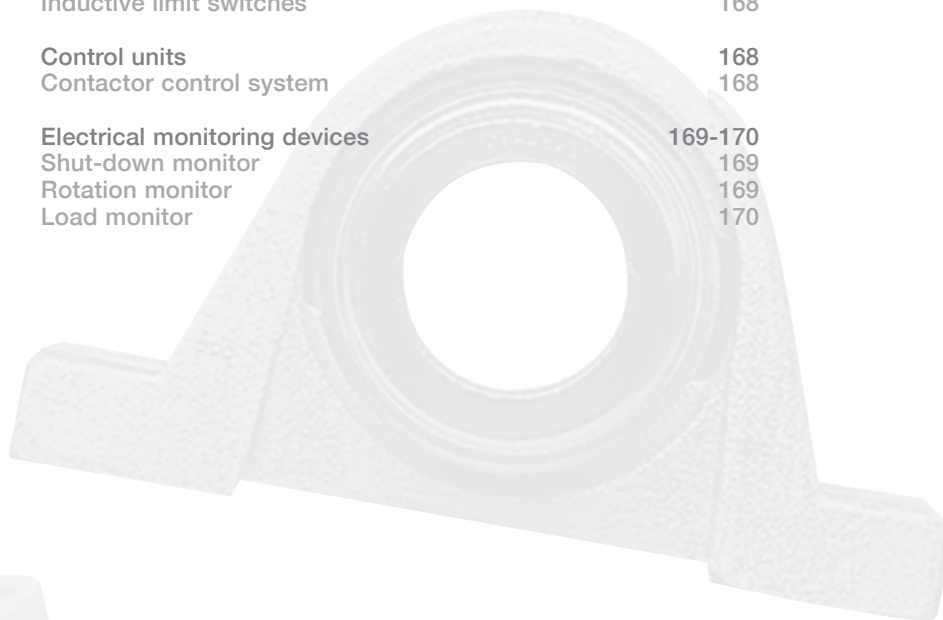


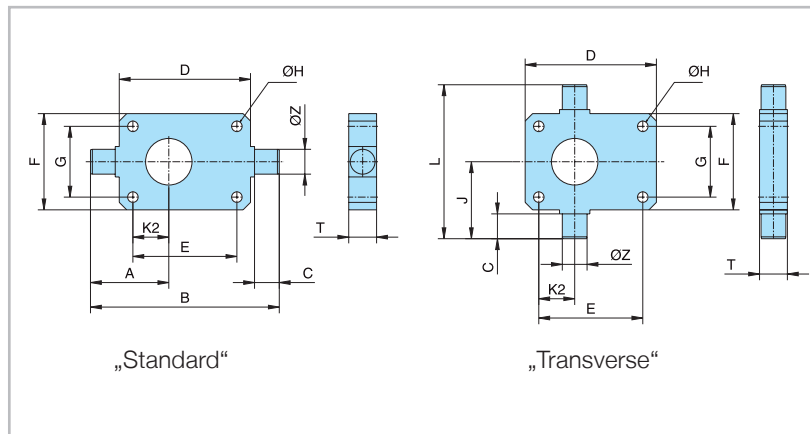
Accessories

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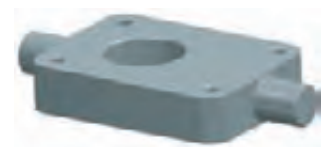
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7.1 Swivel plates



In order to allow worm gear screw jacks to carry out swivelling and tipping movements, the drive elements must be secured at two points and permitted to move. This can be done using swivel plates and a head IV or articulated head. The bending moment resulting from the swivelling motion should be minimized as much as possible by means of low-friction articulations.



7.1.1 SHE range

Size	A	B	C	D	E	F	G	ØH	J	K2	L	T	ØZ	Load max. „Standard“	Load max. „Transverse“
0,5	on request														
1.1	95,5	205	25	150	130	100	80	8,5	77,5	58	155	25	20	15 kN	15 kN
2	on request														
3.1	102,5	240	35	165	135	120	90	13	97,5	50	195	35	30	30 kN	30 kN
5.1	126,5	305	45	212	168	155	114	17	124	58	248	45	40	50 kN	50 kN
10	143,5	350	55	235	190	200	155	21	157,5	63,5	315	55	50	80 kN	100 kN
15.1	143,5	350	55	235	190	200	155	21	157,5	63,5	315	55	50	80 kN	100 kN
20.1	190	430	65	295	240	215	160	28	175	95	350	65	60	200 kN	160 kN
25	202,5	495	70	350	280	260	190	35	202,5	95	405	70	65	220 kN	250 kN
35	on request														
50.1	on request														
75	on request														
100.1	on request														
150	on request														

7.1.2 MERKUR range

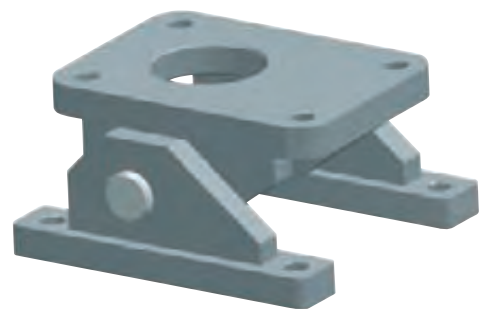
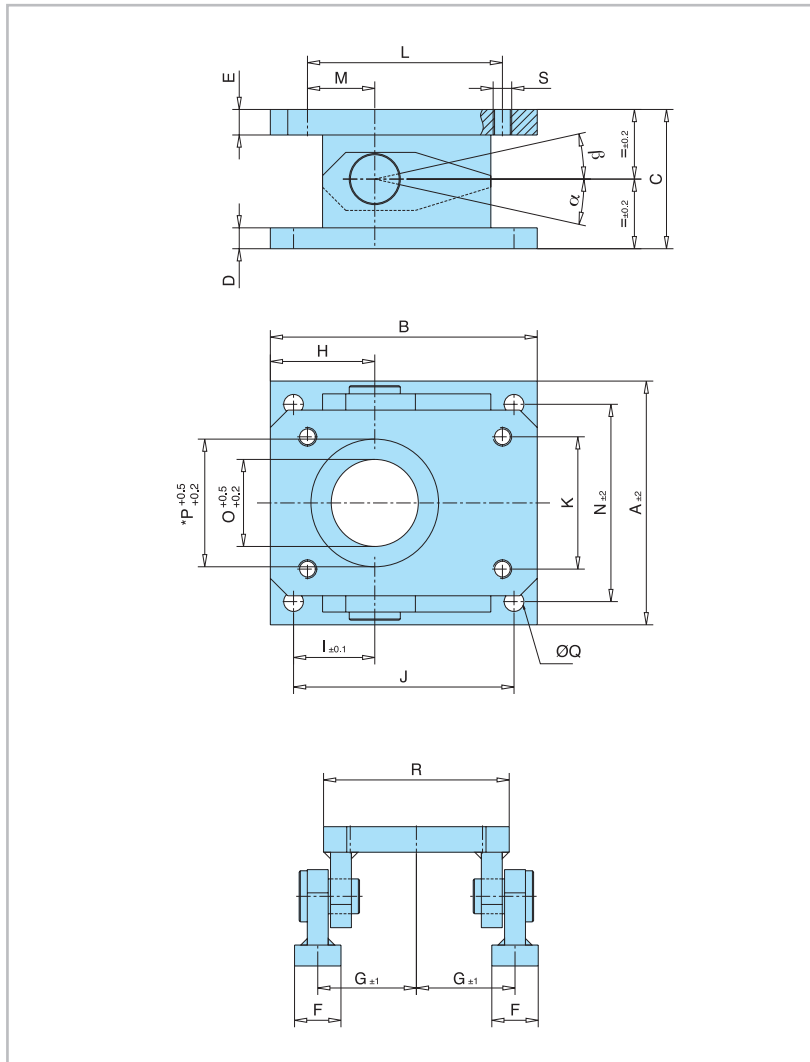
Size	A	B	C	D	E	F	G	ØH	J	K2	L	T	ØZ
0	34,5	85	10	60	48	50	38	6,6	37,5	16	75	15	10
1	48,5	115	15	80	60	72	52	9	53,5	21	107	20	15
2	62,5	145	20	100	78	85	63	9	65	29	130	25	20
3	76,5	175	20	130	106	105	81	11	75	42	150	30	25
4	110,5	245	30	180	150	145	115	13,5	105	63	210	40	35
5	120,5	275	35	200	166	165	131	22	120	66	240	50	45
6	on request												
7	on request												
8	on request												

