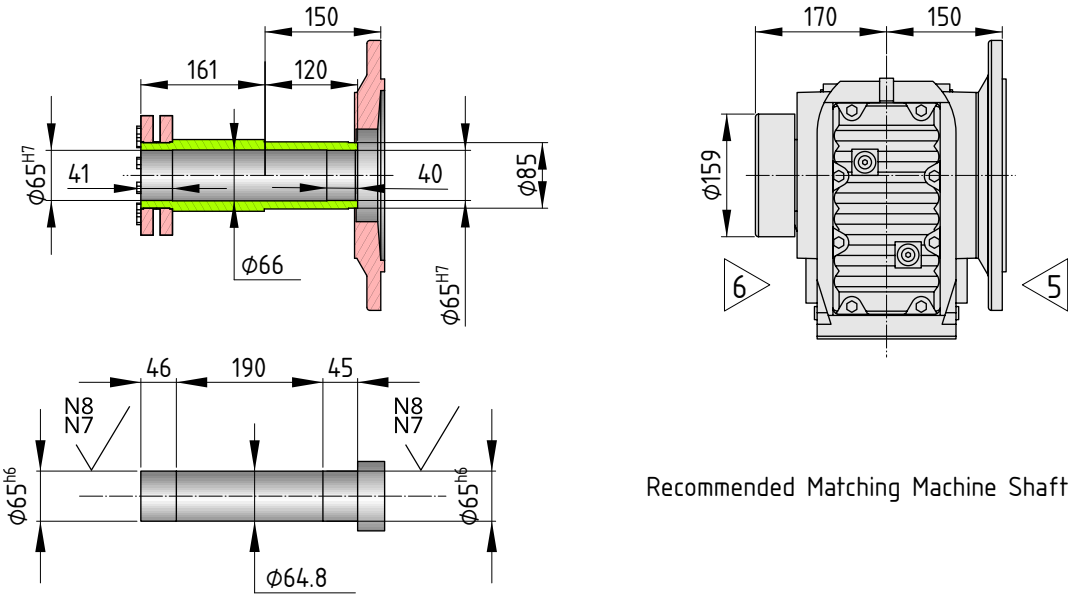


KB-085-F□-H: Hollow Shaft with Keyway



KB-085-F□-HS□: Hollow Shaft with Shrink Disk

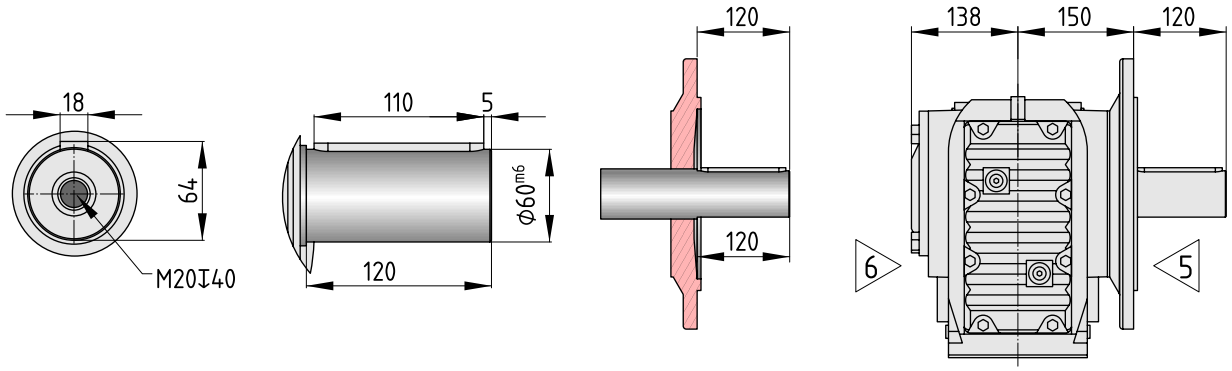
The drawings depict the shrink disk on side 6 (HS56), but it can also be installed on side 5 (HS5). It is always opposite to the flange.



