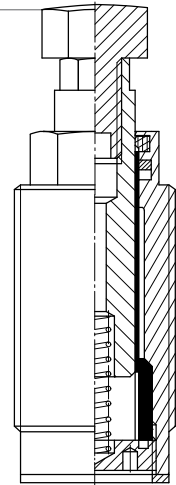


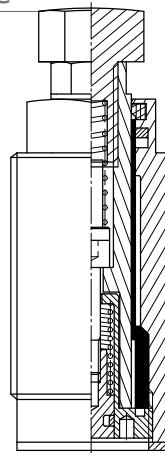


SUPPORT ELEMENT

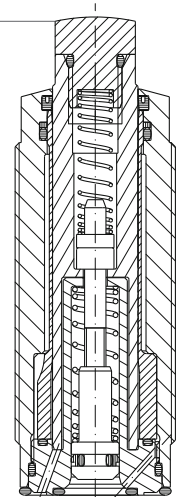
AVVR – Contact force through spring



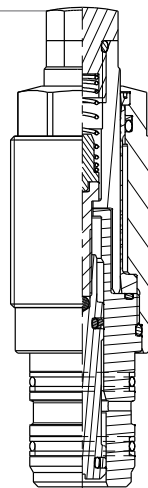
AVVH – Extend piston through oil pressure



AVHE – Single-acting with ventilation



AVVD – Double-acting



GENERAL DESCRIPTION

Support elements are used to support workpieces, in order to prevent bending and vibration during machining. The screw-in design enables space saving direction installation in the equipment body. The hydraulic feed is done via drilled channels.

STRUCTURE OF SUPPORT ELEMENT

- Housing bronzed
- Piston rod Arcor treated
- Very compact design
- Hydraulic extending
- Metal strip edge against penetration of chips
- Sealed against penetration of liquids

FUNCTIONAL PRINCIPLE OF SCREW-IN SUPPORT ELEMENT

In the housing of the screw-in support elements there is a thin-walled clamping sleeve made of corrosion resistant material, which with pressurization circularly clamps the movable support pins.

The support pins are placed on the workpiece either by spring force or a combination of spring force with oil pressure.

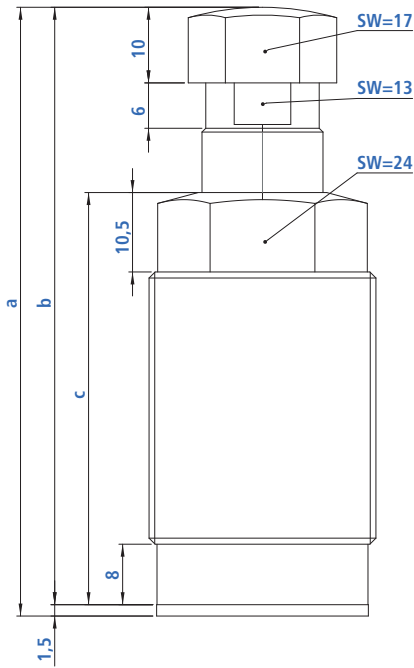
TECHNICAL VALUES

Designation		AVVR 13 C8	AVVR 14 C8	AVVH 13 C8	AVVH 13 C15	AVVH 14 C8	AVVH 14 C15	AVHE 11 C08	AVHE 11 C15	AVHE 12 C08
Rod diameter	mm	16	16	16	16	16	16	16	16	16
Lift	mm	8	8	8	8	8	8	8	15	8
Allowable volume flow	cm ³ /s	-	-	25	25	25	25	25	25	25
Recommended minimum pressure	bar	160	160	160	160	160	160	160	160	160
Maximum pressure	bar	500	500	500	500	500	500	500	500	500
Stroke volumes extended	cm ³	-	-	-	-	-	-	0.5	1	0.5
Allowable temperature	°C	0–70	0–70	0–70	0–70	0–70	0–70	0–70	0–70	0–70
Maximum purge air	bar	-	-	-	-	-	-	0.5	0.5	0.5
Elastic length change	mm/kN	4	4	4	4	4	4	4	4	4
Installation torque	Nm	60	60	60	60	60	60	60	60	60
Weight	kg	0.22	0.22	0.22	0.25	0.22	0.25	0.3	0.4	0.3

