

Screw jacks

SHE standard screw jacks

Features and processing

Quality stands for lasting success: this is embodied by the proven SHE worm gear screw jack ranges. Covering a load range from 0.5 t to 200 t, it boasts a classic housing shape made of spheroidal graphite cast iron. The SHE ranges is optimally used where high loads have to be positioned and lifted precisely at medium duty cycles and moderate lifting speeds. Reference projects underline the

versatility, robustness and reliability of the SHE ranges. These include, for example, a lifting system in a research laboratory for load tests, an indoor running track that can be adjusted in height and inclination and a lock opening system in hydraulic steel engineering.

13 different sizes

Lifting capacities from 5 to 2000 kN

Input speeds up to 1500 min⁻¹

- Self-locking trapezoidal screw
- Grease-lubricated configuration
- Worm gear pairs in two ratio steps (normal „N“ and slow „L“)
- Worm-drive shaft case-hardened and ground
- Robust construction for slow and medium lifting speeds



Possible usage according to directive 2014/34/EU (ATEX)



A



B



C

D

Screw jacks

SHE-S stainless steel screw jacks

Features and processing

The SHE-S screw jacks were developed for use in corrosive environments. The SHE-S ranges is the stainless alternative to our SHE ranges with identical dimensions.

All components that come into contact with corrosive media are made of corrosion-resistant materials.

4 different sizes

Lifting capacities from 30 to 200 kN

Input speeds up to 1500 min⁻¹

- Self-locking trapezoidal screw
 - Complete stainless
- Grease-lubricated configuration
- Worm gear pairs in two ratio steps (normal „N“ and slow „L“)
- Worm-drive shaft tempered and ground

 Possible usage according to directive 2014/34/EU (ATEX)



A



B

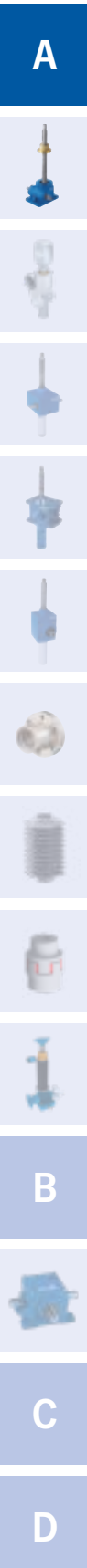


C

D

SHE range

Selection table



Selection table screw jack SHE								
Size		0,5	1.1	3.1 ⁴⁾	5.1 ⁴⁾	15.1 ^{4), 5)}	20.1 ^{4), 5)}	
Max. lifting capacity dynamic/static	[kN]	5/5	15/15	30/45	50/75	100/150	200/200	
Max. tensile load dynamic/static	[kN]	5/5	10/10	30/45	50/75	99/99	178/200	
Screw Tr ¹⁾		18x6	24x5	30x6	40x7	60x12	70x12	
Ratio N		10:1	5:1	6:1	6:1	7 2/3:1	8:1	
Lift per revolution for ratio N	[mm/per rev.]	0,60	1,0	1,0	1,167	1,565	1,5	
Ratio L		20:1	20:1	24:1	24:1	24:1	24:1	
Lift per revolution for ratio L	[mm/per rev.]	0,30	0,25	0,25	0,292	0,50	0,5	
Max. drive capacity ²⁾ at T = 20 °C Duty cycle (ED) 20 %/h	[kW]	0,17	0,4	0,65	1,15	2,7	3,8	
Max. drive capacity ²⁾ at T = 20 °C Duty cycle (ED) 10 %/h	[kW]	0,25	0,6	1,25	1,9	3,85	5,4	
Screw efficiency rating	[%]	54	41	40	36,5	39,5	37,5	
Overall efficiency for ratio N	[%]	31	30	27	24	27	24	
Overall efficiency for ratio L	[%]	24	23	19	16	17	17	
Torque, capacity, turning-speed at 20 % ED/h and 20 °C		see performance tables page 20–23						
Screw torque at max. lifting power	[Nm]	8,8	29,1	60	153	702	1061	
Max. permitted drive-shaft torque	[Nm]	12	29,4	46,5	92	195	280	
Mass moment of inertia J ³⁾ Ratio N type 1	[kg cm ²]	0,095	0,383	0,78	2,234	5,256	11,93	
Mass moment of inertia J ³⁾ Ratio N type 2	[kg cm ²]	0,1	0,39	0,792	2,273	5,356	12,14	
Mass moment of inertia J ³⁾ Ratio L type 1	[kg cm ²]	0,089	0,269	0,558	1,696	4,081	9,427	
Mass moment of inertia J ³⁾ Ratio L type 2	[kg cm ²]	0,089	0,275	0,558	1,699	4,091	9,451	
Max. permitted screw length for compression load	[mm]	see buckling diagrams page 152–153						
Housing material SHE		G-AISI10Mg		EN-GJS-500-7 (GGG 50)				
Housing material SHE-S		G-AISI10Mg		1.4552				
Weight without stroke length and protection tube	[kg]	1,2	3	7,3	16,2	26,5	36	
Screw weight per 100 mm stroke	[kg]	0,14	0,26	0,45	0,82	1,79	2,52	
Amount of lubricant in worm gear	[kg]	0,05	0,1	0,2	0,35	0,9	2	

Dimension plans type 1: page 24–31, type 2: page 32–36

- 1) Also applies to Ku screw (see page 157)
- 2) Max. permitted values for type 1 and Tr screw. Higher values are possible when using type 2 or Ku screw.
- 3) Referring to 100 mm screw length
- 4) Also available in stainless steel version
- 5) Also available as swivel lug version (SSP)

Possible usage according to directive 2014/34/EU (ATEX)

SHE range

Selection table

							Selection table screw jack SHE	
25 ³⁾	35	50.1	75	100.1	150.1	200.1	Size	
250/250	350/350	500/500	750/750	800/1000	1500/1500	2000/2000	[kN]	Max. lifting capacity dynamic/static
250/250	350/350	500/500	750/750	800/1000	1500/1500	-	[kN]	Max. tensile load dynamic/static
90x16	100x16	120x16	140x20	160x20	190x24	220x28		Screw Tr ¹⁾
10 2/3:1	10 2/3:1	10 2/3:1	12:1	12:1	19:1	17,5:1		Ratio N
1,5	1,5	1,5	1,667	1,667	1,263	1,6	[mm/per rev.]	Lift per revolution for ratio N
32:1	32:1	32:1	36:1	36:1	-	-		Ratio L
0,5	0,5	0,5	0,556	0,556	-	-	[mm/per rev.]	Lift per revolution for ratio L
5	6	7,4	9	12,5	18,5	on request	[kW]	Max. drive capacity ²⁾ at T = 20 °C Duty cycle (ED) 20 %/h
7,2	8,6	10,4	12,6	17,5	26	on request	[kW]	Max. drive capacity ²⁾ at T = 20 °C Duty cycle (ED) 10 %/h
36,5	34	30	31,6	28,5	28,8	29	[%]	Screw efficiency rating
22	21	15	18	15	15	17,5	[%]	Overall efficiency for ratio N
15	14	10	12	9	-	-	[%]	Overall efficiency for ratio L
see performance tables page 20–23								Torque, capacity, turning-speed at 20 % ED/h and 20 °C
1725	2600	4235	7550	11115	19850	30700	[Nm]	Screw torque at max. lifting power
480	705	840	2660	2660	4260	on request	[Nm]	Max. permitted drive-shaft torque
23,42	55,8	108,8	318	428,5	on request	on request	[kg cm ²]	Mass moment of inertia J ³⁾ Ratio N type 1
23,74	56,3	109,9	325,2	431,3	on request	on request	[kg cm ²]	Mass moment of inertia J ³⁾ Ratio N type 2
19,59	44,08	88,37	275,6	346	on request	on request	[kg cm ²]	Mass moment of inertia J ³⁾ Ratio L type 1
19,62	44,13	88,49	279,4	346,3	on request	on request	[kg cm ²]	Mass moment of inertia J ³⁾ Ratio L type 2
see buckling diagrams page 152–153							[mm]	Max. permitted screw length for compression load
EN-GJS-500-7 (GGG 50)								Housing material SHE
-								Housing material SHE-S
70,5	87	176	ca, 350	538	850	ca, 1000	[kg]	Weight without stroke length and protection tube
4,15	5,2	7,7	10	13,82	19,6	26,2	[kg]	Screw weight per 100 mm stroke
1,3	2,5	4	5	10	10	on request	[kg]	Amount of lubricant in worm gear