7.1.3 HSE range

Size	A	B	C	D	E	F	G	ØH	J	K2	L	T	ØZ	Load max. „Standard“	Load max. „Transverse“
32	on request														
36.1	80	190	25	138	110	105	80	9	78,5	40	157	25	20	10 kN	10 kN
50 / 50.1	105	250	35	175	140	130	100	13	102,5	50	205	35	30	25 kN	25 kN
63 / 63.1	140	330	45	235	190	160	120	17	127,5	70	255	45	40	50 kN	50 kN
80 / 80.1	160	390	55	275	220	200	150	21	157,5	75	315	55	50	100 kN	100 kN
100 / 100.1	185	465	65	330	270	230	175	28	182,5	87,5	365	65	60	110 kN	110 kN
125 / 125.1	on request														
140	on request														
200.1	on request														

Accessories

7.2 Swivel mounting bases



In order to allow worm gear screw jacks to carry out swivelling and tipping movements, the drive elements must be secured at two points and permitted to move. This can be done using a swivelling bearing and a head IV or articulated head, or by means of a swivel-lug configuration. The lateral force resulting from the swivelling motion should be minimized as much as possible by means of low-friction articulations.

7

Only the most recent dimension plans are binding.

Size	Dimension																				
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P*	ØQ	R	S	α°	β°
SHE 1.1	150										80	130	58		80	80					
HSE 32	138	138	60	10	10	20	60	54	40	110	62	95	31	120	62	62	9	108	M8	26	42
HSE 36.1	138										80	110	40		72	72					
SHE 2,5/3.1	180	170	110	16	20	40	70	65	50	140	90	135	50	140	70	70	14	130	M12	35	55
HSE 50/50.1											100	140	50		100	100				25	
SHE 5/5.1	210	230	120	18	22	40	85	90	70	190	114	168	58	170	110	110	17	160	M16	28	44
HSE 63/63.1											120	190	70		122	122					
SHE 10/15.1	270	270	150	22	28	50	110	100	75	220	155	190	63,5	220	130	130	21	200	M20	28	45
HSE 80/80.1											150	220	75		152	152					
SHE 20/20.1	350	340	190	30	33	60	145	130	95	280	160	240	95	290	100	160	26	260	M24	30	45
HSE 100/100.1											175	270	87,5		185	185					

*applies to anti-turn device only

Swivel mounting bases for the MERKUR range are available on request

7.3 Motor mounting flanges

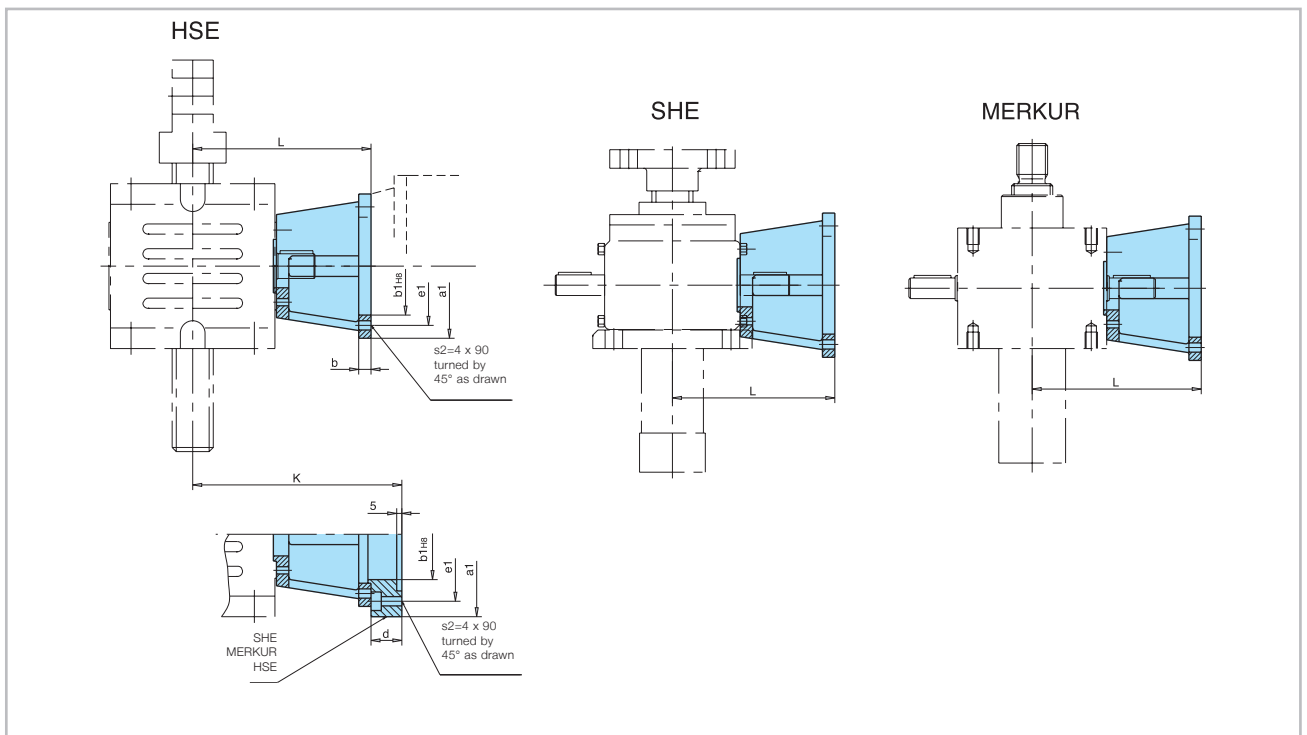


The diverse usage of the worm gear screw jacks requires directly mounted motors in certain situations. Direct motor mounting can be carried out with IEC flanges and flexible couplings provided the weight and dimensions of the two drive elements do not differ too much from each other.

If the drive motor is to be supplied and fitted by the customer, please provide us with a dimensional drawing showing the connection points. The customer should also determine whether installation on the lifting element should be on the right or left hand side (see chapter 3.10).

In order to simplify procedures, only the motor mounting flanges most often required are shown below.

