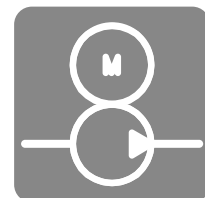
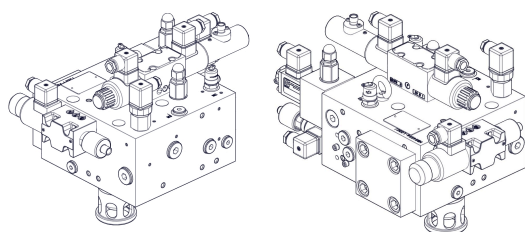


# Control for CNC press brakes type ePrAX<sup>®</sup> basic

operating pressure  $p_{max}$  320 bar  
volume flow  $V_{max}$  200 L/min



## Product characteristics

The hydraulic press drive ePrAX<sup>®</sup> basic consists of two cylinder blocks with integrated suction valves, which enable operation of CNC press brakes.

### Features and benefits:

- consequent separation of the actuators for load-dependent control
- press forces up to 30,000 kN / volume flows up to 200 L/min per module possible
- optimal adaption to machine size through different nominal sizes
- PIH and POH valves offer a particularly fast and precise control through the simultaneous current feed of the solenoids coils.
- The proportional directional control valves on the cylinder blocks improve the synchronous run through precise control. Their arrangement makes the system more rigid and thus leads to a high positioning accuracy.
- reduced installation effort through simplified tubing (pump block and filter are integrated)
- efficient integrated filter, perfectly aligned to the application
- options: modules for tool clamping, crowning, or load sensing
- complies with valid accident prevention regulations
- certified with type examination certificate no. 13028

### Intended applications:

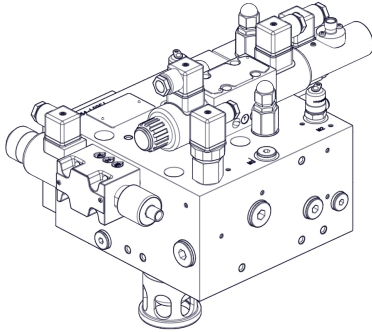
- press brakes

## Table of Contents

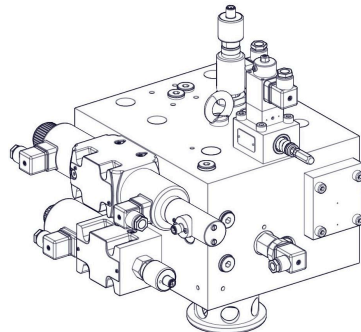
<b>Structure</b> .....	<b>2</b>
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## Structure

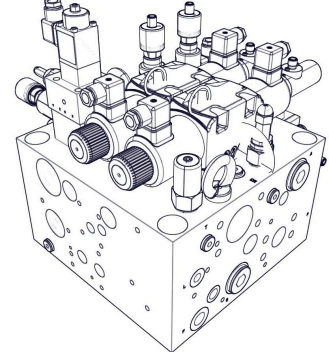
ePrAX 06



ePrAX 10

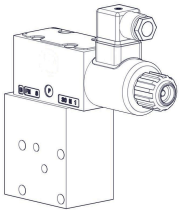


ePrAX 25



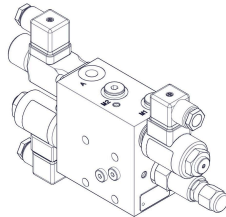
## Options

proportional hydraulic crowning



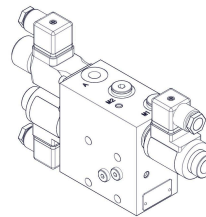
→ adapts the lower beam to the deformation of the upper beam

module for tool clamping with pressure control



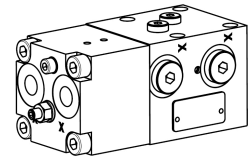
→ Clamp system for tool holder at the upper beam, which enables change and movement of tools. Pressure can be adjusted as required.

module for tool clamping without pressure control



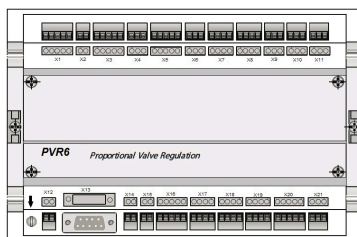
→ Clamp system for tool holder at the upper beam, which enables change and movement of tools.

