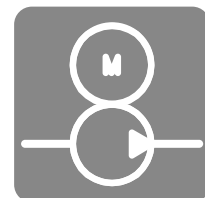
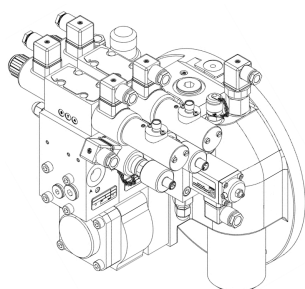


Control for CNC press brakes type SPVM

operating pressure p_{max} 320 bar
 volume flow V_{max} 60 L/min



Product characteristics

The hydraulic press drive consists of a central pump block including pump, filter with electrical contamination indicator, coupling, and bell housing.

Features and benefits:

- press forces up to 2,000 kN possible
- suction valves: with housing, for installation on the cylinder / without housing, for installation in the cylinder
- can be directly flanged to standard motors
- low noise level through asymmetric cast pump housing
- double pumps available
- efficient integrated filter, perfectly aligned to the application
- Options: modules for tool clamping or proportional hydraulic crowning
- complies with valid accident prevention regulations
- certified with type examination certificate no. 13028

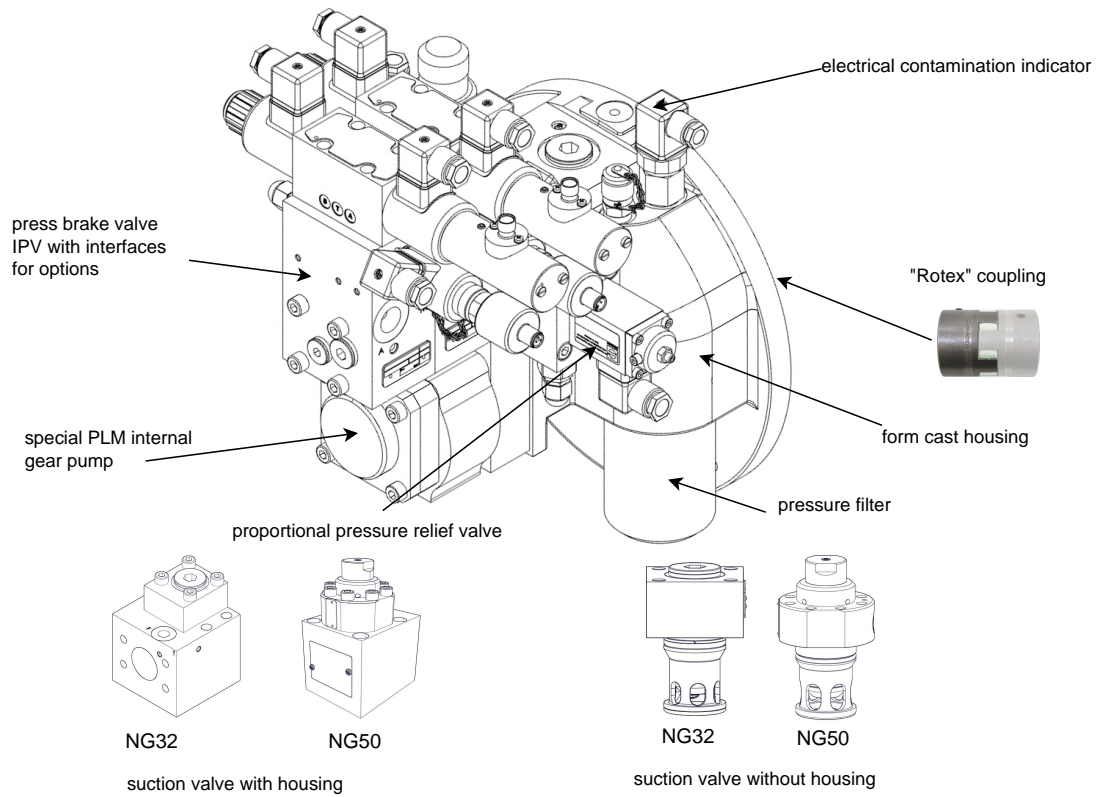
Intended applications:

- press brakes

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Functional diagram.....	6
Efficiencies.....	7
Dimensions and connections.....	8
Circuit diagram.....	20
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Structure



Designs

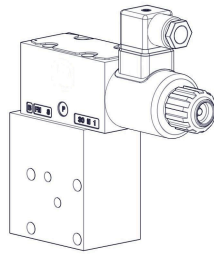
SPVM 302	HQI2: 8, 11, 13, 16 cm ³ /U	motor power: 5.5 - 7.5 kW	coupling "Rotex"
SPVM 352	HQI2: 16, 19, 22, 25 cm ³ /U	motor power: 11 - 15 kW	coupling "Rotex"
SPVM 353	HQI3: 25, 32, 40, 50 cm ³ /U	motor power: 18.5 - 22 kW; max. 30 kW*	coupling "Rotex"

*at 30 kW a motor with 350 mm flange is required

Dependent on the used motor power, lower operating pressures are possible; peak operating pressure (bar) max. 10 seconds 15 % duty cycle.

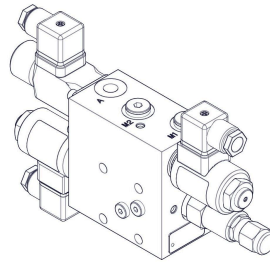
Options

proportional hydraulic crowning



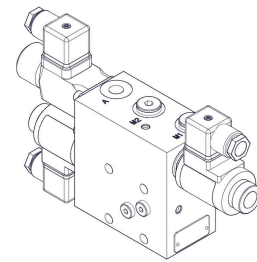
→ adapts the lower beam to the deformation of the upper beam

module for tool clamping with pressure control



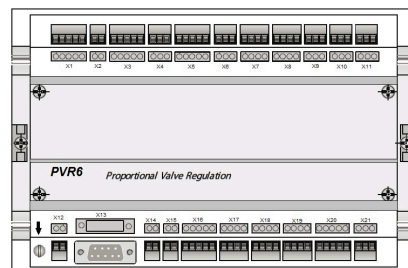
→ Clamp system for tool holder at the upper beam, which enables change and movement of tools. Pressure can be adjusted as required.

module for tool clamping without pressure control



→ Clamp system for tool holder at the upper beam, which enables change and movement of tools.

electronic digital amplifier PVR6



→ control of up to four proportional valves for position / pressure control via EtherCat interface or analog ± 10 V

Further information can be found in the respective data sheet of the product.

Technical data

General

weight	SPVM 302:	~ 48 kg
	SPVM 352 / 353:	~ 71 / 82 kg
	HB99753-002 (NG32):	1,1 kg
	HB90638-002 (NG32):	2,5 kg
	HV07902 (NG50):	3,7 kg
	HB90639-002 (NG50):	7,4 kg
	crowning (NG06):	2,5 kg
	crowning (NG10):	6,0 kg
	tool clamping with pressure control:	4,9 kg
tool clamping without pressure control:	4,0 kg	
ambient temperature	-10 to +50 °C	
mounting position	arbitrary (proportional directional control valves always in horizontal position)	
corrosion protection	surface protected by corrosion protection fluid	

Hydraulic parameters

Hydraulic fluid: mineral oil according to DIN 51524, other media on request

max. operating pressure*	320 bar	
max. pump flow rate	SPVM 302 with HQI2	8, 11, 13, 16 cm ³ /U
	SPVM 352 with HQI2	16, 19, 22, 25 cm ³ /U
	SPVM 353 with HQI3	25, 32, 40, 50 cm ³ /U
max. volume flow of SPVM	SPVM:	60 L/min
	suction valve NG32:	150 L/min
	suction valve NG50:	350 L/min
temperature hydraulic fluid	-10 to +70 °C	
viscosity	10-600; recommended range for continuous operation: 20-100 mm ² /s	
permissible degree of pollution	max. 20/18/15 according ISO 4406	

*Authorized deviation for higher peak operating pressures of the used HQI pumps in press brakes. The following requirements must be fulfilled:

- speed of pressure increase < 10,000 bar/s
- no continuous operation at pressures above the allowed continuous pressures
- authorized peak operating pressures for max. 10 seconds or 15 % of the duty cycle
- only permitted for speeds up to 1,800 U/min

HQI3:

allowed continuous pressure	size 040: 280 bar
	size 050: 280 bar
	size 064: 280 bar
allowed peak operating pressure	size 040: 300 bar
	size 050: 300 bar
	size 064: 300 bar
authorized deviation of peak operating pressure	size 040: 320 bar
	size 050: 320 bar
	size 064: 320 bar (only pumps with SAE-g geared shaft end)

Electrical parameters

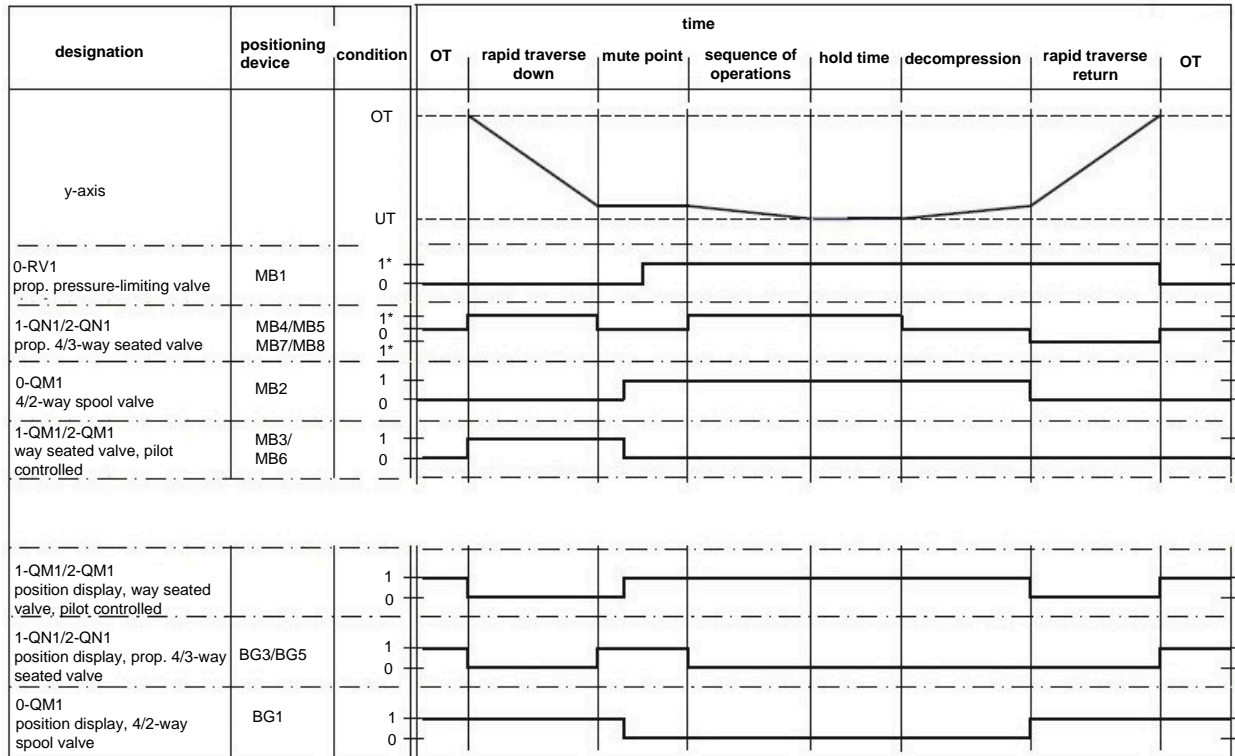
motor B3/B5 (4 poles)

motor	SPVM 302 with HQI2: 5.5 - 7.5 kW
	SPVM 352 with HQI2: 11 - 15 kW
	SPVM 353 with HQI3: 18.5 - 22 kW; max. 30 kW*

Dependent on the used motor power, lower operating pressures are possible; peak operating pressure (bar) max. 10 seconds 15 % ED

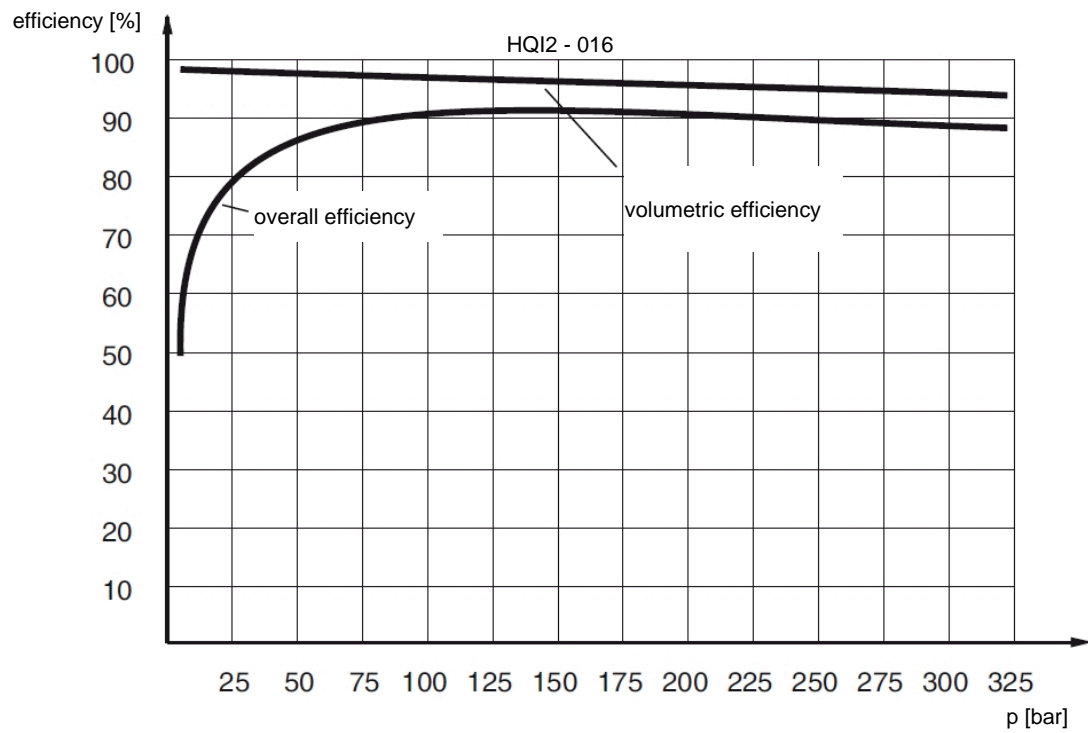
* At 30 kW a motor with 350 mm flange is required.