Please consult us if you have any queries.



Only the most recent dimension plans are binding.

7.3.1 SHE range

Size	Motor type	Flange dimensions			Motor shaft	Coupling	Dimensions				
		Øa1	Øb1	Øe1			L	b	K	d	s2
2,5/3.1	63	105	70	85	Ø11x23	R19/24	136	10	-	-	4xØ6,6
2,5/3.1	71	105	70	85	Ø14x30	R19/24	141	10	-	-	4xØ6,6
2,5/3.1	80	120	80	100	Ø19x40	R19/24	151	10	-	-	4xØ6,6
2,5/3.1	90	140	95	115	Ø24x50	R24/28	164	10	-	-	4xØ9,0
2,5/3.1	SK 11 EF	120	80	100	Ø20x40	R19/24	151	10	-	-	4xØ9,0
2,5/3.1	SK 02 F	120	80	100	Ø20x40	R19/24	151	10	-	-	4xØ6,6
2,5/3.1	SK 12 F	140	95	115	Ø25x50	R24/28*	164	10	-	-	4xØ9,0

*Steel hub

■ Recommended flange dimensions

Accessories

7.3 Motor mounting flanges

7.3.1 SHE ranges from size 5

Size	Motor	Flange dimensions			Motor shaft	Coupling	Dimensions				
		Øa1	Øb1	Øe1			L	b	K	d	s2
5/5.1	71	140	95	115	Ø14x30	R 24/28	167	12	-	-	4xØ9
5/5.1	80	140	95	115	Ø19x40	R 24/28	177	12	-	-	4xØ9
5/5.1	90	140	95	115	Ø24x50	R 24/28	187	12	-	-	4xØ9
5/5.1	100	160	110	130	Ø28x60	R 24/28	197	12	-	-	4xØ9
5/5.1	SK 11 EF	140	95	115	Ø20x40	R 24/28	177	12	-	-	4xØ9
5/5.1	SK 02 F	140	95	115	Ø20x40	R 24/28	177	12	-	-	4xØ9
5/5.1	SK 12 F	140	95	115	Ø25x50	R 24/28	187	12	-	-	4xØ9
5/5.1	SK 13 F	140	95	115	Ø25x50	R 24/28	187	12	-	-	4xØ9
5/5.1	SK 22 F	160	110	130	Ø30x60	R 24/28*	197	12	-	-	4xØ9
5/5.1	SK 23 F	160	110	130	Ø30x60	R 24/28*	197	12	-	-	4xØ9
15.1	80	140	95	115	Ø19x40	R 28/38	200	10	-	-	4xØ9
15.1	90	160	110	130	Ø24x50	R 28/38	210	10	-	-	4xØ9
15.1	100	160	110	130	Ø28x60	R 28/38	220	10	-	-	4xØ9
15.1	112	160	110	130	Ø28x60	R 28/38	220	10	-	-	4xØ9
15.1	SK 11 EF	140	95	115	Ø20x40	R 28/38	200	10	-	-	4xØ9
15.1	SK 02 EF	140	95	115	Ø20x40	R 28/38	200	10	-	-	4xØ9
15.1	SK 12 EF	160	110	130	Ø25x50	R 28/38	210	10	-	-	4xØ9
15.1	SK 21 EF	160	110	130	Ø25x50	R 28/38	210	10	-	-	4xØ9
20.1	80	160	110	130	Ø19x40	R 28/38	221	12	-	-	4xØ9
20.1	90	160	110	130	Ø24x50	R 38/45	235	12	-	-	4xØ11
20.1	100	200	110	130	Ø28x60	R 42/55	248	15	-	-	4xØ14
20.1	112	200	110	130	Ø28x60	R 42/55	248	15	-	-	4xØ14
20.1	SK 02 F	160	110	130	Ø20x40	R 28/38	221	12	-	-	4xØ9
20.1	SK 12 F	160	110	130	Ø25x50	R 38/45	235	12	-	-	4xØ11
20.1	SK 11 EF	160	110	130	Ø25x50	R 38/45	235	12	-	-	4xØ11

*Steel hub

☐ Recommended flange dimensions

7

7.3.2 MERKUR range

Size	Motor type	Flange dimensions						Motor shaft	Coupling	Dimensions					
		Øa1	Øb1	Øe1	L	b	K			d	s2 (B14-Design)				
M2	80	120	140	80	110	100	130	Ø19x40	R19/24	-	-	132,5	20	4xØ6,6	4xØ9
M3	63	90	120	60	80	75	100	Ø11x23	R19/24	-	-	142	12	4xØ5,5	4xØ6,6
M3	71	105	140	70	95	85	115	Ø14x30	R19/24	-	-	147	17	4xØ6,6	4xØ9
M3	80	120	160	80	110	100	130	Ø19x40	R19/24	-	-	157	27	4xØ6,6	4xØ9
M3	90	140	160	95	110	115	130	Ø24x50	R19/24	-	-	167	37	4xØ6,6	4xØ9
M3	SK 11 EF	120	140	80	95	100	115	Ø20x40	R19/24	-	-	157	27	4xØ6,6	4xØ9
M3	SK 02 F	120	140	80	95	100	115	Ø20x40	R19/24	-	-	157	27	4xØ6,6	4xØ9
M3	SK 12 F	120	140	80	95	100	115	Ø25x50	R19/24*	-	-	167	37	4xØ6,6	4xØ9
M4	71	120	140	80	95	100	115	Ø14x30	R 24/28	-	-	169,5	10	4xØ6,6	4xØ9
M4	80	120	160	80	110	100	130	Ø19x40	R 24/28	-	-	179,5	20	4xØ6,6	4xØ9
M4	90	140	160	95	110	115	130	Ø24x50	R 24/28	-	-	189,5	30	4xØ9	
M4	100	160	200	110	130	130	165	Ø28x60	R 24/28	-	-	199,5	40	4xØ9	4xØ11
M4	SK 11 EF	120	140	80	95	100	115	Ø20x40	R 24/28	-	-	179,5	20	4xØ6,6	4xØ9
M4	SK 02 F	120	140	80	95	100	115	Ø20x40	R 24/28	-	-	179,5	20	4xØ6,6	4xØ9
M4	SK 12 F	140	160	95	110	115	130	Ø25x50	R 24/28	-	-	189,5	30	4xØ9	
M4	SK 13 F	140	160	95	110	115	130	Ø25x50	R 24/28	-	-	189,5	30	4xØ9	
M4	SK 22 F	160	200	110	130	130	165	Ø30x60	R 24/28*	-	-	199,5	40	4xØ9	4xØ11
M4	SK 23 F	160	200	110	130	130	165	Ø30x60	R 24/28*	-	-	199,5	40	4xØ9	4xØ11