A

B

C
D

SHE range

Performance tables (screw jacks with Tr screw)

Performance table SHE 150.1 screw Tr 190x24

Speed n	Lifting speed		F = 1500 kN				F = 1250 kN				F = 1000 kN				F = 750 kN				F = 500 kN				F = 250 kN				F = 100 kN			
	N	L	N	L	Nm	kW	N	L	Nm	kW	N	L	Nm	kW	N	L	Nm	kW	N	L	Nm	kW	N	L	Nm	kW	N	L	Nm	kW
[1/min]	[m/min]		Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1000	1,263		2010	211			1680	175			1340	140			1010	105			670	70			335	35			134	14		
750	0,947		2010	158			1680	132			1340	105			1010	79			670	53			335	26			134	11		
500	0,632		2010	105			1680	88			1340	70			1010	53			670	35			335	18			134	7		
400	0,505		2010	84			1680	70			1340	56			1010	42			670	28			335	14			134	5,6		
300	0,379		2010	63			1680	53			1340	42			1010	32			670	21			335	11			134	4,2		
200	0,253		2010	42			1680	35			1340	28			1010	21			670	14			335	7			134	2,8		
100	0,126		2010	21			1680	18			1340	14			1010	11			670	7			335	3,5			134	1,4		
50	0,063		2010	11			1680	8,8			1340	7			1010	5,3			670	3,5			335	1,8			134	0,7		

Performance table SHE 200.1 screw Tr 220x28

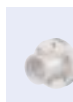
Speed n	Lifting speed		F = 2000 kN				F = 1500 kN				F = 1000 kN				F = 750 kN				F = 500 kN				F = 250kN				F = 100 kN			
	N	L	N	L	Nm	kW	N	L	Nm	kW	N	L	Nm	kW	N	L	Nm	kW	N	L	Nm	kW	N	L	Nm	kW	N	L	Nm	kW
[1/min]	[m/min]		Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW	Nm	kW
1000																														
750																														
600																														
500																														
300																														
100																														
50																														

on request



Pfaff underfloor lifting system with SHE 25 worm gear screw jacks designed according to DIN EN 1493

A



B



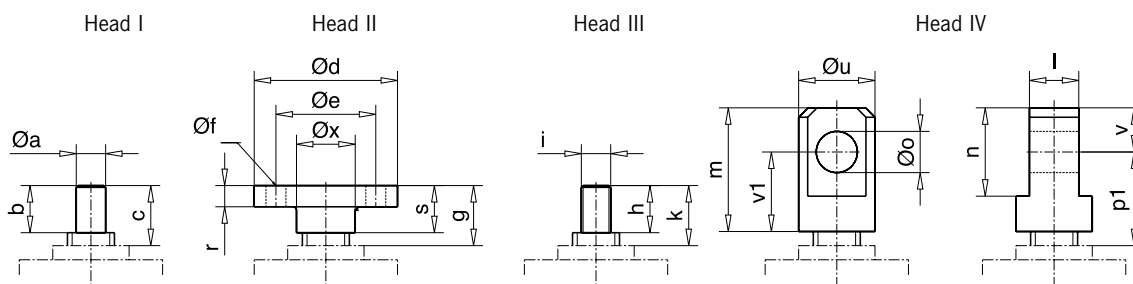
C

D

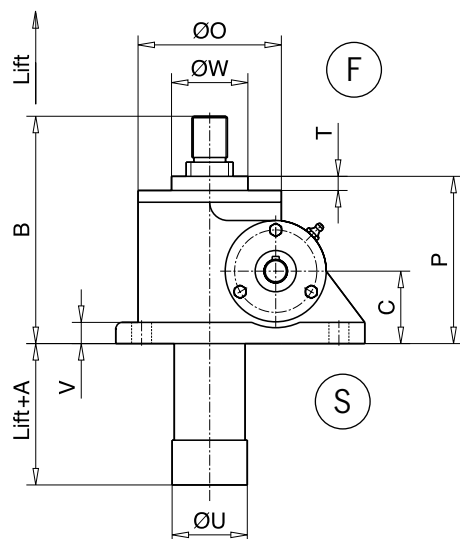
SHE range

Technical drawings SHE: Type 1

Technical drawings SHE: Type 1, Standard, Part 1

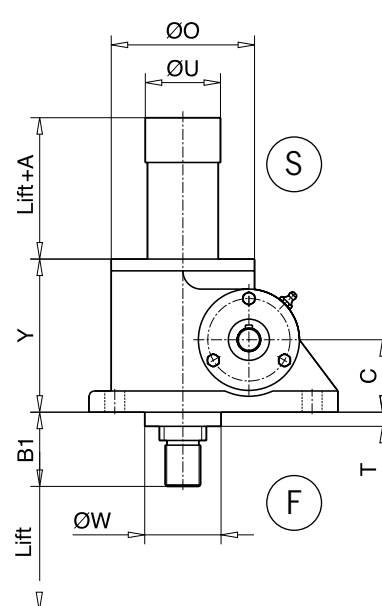


Design „A“

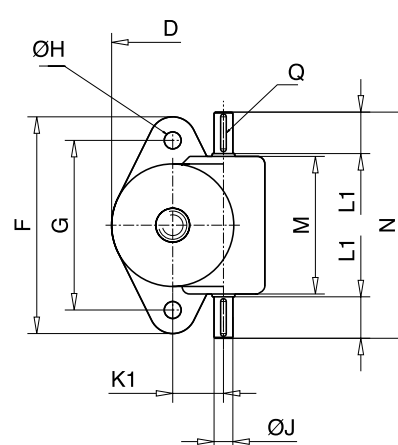
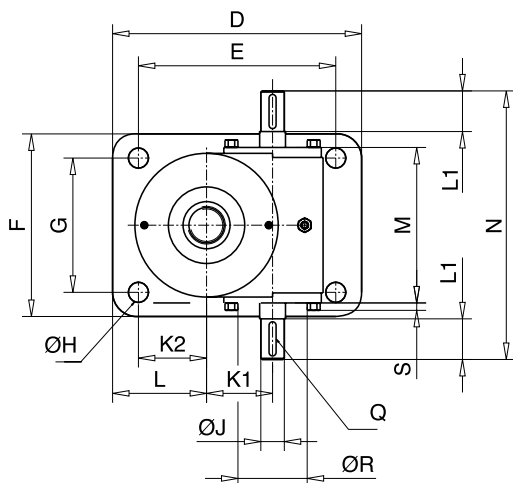