Functional diagram



*value 1 at MB1, MB4/MB5 and MB7/MB8 is dependent on machine and control state

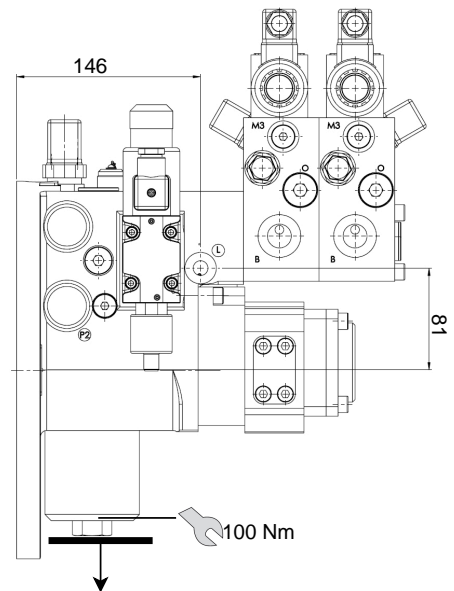
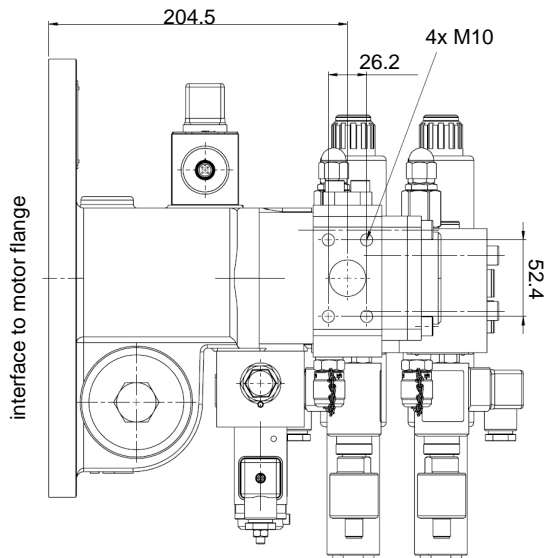
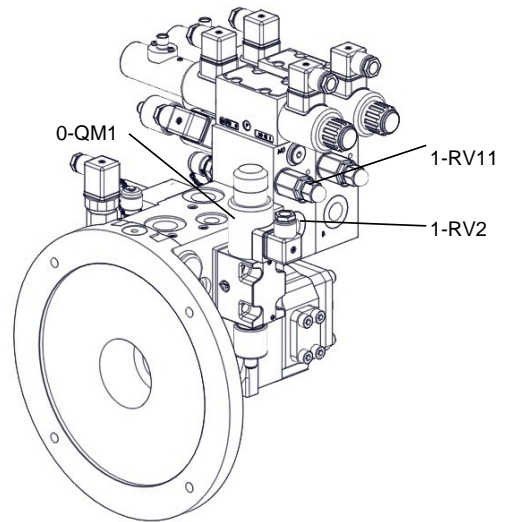
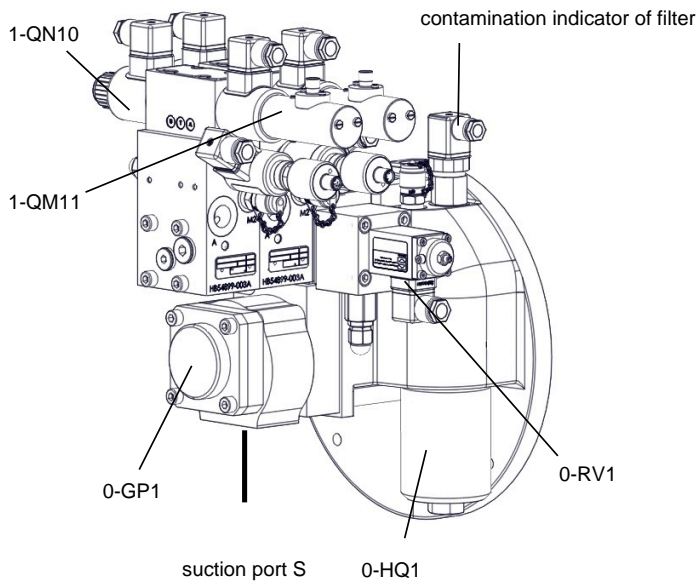
Efficiencies



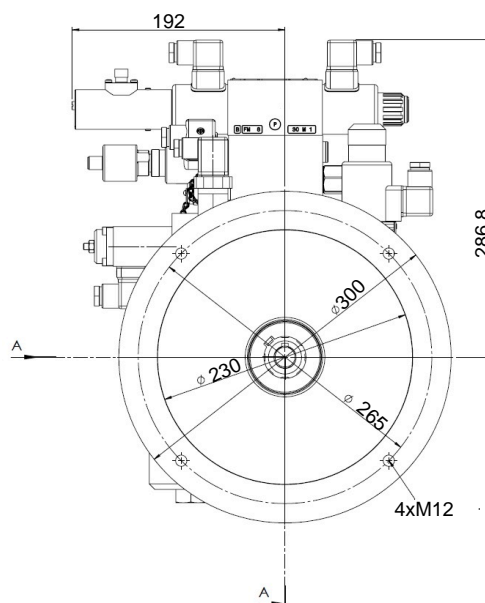
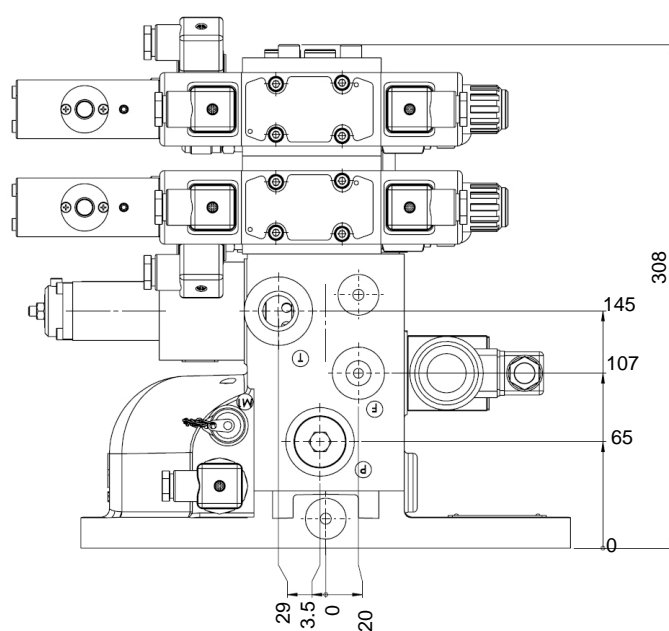
Dimensions and connections

Dimensions are given in mm.

SPVM 302



minimum distance for change of filter: 100 mm



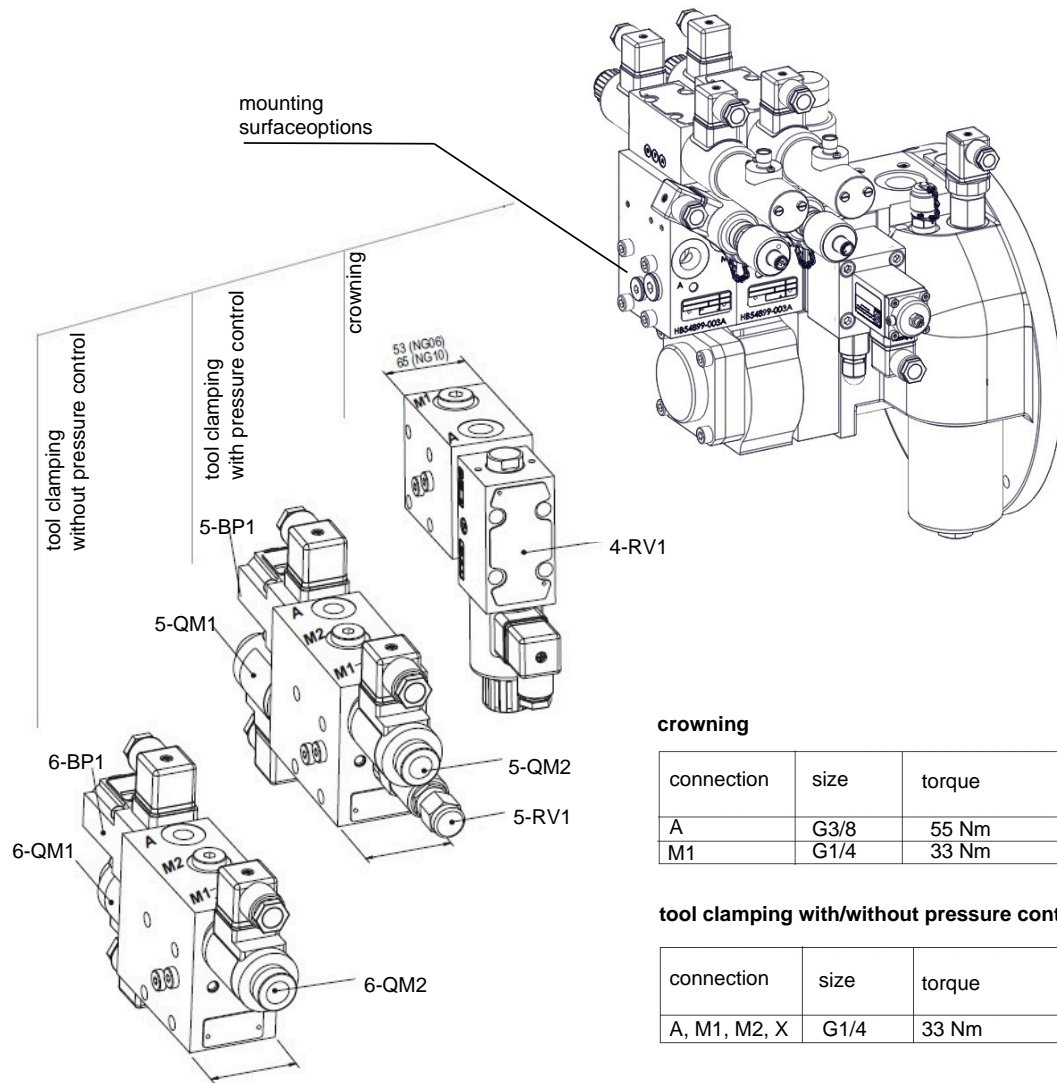
NG	A	B	C	D	E
8	201.5	262.5	19	22	47.5
11	204.5	268.5	25	26.2	52.4
13	207	273.5	25	26.2	52.4
16	209.5	278.5	25	26.2	52.4

