

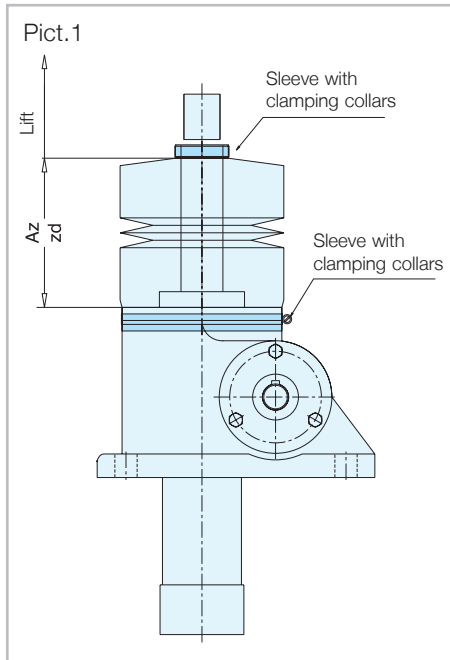
Lifting screw protective covers

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5 Lifting screw protective covers

5.1 Flexible protection boots



Pfaff-silberblau worm gear screw jacks must be protected with flexible protection boots if they are to be used in circumstances where there is a danger of dirt entering the unit or damage or injury occurring. Several types of flexible protection boots in different materials are available according to requirements.

5.1.1 General

In the standard configuration, flexible protection boots made of material PN-100 or PN-200 are used. They are secured at both ends with galvanized metal clamping collars (Pict. 1). Stainless steel clamping collars (V2A) can also be supplied on request.

In the case of extension limits $Az > 1000$ mm, the flexible protection boots are fitted with limiting devices, which prevent over-extension of the individual protection boot segments.

If they are arranged in a tilted or horizontal position, the flexible protection boots must be fitted (from a stroke length of 400 mm onwards) with support rings in order to prevent them engaging with the threads. If they are arranged in a vertical position, one support ring per 1000 mm stroke is required.

5



Order code:

PN- - / - / - x / x - - - x

1 2 3 4 5 6 7

- 1 Material
- 2 zd / Az (zd = minimum length, Az = maximum length)
- 3 Inside Ø / Outside Ø
- 4 Sleeve 1 / Sleeve 2
- 5 Protection against over-extension 0/1 (yes/no)
- 6 Number of support rings
- 7 Size of screw Tr (DxP) / Ku (DxP)