Designation		AVHE 12 C15	AVHE 21 C10	AVHE 31 C10	AVHE 41 C16	AVVD 11 C08	AVVD 11 C15	AVVD 12 C08	AVVD 12 C15
Rod diameter	mm	16	20	28	36	16	16	16	16
Lift	mm	15	10	10	16	8	15	8	15
Allowable volume flow	cm ³ /s	25	25	25	35	25	25	25	25
Recommended minimum pressure	bar	160	50	50	50	160	160	160	160
Maximum pressure	bar	500	500	500	500	500	500	500	500
Stroke volumes extended	cm ³	1	0.8	1.5	5	6.3	11.9	6.3	11.9
Allowable temperature	°C	0–70	0–70	0–70	0–70	0–70	0–70	0–70	0–70
Maximum purge air	bar	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Elastic length change	mm/kN	4	3.5	2.5	2.5	4	4	4	4
Installation torque	Nm	60	100	200	400	60	60	60	60
Weight	kg	0.4	0.5	1	2	0.34	0.39	0.39	0.44

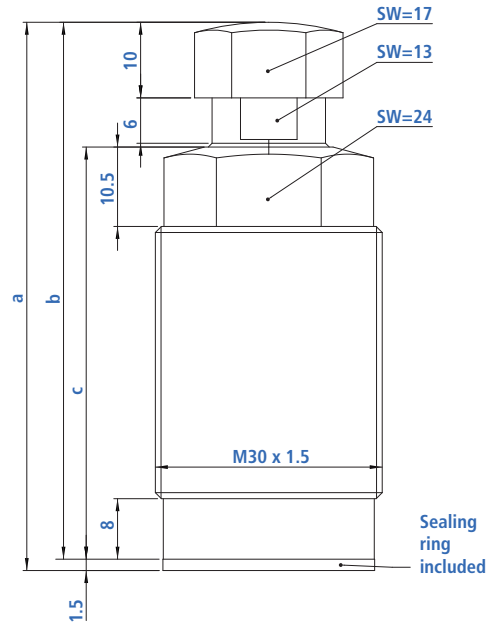
AVVR

- Contact force through spring



AVVH

- Extend piston through oil pressure
- Contact force through spring

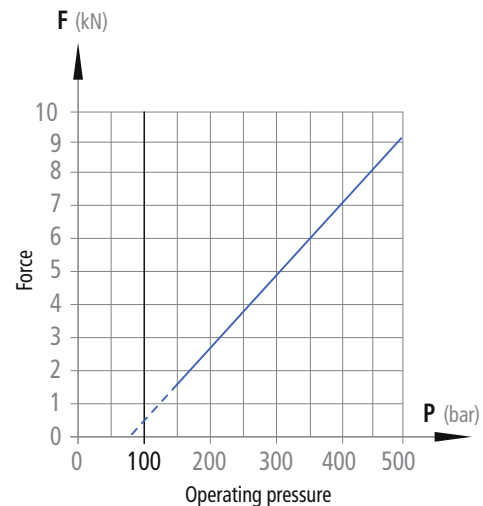
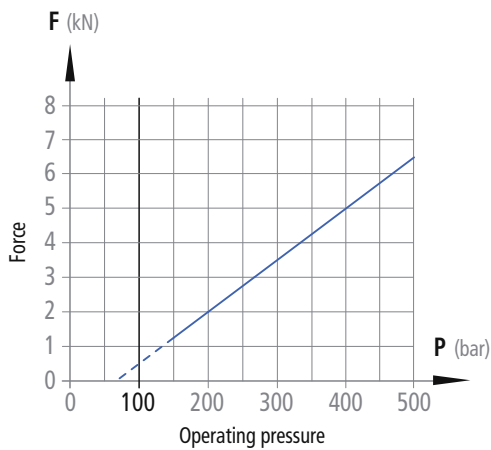


Model		AVVR 13 C8	AVVR 14 C8	AVVH 13 C8	AVVH 13 C15	AVVH 14 C8	AVVH 14 C15
Allowable loading force at 500 bar	kN	6.5	10.5	6.5	6.5	10.5	10.5
Lift	mm	8	8	8	15	8	15
a	mm	80.5	90.5	72.5	79.5	82.5	89.5
b	mm	79	89	71	78	81	88
c	mm	54.5	64.5	54.5	61.5	64.5	71.5
Spring force min./max.	N	8 – 13	8 – 13	10 – 23	10 – 23	10 – 23	10 – 23
Order no.		751 113/700	751 109/700	751 113/100	751 136/100	751 109/100	751 157/100