port	size	tightening torque
P, T	G3/4	155 Nm
A, B	G1/2	90 Nm
F	G3/8	55 Nm
L, M1, M2	G1/4	33 Nm

size of screwing	tightening torque
M5	5,5 Nm
M6	9,5 Nm
M8	24 Nm
M10	46 Nm

type	coupling	\varnothing motor shaft
A	NG 28	38 mm
B	NG 28	42 mm
C	NG 38	42 mm
D	NG 42	48 mm
E	NG 42	55 mm

Display with options



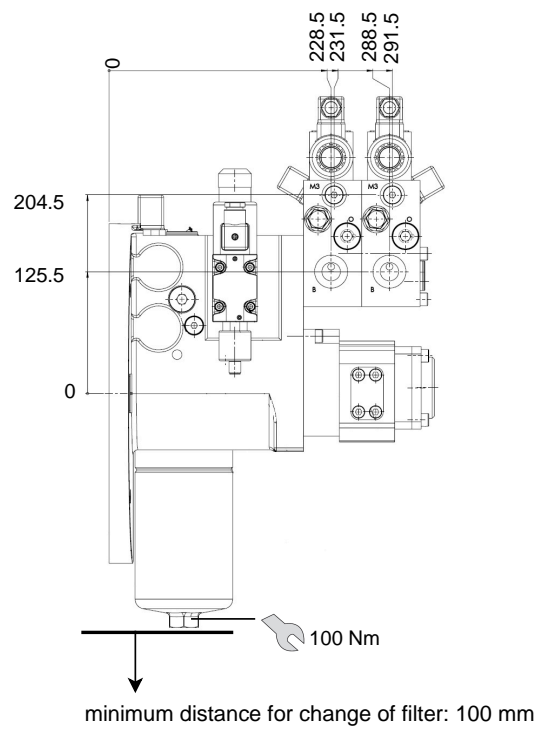
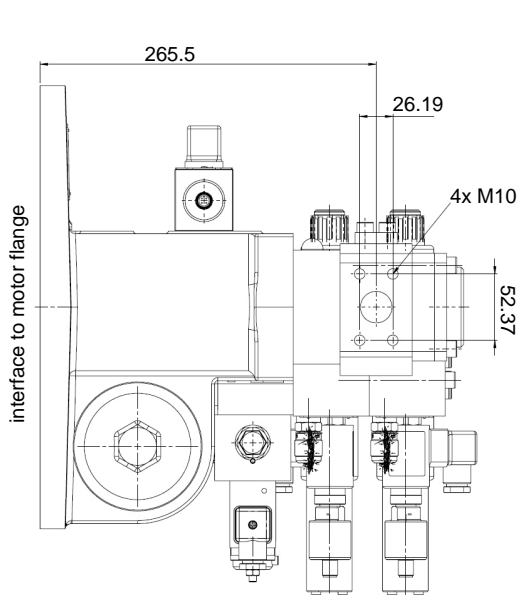
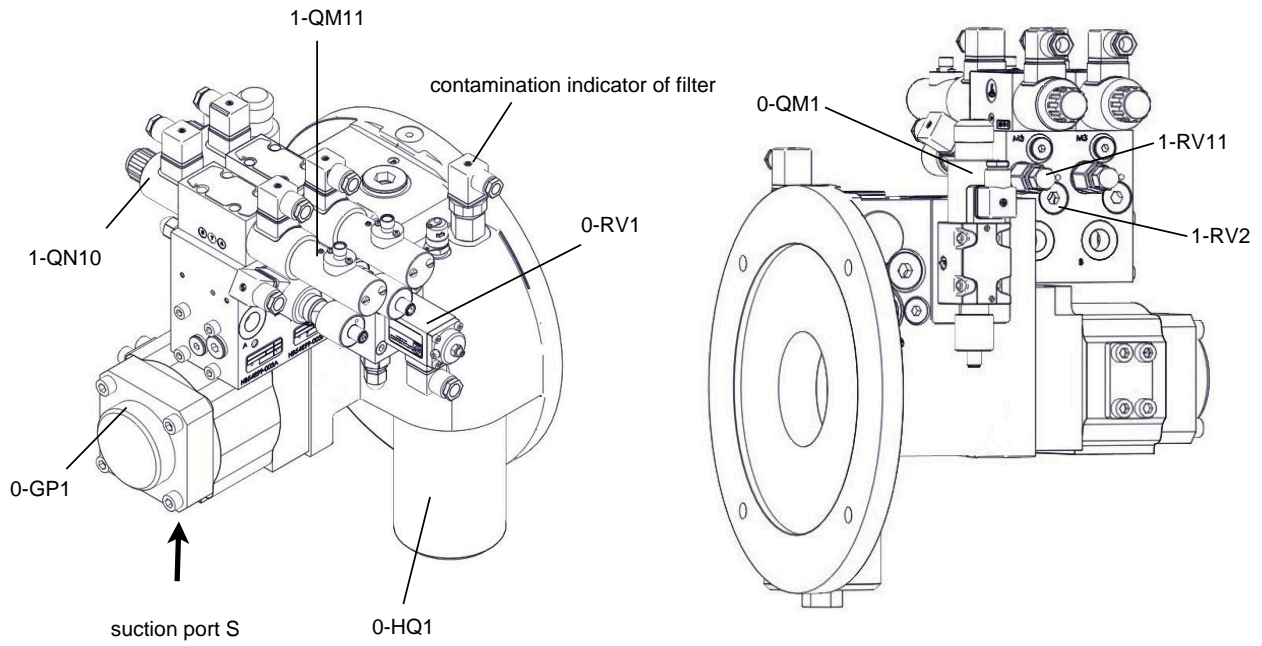
crowning