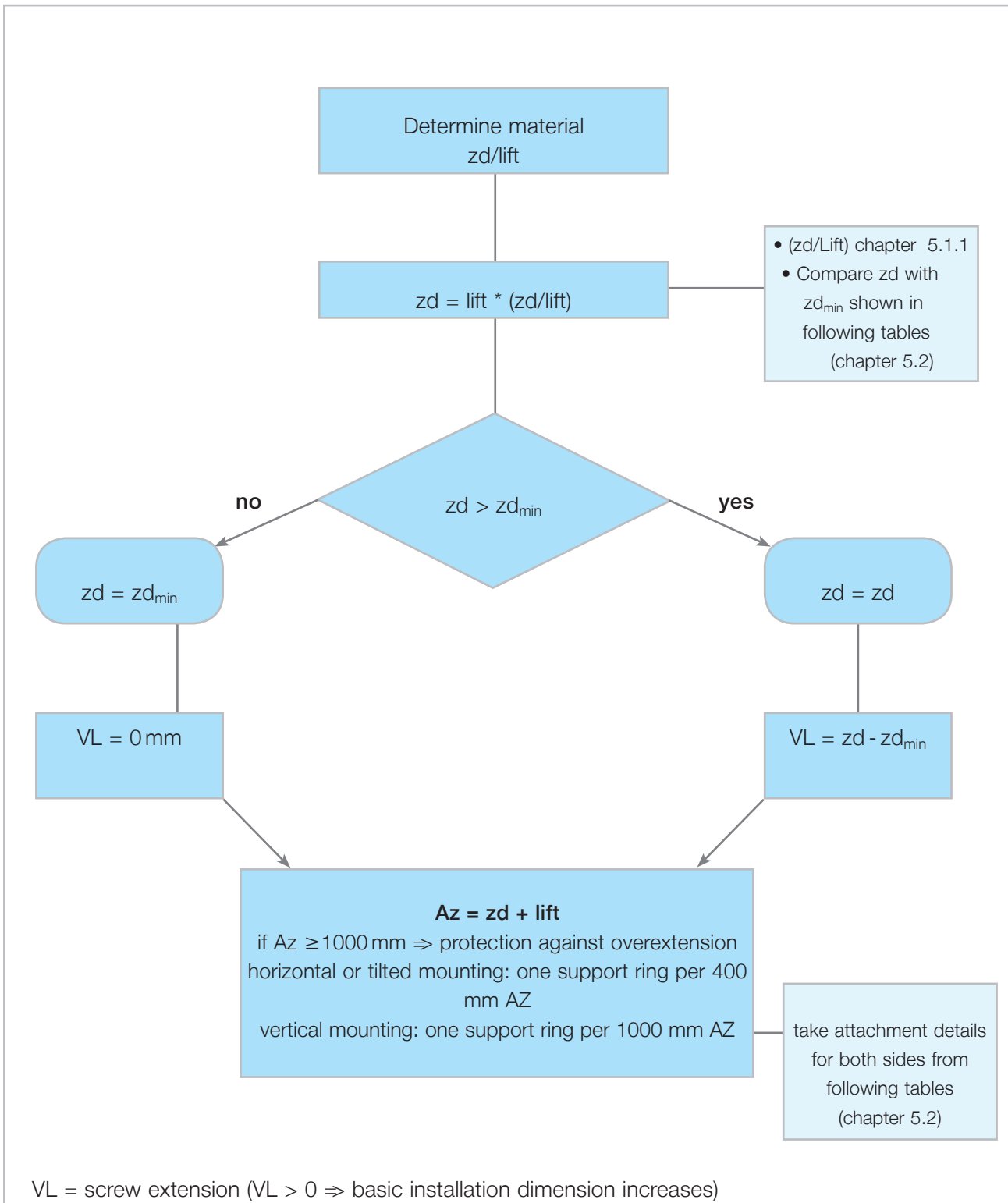
Material	Design	Temperature range °C	Dustproof	Waterproof	Oil-resistant	Chemical-resistant	Spark-resistant	zd/lift
PN-100*	Polygonal folding	-15° to 70°	●	●	● ₂	-	-	0,12
PN-200*	Polygonal folding	-15° to 100°	●	●	●	○	-	0,15
PN-300	Sewn round	-15° to 100°	●	○	○	-	-	0,20
PN-CSM- Rubber sheeting	Round	-28° to 110°	●	●	○	-	-	on request
PN-CR- Rubber fabric	Round	-38° to 100°	●	●	●	● ₁	-	on request
PN-ALU- Glass fiber	Sewn round	-20° to 200°	●	-	-	-	●	on request

* **Standard** ○ only conditional ● resistant ● 1 only if coated with Teflon ● 2 with synth. oil, with inner coating only