Recommended Matching Machine Shaft

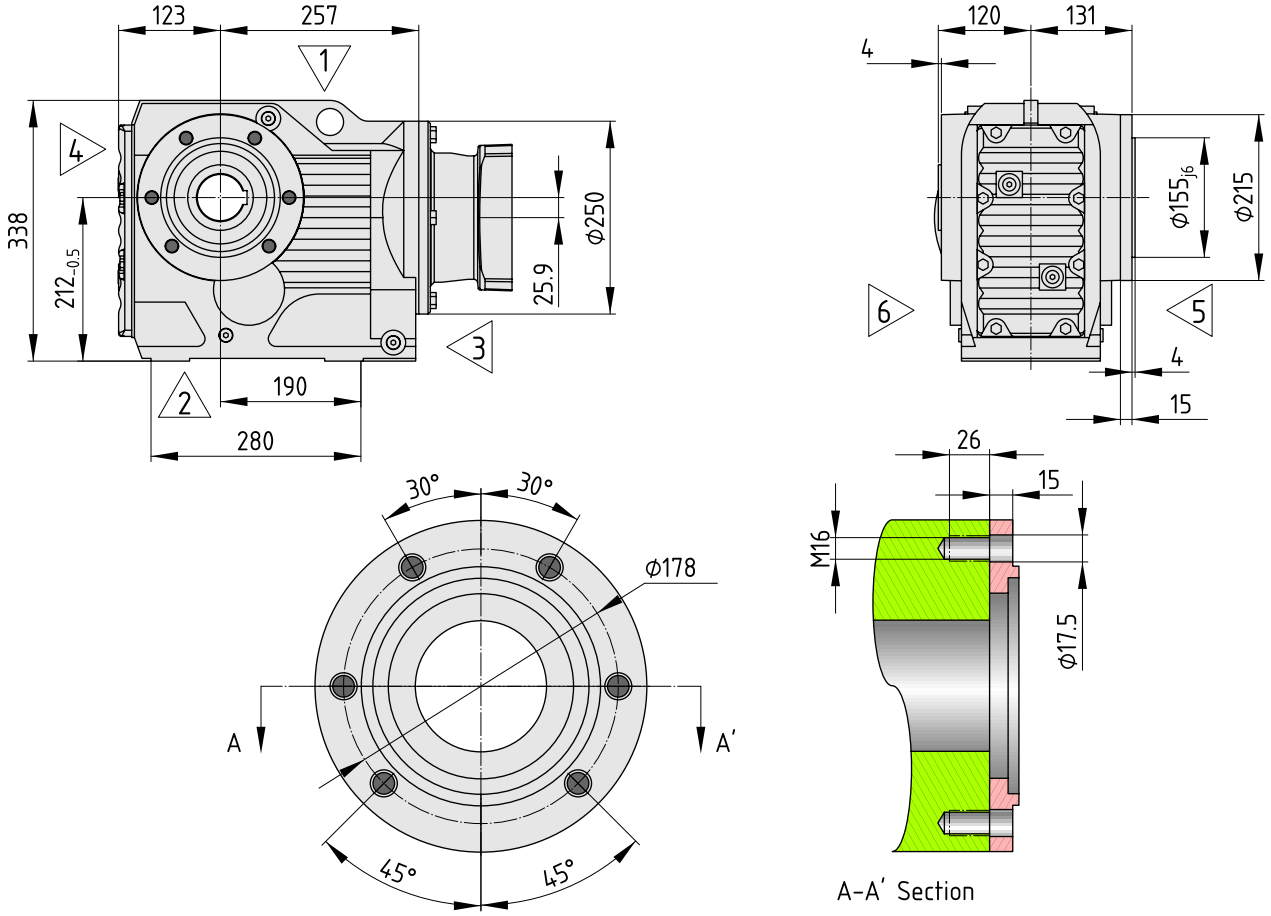
KB-085-F□-P□: Single Solid Shaft with Key

The drawings depict the solid shaft on side 5 (P5), but it can also be installed on side 6 (P6). It is always on the same side as the flange.