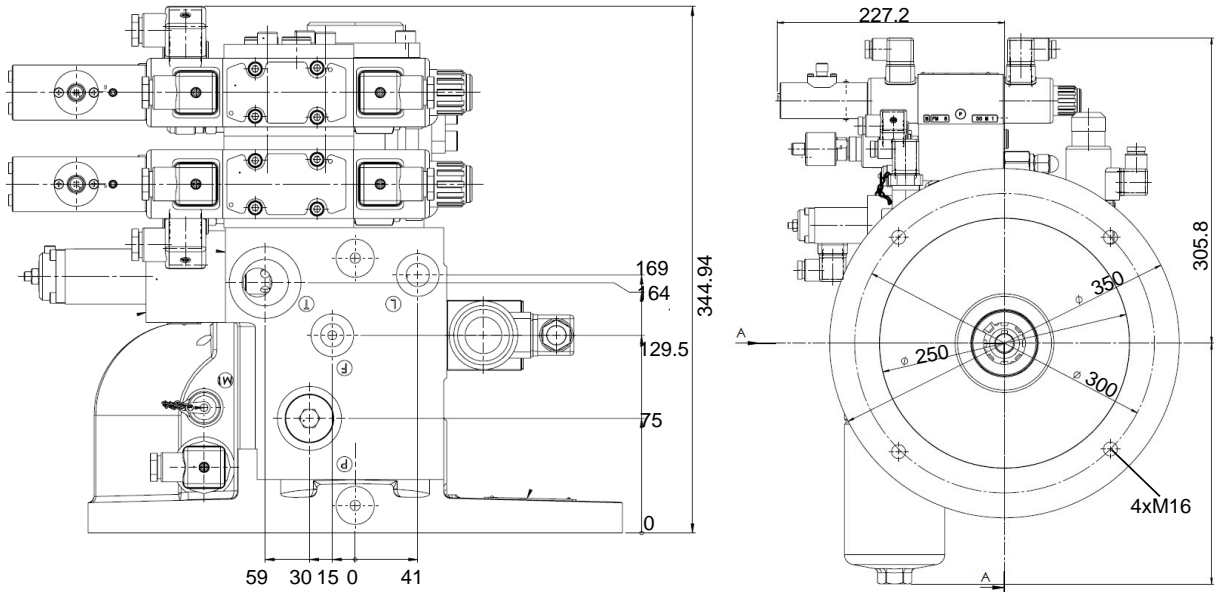
connection	size	torque
A	G3/8	55 Nm
M1	G1/4	33 Nm

tool clamping with/without pressure control

connection	size	torque
A, M1, M2, X	G1/4	33 Nm

SPVM 352



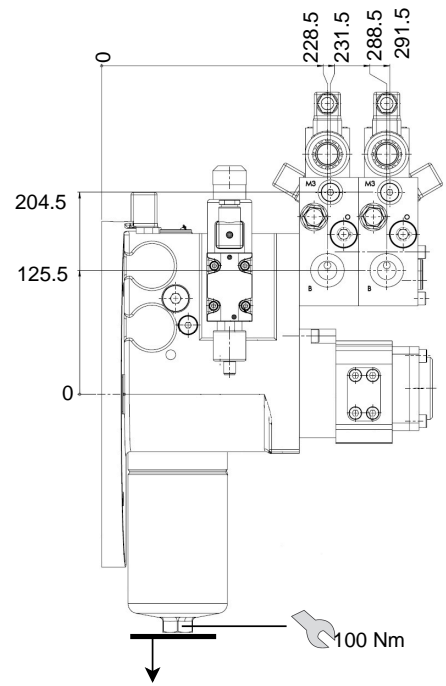
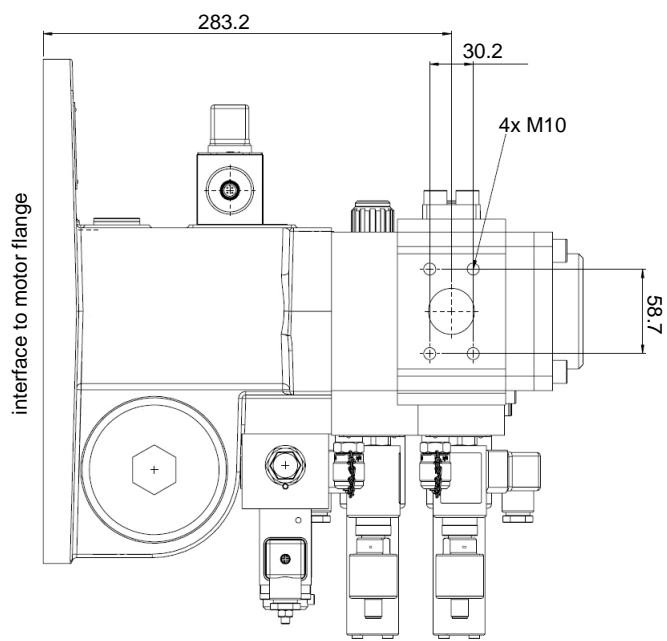
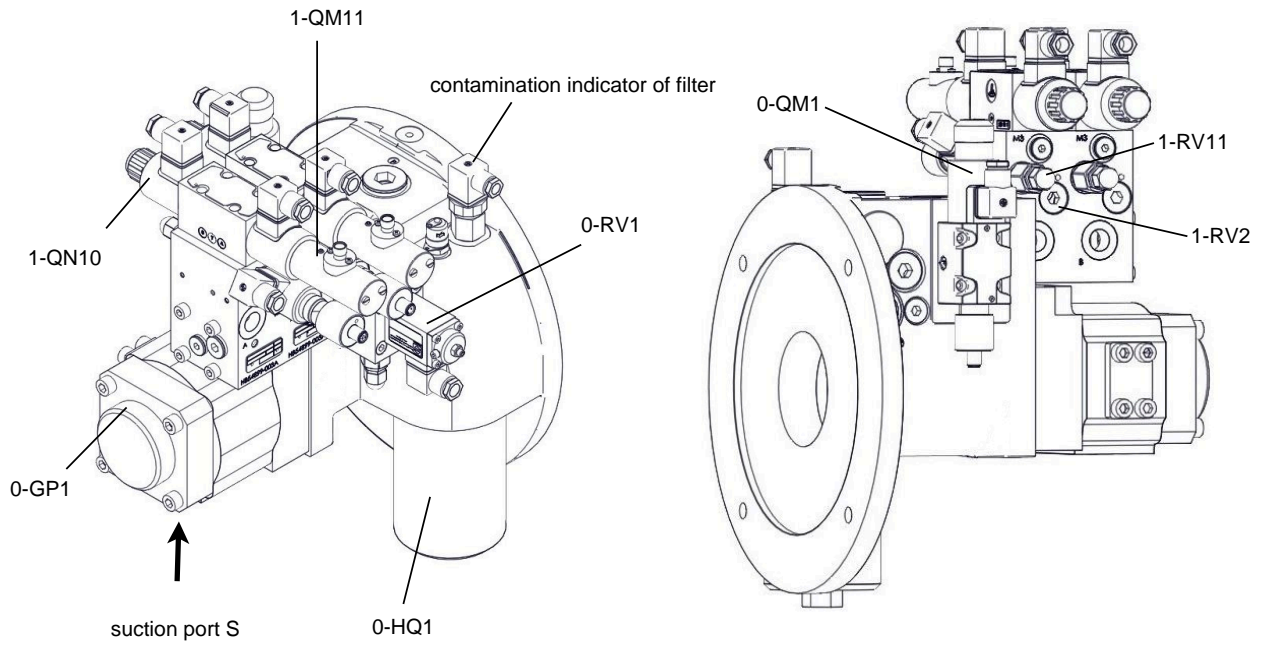


NG	A	B	C	D	E	G
16	265.5	334.5	25	26.2	52.4	30
19	269	341.5	25	26.2	52.4	30
22	272	347.5	25	26.2	52.4	30
25	275	353.5	25	26.2	52.4	30