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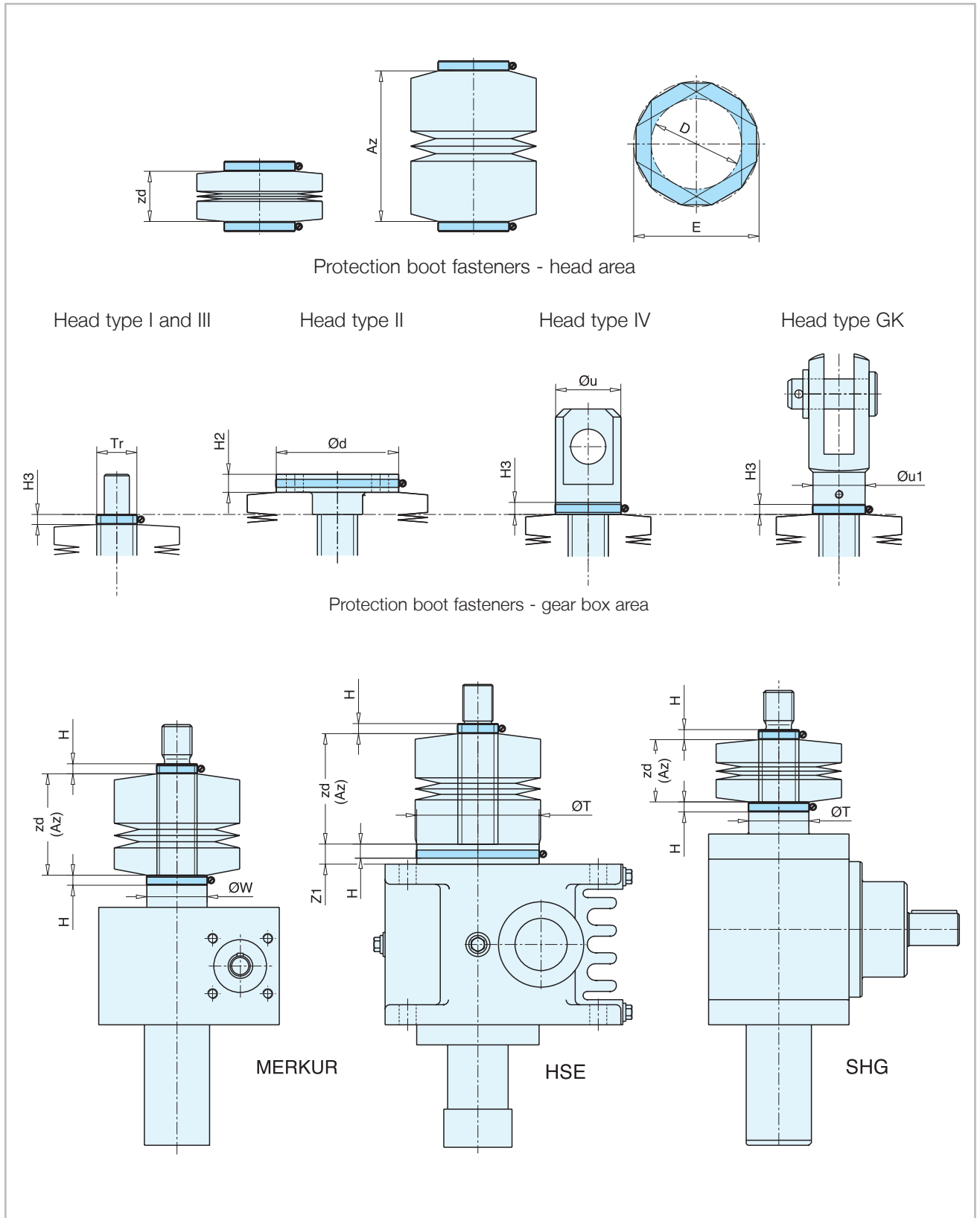
5.1 Flexible protection boots

5.1.2 Dimensioning



5.2 Dimensions, configuration type 1

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Lifting screw protective covers

5.2 Dimensions, configuration type 1

5.2.1 MERKUR range

MERKUR		M0	M1	M2	M3	M4	M5	M6	M7	M8
Housing connection:										
Housing	ØW	26	30	39	46	60	85	120	145	170
	H	12	12	12	12	12	12	15	15	15
Screw head										
Head II	Ød	50	65	80	90	110	150	220	260	310
	H2	12	12	12	12	15	20	30	30	30
Head I/III	*ØTr	14	18	20	30	40	60	70	100	120
Head IV	Øu	25	30	40	45	60	85	120	160	170
	H3	12	12	12	12	12	12	15	15	15
Head GK	Øu1	14	20	25	34	52	60	-	-	-
	H3	12	12	12	12	12	12	-	-	-
Minimum zd_{min}										
Head II		7	12	16	16	19	37	42	52	102
Head I/III		0	0	0	0	0	0	0	0	0
Head IV-GK		3	4	7	5	4	7	12	12	22
Flexible protection boots inner and outer diameter (material PN 100 and PN 200)										
Head II	D	63	63	100	100	120	150	220	260	310
	E	105	105	140	140	180	210	280	320	370
Head I-III-IV-GK	D	38	38	45	63	100	100	120	200	200
	E	75	75	85	105	140	140	180	260	260

Dimensions for ball screws on request.