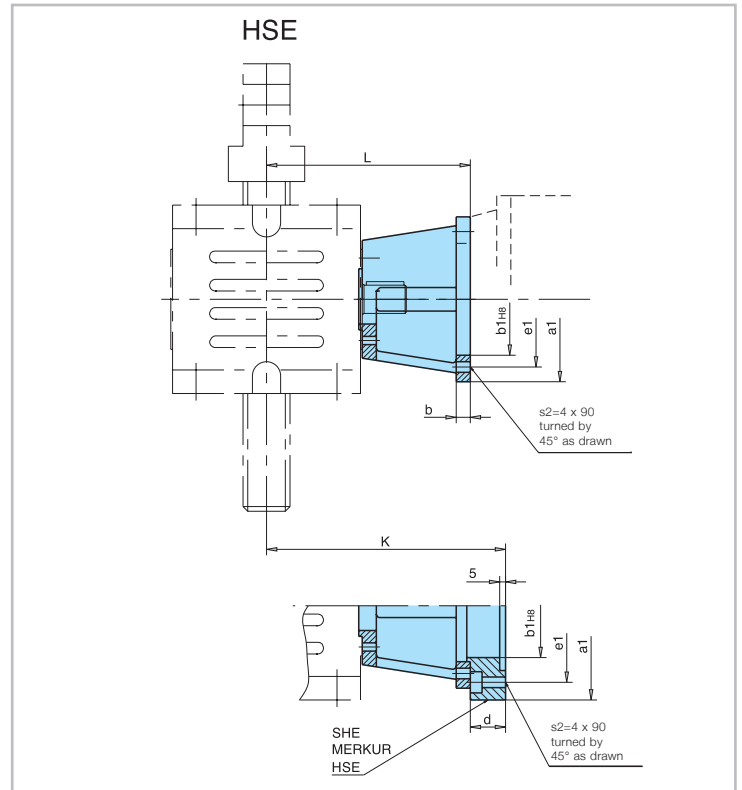
*Steel hub

☐ Recommended flange dimensions

Further mounting flanges on request

7.3 Motor mounting flanges

7.3.3 HSE range



7

Size	Motor type	Flange dimensions						Motor shaft	Coupling	Dimensions					
		Øa1		Øb1		Øe1				L	b	K	d	s2	
50.1	63	90	120	60	80	75	100	Ø11x23	R19/24	-	-	140,5	12	4xØ5,5	4xØ6,6
50.1	71	105	140	70	95	85	115	Ø14x30	R19/24	-	-	145,5	17	4xØ6,6	4xØ9
50.1	80	120	160	80	110	100	130	Ø19x40	R19/24	-	-	155,5	27	4xØ6,6	4xØ9
50.1	90	140	160	95	110	115	130	Ø24x50	R19/24	-	-	165,5	37	4xØ9	
50.1	SK 11 EF	120	140	80	95	100	115	Ø20x40	R19/24	-	-	155,5	27	4xØ6,6	4xØ9
50.1	SK 02 F	120	140	80	95	100	115	Ø20x40	R19/24	-	-	155,5	27	4xØ6,6	4xØ9
50.1	SK 12 F	120	140	80	95	100	115	Ø25x50	R19/24*	-	-	165,5	37	4xØ6,6	4xØ9
63.1	71	105	140	70	95	85	115	Ø14x30	R 24/28	-	-	168,5	10	4xØ6,6	4xØ9
63.1	80	120	160	80	110	100	130	Ø19x40	R 24/28	-	-	178,5	20	4xØ6,6	4xØ9
63.1	90	140	160	95	110	115	130	Ø24x50	R 24/28	-	-	188,5	30	4xØ9	
63.1	100	160	200	110	130	130	165	Ø28x60	R 24/28	-	-	198,5	40	4xØ9	4xØ11
63.1	SK 11 EF	120	140	80	95	100	115	Ø20x40	R 24/28	-	-	178,5	20	4xØ6,6	4xØ9
63.1	SK 02 F	120	140	80	95	100	115	Ø20x40	R 24/28	-	-	178,5	20	4xØ6,6	4xØ9
63.1	SK 12 F	140	160	95	110	115	130	Ø25x50	R 24/28	-	-	188,5	30	4xØ9	
63.1	SK 13 F	140	160	95	110	115	130	Ø25x50	R 24/28	-	-	188,5	30	4xØ9	
63.1	SK 22 F	160	200	110	130	130	165	Ø30x60	R 24/28*	-	-	198,5	40	4xØ9	4xØ11
63.1	SK 23 F	160	200	110	130	130	165	Ø30x60	R 24/28*	-	-	198,5	40	4xØ9	4xØ11
80.1	80	160	110	110	130	130	165	Ø19x40	R 28/38	232	15	-	-	4xØ9	
80.1	90	160	110	110	130	130	165	Ø24x50	R 28/38	232	15	-	-	4xØ9	
80.1	100	160	110	110	130	130	165	Ø28x60	R 38	232	15	-	-	4xØ9	
80.1	112	160	110	110	130	130	165	Ø28x60	R 38	232	15	-	-	4xØ9	
80.1	SK 21 F	160	110	110	130	130	165	Ø25x50	R 28/38	232	15	-	-	4xØ9	
80.1	SK 12 F	160	110	110	130	130	165	Ø25x50	R 28/38	232	15	-	-	4xØ9	
80.1	SK 22 F	160	110	110	130	130	165	Ø30x60	R 38	232	15	-	-	4xØ9	
80.1	SK 31 EF	160	110	110	130	130	165	Ø30x60	R 38	232	15	-	-	4xØ9	

*Steel hub

■ Recommended flange dimensions

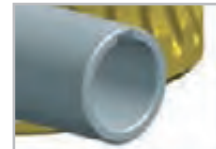
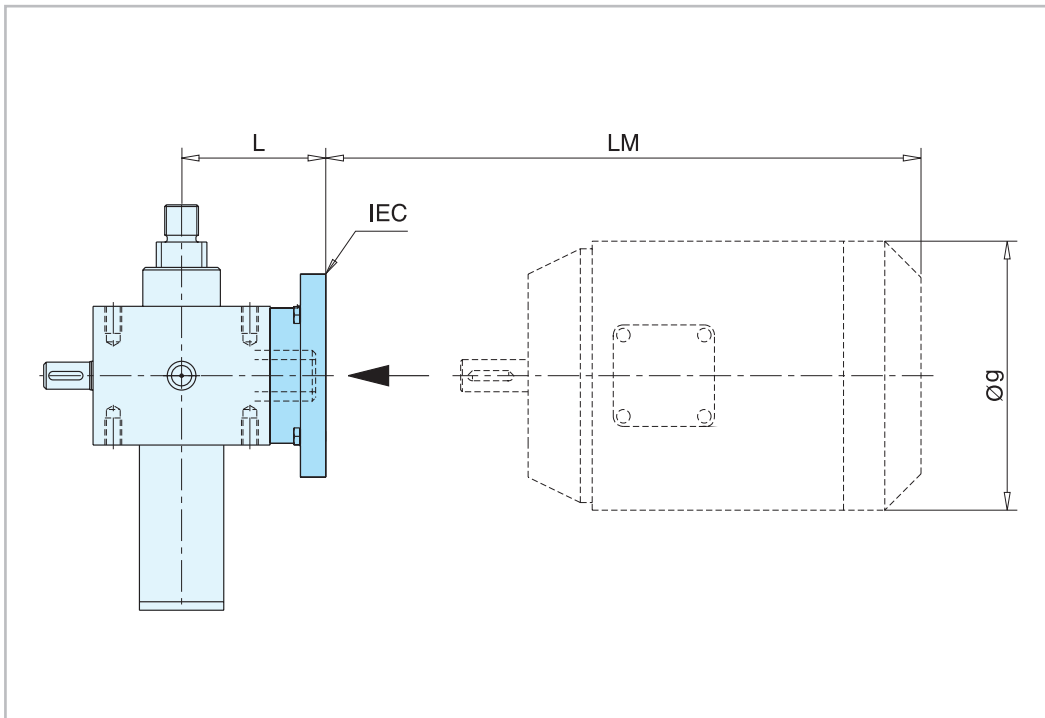
If required, motor mounting flanges can also supplied in special configurations.