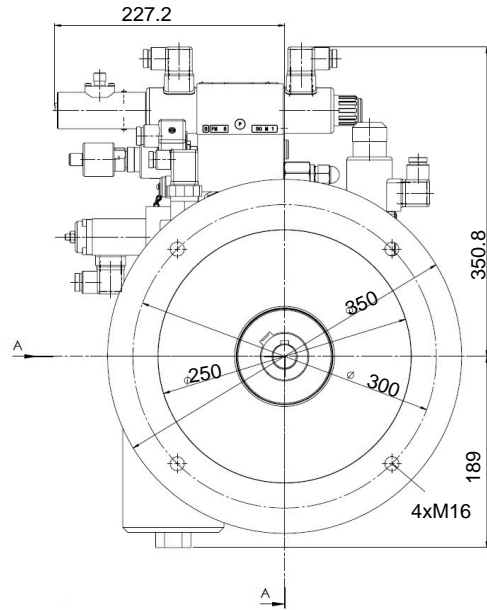
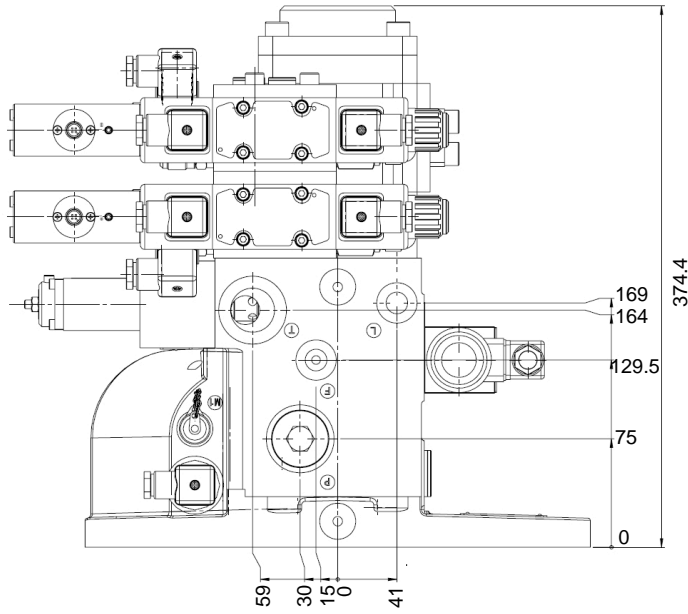
port	size	tightening torque
P	G3/4	155 Nm
T	G1	400 Nm
A, B	G1/2	90 Nm
F, L	G3/8	55 Nm
M1, M2	G1/4	33 Nm

size of screwing	tightening torque
M5	5.5 Nm
M6	9.5 Nm
M8	24 Nm
M10	46 Nm

SPVM 353



minimum distance for change of filter: 100 mm

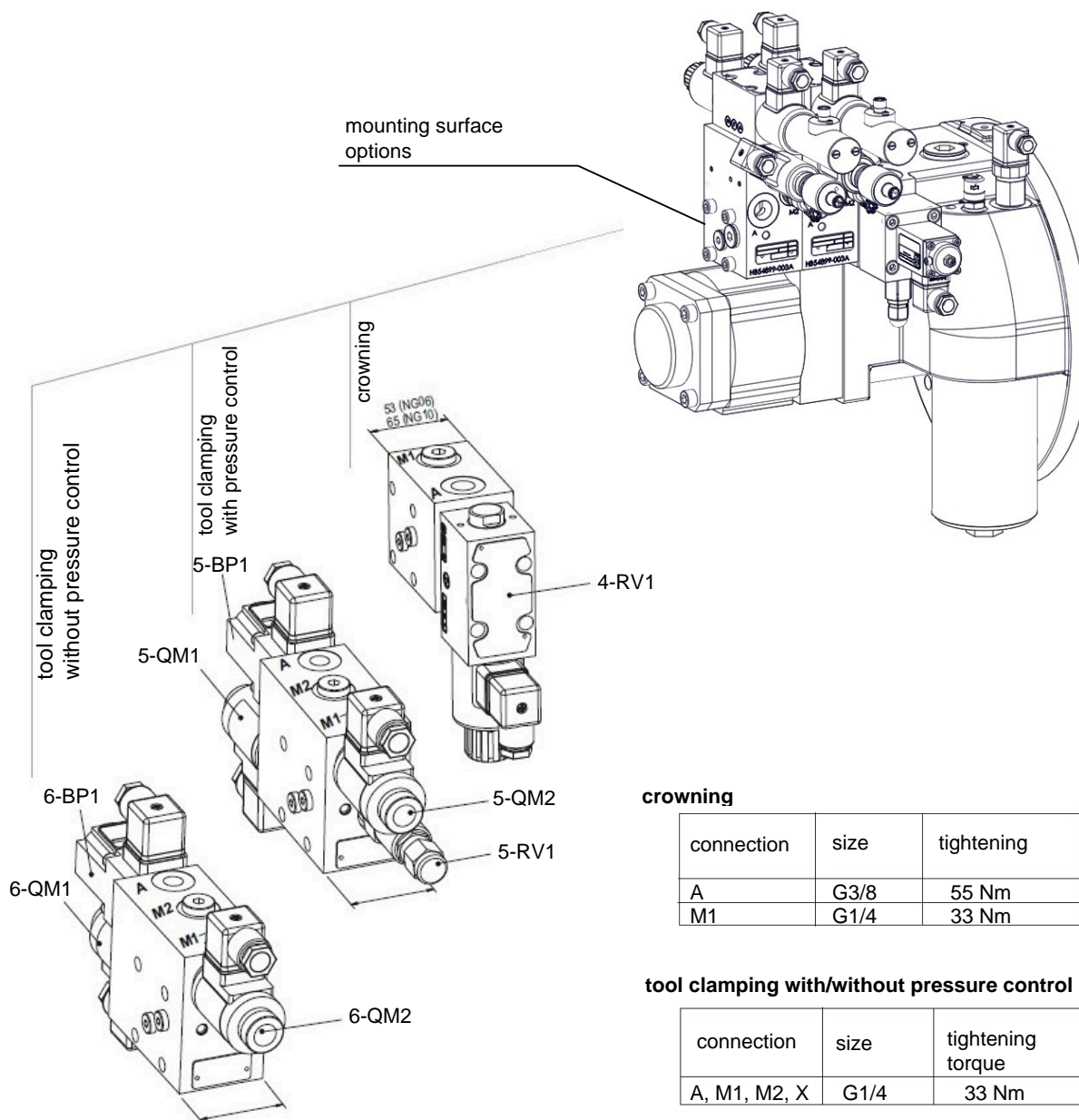


NG	A	B	C	D	E	G
16	278.2	364.4	32	30.2	58.7	26
19	283.2	374.4	32	30.2	58.7	26
22	288.7	385.4	32	30.2	58.7	26
25	295.7	399.4	32	30.2	58.7	26

port	size	tightening torque
P	G3/4	400 Nm
T	G1	400 Nm
A, B	G1/2	90 Nm
F, L	G3/8	55 Nm
M1, M2	G1/4	33 Nm

size of screwing	tightening torque
M5	5.5 Nm
M6	9.5 Nm
M8	24 Nm
M10	46 Nm

Display with options



crowning

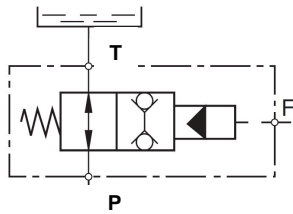
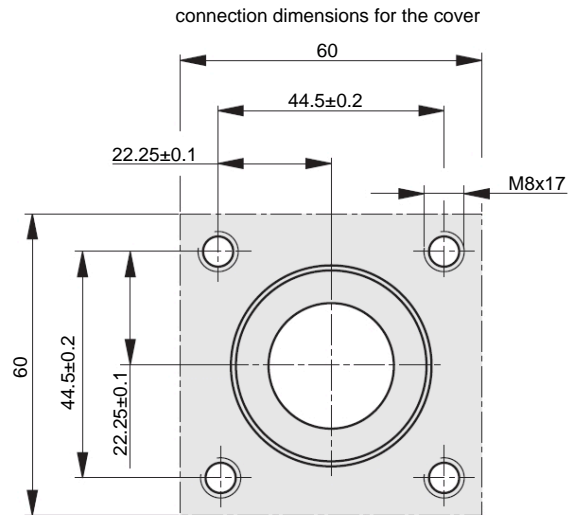
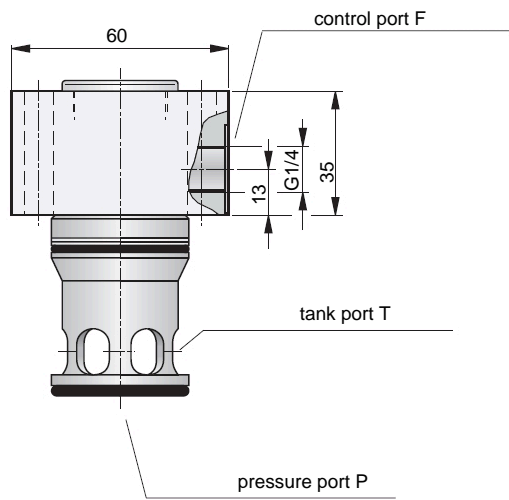
connection	size	tightening
A	G3/8	55 Nm
M1	G1/4	33 Nm