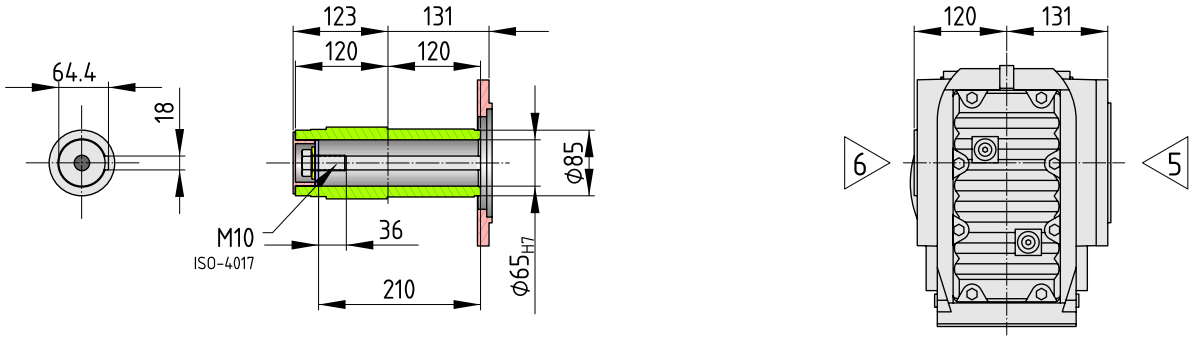


KB-085-Z□: B5 Flange Mounted

The drawings depict the flange on side 5 (Z5), but it can also be installed on side 6 (Z6).