Accessories

7.4 Mounting flanges for hollow shaft

7.4.1 MERKUR range

Mounting of motor on worm gear screw jack via hollow shaft and flange.

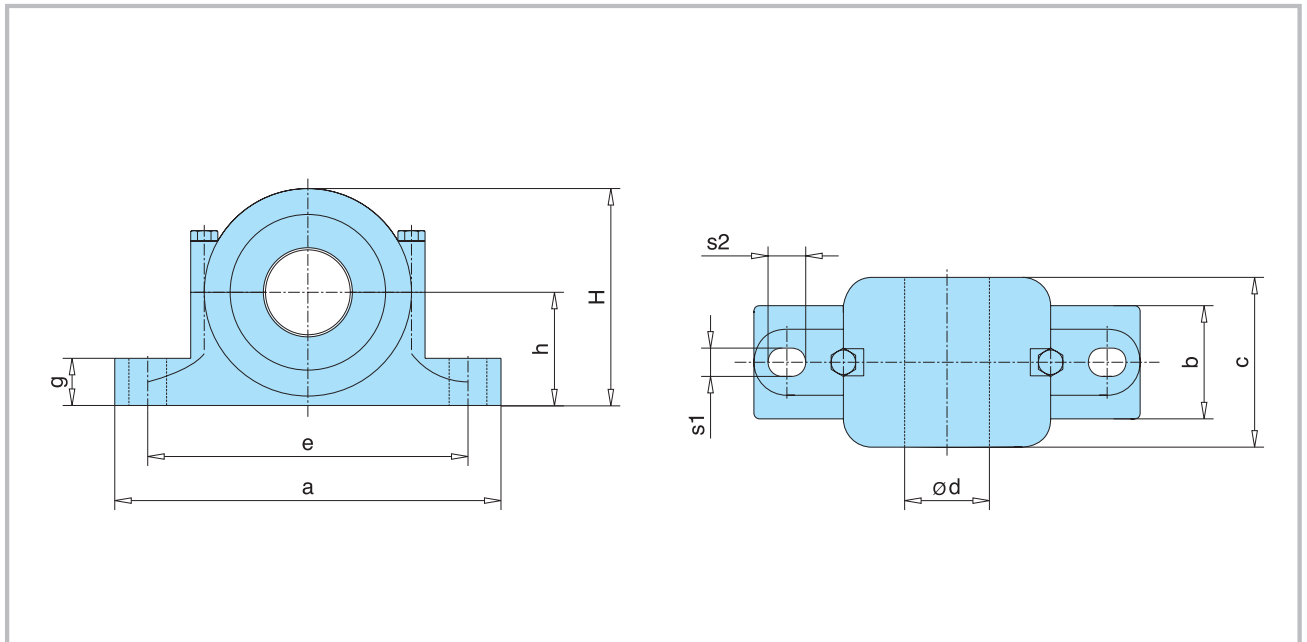


7

Size	Motor type	IEC- flange			Motor shaft	L	LM ¹⁾ (approx)	Øg
		Øa1	Øb1	Øe1 H8				
M 0					on request			
M 1	63	90	60	75	Ø11x23	64	190	126
M 1	71	105	70	85	Ø14x30	64	213	142
M 2	63	90	60	75	Ø11x23	72,5	190	126
M 2	71	105	70	85	Ø14x30	72,5	213	142
M 2	80	120	80	100	Ø19x40	72,5	233	159
M 3	71	105	70	85	Ø14x30	82,5	213	142
M 3	80	120	80	100	Ø19x40	82,5	233	159
M 4	80	120	80	100	Ø19x40	117,5	233	159
M 4	90	140	95	115	Ø24x50	117,5	280	179
M 4	100	160	110	130	Ø28x60	117,5	308	200
M 5	80	120	80	100	Ø19x40	127,5	233	159
M 5	90	140	95	115	Ø24x50	127,5	280	179
M 5	112	160	110	130	Ø28x60	127,5	328	222
M 6								
M 7					on request			
M 8								

¹⁾ without brake

7.5 Pillow blocks



Pfaff-silberblau DIN 736-standard pillow block, complete with rolling bearing with conical hole and adapter sleeve. Housing with DIN 5419-standard two-sided felt gasket. This range of pillow blocks is particularly suitable for intermediate bearing support of connecting shafts, as the adapter sleeve can be fixed to the outer diameter of the tube.

In order to avoid distortion when more than one pillow block is fitted, only one of them should be configured as a fixed bearing.

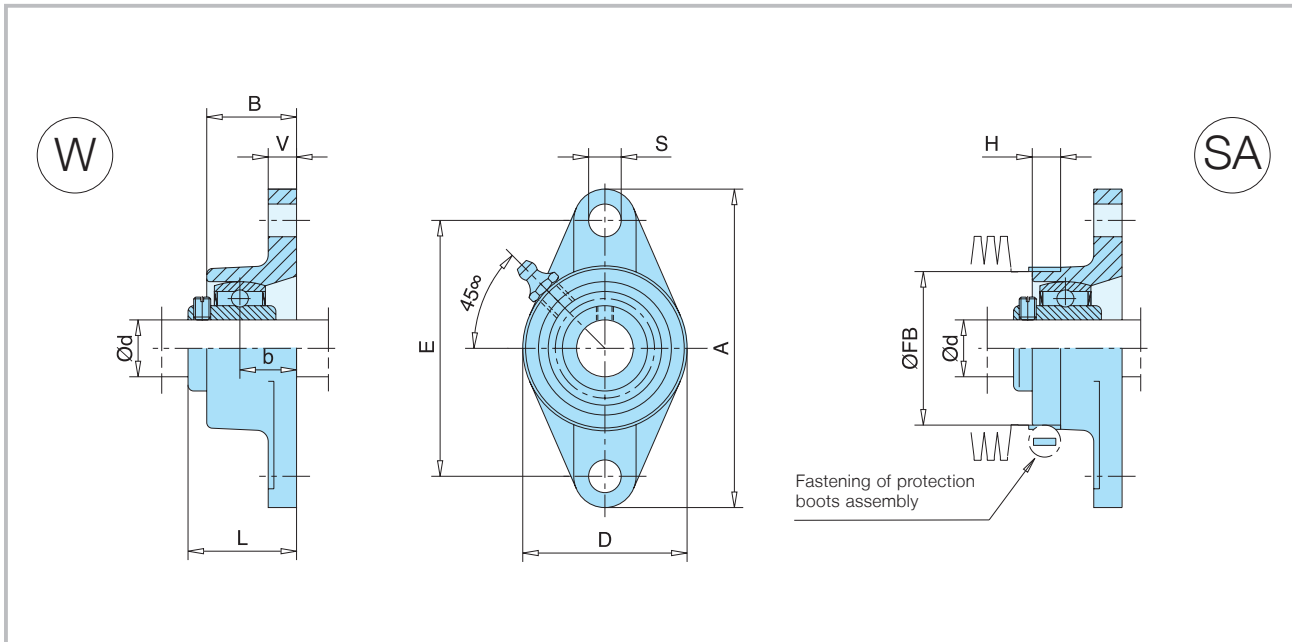
Order code:

SN _____

Size	Ød	H	h	e	S1	S2	c	a	b	g	Weight kg
SN 505	20	71	40	130	15	20	67	165	46	19	1,4
SN 506	25	87	50	150	15	20	77	185	52	22	1,9
SN 507	30	92	50	150	15	20	82	185	52	22	2,0
SN 508	35	106	60	170	15	20	85	205	60	25	2,7
SN 509	40	115	60	170	15	20	85	205	60	25	2,9
SN 510	45	112	60	170	15	20	90	205	60	26	2,8
SN 511	50	127	70	210	18	23	95	255	68	28	4,2
SN 512	55	133	70	210	18	23	105	255	70	30	4,9
SN 513	60	148	80	230	18	23	110	275	80	30	6,1
SN 515	65	154	80	230	18	23	115	280	80	30	6,8
SN 516	70	175	95	260	22	27	120	315	90	32	9,3
SN 517	75	181	95	260	22	27	125	320	90	32	9,7
SN 518	80	192	100	290	22	27	145	345	100	35	12,8
SN 519	85	210	112	290	22	27	140	345	100	35	15,0
SN 520	90	215	112	320	26	32	160	380	110	40	17,0
SN 522	100	239	125	350	26	32	175	410	120	45	18,5
SN 524	110	271	140	350	26	32	185	410	120	45	24,5
SN 528	125	302	150	420	35	42	205	500	150	50	38,0

Accessories

7.6 Flange bearings



Recommended fixation layout for screw for screw jacks, type 2.

Order code:
OWF ___ U-W

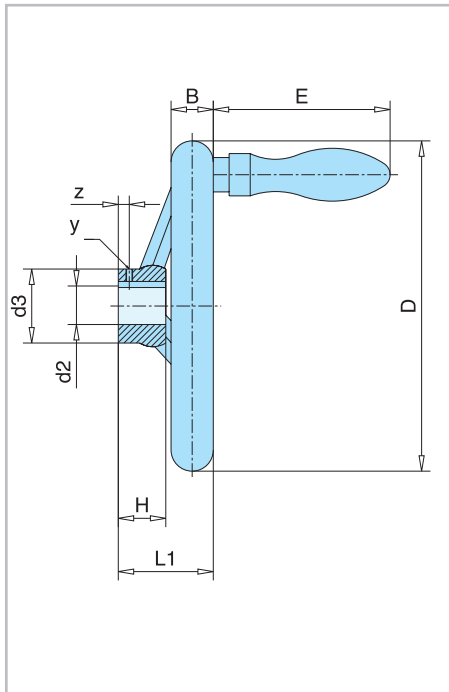
Order code:
OWF ___ U-SA¹⁾

(W= Standard;
SA = with centering shoulder)

Size	Weight kg	Dimensions in mm											
		d	D	B	E	A	V	S	L	H ¹⁾	FB ¹⁾	b	
OWF 12 U		12											
OWF 15 U	0,49	15	60	25,5	90	113	11	12	33,3	12	55	15	
OWF 20 U		20											
OWF 25 U	0,63	25	68	27	99	130	13	16	35,7	12	65	16	
OWF 30 U	0,94	30	80	31	117	148	13	16	40,2	15	75	18	
OWF 35 U	1,20	35	90	34	130	161	14	16	44,4	15	85	19	
OWF 40 U	1,60	40	100	36	144	175	14	16	51,2	15	95	21	
OWF 45 U	1,90	45	108	38	148	188	15	19	52,2	15	100	22	
OWF 50 U	2,20	50	115	40	157	197	15	19	54,6	15	110	22	
OWF 60 U	4,10	60	140	48	202	250	18	23	68,7	25	135	29	
OWF 80 U	7,90	80	180	59	233	290	20	25	84,3	25	175	35	

¹⁾ Flange bearing type "SA" are supplied with a centering shoulder Ø FB protection bellows assembly, to aid fastening of the bellows assembly on site.

7.7 Hand wheels



Further designs on request

For emergency manual operation or manual adjustment of worm gear screw jacks.
Design: DIN 950-standard hand wheel with rotating knob (DIN 98), made of polished anodized aluminium

Order code: Hand-wheel-____(indicate size, e. g.: HSE 32)

Size	ØD	Ød2	Ød3	H	L1	B	L2	z	y	E
SHE 0,5 M 1	80	10	24	16	29	14	55	6	M3	55
SHE 1.1 HSE 32 HSE 36.1 M 2	125	14	28	18	36	16	70	9	M 4	70
SHE 3.1 HSE 50.1 M 3	160	16	32	20	40	18	70	9	M 4	70
SHE 5.1 M 4 HSE 63.1	225	20 24	42	26	48	24	88	9	M 4	88
SHE 10 ¹⁾ /15.1 M 5 HSE 80.1	280	25 32	50	30	53	26	111	10	M 6	110
SHE 20.1 M 6 HSE 100.1	400	28 30 38	65	38	63	32	124	10	M 6	125

¹⁾ For new orders, use size 15.1; size 10 only available as a special version
Feather key groove conforming to DIN 6885/1

7

7.8 Lubrication systems

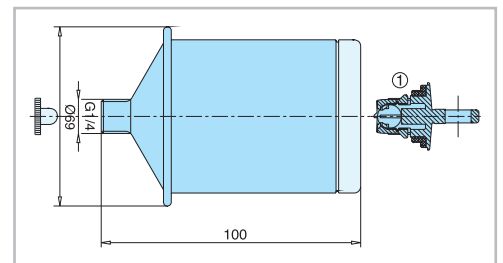
7.8.1 Automatic lubricant dispensers

Automatic lubricant dispensers filled with high-grade lubricating grease ensure permanent lubrication of the lifting screws and worm gears for up to 12 months, and are therefore a cost-effective solution for reducing maintenance intervals.

Standard range

Technical information:

- Metal housing
- Drive provided by electrochemical reaction
- At 20 °C, running times of 1, 3, 6 and 12 months are possible (the color of the activation screw ❶ denotes the dispensing time)
- 120 cm³ volume
- Maximum compression accumulation of 4 bar
- Operating temperatures ranging from 0 °C up to a maximum of + 40 °C are possible



❶ Color	Dispensing time
yellow	1 month
green	3 months
red	6 months
grey	12 months

Accessories

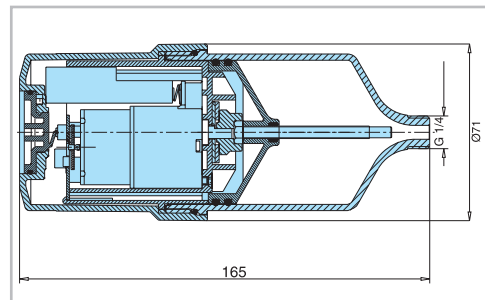
7.8 Lubrication systems

Vario range

The electromechanical operating system of the Vario unit is what makes it a high-precision dispenser. After entering the desired running time and LC unit, apply lubricating grease to the corresponding area. This unit is also fitted with a red- and green-LED function-indicating system.