tool clamping with/without pressure control

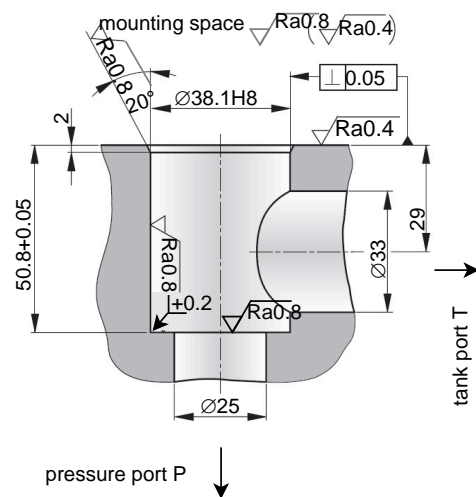
connection	size	tightening torque
A, M1, M2, X	G1/4	33 Nm

Suction valve NG32

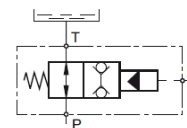
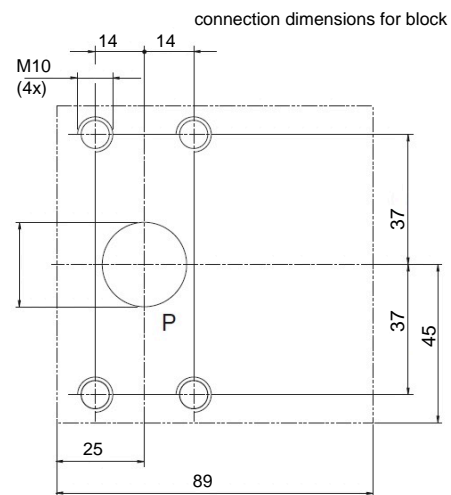
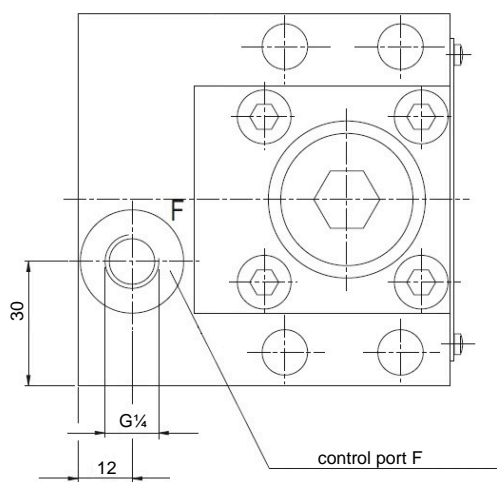
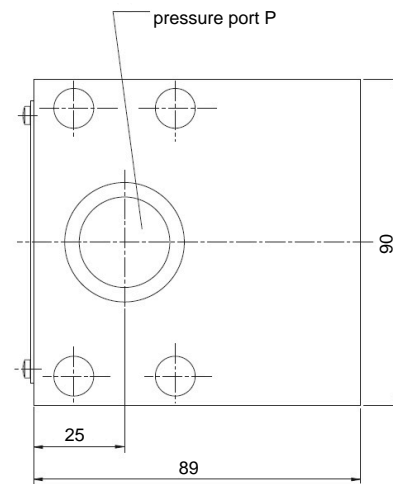
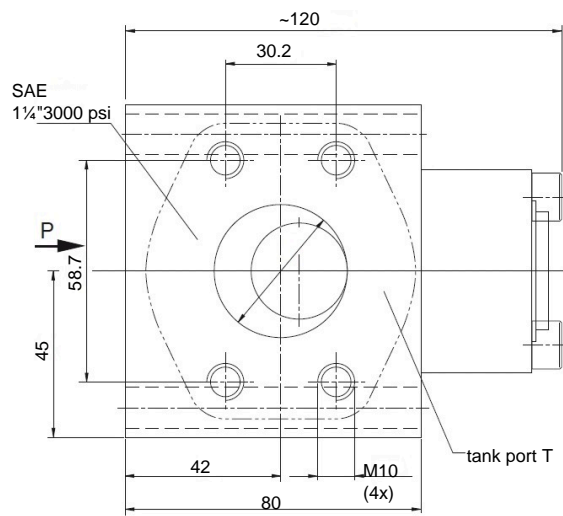
Installation in cylinder



minimum screw length for fixing: 50 mm.
Screws of strength class 10.9 (34+2 Nm) are recommended,
others on request.

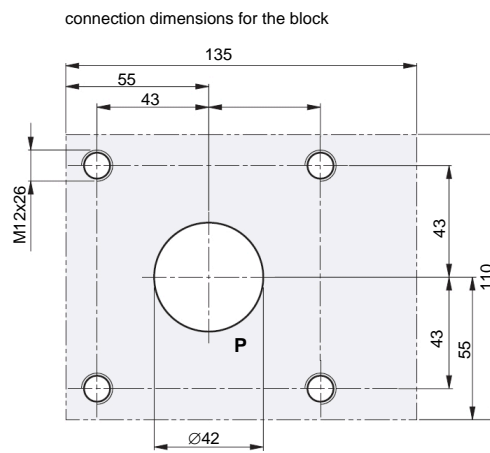
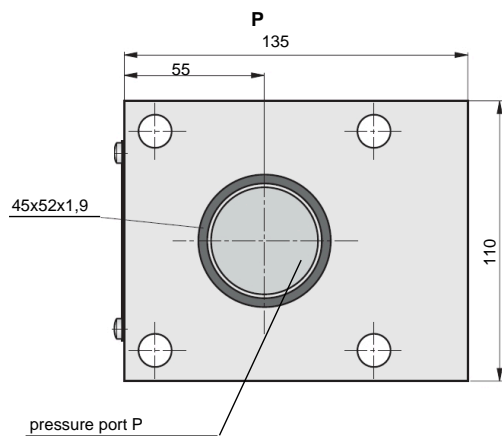
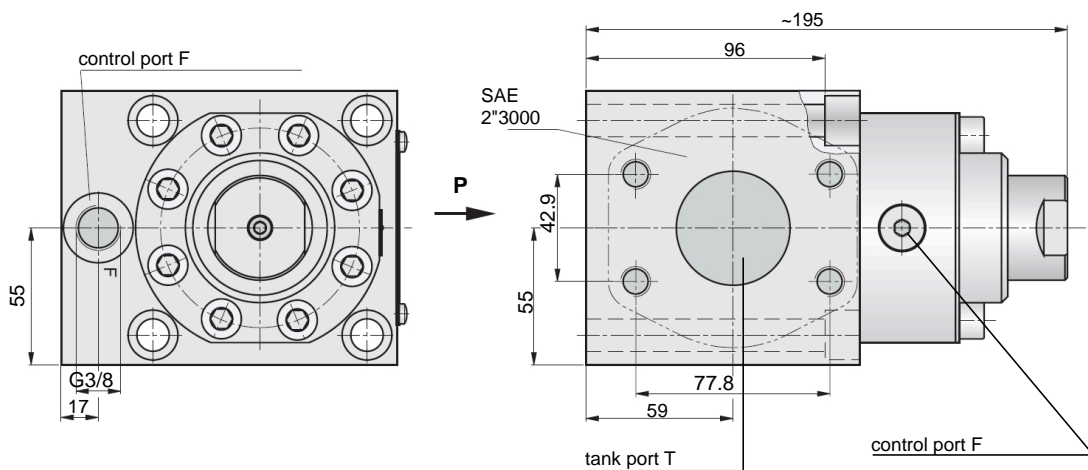


Installation on cylinder

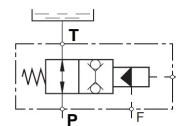


minimum screw length for fixing: 100 mm.
Recommended are screws of property class 10.9 (68+2 Nm), others on request.