*for ball screw (Ku) –connection head I-III = Ku-Ø

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5.2.2 HSE und SHG range

HSE		32	36.1	50.1	63.1	80.1	100.1	125.1	140	200.1
Housing connection:										
Housing	ØT	62	72	92	122	152	182	222		352
	H	15	16	18	20	25	25	25		25
Screw head										
Head II	Ød	65	72	92	122	150	182	222		352
	H2	12	12	12	18	20	20	25		30
Head I/III	ØTr	18	24	40	50	60	70	100		160
Head IV	Øu	30	40	50	65	90	110	140		220
	H3	12	12	12	12	15	15	20		20
Minimum zd_{min} with H configuration (chapter 3.7)										
Head II		31	33	38	42	50	50	70	on	20
Head I / III		8	8	10	10	10	15	15	request	20
Head IV		20	20	20	20	20	20	20		20
Minimum zd_{min} with F configuration (chapter 3.7)										
Head II		39	41	46	51	64	69	89		49
Head I / III		16	16	18	19	19	24	24		29
Head IV		28	28	28	29	34	39	39		49
Flexible protection boots inner and outer diameter (material PN 100 and PN 200)										
Head II	D	63	63	100	120	150	185	260		300
	E	105	105	140	180	210	245	320		360
Head I-III-IV	D	38	45	63	75	110	130	150		245
	E	75	85	105	125	150	185	210		295

() Values in brackets for configuration with ball screw (Ku)

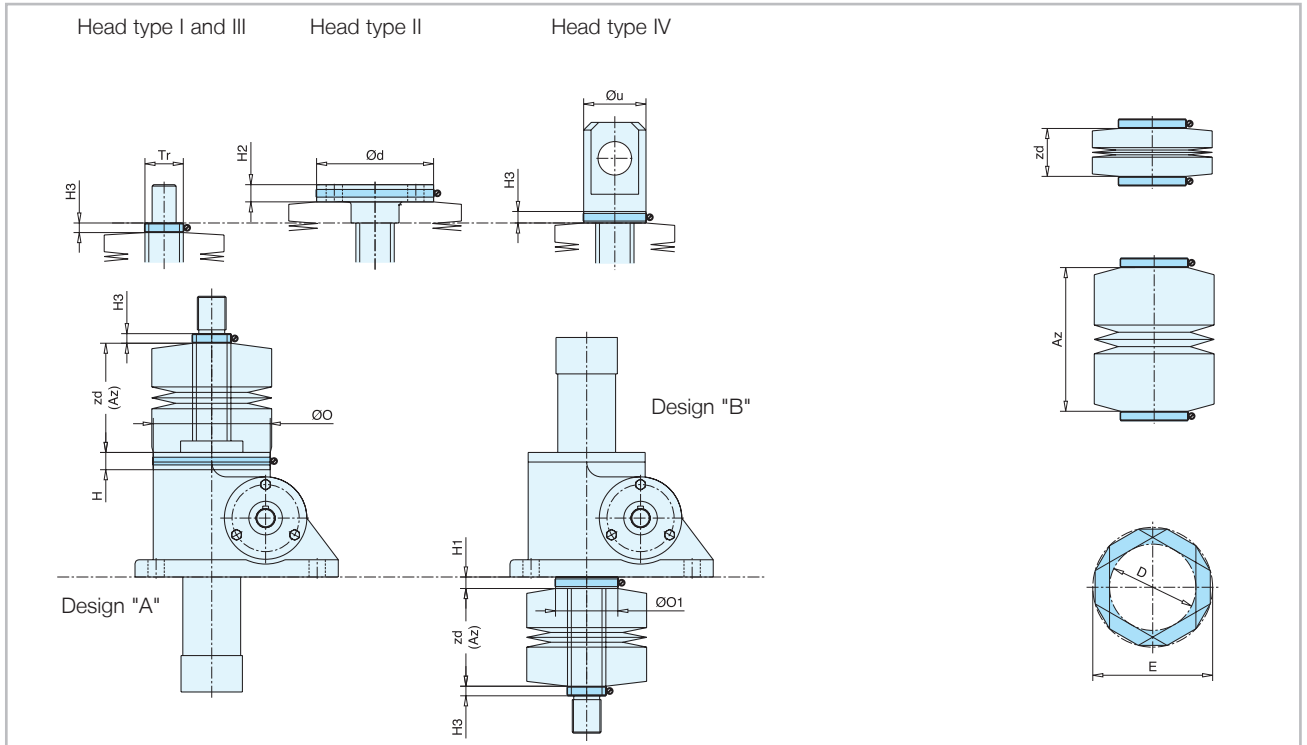
SHG		G15	G25	G50	G90
Housing connection:					
Housing	ØT	39	100	60	90
	H	12	12	15	15
Screw head					
Head II	Ød	90	98	110	170
	H2	12	12	15	25
Head I/III	ØTr	24	35	40	60
	(ØKu)	(25)	-	(40/32)	(63)
Head IV-	Øu	-	50	65	80
Head GK	Øu1	34	-	52	-
	H3	12	12	15	15
Minimum zd_{min} with H configuration (chapter 3.8.1.2)					
Head II		-	33	-	-
Head I / II		-	3	-	-
Head IV		-	15	-	-
Minimum zd_{min} with F configuration					
Head II		16	43	19	32
Head I / II		0	13	0	0
Head IV		-	25	4	7
Head GK		5	-	4	-
Flexible protection boots inner and outer diameter (Material PN 100 und PN 200)					
Head II	D	100	120	120	185
	E	140	180	180	245
Head I-III-IV-GK	D	63	75	110	110
	E	105	125	150	150