Allowable loading force F depending on the operating pressure p

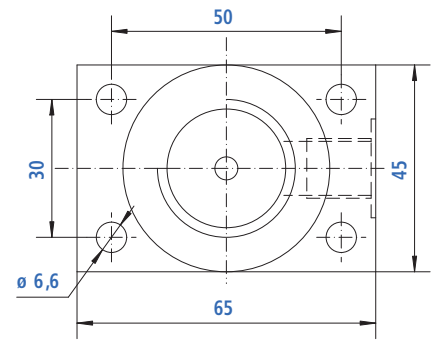
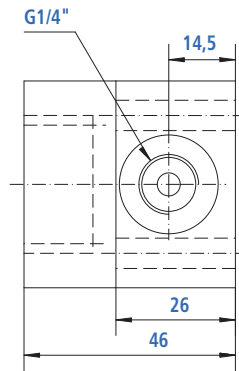
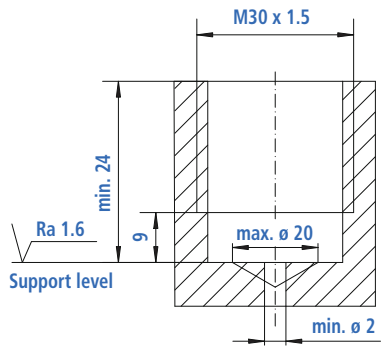
AVVR 13 C8 | AVVH 13 C8 | AVVH 13 C15

AVVR 14 C8 | AVVH 14 C8 | AVVH 14 C15

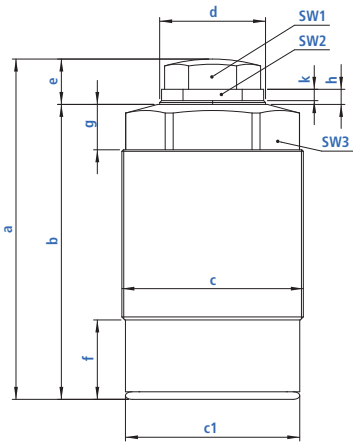


Installation space machining dimension:

Connection block: 751 109/050



AVHE

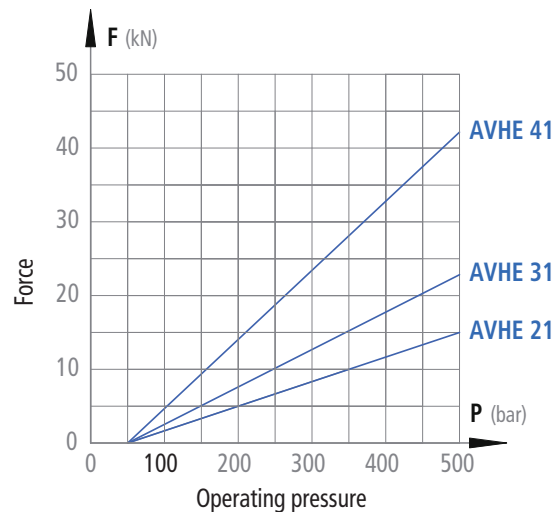
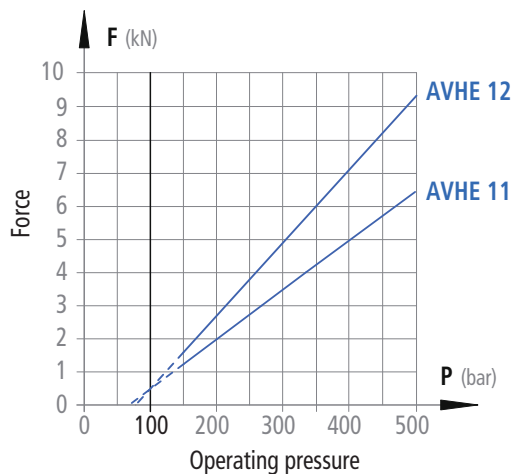


Model		AVHE 11 C8	AVHE 11 C15	AVHE 12 C8	AVHE 12 C15	AVHE 21 C10	AVHE 31 C10	AVHE 41 C16
Allowable loading force at 500 bar	kN	6.5	6.5	9.5	9.5	15	23.5	42
Lift	mm	8	15	8	15	15	8	16
a	mm	75.5	79.5	82.5	89.5	86	90	115
b	mm	59	66	59	66	72.5	78	102.5
c		M30x1.5	M30x1.5	M30x1.6	M30x1.7	M36x1.5	M48x1.5	M60x1.5
c1	mm	28.1	28.1	28.1	28.1	34.1	46.1	58.1
d	mm	16	16	16	16	20	28	36
e	mm	15	15	15	15	13	12	12.5
f	mm	9.5	9.5	9.5	9.5	17.5	21	21
g	mm	10	10	10	10	12	12	18
h	mm	6.5	6.5	6.5	6.5	6	4	4.5
k	mm	5.5	5.5	5.5	5.5	5	3	4
SW1	mm	13	13	13	13	30	41	50
SW2	mm	13	13	13	13	17	22	30
SW3	mm	24	24	24	24	19	22	22
Spring force min./max.	N	11 – 18	10 – 23	11 – 18	10 – 23	13 – 25	24 – 39	38 – 61
Order no.		751 113/500	751 136/700	751 109/100	751 157/100	751 169/100	751 170/100	751 172/100