Size 1.1 – Size 35

Design „B“



Size 0,5



F = Guide ring, S = Protection tube

CAD & go



A



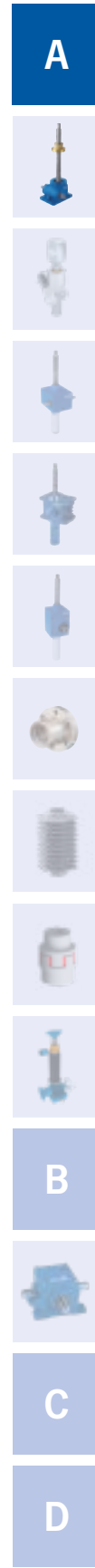
SHE range

Dimensions: Type 1

Dimensions: Type 1, Standard, Part 1

Size	0,5	1.1	3.1	5.1	15.1	20.1	25	35
Screw	Tr 18x6	Tr 24x5	Tr 30x6	Tr 40x7	Tr 60x12	Tr 70x12	Tr 90x16	Tr 100x16
A	20	20	20	20	20	20	20	20
B	105,5	124	150,5	193	230	256	317	350
B1	35,5	54	53,5	63	80	80	100	110
C	32	35	45	61,5	70	87	102	115
D	81,5	150	165	212	235	295	350	430
E	-	130	135	168	190	240	280	360
F	115	100	120	155	200	215	260	280
G	90	80	90	114	155	160	190	210
Ø H	9	9	14	17	21	28	35	35
Ø J k6	10	14	16	20	25	28	34	38
K 1	27	36	45,2	56,2	66,8	72,5	97	120
K 2	-	58	50	58	63,5	95	95	135
L	32,5	68	65	80	86	122,5	130	170
L 1	22	18	-	-	47	52	60	80
M	73	100	110,5	132	185	213,5	221	265
N	120	140	190	228	280	322	355	430
Ø O	65	88	98	122	150	185	205	260
P	75,5	79	105,5	142	156	182	225	250
Q	3x3x20	5x5x16	5x5x32	6x6x32	8x7x40	8x7x45	10x8x50	10x8x70
Ø R	-	-	38	55	-	72	80	100
S	-	-	5,5	6	-	6	10	10
T	5,5	9	8,5	12	6,5	6	8	10
Ø U	29	40	49	64	81	88	120	139
V	10	13	12	18	16	20	25	30
Ø W	36	52*	48	65	80	100	130	150
Y	70	79	97	130	150	176	217	240
Head I								
Ø a k6	18h9	15	20	25	40	50	70	80
b	20	24	30	40	50	54	63	80
c	30	45	45	51	74	74	92	100
Head II								
Ø d	65	72	98	122	150	185	205	260
Ø e	45	50	75	85	105	140	155	200
Ø f	4xØ7	4xØ9	4xØ14	4xØ17	4xØ21	4xØ26	4xØ27	4xØ33
g	30	45	45	51	74	74	92	100
r	8	10	12	18	20	20	25	30
s	20	25	30	40	50	54	63	80
Ø x	18	30	40	50	65	90	100	130
Head III								
h	15	24	30	39	50	54	63	80
i	M 18x1,5	M 16x1,5	M 22x1,5	M 30x2	M 40x3	M 56x3	M 70x3	M 80x3
k	30	45	45	51	74	74	92	100
Head IV								
l -0,2	20	25	30	42	60	75	90	105
m	50	60	70	105	130	150	175	220
n	30	40	50	75	100	120	140	160
Ø o H8	15	20	25	35	50	60	70	80
p1	50	60	60	79	104	110	134	160
Ø u	30	40	50	65	90	110	130	150
v1	35	40	45	67,5	80	90	105	140
v	15	20	25	37,5	50	60	70	80

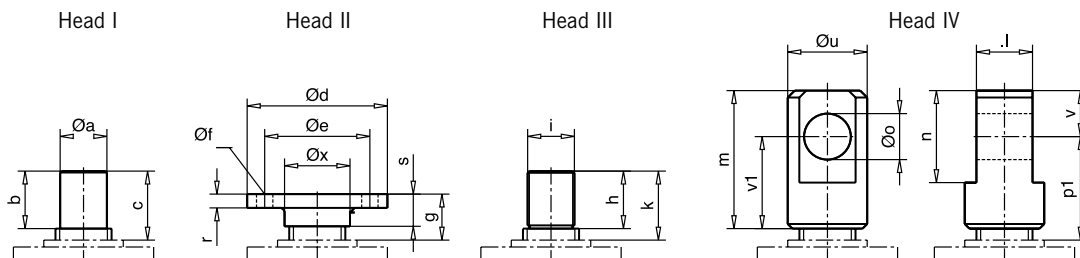
*Only design B



SHE range

Technical drawings SHE: Type 1

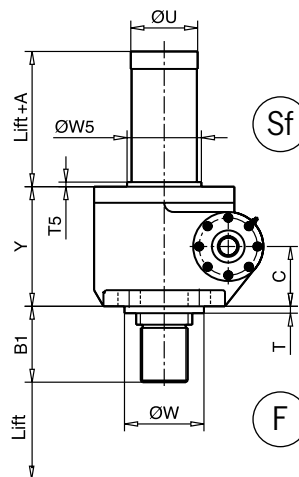
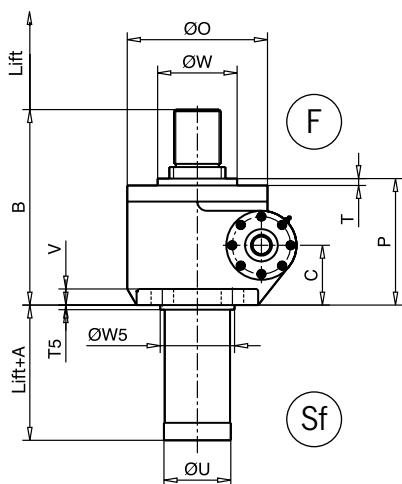
Technical drawings SHE: Type 1, Standard, Part 2



Design „A“

Size 50.1 – Size 75

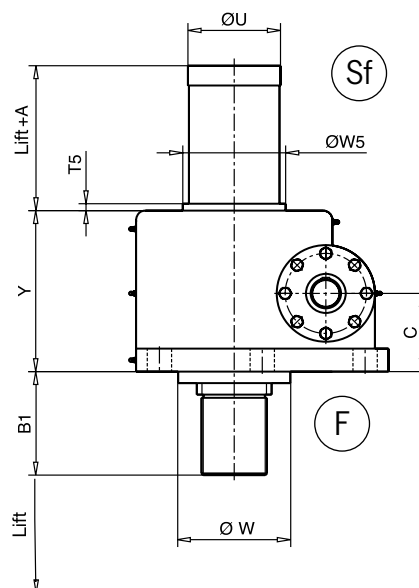
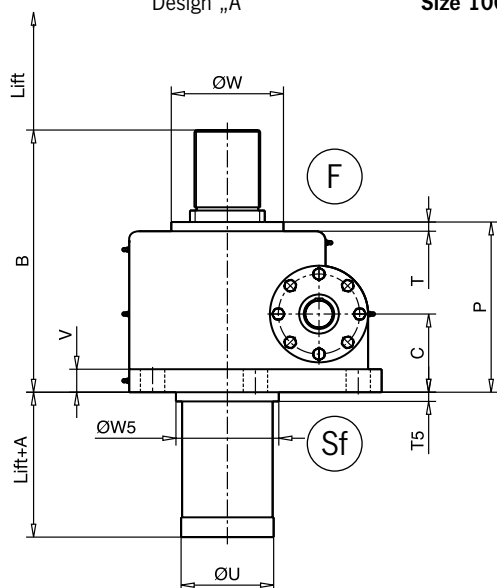
Design „B“