() Values in brackets for configuration with ball screw (Ku)

Lifting screw protective covers

5.2 Dimensions, configuration type 1

5.2.3 SHE range, design A and B, all mounting positions



SHE		0,5	1.1	2	3.1	5.1	(10 ¹)	15.1	20.1	25	35	50.1	75	100.1	150	200.1*
Housing connection design A																
Housing	ØO	65	88	98	98	122	150	150	185	205	260	170	250	240	300	
	H			12					15					20		
Housing connection design B																
Housing	ØO1	36	52	48	48	65	80	80	100	130	150	170	250	240	300	
	H1					12						15		20		
Screw head																
Head II	Ød	65	72	98	98	122	150	150	185	205	260	300	200	200	220	
	H2	12	12	12	12	18	20	20	25	25	25	30	30	30	30	
Head I/III	ØTr	18	24	26	30	40	58	60	70	90	100	120	140	160	190	
Head IV	Øu	30	40	48	50	65	90	90	110	130	150	170	200	220	260	
	H3			12					15					20		
Minimum z_{dmin} design A																
Head II		24	33	42	42	45	60	60	66	75	80	70	20	25	30	
Head I/III		4	8	12	12	11	15	15	11	22	15	10	0	5	10	
Head IV		20	20	24	24	24	30	30	26	37	30	25	20	25	30	
Minimum z_{dmin} design B																
Head II		12	30	30	30	33	48	48	54	63	68	70	20	20	30	
Head I/III		0	5	0	0	0	3	3	0	10	3	10	0	0	10	
Head IV		8	17	12	12	12	18	18	14	25	18	25	20	20	30	
Flexible protection boot dimensions (material PN 100 and PN 200)																
Head II	D	63	75	100	100	120	150	150	185	200	260	300	300	300	310	
	E	105	125	140	140	180	210	210	245	260	320	360	360	360	370	
Head I-III-IV	D	38	45	63	63	75	110	110	130	150	150	200	245	245	280	
	E	75	85	105	105	125	150	150	185	210	210	260	295	295	340	