Load sensing NG06 und NG10



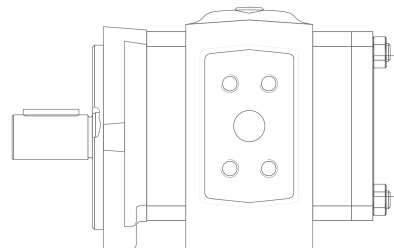
→ Pressure will be adjusted to the requirements requested by the consumer. The heating of the hydraulic fluid will be reduced and energy efficiency will be increased.

digital amplifier PVR6



→ control of up to four proportional valves for position / pressure control via EtherCAT interface or analog  $\pm 10$  V

internal gear pump HQI



→ robust industrial pump for high pressures with constant displacement volume

## Technical data

### General

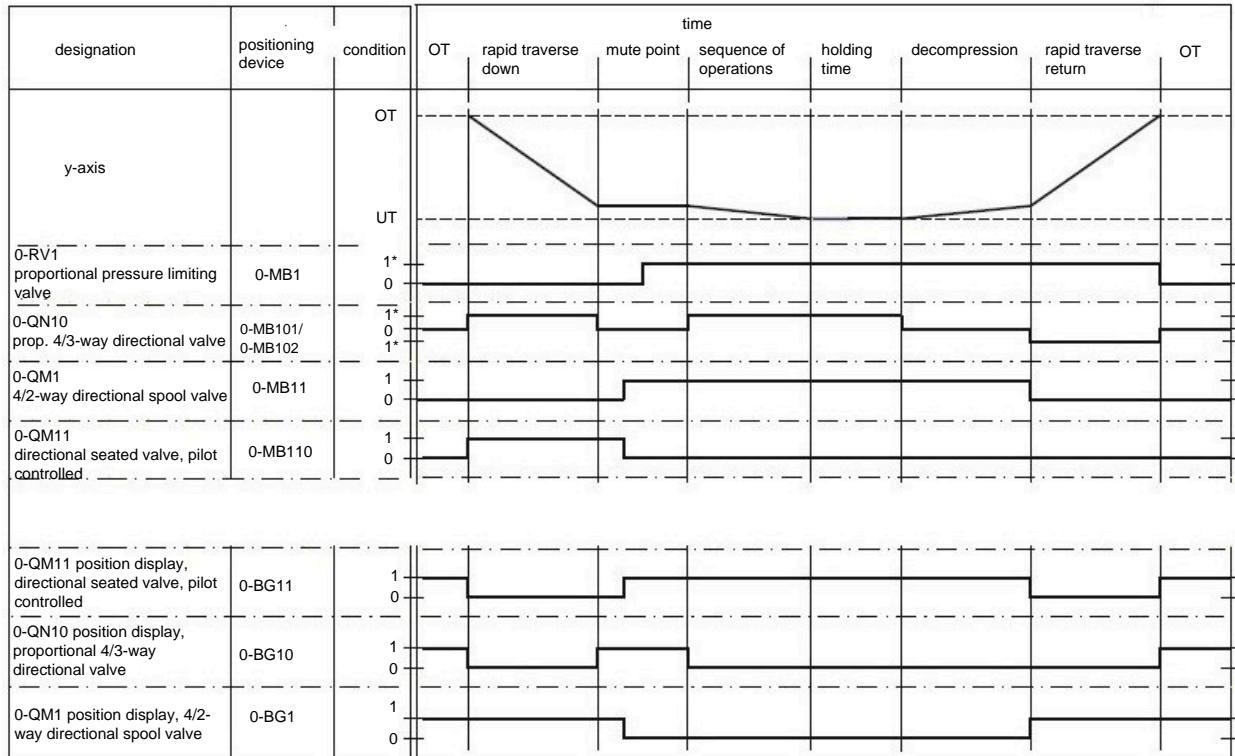
<b>weight</b>	EPRAXBASIC_54554 (NG06):	41 kg
	EPRAXBASIC_54861 (NG10):	100 kg
	crowning (NG06):	3.6 kg
	crowning (NG10):	6.0 kg
	tool clamping with pressure regulation:	4.9 kg
	tool clamping without pressure regulation:	4.0 kg
	load sensing (NG06):	3.1 kg
	load sensing (NG10):	7.3 kg
<b>ambient temperature</b>	-10 to +50 °C	
<b>mounting position</b>	arbitrary; Attention: proportional directional control valves always in horizontal position	
<b>corrosion protection</b>	surface protected by corrosion protection fluid	