Allowable loading force F depending on the operating pressure p

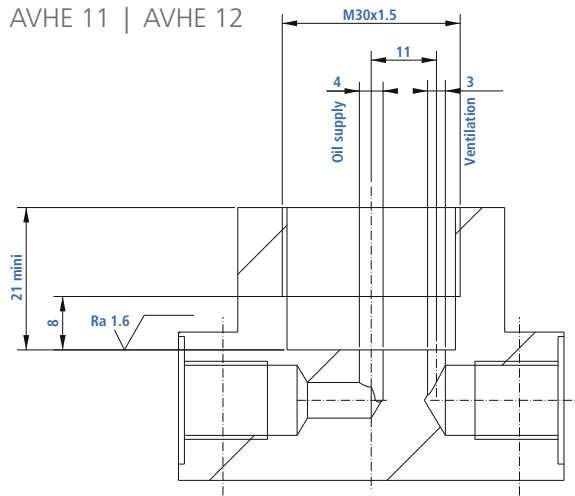
AVHE 11 | AVHE 12

AVHE 21 | AVHE 31 | AVHE 41

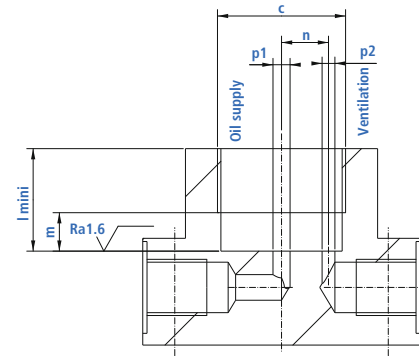


Installation space machining dimension

AVHE 11 | AVHE 12

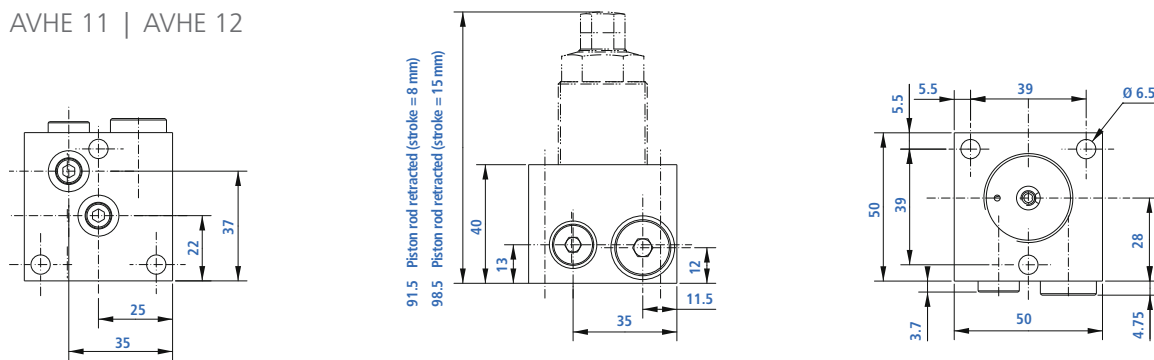


AVHE 21 | AVHE 31 | AVHE 41

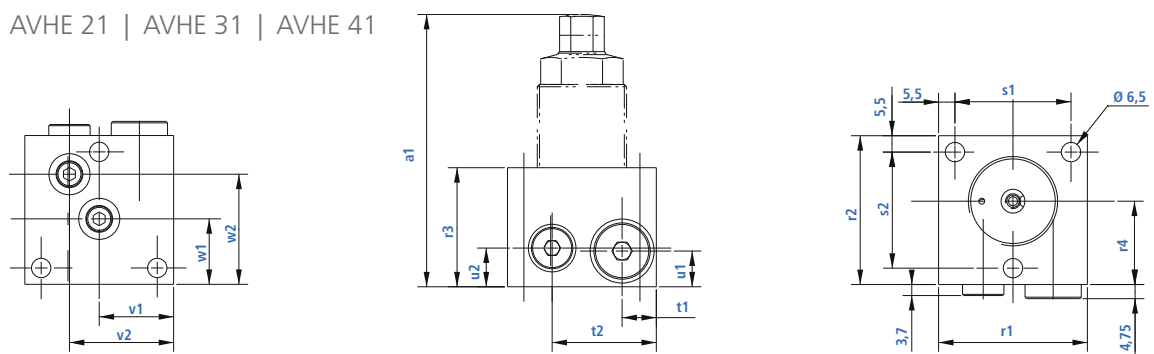


Connection block: 834 B63/000

AVHE 11 | AVHE 12



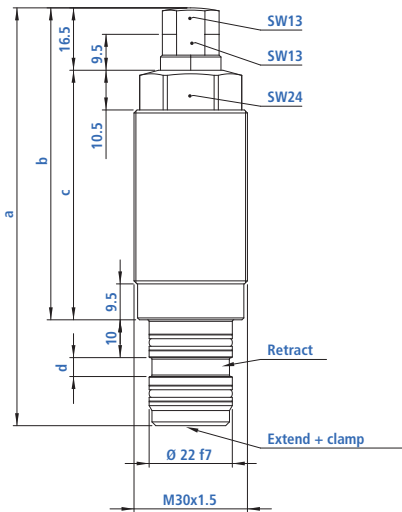
AVHE 21 | AVHE 31 | AVHE 41



Model		AVHE 21	AVHE 31	AVHE 41
a1	mm	106	107	132
c		M36x1.5	M48x1.5	M60x1.5
l	mm	35	42	46
m	mm	15	17	16
n	mm	12	16	22
p1	mm	4	4	4
p2	mm	3	3	3
r1	mm	50	60	68
r2	mm	55	68	80
r3	mm	55	60	63
r4	mm	30.5	39	43

Model		AVHE 21	AVHE 31	AVHE 41
s1	mm	39	49	57