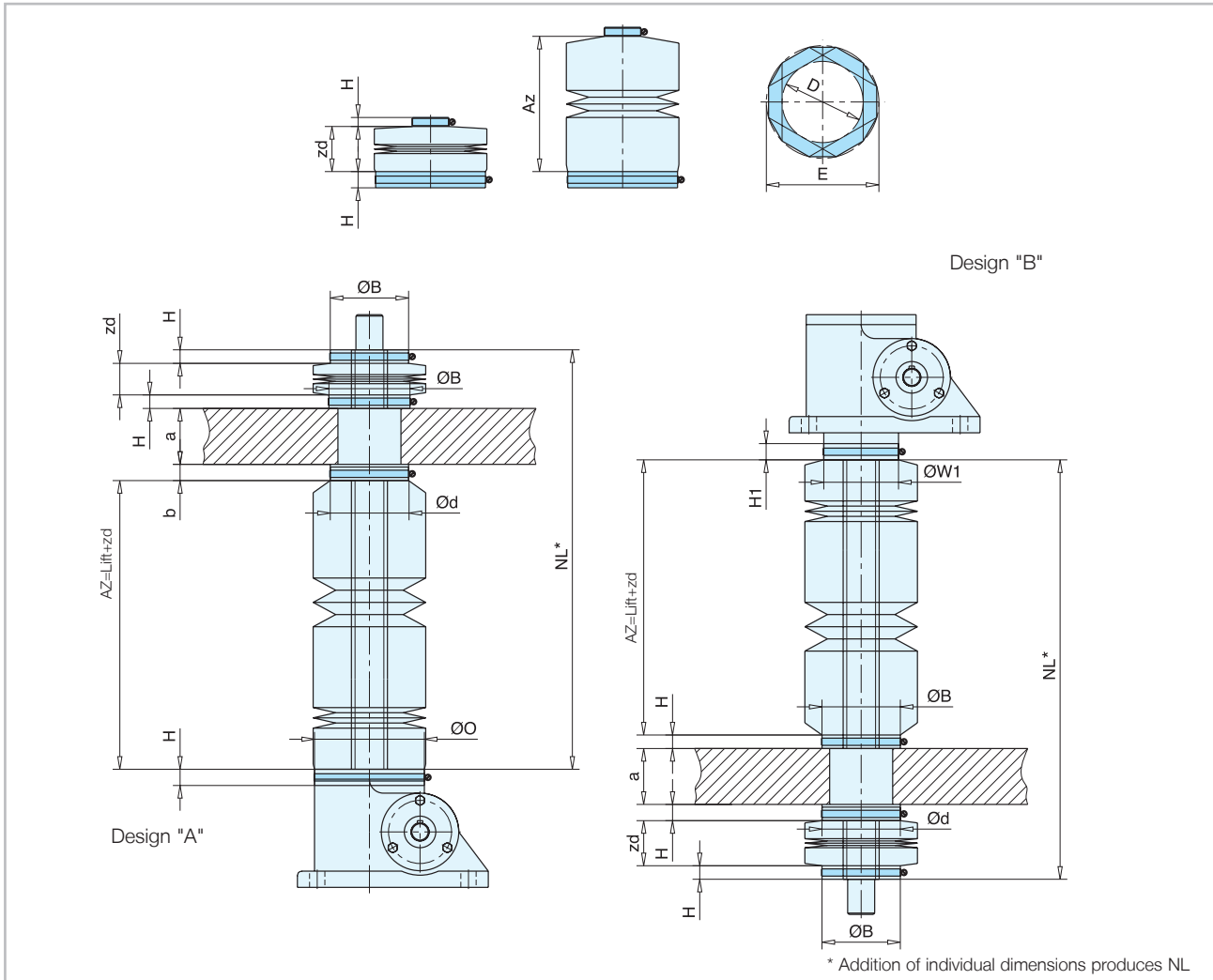
¹⁾ For new orders, use size 15.1; size 10 only available as a special version