Design „A“

Size 100.1 – Size 200.1

Design „B“



F = Guide ring, Sf = Protection tube with guide ring

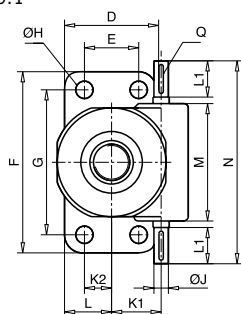
CAD & go



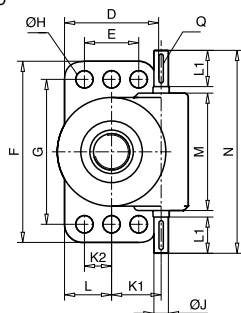
SHE range

Dimensions: Type 1

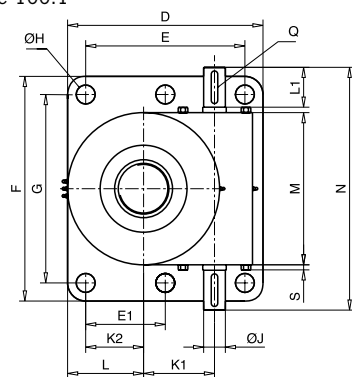
Size 50.1



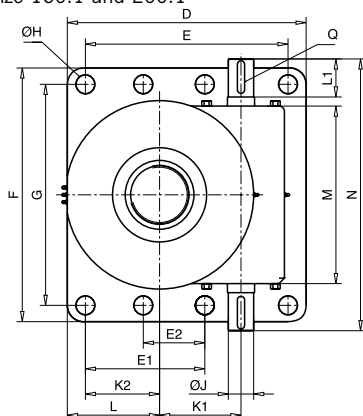
Size 75



Size 100.1



Size 150.1 and 200.1



Dimensions: Type 1, Standard, Part 2

Size	50.1	75	100.1	150.1	200.1
Screw	Tr 120x16	Tr 140x20	Tr 160x20	Tr 190x24	Tr 220x28
A	20	80	65	80	125
B	425	485	570	675	675
B1	165	175	220	230	300
C	130	155	170	194	185
D	260	330	540	660	780
E	150	225	440	560	660
E1	-	-	220	330	330
E2	-	-	-	170	-
F	500	540	620	700	800
G	400	455	520	610	710
Ø H	4xØ48	6xØ45	6xØ52	8xØ52	6xØ45
Ø J	40 k6	60 m6	60 m6	70 m6	75 k6
K 1	137	160	196	225	280
K 2	75	112.5	160	210	260
L	130	165	210	255	320
L 1	100	110	110	110	130
M	324	360	420	490	555
N	560	600	670	710	830
Ø O	290	375	420	510	640
P	275	335	355	445	440
Q	12x8x80	18x11x100	18x11x90	20x12x90	20x12x110
S	-	-	14	-	-
T	15	25	15	20	75
T5	10	25	20	20	40
Ø U	143	220	198	220	299
V	35	40	50	60	60
Ø W	170	265	182	300	350
Ø W5	170	265	220	245	320
Y	260	310	350	424	365
Head I					
Ø a k6	100	110	140	160	on request
b	125	125	175	200	
c	150	150	200	230	
Head II					
Ø d	300	370	370	400	420
Ø e	225	270	280	310	310
Ø f	4xØ35	6xØ45	6xØ52	8xØ52	8xØ38
g	100	150	150	180	235
r	30	75	75	90	100
s	70	125	125	150	150
Ø x	140	200	200	220	220
Head III					
h	125	125	175	200	on request
i	M 100x5	M 120x6	M 140x6	M 160x6	
k	150	150	200	230	
Head IV					
l	120-0,2	140-0,2	160-0,3	180-0,3	on request
m	300	360	360	400	
n	200	240	280	320	
Ø o H8	100	120	140	160	
p1	225	265	245	270	
Ø u	170	200	220	260	
v1	200	240	220	240	
v	100	120	140	160	

A



B



C



D

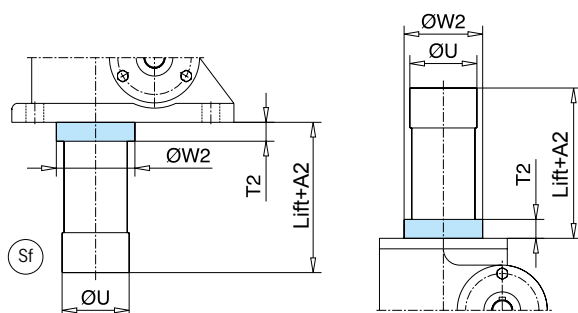
SHE range

Technical drawings and dimensions

2nd Guide ring Sf



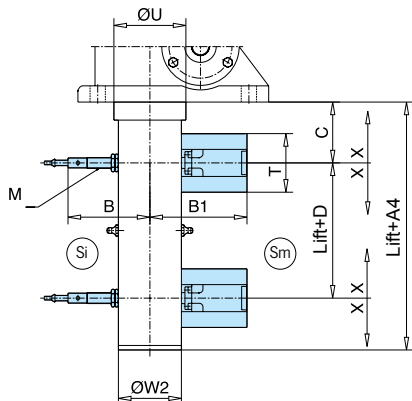
A 2nd guide ring should be provided on the SHE, if on-site guides are not possible and if restoring forces from a swivel movement or lateral forces cannot be excluded.



Size	A2	T2	ØW2	ØU
0,5	32	11,5	36	29
1.1	32	9	52*	40
3.1	40	20	60	49
5.1	43	18	75	64
15.1	42	18	95	81
20.1	55	31	100	88
25	65	40	130	120
35	60	40	150	139
50.1	Standard always with 2 nd guide ring			143
75				220
100.1				198
150.1				220
200.1				299

*Only design A

With added-on limit switches Sm/Si



Size	A2	B	B1	C	D	T	M	ØU	ØW2	X
1.1	on request									
3.1	170	100	106	65	25	58	12x1	75	60,3	±10
5.1	175	107	115	70	25	58	12x1	95	76,1	±10
15.1	185	114	122	75	30	58	12x1	110	88,9	±10
20.1	195	131	130	80	40	58	12x1	125	114,3	±10
25	225	141	137	90	50	65	18x1	150	133	±10
35	on request									
50.1	on request									
75	204	171	178	75	70	58	18x1	265	219,1	±10
100.1/150.1/200.1	on request									

All sizes are prepared for mechanical (Sm) and inductive (Si) operating limit switches. Limit switches are not included in

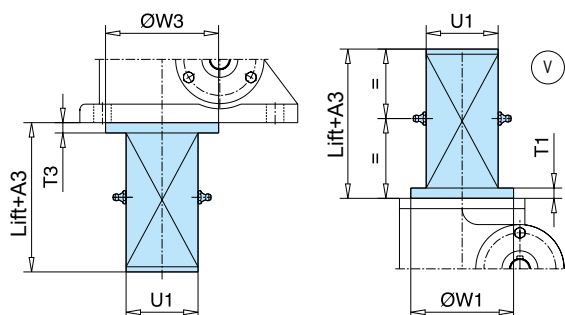
the scope of delivery.

Technical data see chapter „Accessories“!

Anti-Turn device V



In order to ensure a linear movement, the screw must be secured against rotation. This can be done on site or by means of an anti-rotation device on the SHE by means of a square tube.

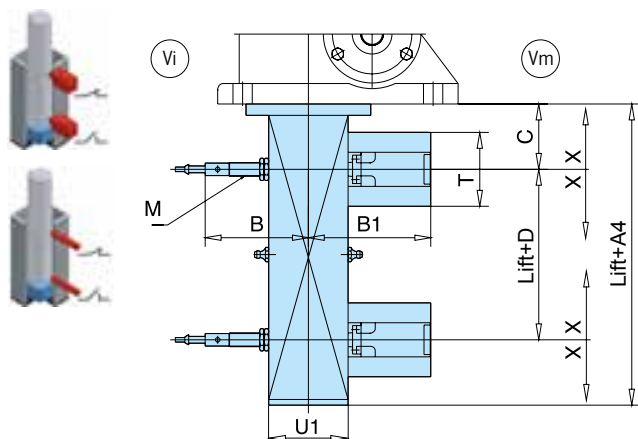


Size	A3	T3	ØW3	A1	T1	ØW1	U1
0,5	65	9	52	60	-	-	30x30
1.1	74	8	80	74	8	80	40x40
3.1	85	8	70	77	-	-	50x50
5.1	95	10	110	85	-	-	80x80
15.1	115	15	130	100	-	-	90x90
20.1	100	20	160	100	20	160	100x100
25	110	20	180	110	20	160	120x120
35	115	20	200	115	20	160	140x140
50.1	158	15	240	158	15	240	180x180
75	170	20	300	170	20	300	220x220
100.1	170	10	300	170	15	300	200x200
150.1	210	20	380	210	20	380	260x260
200.1	on request						

SHE range

Technical drawings and dimensions

Anti-turn device Vm/Vi with added-on limit switches



All sizes are prepared for mechanical (Vm) and inductive (Vi) operating limit switches. Limit switches are not included in the scope of delivery.