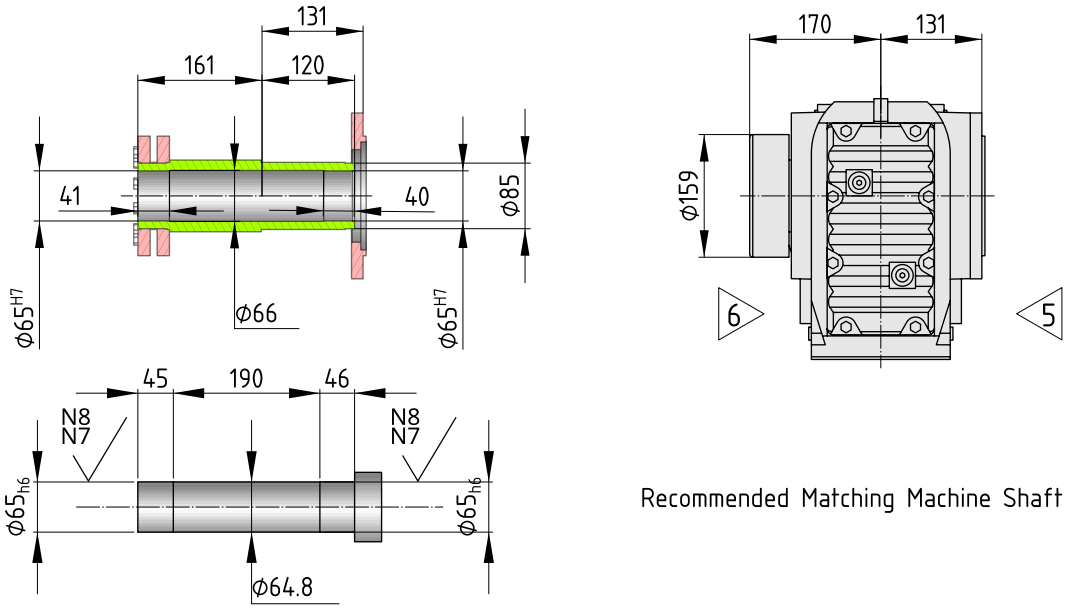


KB-085-Z□-H: Hollow Shaft with Keyway



KB-085-Z□-HS□: Hollow Shaft with Shrink Disk

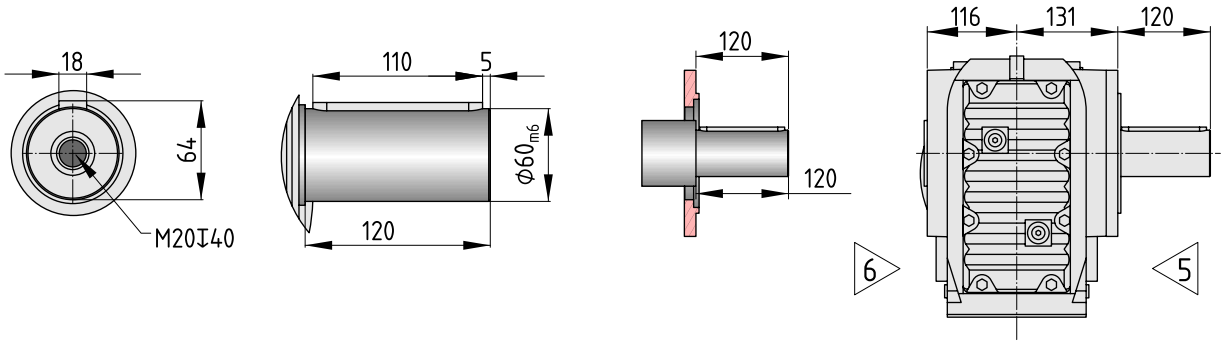
The drawings depict the shrink disk on side 6 (HS56), but it can also be installed on side 5 (HS5). It is always opposite to the flange.