### Hydraulic parameters

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

<b>max. operating pressure (input pressure)</b>	320 bar
<b>hydraulic fluid temperature</b>	-10 to +70 °C
<b>viscosity</b>	10-600 mm <sup>2</sup> /s; recommended range for continuous operation: 20-100 mm <sup>2</sup> /s
<b>permissible degree of pollution</b>	max. class 19/16/13 according ISO 4406

## Functional diagram

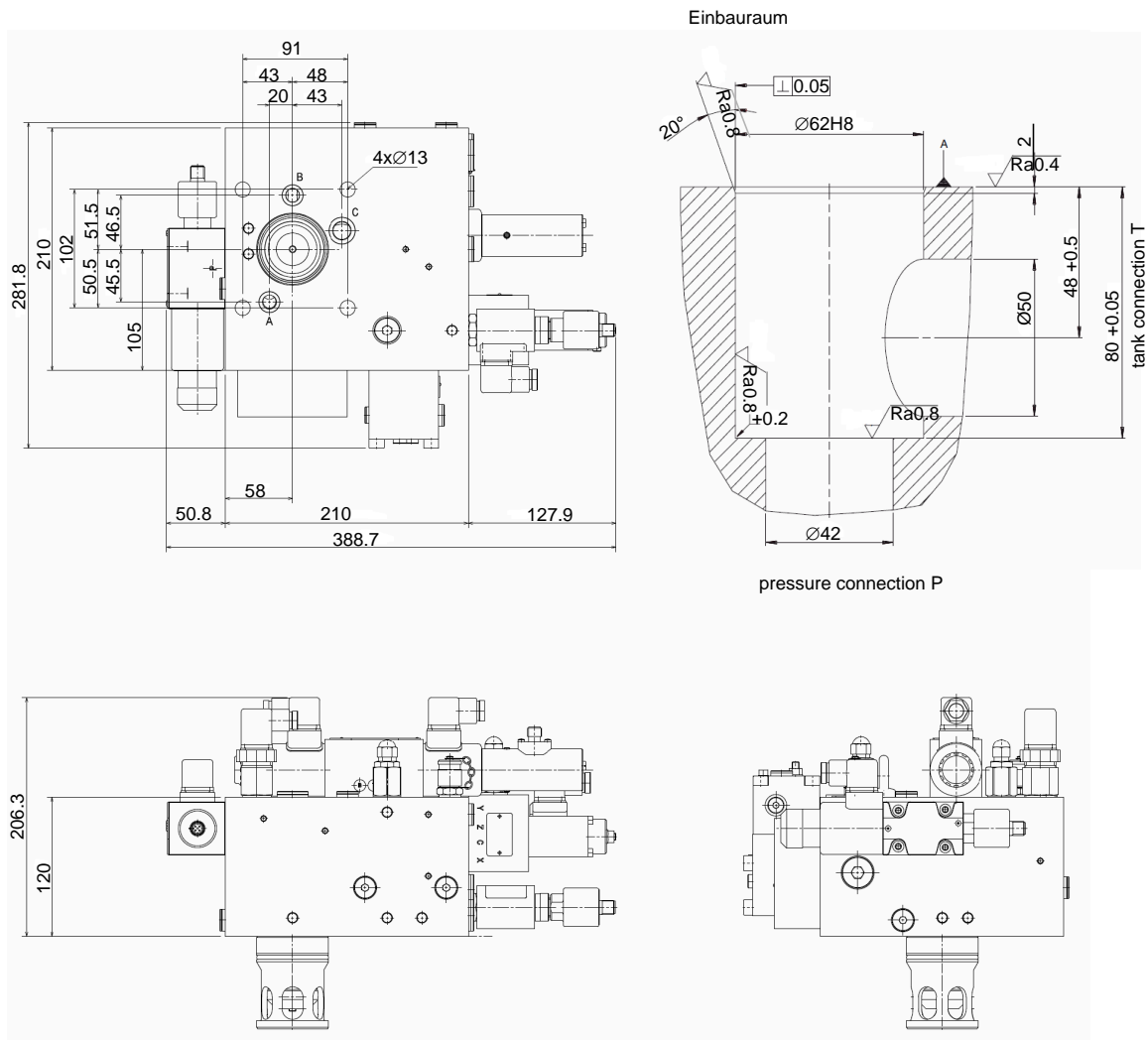


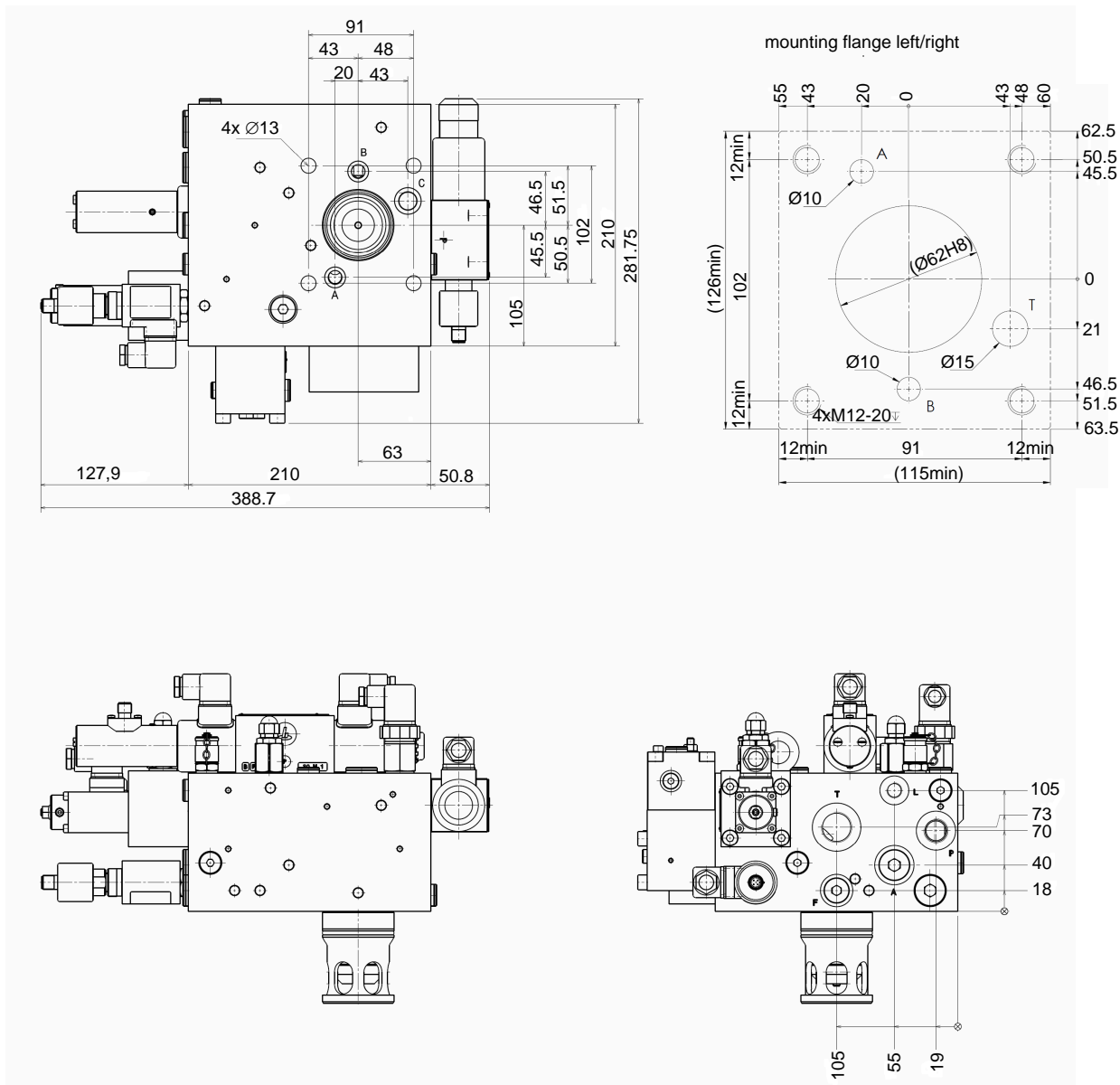
\*value 1 at 0-MB1, 0-MB101 and 0-MB102 is dependent on machine and control state