* Flexible protection boots for SHE 200.1 on request

Lifting screw protective covers

5.3 Dimensions, configuration type 2

5.3.1 SHE range, design A and B, all mounting positions



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SHE	0,5	1.1	2	3.1	5.1	(10 ¹)	15.1	20.1	25	35	50.1	75*	100.1	150	200.1*
Connecting dimensions: Housing design A															
ØO	65	88	98	98	122	150	150	185	205	260	210		240	300	
H	12	12	12	12	12	15	15	15	15	15	20		20	20	
Connecting dimensions: Housing design B															
ØW1	45	52	60	68	83	110	110	140	160	180	210		280	340	
H1	12	12	12	12	12	15	15	15	15	15	20		20	20	
Travelling nut connection															
Ød	50	65	76	80	87	110	110	120	155	190	225		260	300	
b	12	12	12	12	12	15	15	15	15	15	20		20	20	
On site connection															
ØB	50	65	80	80	87	110	110	120	155	190	225		260	300	
H	12	15	15	15	15	15	15	15	15	15	25		20	20	
Flexible protection boot dimensions (material PN 100 and PN 200)															
ØD	38	38	63	63	75	110	110	130	150	150	200		245	280	
ØE	75	75	105	105	125	150	150	185	210	210	260		295	360	

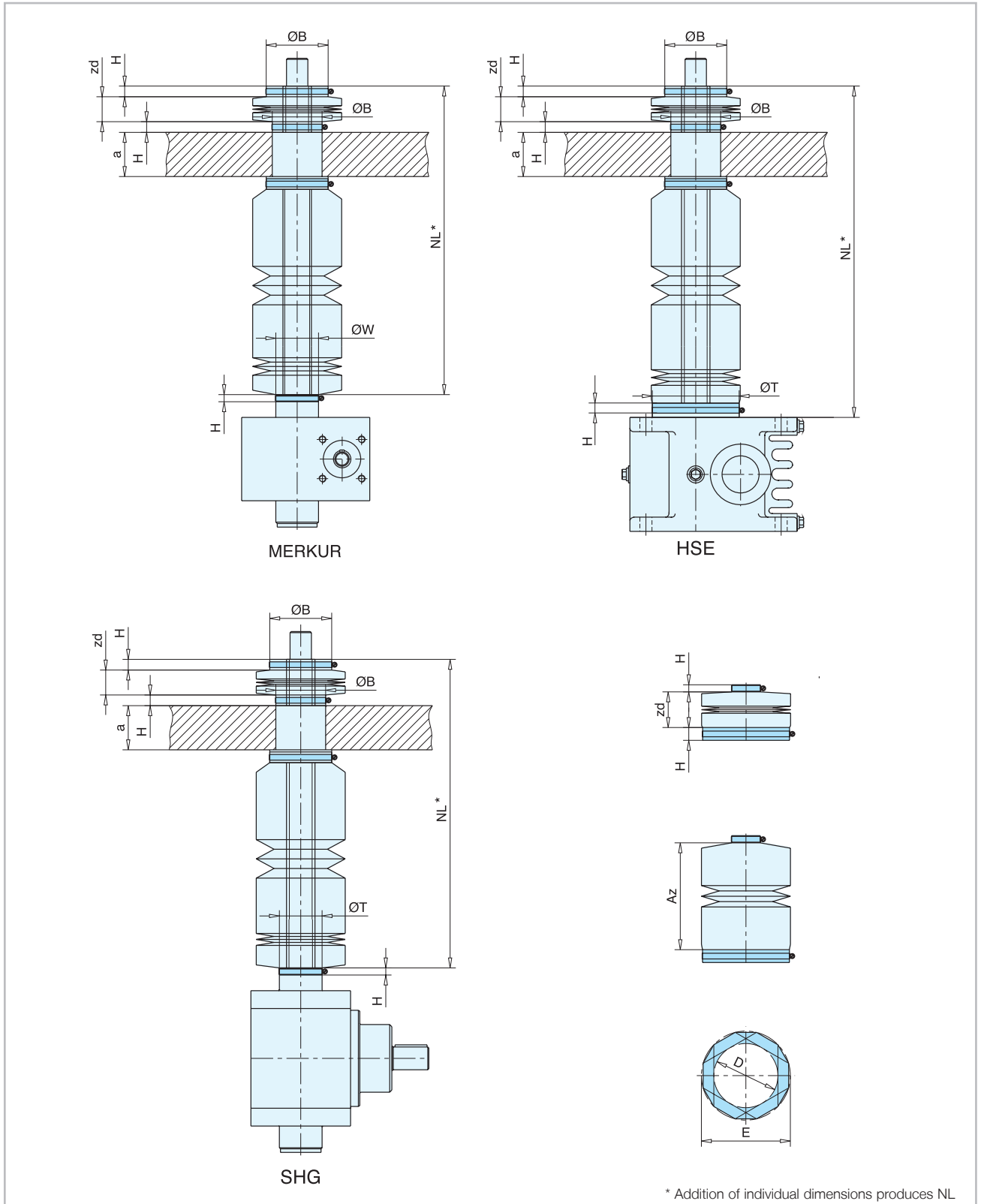
¹⁾ For new orders, use size 15.1; size 10 only available as a special version