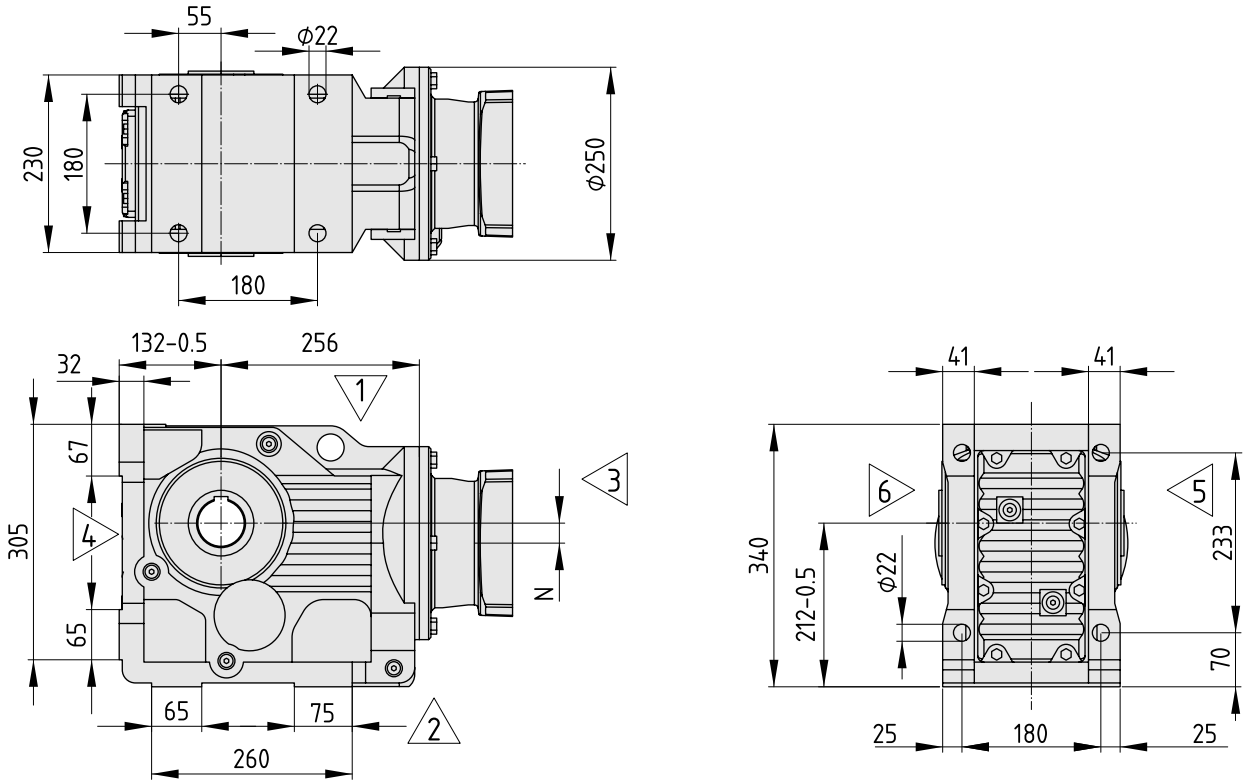
Recommended Matching Machine Shaft

KB-085-Z□-P□: Single Solid Shaft with Key

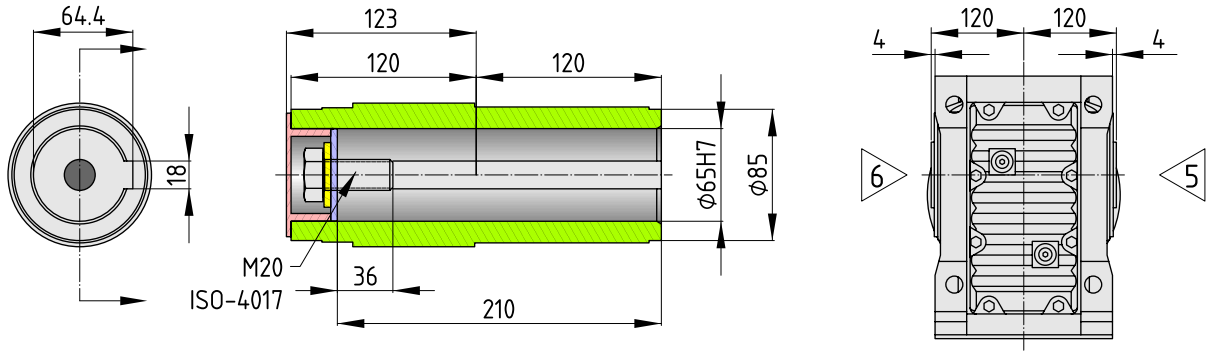
The drawings depict the solid shaft on side 5 (P5), but it can also be installed on side 6 (P6). It is always on the same side as the flange.