Size	A4	B	B1	C	D	T	M	U1	X
0,5	on request								
1.1	on request								
3.1	130	95	105	60	25	58	12x1	50x50x2	±10
5.1	130	102	112	55	25	58	12x1	80x80x3	±10
15.1	155	111	116	80	30	58	12x1	90x90x6	±10
20.1	180	130	131	80	40	68	18x1	110x110x5	±10
25	210	145	145	90	50	68	18x1	140x140x6	±0
35	on request								
50.1	on request								
75	220	171	178	75	90	58	18x1	220x220x10	±10
100.1/150.1/200.1 on request									

Ind. proximity switch Vi

Mechanical limit switch Vm

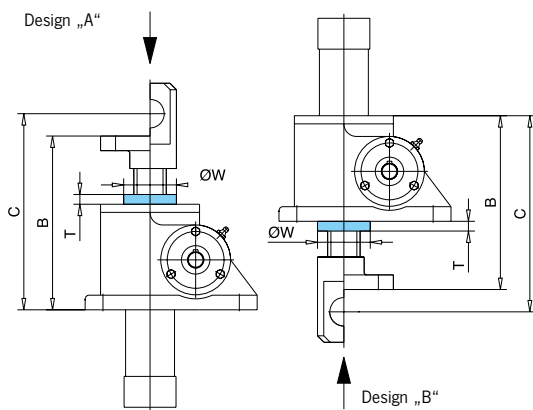
Technical data see chapter „Accessories“!

With short safety nut SFM-O



The short safety nut significantly increases the operational safety of the drive elements by absorbing the axial load in the event of a main nut fracture. At the same time, the safety nut can be used to check the wear of the main nut exactly, since the distance between the two nuts changes with increasing

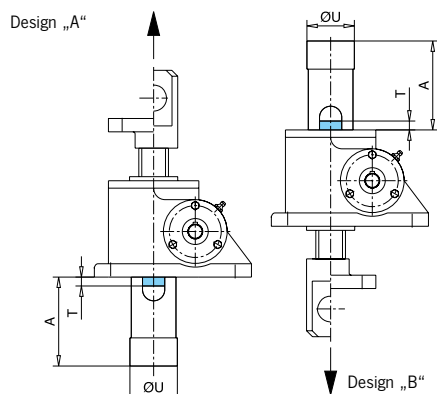
wear. In the case of worm gear screw jacks with safety nuts the main load direction (tensile or compression load) and the installation position must always be taken into account, as only a consistently arranged safety nut can take up the load.



SHE type 1, compression load

Size	B	C	T*	ØW
1.1	on request			
3.1	150,5	165,5	2	45
5.1	193	220,5	2	55
15.1	230	260	3	76
20.1	262	292	3	86
25	317	359	3,5	112
35	355	415	15	138

50.1/75/100.1/150.1/200.1 on request



SHE type 1, tensile load

Size	A	T*	ØU
1.1	on request		
3.1	Lift + 20	2	61
5.1	Lift + 40	2	81
15.1	Lift + 20	3	93
20.1	Lift + 20	3	119
25	Lift + 20	3,5	145
35	Lift + 45	4	173

50.1/75/100.1/150.1/200.1 on request

*Corresponds to new condition; if „T = 0“, supporting and safety nut must be repaired.

A



SHE range

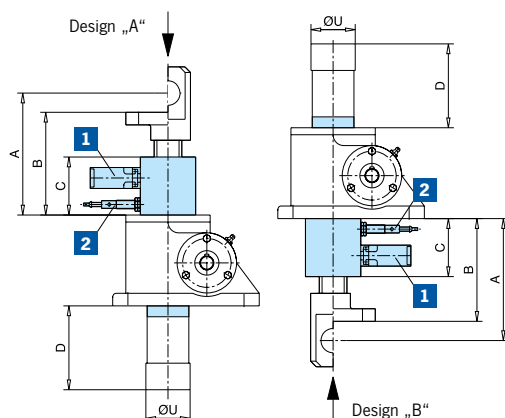
Technical drawings and dimensions

With long safety nut SFM-E/SFM-D (DGVU V17/18 and DGVU R100-500, chap. 2.10)



When using worm gear screw jacks in theater stages (DGVU V17/18), lifting platforms (DGVU R100-500, chap. 2.10) or lifting systems where there is a risk of injury to persons, the screw jacks are designed in accordance with

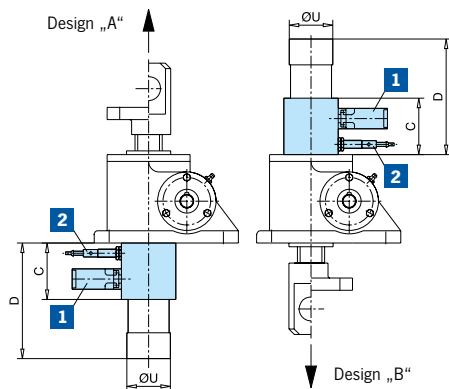
the current regulations. Additional components ensure, among other things, fall protection (self-locking spindles and/or mechanical safety brakes in the drive) and, if required, the synchronous direction of rotation.



SHE type 1, compression load

Size	A	B	C	D	ØU
1.1	on request				
3.1	140	125	80	Hub + 60	65
5.1	161,5	134	83	Hub + 70	65
15.1	201,5	171,5	87,5	Hub + 70	83
20.1	201	171	91	Hub + 70	115
25	264	222	130	Hub + 83	160

35/50.1/75/100.1/150.1/200.1 on request



SHE type 1, tensile load

Size	A	B	C	D	ØU
Size on request					

All sizes are prepared for mechanical and inductive operating limit switches. Limit switches are not included in the scope of delivery.

Mechanical limit switch Vm **1**

Ind. proximity switch Vi **2**

Technical data and dimensions see chapter „Accessories“!

A



B



C

D

SHE range

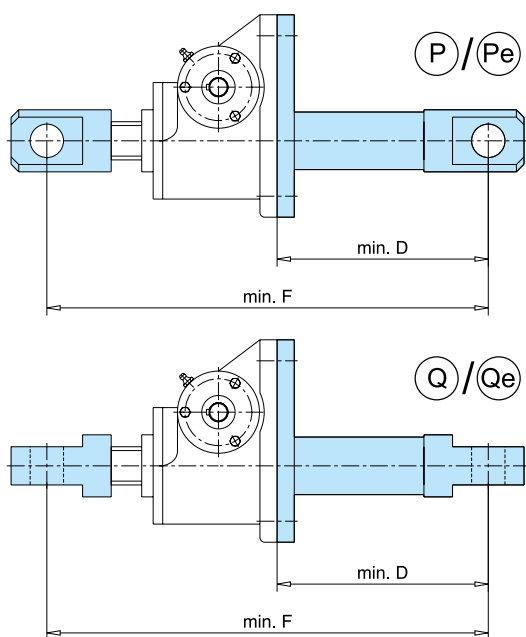
Technical drawings and dimensions

Swiveling configuration P/Pe, Q/Qe



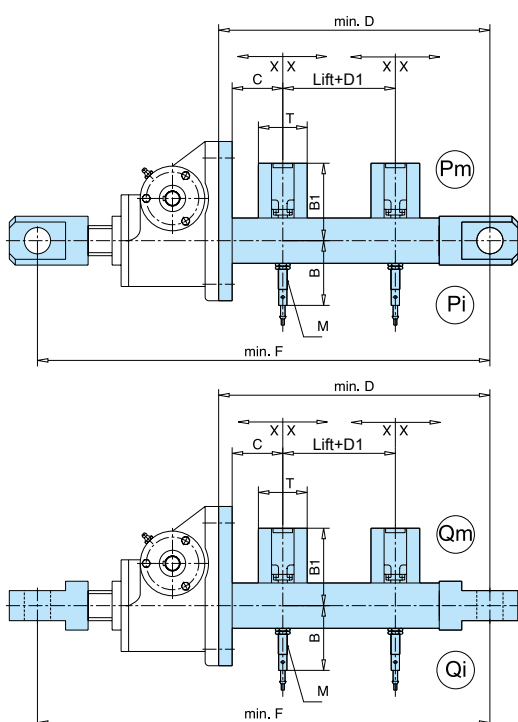
In order to allow worm gear screw jacks to carry out swiveling and tipping movements, the drive elements must be secured at two points and permitted to move. This can be done using head IV (see page 117, Accessories swivel plates) on both

screw ends or an articulated head. The bending moment resulting from the swiveling motion should be minimized as much as possible by means of low-friction articulations.