## Dimensions and connections

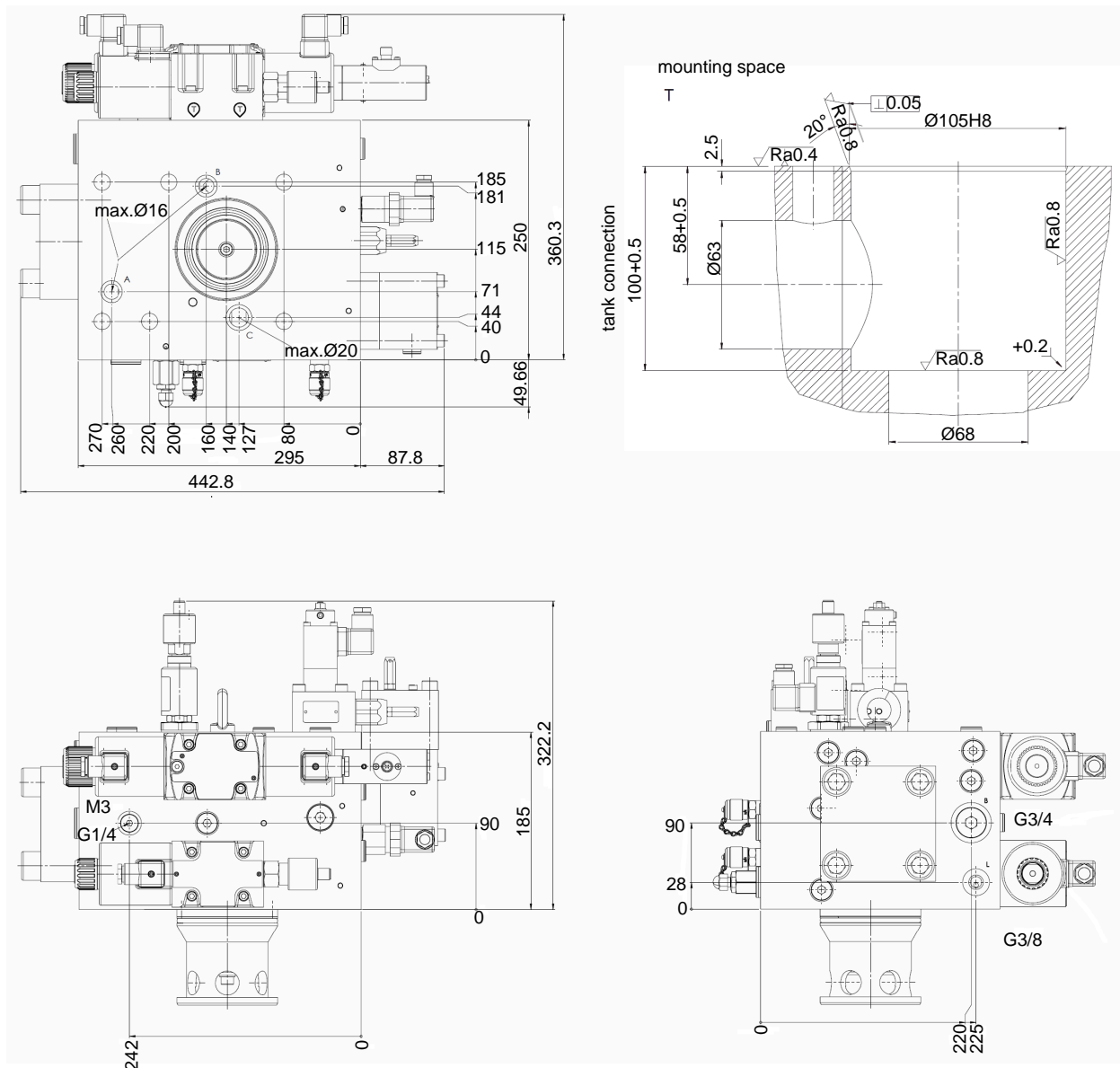
Dimensions are given in mm.