KG-085-OO: Foot Mounted

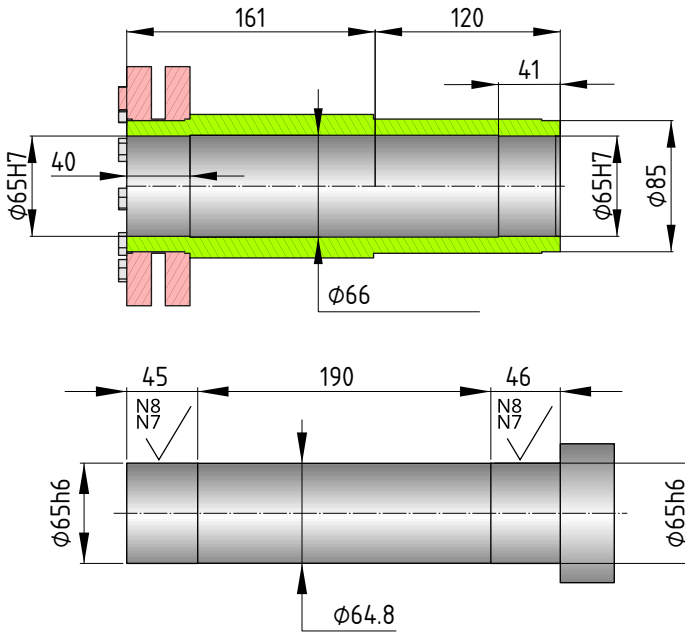


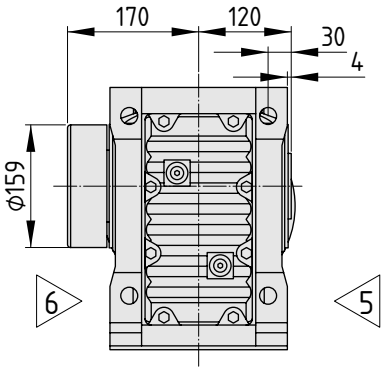
KG-085-OO-H: Hollow Shaft with Keyway



KG-085-OO-HS□: Hollow Shaft with Shrink Disk

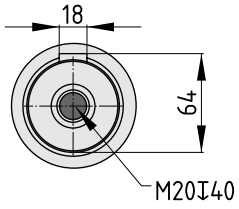
The drawings depict the shrink disk on side 6 (HS56), but it can also be installed on side 5 (HS5).

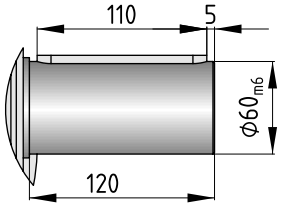


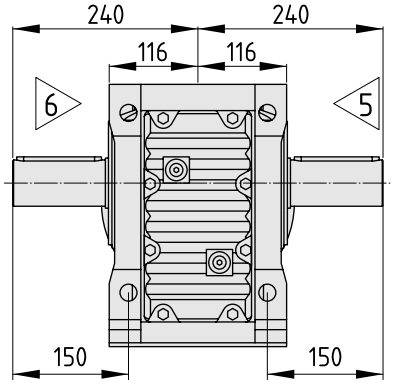


Recommended Matching Machine Shaft

KG-085-OO-P□ / KG-085-OO-DP: Single/Double Solid Shaft with Key



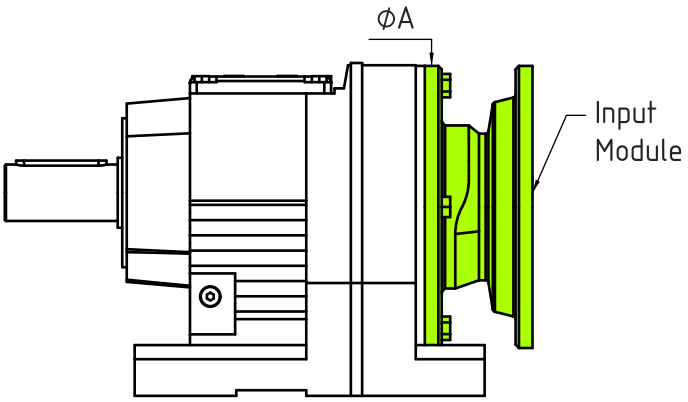




Input Modules

To simplify input module selection, Servotak uses modular input blocks. Each gearbox size and family combination has a interface code, that lets you quickly determine which input modules can be installed. Input modules are shared between R, F and K gearboxes. A is the diameter of the interface flange for that gearbox.

Input Module



Reference	Interface Code	A
R□-015	A	105
R□-025	B	120
R□-035	B	120
R□-045	C	160
R□-055	C	160
R□-065	C	160
R□-075	D	200
R□-085	E	250
R□-095	F	300
R□-105	G	350
R□-135	H	400
R□-145	I	450
R□-165	J	550

Reference	Interface Code	A
F□-035	B	120
F□-045	B	120
F□-055	C	160
F□-065	C	160
F□-075	D	200
F□-085	E	250
F□-095	F	300
F□-105	G	350
F□-125	I	450
F□-155	J	550