Size	Without end-limit stop P/Q		With end-limit stop Pe/Qe	
	D	F	D	F
1.1	on request			
3.1	Lift + 90	Lift + 255,5	Lift + 110	Lift + 275,5
5.1	Lift + 108	Lift + 329	Lift + 128	Lift + 349
15.1	Lift + 125	Lift + 385	Lift + 155	Lift + 415
20.1	Lift + 135	Lift + 427	Lift + 175	Lift + 467
25	Lift + 150	Lift + 509	Lift + 200	Lift + 559
35/50.1/75/100.1 on request				

Swiveling configuration with added-on limit switches Pm/Pi, Qm/Qi



Size	B	B1	C	D	D1	F	M	T	X
3.1	91	100	48	Lift + 175	25	Lift + 340,5	12x1	58	± 10
5.1	103	80	48	Lift + 203	20	Lift + 424,5	12x1	58	± 10
15.1	106	115	48	Lift + 228	30	Lift + 488	12x1	58	± 10
0,5/1.1/20.1/2/35/50.1/75/100.1 on request									

All sizes are prepared for mechanical (Pm/Qm) and inductive (Pi/Qi) operating limit switches.

Limit switches are not included in the scope of delivery.

Mechanical limit switch Pm/Qm

Ind. proximity switch Pi/Qi

Technical data and dimensions see chapter „Accessories“!

A



SHE range

Technical drawings SHE: Type 2

Technical drawings SHE: Type 2, Standard, Part 1

A



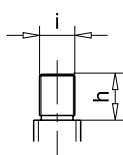
B

C

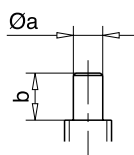
D

Screw ends

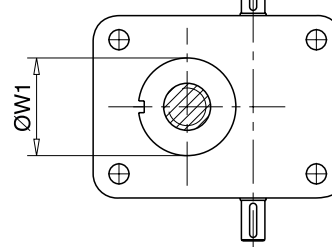
Head III



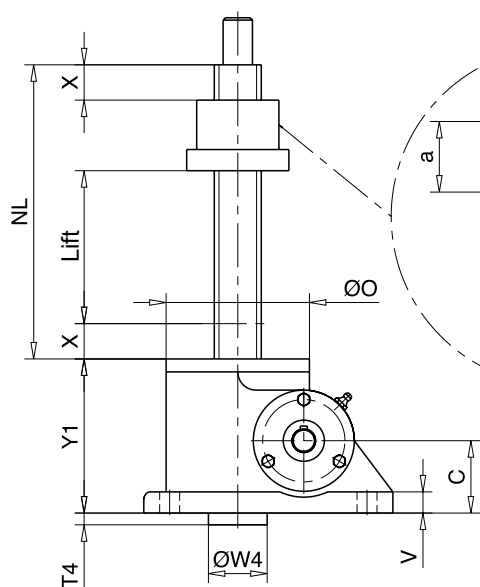
Head I



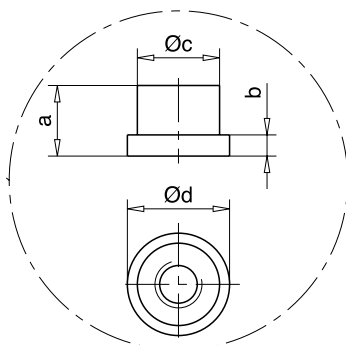
Cross section A-A



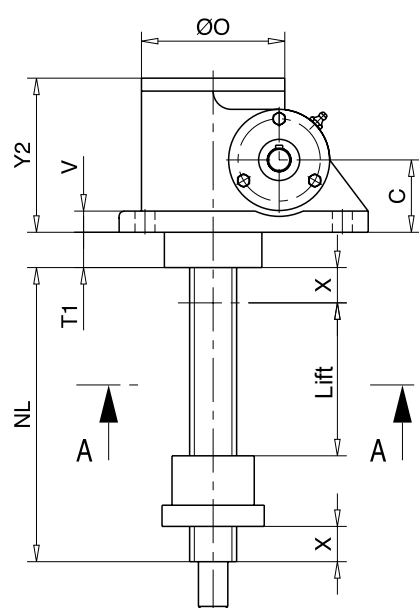
Design „A“



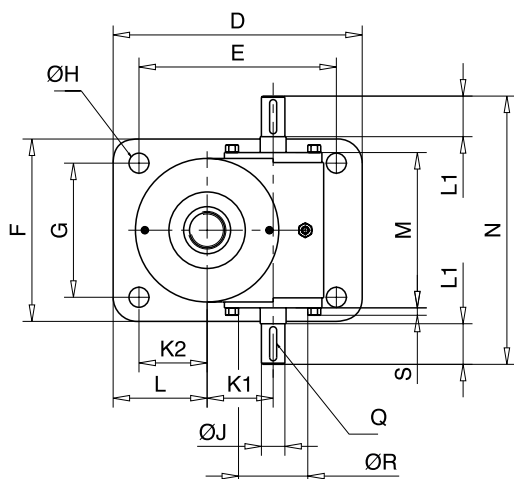
Travelling nut LFM



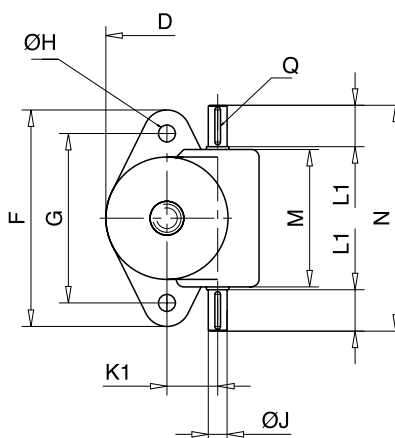
Design „B“



Size 1.1 – Size 35



Size 0,5



CAD & go



SHE range

Dimensions: Type 2

Dimensions: Type 2, Standard, Part 1

Size	0,5	1.1	3.1	5.1	15.1	20.1	25	35
Screw	Tr 18x6	Tr 24x5	Tr 30x6	Tr 40x7	Tr 60x12	Tr 70x12	Tr 90x16	Tr 100x16
C	32	35	45	61,5	70	87	102	115
D	81,5	150	165	212	235	295	350	430
E	-	130	135	168	190	240	280	360
F	115	100	120	155	200	215	260	280
G	90	80	90	114	155	160	190	210
Ø H	9	9	14	17	21	28	35	35
Ø J k6	10	14	16	20	25	28	34	38
K 1	27	36	45,2	56,2	66,8	72,5	97	120
K 2	-	58	50	58	63,5	95	95	135
L	32,5	68	65	80	86	122,5	130	170
L 1	22	18	-	-	47	52	60	80
M	73	100	110,5	132	185	213,5	221	265
N	120	140	190	228	280	322	355	430
NL	Lift + 72	Lift + 80	Lift + 85	Lift + 100	Lift + 125	Lift + 150	Lift + 170	Lift + 205
Ø O	65	88	98	122	150	185	205	260
Q	3x3x20	5x5x16	5x5x32	6x6x32	8x7x40	8x7x45	10x8x50	10x8x70
Ø R	-	-	38	55	-	72	80	100
S	-	-	5,5	6	-	6	10	10
T 1	18,5	16	26,5	30	34	39	52	45
T 4	-	-	-	-	-	-	-	15
V	10	13	12	18	16	20	25	30
Ø W 1	45	52	68	83	110	140	160	180
Ø W 4	-	-	-	-	-	-	-	150
Safety X	20	20	20	20	25	25	25	30
Y 1	74	86	100	131	160	194	226	250
Y 2	70	79	97	130	150	176	217	255
Travelling nut LFM								
a	32	40	45	60	75	100	120	145
b	10	12	15	18	25	30	35	35
Ø c h9	40	45	50	70	90	90	130	150
Ø d	50	65	80	87	110	120	155	190
Head I								
Ø a k6	10	15	20	25	40	50	70	80
b	20	24	30	40	50	54	80	80
Head III								
h	20	24	30	39	50	54	80	80
i	M 10	M 16x1,5	M 22x1,5	M 30x2	M 40x3	M 56x3	M 70x3	M 80x3