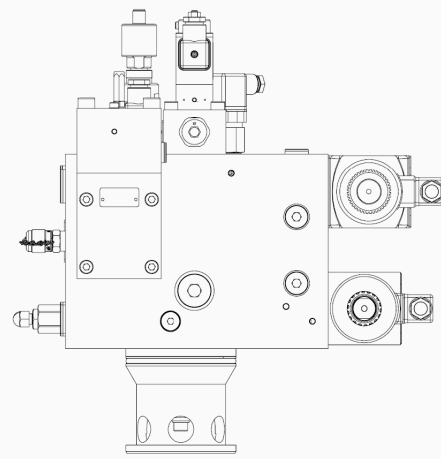
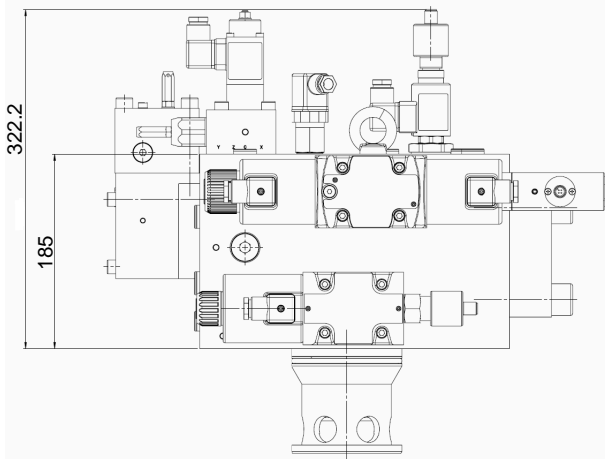
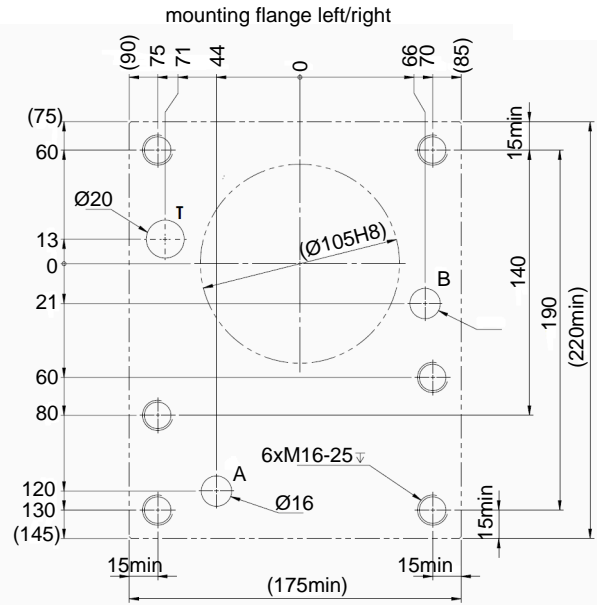
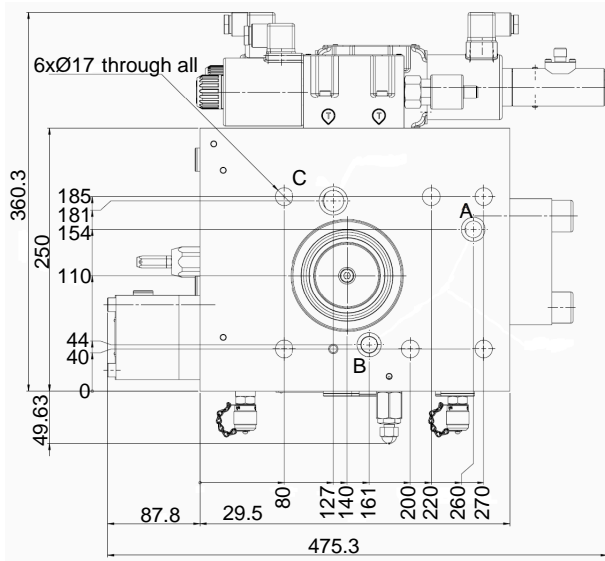
### ePrAX® basic O6, left