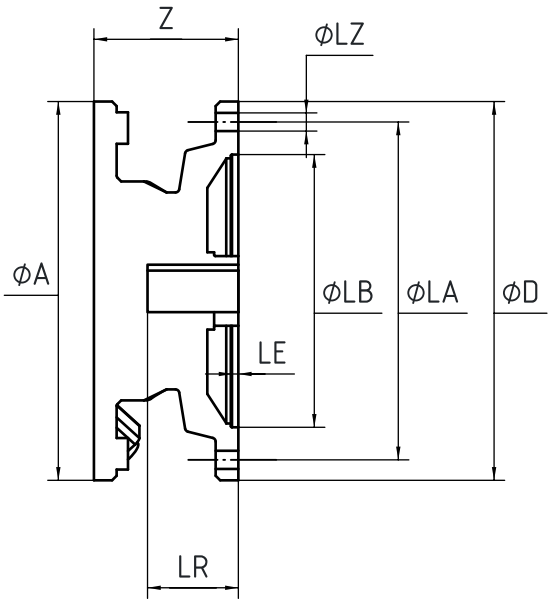
Reference	Interface Code	A
K□-035	B	120
K□-045	C	160
K□-055	C	160
K□-065	C	160
K□-075	D	200
K□-085	E	250
K□-095	F	300
K□-105	G	350
K□-125	I	450
K□-155	J	550
K□-165	J	550
K□-185	J	550

IEC Motor Flanges

Each standard IEC motor flange has a set number of interfaces with which it is compatible. Z5 is the length of the input flange, and sometimes varies between interfaces. All IEC motor flanges are for IM B5 / IM V1 / IM V3 Motors.

Motor Size	Interface Code	Z
63	A, B, C	50
63	D	54
71	A, B, C, D	54
80	A, B, C, D, E	69
90	B, C, D, E	69
100	C, D, E, F, G	81
112	C, D, E, F, G	81
132	D, E, F, G, H, I	92

Motor Size	Interface Code	Z
160	E, F	125
160	G, H, I, J	124
180	E, F	125
180	G, H, I, J	124
200	F, G, H, I, J	144
225	F, G, H, I, J	159
250	I, J	180
280	I, J	180



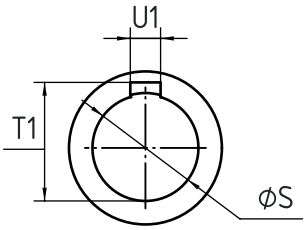


Fig. 1

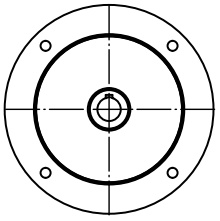
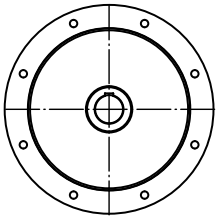