A



B

C

D

SHE range

Technical drawings SHE: Type 2

Technical drawings SHE: Type 2, Standard, Part 2

A



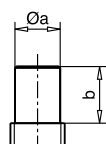
B



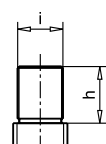
C

D

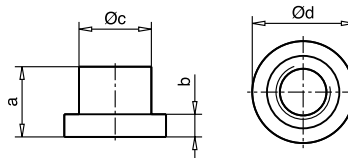
Head I



Head III



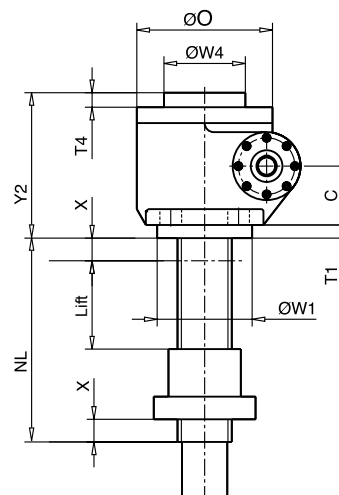
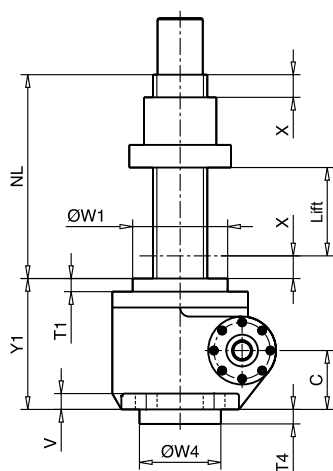
Travelling nut LFM



Design „A“

Size 50.1 – Size 75

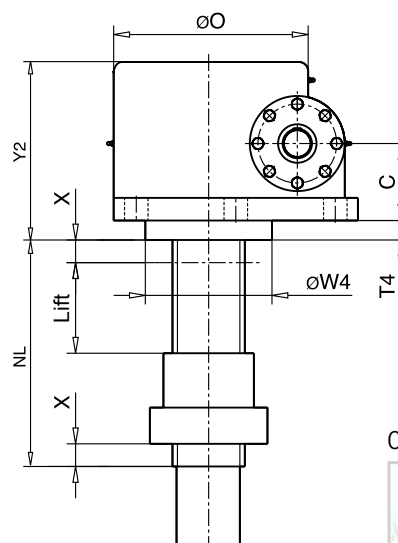
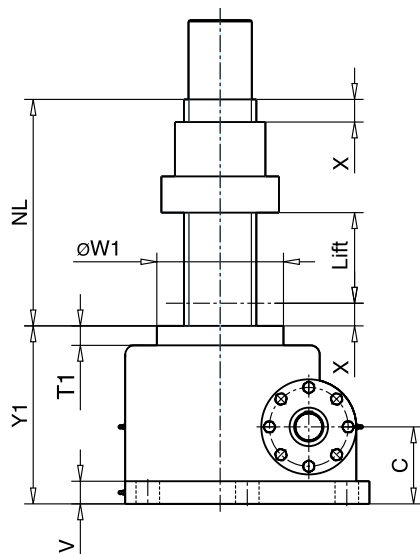
Design „B“



Design „A“

Size 100.1 – Size 200.1

Design „B“



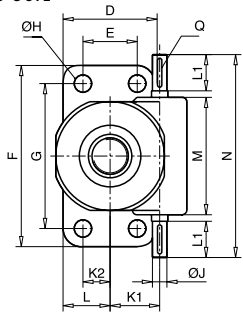
CAD & go



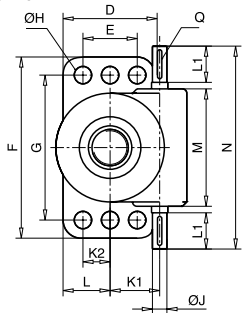
SHE range

Dimensions: Type 2

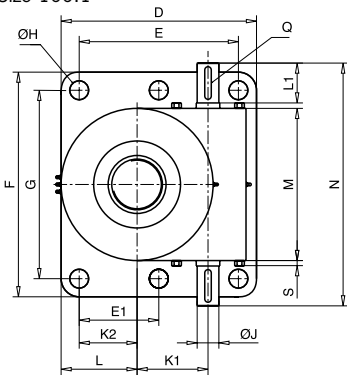
Size 50.1



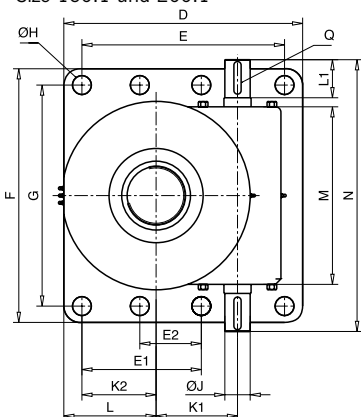
Size 75



Size 100.1



Size 150.1 und 200.1



Dimensions: Type 2, Standard, Part 2

Size	50.1	75	100.1	150.1	200.1
Screw	Tr 120x16	Tr 140x20	Tr 160x20	Tr 190x24	Tr 220x28
C	130	155	170	194	185
D	260	330	540	660	780
E	150	225	440	560	660
E1	-	-	220	330	330
E2	-	-	-	170	-
F	500	540	620	700	800
G	400	455	520	610	710
Ø H	48	45	52	52	45
Ø J	40k6	60m6	60m6	70m6	75k6
K 1	137	160	196	225	280
K 2	75	112,5	160	210	260
L	130	165	210	255	320
L 1	100	110	110	110	130
M	324	360	420	490	555
N	560	600	670	710	830
NL	Hub + 255	Hub + 300	Hub + 300	Hub + 340	-
Ø O	290	375	420	510	640
Q	12x8x80	18x11x100	18x11x90	20x12x90	20x12x110
S	-	-	14	-	-
T 1	29	16	33	40	85
T 4	32	-	43	50	85
V	35	40	50	60	60
Ø W 1	210	274	280	340	330
Ø W 4	180	-	-	-	330
Safety X	50	50	50	50	50
Y 1	289	326	383	465	450
Y 2	289	326	393	475	450
Travelling nut LFM					
a	155	200	200	240	on request
b	50	70	80	90	
Ø c h9	160	180	200	240	
Ø d	225	250	260	300	
Head I					
Ø a k6	100	110	140	160	on request
b	125	125	175	200	
Head III					
h	125	125	175	200	on request
i	M 100x5	M 120x6	M 140x6	M 160x6	

A



B

C

D

SHE range

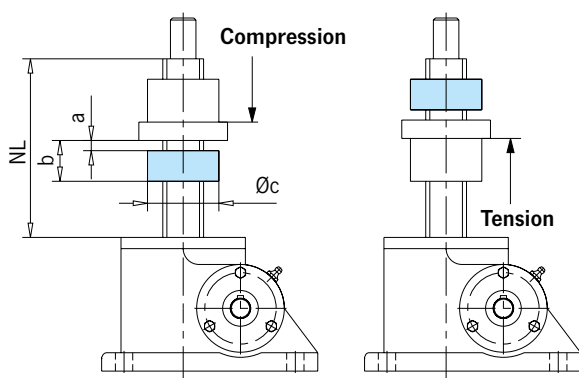
Technical drawings and dimensions

With short safety nut LFM-K



The short safety nut significantly increases the operational safety of the drive elements by absorbing the axial load in the event of a main nut fracture. At the same time, the safety nut can be used to check the wear of the main nut exactly, since the distance between the two nuts changes with increasing

wear. In the case of worm gear screw jacks with safety nuts the main load direction (tensile or compression load) and the installation position must always be taken into account, as only a consistently arranged safety nut can take up the load.