Technical information:

- Transparent plastic housing
- Electromechanical operating system with set of replaceable batteries
- Running time can be individually set to 1, 3, 6 or 12 months
- LC units of 60 / 120 / 250 cm³ volume
- Automatic compression-limiting to 5 bar
- Operating temperatures ranging from - 10 °C up to a maximum of + 50 °C are possible
- LC (Lubrication Canister) units can be replaced on the spot
- Corrosion-resistant, dust- and hose-proof (IP65)



Frost range

The "Frost" dispenser is designed for operation at low temperatures.

Technical information:

- Metal housing
- Drive provided by electrochemical reaction
- Running time depends on temperature (see table ②)
- 120 cm³ volume
- Maximum compression accumulation of 4 bar
- Operating temperatures ranging from - 25 °C up to a maximum of + 10 °C are possible

② Temperature	Dispensing time
+10 °C	1 week
± 0 °C	2 weeks
-10 °C	6 weeks
-20 °C	14 weeks
-25 °C	26 weeks

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7.8.2 Central lubricating systems

In the case of multi-screw lifting systems, or if access to the worm gear screw jacks is difficult, we recommend the use of a motor-actuated central lubricating system. The use of a lubricant tank, circulation pump and force-feed system with progressive distributor allows the required lubricant to be sent precisely to the individual lubrication points.

As each lubricant distribution system has to be configured to match the pertaining operating conditions, our technicians would be pleased to work out a special solution for your needs.

7.9 Synchronisation control in multi-screw lifting systems

The electrical synchronisation control of two or more individual drives is provided by a control system with frequency converter and speed control. The positioning control, which is integrated in the frequency converter, allows for simple relative and absolute positioning – up to 15 positions are possible. So can be realised complex drive tasks.

7.9.1 Synchronisation control in master/slave operation

Precise synchronisation control in master/slave operation by control system with frequency converter and speed control

- Safety equipment as per EN954-1, cat. 3 stop categories 0 and 1
- Simple relative and absolute positioning by positioning control
- Up to 15 different positions can be set by digital inputs
- Direct connection of an incremental encoder, connection of absolute encoders via CANopen interface
- Continuous and user-friendly parameter structure
- Automatic motor parameter identification
- 7 x digital input
- 2 x digital output
- 2 x analogue input (0..10V / 0/4..20mA)
- 1 x analogue output
- 2 x multifunction relay
- RS 485 and RS 232 on RJ12 bushing



Accessories

7.10 Limit switches

7.10.1 Mechanical limit switches

Limit switches in enclosed configuration for normal and emergency shut-off of the worm gear or on the on site structure.

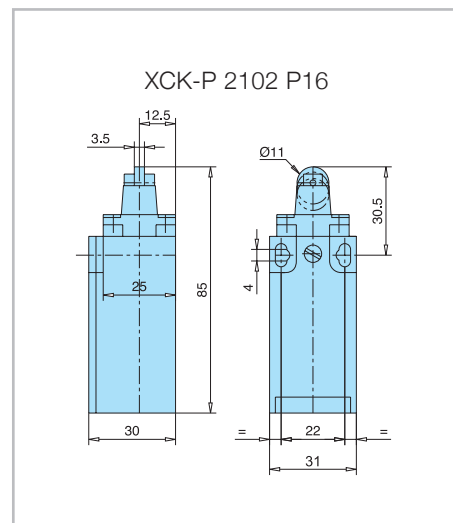
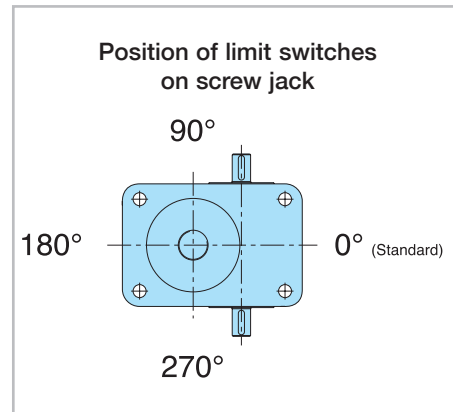
Technical specifications XCK- _ _ _ :

Design:	Enclosed in plastic (or metal)
Ambient temperature:	- 25 °C to + 70 °C
Protection rating:	IP 66
Line entrance:	ISO, M16 x 1,5 (M20 x 1,5)
Short-circuit protection:	10A
Auxiliary switch inserts:	Single-circuit change-over contact open/close with (without) jumper function and forced opening of break contact

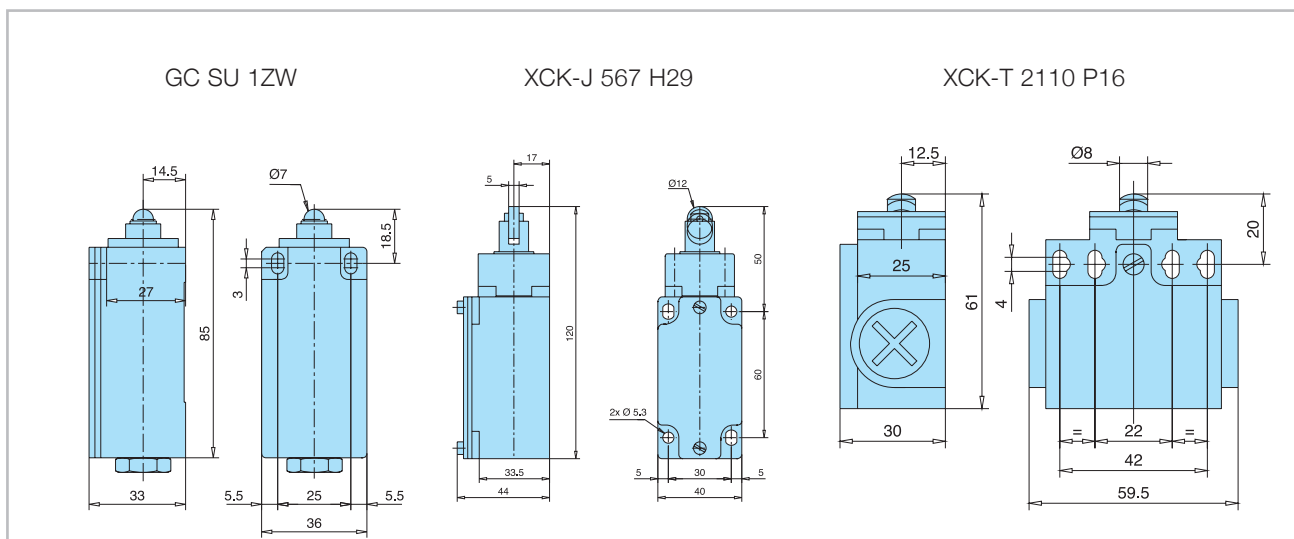
() values in brackets apply to XCK-J

Technical specifications GC SU 1ZW:

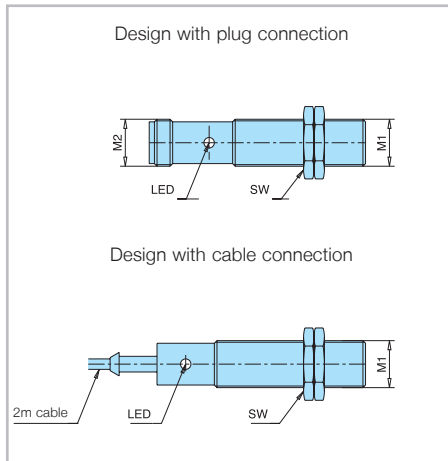
Design:	Enclosed in metal
Ambient temperature:	- 30 °C to + 80 °C
Protection rating:	IP 65
Line entrance:	ISO, M20 x 1,5
Short-circuit protection:	10A
Auxiliary switch inserts:	Single-circuit change-over contact open/close with jumper function and forced opening of break contact



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7.10 Limit switches



7.10.2 Inductive limit switches

Can also be used for rotation or standstill monitoring purposes on the worm gear screw jack.