* Dimensions on request

5.3 Dimensions, configuration type 2

5.3.2 MERKUR, HSE and SHG range

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Lifting screw protective covers

5.3 Dimensions, configuration type 2

5.3.2 MERKUR, HSE and SHG range

MERKUR range

Size	M0	M1	M2	M3	M4	M5	M6	M7	M8
Connecting dimensions: Housing									
ØW	26	30	39	46	60	85	120	145	170
H	12	12	12	12	12	12	15	15	15
Travelling nut connection									
Ød	50	50	65	80	87	110	155	190	225
b	12	12	12	15	18	25	25	25	25
On site connection									
ØB	50	50	65	80	87	110	155	190	225
H	12	12	15	15	15	15	25	25	25
Flexible protection boot dimensions (material PN 100 and PN 200)									
D	38	38	38	63	75	110	150	150	200
E	75	75	75	105	125	150	210	210	260

HSE range

Size	32	36.1	50.1	63.1	80.1	100.1	125.1	140	200.1
Connecting dimensions: Housing									
ØT	62	72	92	122	152	182	222	on request	352
H	15	16	18	20	25	25	25		25
Travelling nut connection									
Øy	50	65	87	105	110	120	190	on request	260
H	12	15	18	18	15	15	15		15
On site connection									
ØB	50	65	87	105	110	120	190	on request	260
H	12	15	15	15	15	15	15		15
Flexible protection boot dimensions (material PN 100 and PN 200)									
D	38	38	75	110	110	130	150	on request	245
E	75	75	125	150	150	185	210		210

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SHG range

Size	G15	G25	G50	G90
Connecting dimensions: Housing				
ØT	39	100	60	90
H	12	12	15	15
Travelling nut connection				
Ød	65	87	87	120
b	12	15	15	15
On site connection				
ØB	65	87	87	120
H	12	15	15	15
Flexible protection boot dimensions (material PN 100 and PN 200)				
D	63	75	75	130
E	105	125	125	185

Lifting screw protective covers

5.4 Spiral spring covers

5.4.1 General

Material:

Spiral spring covers can be supplied in blue-polished steel (standard) or stainless steel.

Fitting:

Can be fitted in any location (see illustration).

Note:

Spiral spring covers are self-cleaning when installed in a vertical position (with large diameter pointing upwards). Spiral spring covers should however still be cleaned at regular intervals and treated with special wet-spray oil.

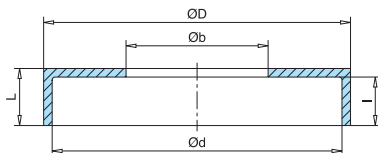
5.4.2 Dimensioning

Details of the correct dimensions for spiral spring covers, along with those of the required centering and guide flanges (ZF - FF) can be obtained on request.

Note: VL required (see chapter 5.1.2)

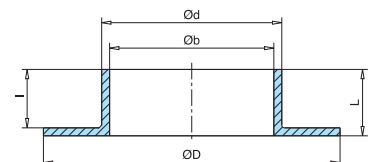
The use of spiral spring covers is recommended in extreme operating conditions (e. g. flying swarf, welding sparks).

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Centering flange: ZF- _ _ _ _ _

Order code: ZF-D - L - d - l - b - material



Guide flange: FF- _ _ _ _ _

Order code: FF-D - L - d - l - b - material