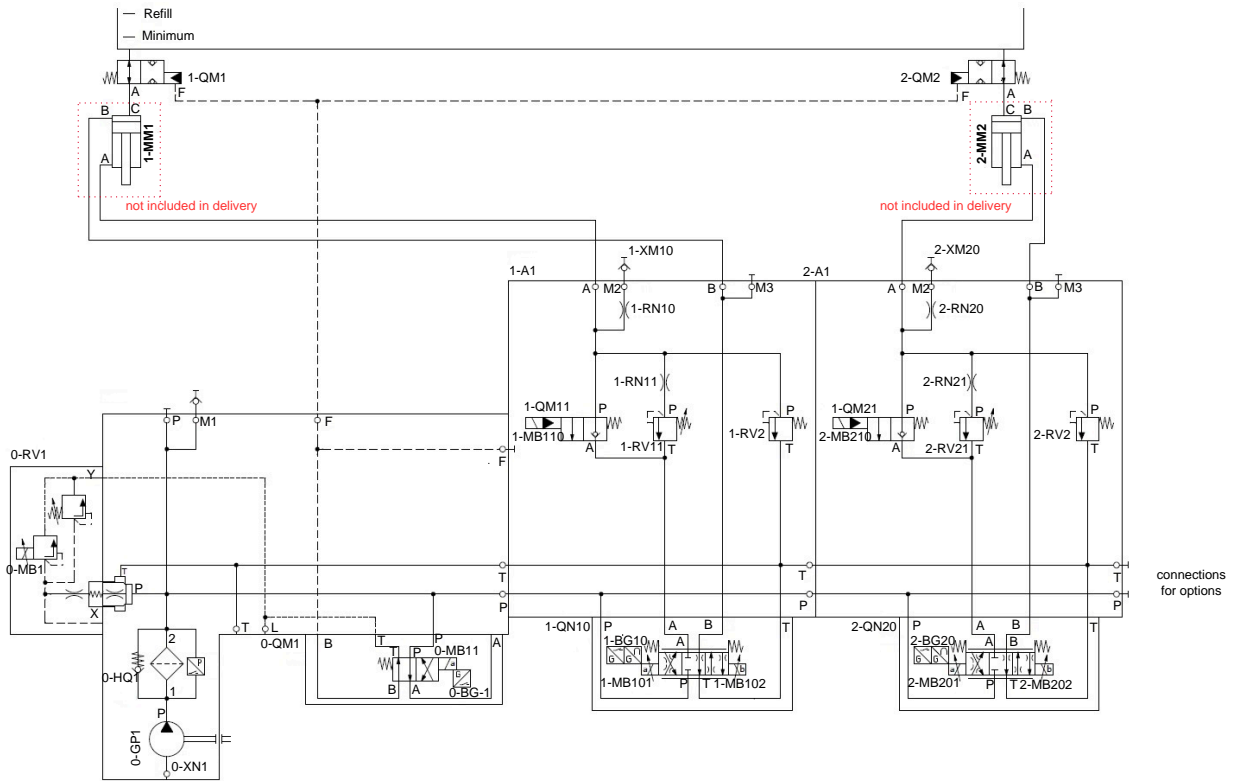
Installation on cylinder



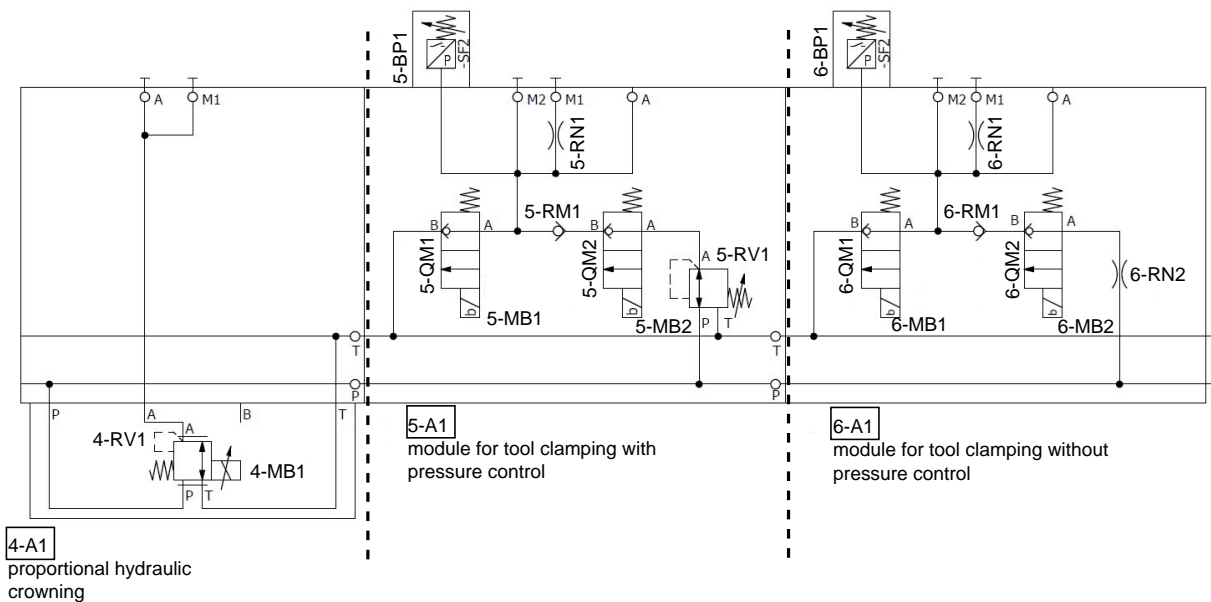
minimum screw length for fixing: 120 mm
Screws of strength class 10.9 (110+2 Nm) are recommended,
others on request.



Circuit diagram



Options



Order information

Type code

S	PVM	30	2	C	52717-	16	A	X - - -	S
									special design
									options
									press valve IPV
									displacement volume of pump
									number of basic block
									coupling
									pump series
									motor flange
									design
									monitoring of valves

monitoring of valves

S	monitoring of:
	<ul style="list-style-type: none"> ▪ 2/2-way seated valve ▪ 4/2-way spool valve ▪ proportional way valve (design I,H)
-	no monitoring

design

PVM | pump block with integrated internal gear pump, pressure filter, ROTEX® coupling, and press valve

motor flange

30	diameter 300 mm
35	diameter 350 mm

pump design

2	special PVM pump, size 2
3	special PVM pump, size 3

coupling

A	NG28 motor shaft Ø 38 mm
B	NG28 motor shaft Ø 42 mm
C	NG38 motor shaft Ø 42 mm

D	NG42 motor shaft Ø 48 mm
E	NG42 motor shaft Ø 55 mm
X	without

displacement volume of pump

in cm³/revolution

press valve IPV

A	1x SIPV54899H06B17
B	2x SIPV54899H06B17
C	1x SIPV54899H06B06
D	2x SIPV54899H06B06
K	1x SIPV54899H06B24
L	2x SIPV54899H06B24
M	1x SIPV54899H06B13
N	2x SIPV54899H06B13
S	special design

options

X	without option
B	crowning (NG06)
C	crowning (NG10)
K	tool clamping module without pressure valve
R	tool clamping module with pressure valve (<80 bar)
L	tool clamping module with pressure valve (<170 bar)

Contact details

Headquarters

HAWE Hydraulik SE
Einsteinring 17
85605 Aschheim
Germany

e-mail: info@hawe.de
www.hawe.com

Phone: +49 (0) 89 / 37 91 00 - 1000

Contact to the Customer Service

Phone (Head office)	+ 49 (0) 89 / 37 91 00 - 1000
Phone (Spare parts)	+ 49 (0) 89 / 37 91 00 - 1302
Phone (Customer Service)	+ 49 (0) 89 / 37 91 00 - 1491
Fax (Customer Service)	+ 49 (0) 89 / 37 91 00 - 91491
e-mail	spareparts@hawe.de service@hawe.de