s2	mm	44	59	69
t1	mm	11.5	12	12
t2	mm	37	47	56
u1	mm	12	12	12
u2	mm	12	12	12
v1	mm	25	30	34
v2	mm	37	47	56
w1	mm	24.5	31	37
w2	mm	40.5	40.5	58
Order no.		834 B67/000	834 B65/000	834 B66/000

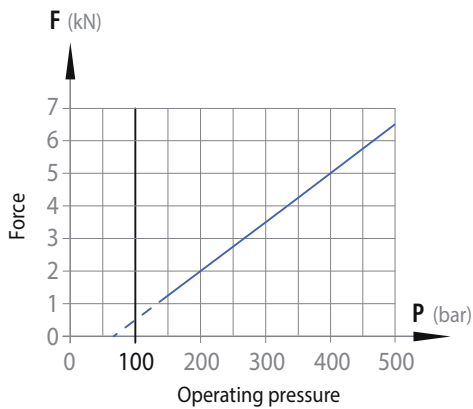
AVVD



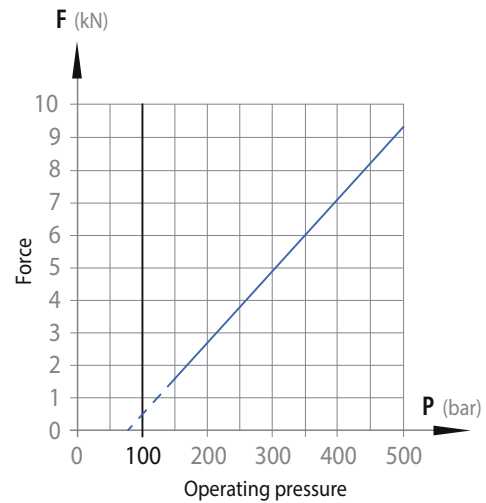
Model		AVVD 11 C 8	AVVD 11 C 15	AVVD 12 C 8	AVVD 12 C 15
Allowable loading force at 500 bar	kN	6.5	6.5	9.5	9.5
Lift	mm	8	15	8	15
a	mm	100.5	113	110.5	123
b	mm	72.5	79.5	82.5	89.5
c	mm	56	63	66	73
d	mm	5	8	5	8
Spring force min./max.	N	11 – 18	8 – 18	11 – 18	8 – 18
Order no.		751 113/600	751 136/600	751 109/600	751 157/600

Allowable loading force F depending on the operating pressure p

AVVD 11



AVVD 12



Installation space machining dimension

AVVD 11 | AVVD 12