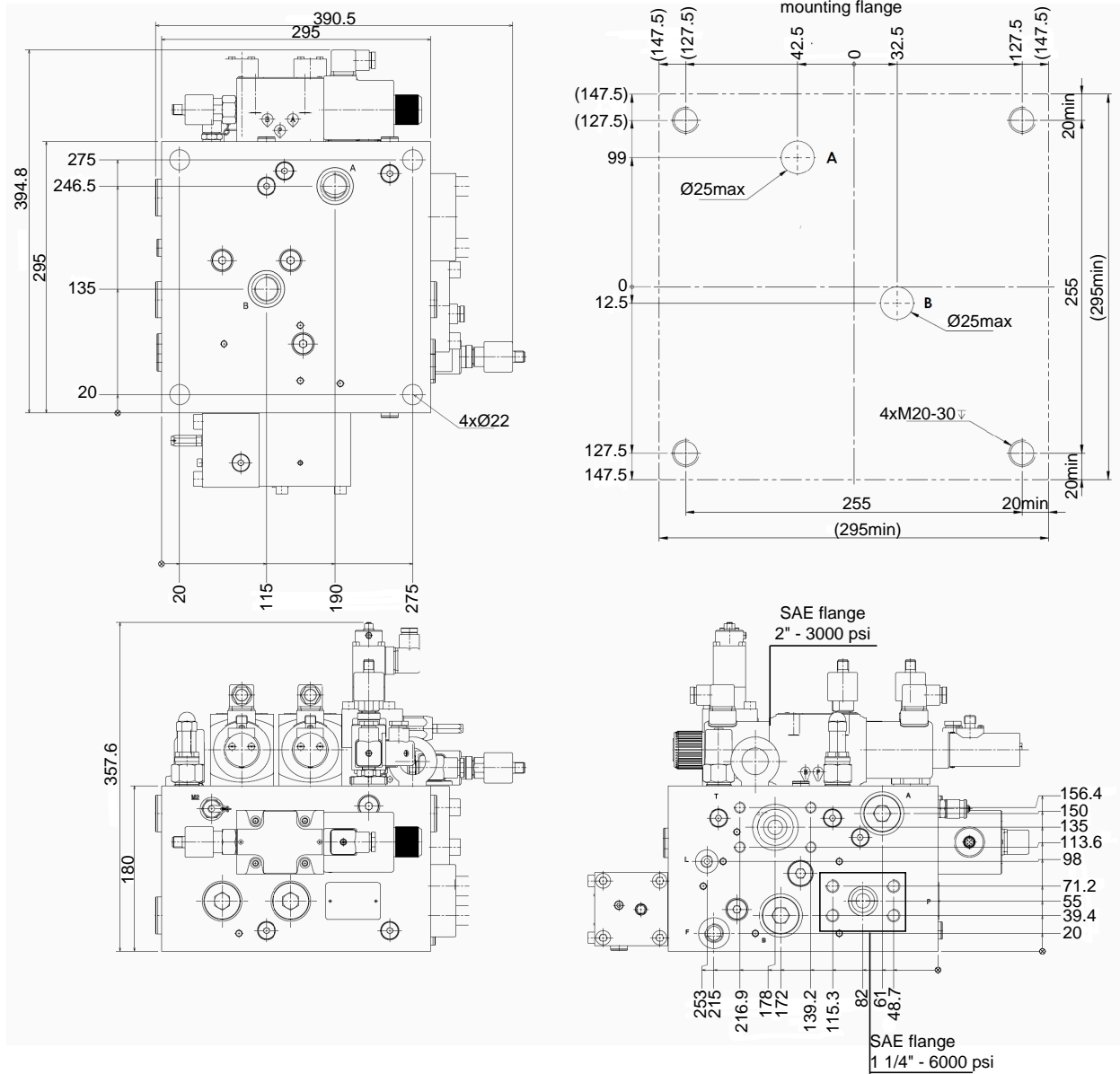
ePrAX® basic 