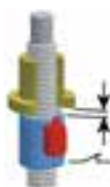


SHE type 2, compression and tensile load

Size	a*	b	Øc	NL
1.1	5	25	45	Lift + 105
3.1	10	35	50	Lift + 120
5.1	10	40	70	Lift + 140
15.1	10	60	90	Lift + 185
20.1	10	60	90	Lift + 210
25	15	80	130	Lift + 250
35	15	80	150	Lift + 285
50.1	15	80	160	Lift + 335
75	on request			
100.1	15	95	200	Lift + 395
150.1	20	120	240	Lift + 460
200.1	on request			

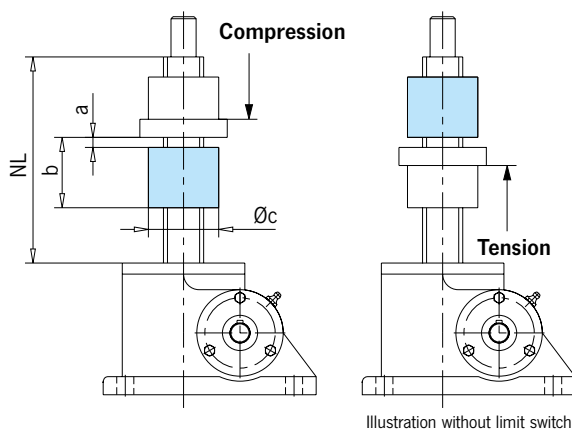
*Corresponds to new condition

With long safety nut LFM-E (DGV V17/18 and DGV R100-500, chap. 2.10)



When using worm gear screw jacks in theater stages (DGV V17/18), lifting platforms (DGV R100-500, chap. 2.10) or lifting systems where there is a risk of injury to persons, the screw jacks are designed in accordance with the current regulations.

Additional components ensure, among other things, fall protection (self-locking spindles and/or mechanical safety brakes in the drive) and, if required, the synchronous direction of rotation.



SHE type 2, compression and tensile load

Size	a*	b	Øc	NL
1.1	5	45	45	Lift + 125
3.1	10	55	50	Lift + 140
5.1	10	70	70	Lift + 170
15.1	10	85	90	Lift + 210
20.1	10	110	90	Lift + 260
25	15	135	130	Lift + 305
35	15	160	150	Lift + 335
50.1	15	170	160	Lift + 425
75	on request			
100.1	15	215	200	Lift + 515
150.1	20	260	240	Lift + 600
200.1	on request			

*Corresponds to new condition

All sizes are prepared for mechanical operating limit switches. Limit switches are not included in the scope of delivery.

Mechanical limit switch

Technical data and dimensions see chapter „Accessories“!

For further travelling nut designs, see page 94-97

A



Screw jacks

Application

Reference example

The SHE-series worm gear screw jacks from Pfaff-silberblau ensure reliable operation in the latest pavers of the global mechanical engineering company. Pavers are used for the mechanical laying of mastic asphalt and thus enable large-scale paving on car parks, bridges, roads, footpaths, multi-storey car parks and halls.

Only two worm gear screw jacks are required to handle the forces of 400 kN produced during the mechanical laying of mastic asphalt. The screw jacks featuring self-locking, grease-lubricated trapezoidal screws can be positioned very precisely at speeds of 150 mm/min thanks to a high ratio (32:1) and a stroke of 0.5 mm per revolution.

A Pfaff-silberblau SHE worm gear screw jack with a stroke of 1300 mm is located on each side of the paver or chassis. The B configuration (screw-on-sided screw) ensures optimum load distribution and offers good mounting options. For example, the travelling nut can be easily integrated into the customer-supplied receptacle, whilst serving as the linear guide with optimal (tensile) loading direction. A flexible protection boot and the robust housing reliably protect the screws against the effects of weather and dirt ingress in the harsh conditions of asphalt laying



Image source: Linnhoff & Henne

A



B



C

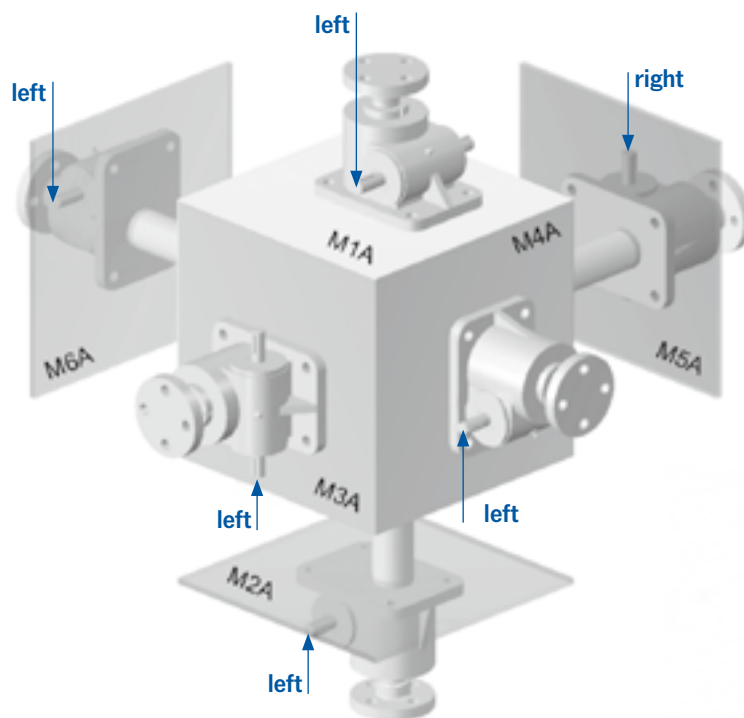


D

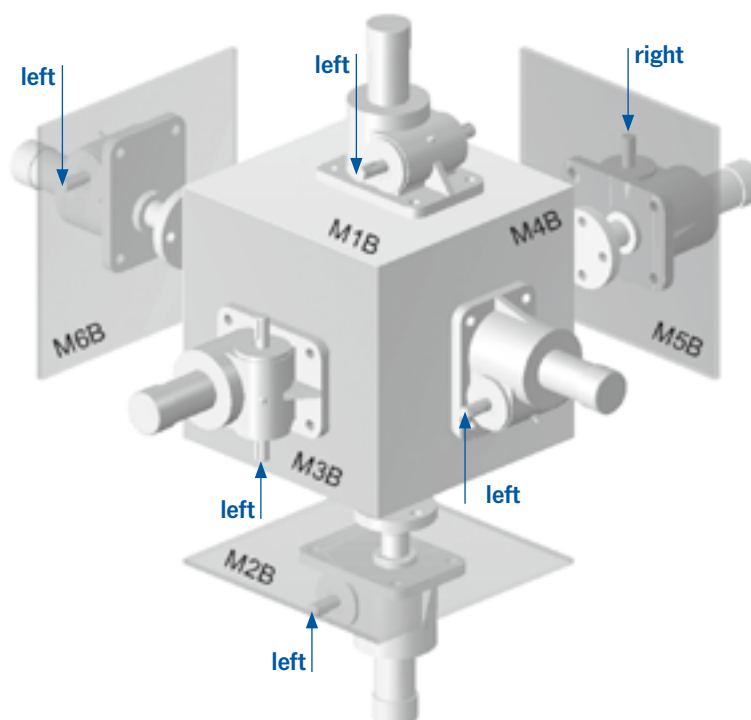
SHE range

Mounting positions, shaft/attachment side

SHE range: Design A



SHE range: Design B



A



B



C

D

SHE range

Ordering details

No.	Description	
1	Range	SHE
2	Size	0,5 / 1.1 / 3.1 / 5.1 / 15.1 / 20.1 25 / 35 / 50.1 / 75.1 / 100.1 / 150.1 / 200.1
3	Configuration type	1 2
4	Screw	Tr (DxP) = Trapezoidal screw Ku (DxP) = Ball screw
5	Ratio	N L
6	Design	A B
7	Mounting position	M1A / M1B / M2A / M2B / M3A / M3B M4A / M4B / M5A / M5B / M6A / M6B
8	Screw side variant	F (Type 1) O (Type 2)
9	Protective tube side variant	K / F / S / Sf / Se / Si / Sm / V / Ve / Vi / Vm (Type 1) O (Type 2)
10	Drive shaft	b (both sides, Standard) r (right) l (left)
11	Head	I / II / III / IV (Type 1) I / III (Type 2)
12	Lift	Lift in mm
13	Extension VL Usable length NL	VL in mm (Type 1) NL in mm (Type 2)
14	Options/Accessories	According to specification, description or technical drawing (see chapter Accessories/Options)