Type	IF 5598	IF 0006	IF 0093
Connection /	Plug	PVC cable	PVC cable
Sets of cable sockets	E10216	2m/2x0,5mm ²	2m/2x0,5mm ²
Operating voltage	10-55V PNP/NPN programm.	20-250VAC opening contact	20...250AC/DC opening contact
Current carrying capacity	300 mA	250 mA	350mA
Protection rating	IP67	IP67	IP67
Ambient temperature	- 25 °... + 80 °	- 25 °... + 80 °	- 25 °... + 80 °
Thread M1/2	M12/M12x1	M12x1	M18x1

The dimension plan and further technical specifications are available on request

7.11 Control units

Pfaff-silberblau can supply both conventional contactor control units and, on request, complete PLC controls.

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7.11.1 Contactor control system

For lifting systems/linear actuators with three-phase motors (~400 V) - conforming to European Standard DIN-EN-60204 Part 1, Part 32.



Type H1TM	Motor power rating up to kW
Basic version	4,0
With external wall-mounted push-button	4,0
With external pendant switch	4,0
With electrical overload protection	4,0
With external wall-mounted push-button and electrical overload protection	4,0
With external pendant switch and electrical overload protection	4,0

The controls are also available in single-phase and D.C. design upon request.

H1TM basic version

- Protection rating IP 54
- Housing made of plastic (270 x 220 x 108 mm)
- Operating voltage ~ 400 V 50 Hz
- Control system voltage ~ 42 V 50 Hz
- Motor protection relay
- "UP/DOWN" push-button control
- Signals from the limit switches can be processed
- Built-in "EMERGENCY OFF" master switch and reversal protection

H1TM with external push-button controls and main contactor

- With wall-mounted "UP/DOWN" and "EMERGENCY OFF" push-buttons (supplied in separate package) or
- With "UP/DOWN" and "EMERGENCY OFF" pendant switches (incl. 5 m control cable)

H1TM with electronic overload protection

(required for lifting devices from loads of 1000 kg)

- With main contactor
- Overload relay
- Key-operated "reset" control
- Fault-warning light

Accessories

7.12 Electrical monitoring devices

7.12.1 Shut-down monitor

Together with the optional pulse generator fitted to the worm gear screw jack (see chapter 3 "long safety nut", electrically monitored), it is possible to use a standstill monitor integrated in the control system to track the movement of the screw/nut system.

Function

The lifting system shuts down automatically whenever the value drops below its preset level.

Technical information ¹⁾

- Target pulse-count achieved by coarse and fine adjustment: 5-25 pulses/min; 20-100 pulses/min
 - LED indicators show current switching status
- Start-up bypassing (or delay):
Available period of 0 to 14 sec. in 2 sec. steps

Dimension plan
Order code:

Pict. 1
AZ 33-B

7.12.2 Rotation monitor

The rotation monitor DZ 100 (Pict. 1) allows tracking of the linear and rotating movements of the unit, helping to prevent imbalanced operation of the individual drive units. As with the shut-down monitoring system, the optional pulse generator is also required on the worm gear screw jack.

Function

The pulse generator on the worm gear screw jack is actuated by means of a switch cam (e. g. fitted to the supporting nut in configuration type 1, and to the screw in configuration type 2).

The incoming pulse-count is compared to the programmed target value. If the value drops below or exceeds this preset level, an output relay is activated. The switching status of the output relay can be used to show operating conditions and for the control of processes.

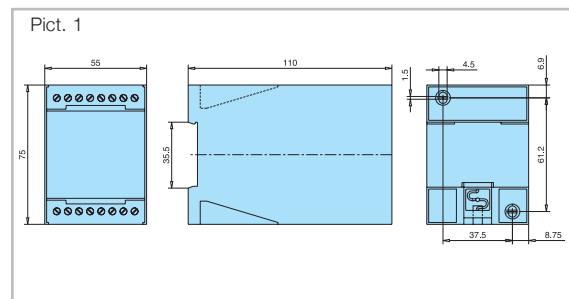
Technical information ¹⁾

- Setting range: 5...5000 pulses/min
Supply voltage: 24 V DC
Current consumption: max. 35mA
Signal level at impulse input: min. 14 V
Start-up bypassing: infinitely adjustable between 0,5 and 15 sec.

Switching-status indicator
by means of LEDs

Order code: DZ 34-A

¹⁾ Technical data sheet available on request



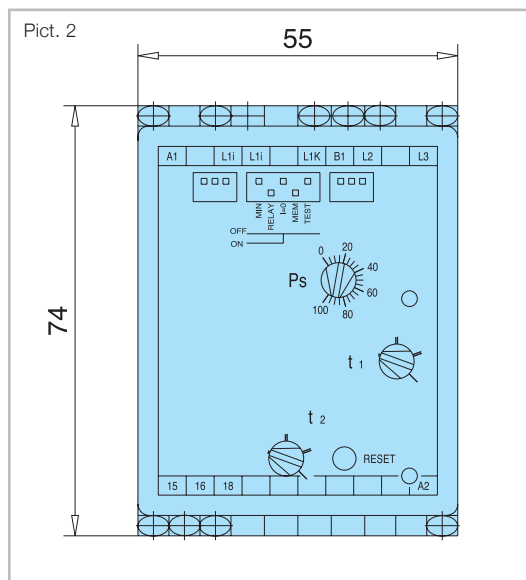
7.12 Electrical monitoring devices

7.12.3 Load monitor

If there is any danger of an overload occurring to the worm gear screw jacks/linear actuators in a lifting system (e. g. due to overrunning the operating end limit or an operating malfunction), we recommend the use of mechanical (safety couplings, see chapter 6) or electrical monitoring devices (load monitor, Pict. 2).

Function

The load monitor BU400V 5X determines the current power output of the drive motor. The fine-adjustment feature with respect to the nominal current range allows for precise detection and recording of load factors.



Technical information¹⁾

Power monitoring:	23-6930 W (without current transformer)
Supply voltages:	12-24-42-110-230-400-440 V AC
Distribution voltage:	+ 10 %.. - 15 % UN
Nominal consumption:	4 VA
Frequency range:	48-63 Hz
Repeating accuracy:	± 2 %
Setting accuracy:	± 5 % (in % of nominal value)
Output:	1 change-over contact for power supply
Amperage range:	1-5 A in steps of 1 A; 5-10 A in one step of 5 A; Current = 0 detection off approx. < 55 of nominal value
Protection rating:	IP40 conforming to VDE 0106 and VBG 4
Accessories:	Transformer module TR3-42VAC (please indicate other voltages)
Order code:	BU400 V/500 V A5 X and TR3-42 VAC

¹⁾ Technical data sheet available on request