Fig. 2

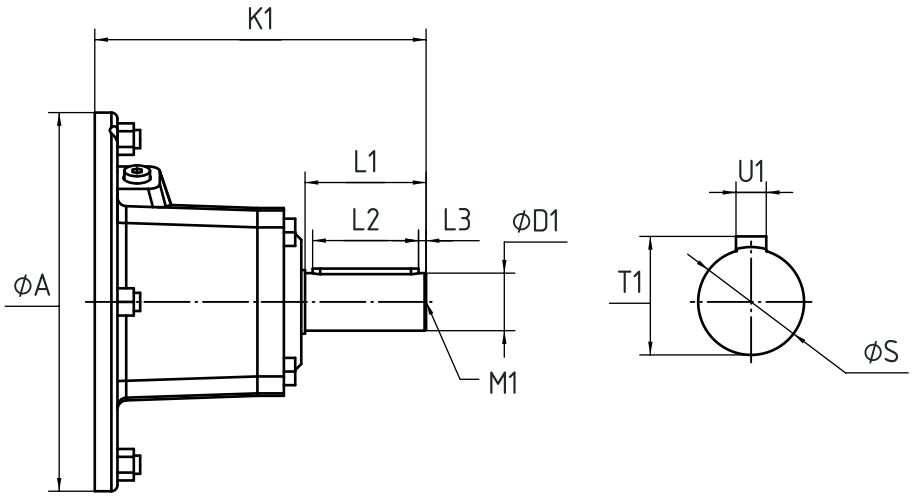


Motor Size	LB	LA	LE	D	LZ	S	LR	T1	U1	Fig
63	95	115	3.5	140	M08	11	23	12.8	4	1
71	110	130	3.5	160	M08	14	30	16.3	5	1
80	130	165	4.5	200	M10	19	40	21.8	6	1
90	130	165	4.5	200	M10	24	50	27.3	8	1
100	180	215	5	250	M12	28	60	31.3	8	1
112	180	215	5	250	M12	28	60	31.3	8	1
132	230	265	5	300	M12	38	80	41.3	10	1
160	250	300	6	350	M16	42	110	45.3	12	1
180	250	300	6	350	M16	48	110	51.8	14	1
200	300	350	7	400	M16	55	110	59.3	16	1
225	350	400	7	450	M16	60	140	64.4	18	2
250	450	500	7	550	M16	65	140	69.4	18	2
280	450	500	7	550	M16	75	140	79.9	20	2

Solid Input Shafts

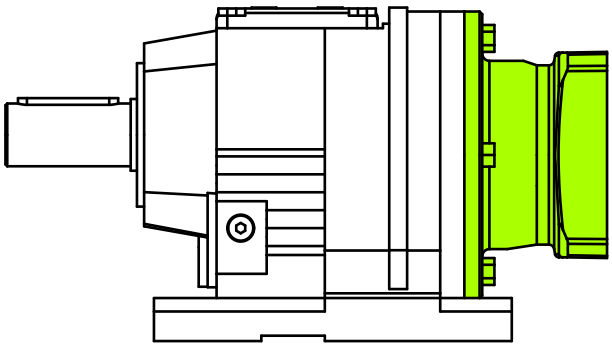
Each solid input shaft has a set of interfaces with which it is compatible. K1 is the length from the interface to the tip of the shaft.

Shaft Size	Interface Code	K1
E14×30	A	72
E16×40	B	102
E19×40	B	130
E19×40	C	123
E19×40	D	116
E19×40	E	111
E24×50	C	159
E24×50	D	151
E28×60	E	156
E28×60	F	151
E28×60	G	145
E38×80	D	224
E38×80	E	219
E38×80	F	214
E38×80	G	208
E38×80	H	201
E38×80	I	193
E42×110	E	292
E42×110	F	287
E42×110	G	281
E42×110	H	274
E42×110	I	266
E42×110	J	258
E48×110	F	327
E48×110	G	321
E48×110	H	314
E48×110	I	306
E48×110	J	298
E55×110	H	308
E55×110	I	300
E55×110	J	292
E70×140	I	383
E70×140	J	374



Shaft Size	D1	L1	L13	L14	T1	U1	M
E14×30	14	30	4	22	16	5	M05
E16×40	16	40	4	32	18	5	M05
E19×40	19	40	4	32	21.5	6	M06
E24×50	24	50	5	40	27	8	M08
E28×60	28	60	5	50	31	8	M10
E38×80	38	80	5	70	41	10	M12
E42×110	42	110	10	70	45	12	M16
E48×110	48	110	10	80	51.5	14	M16
E55×110	55	110	10	90	59	16	M20
E70×140	70	140	15	110	74.5	20	M20

Servomotor Flanges



Since servomotors, unlike IEC motors, don’t have standard dimensions, it is necessary to know the exact dimensions of the servomotor to ascertain the correct input flange for it. Input flanges are often custom made for the customer’s order, which allows Servotak to provide flanges for basically every servomotor. The structure of the reference for the servomotor input flange is detailed at the end of this document, Order References chapter.