10, left



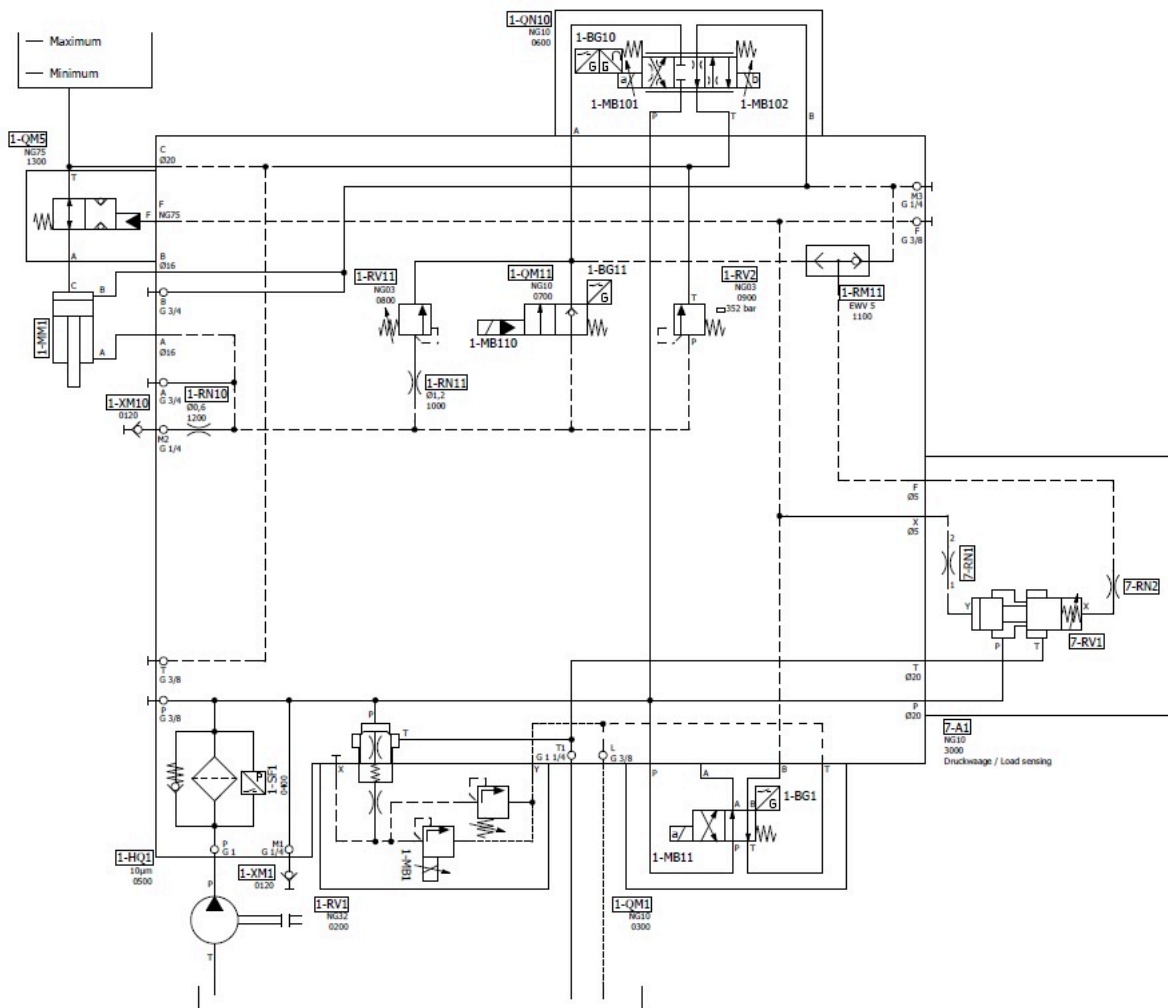


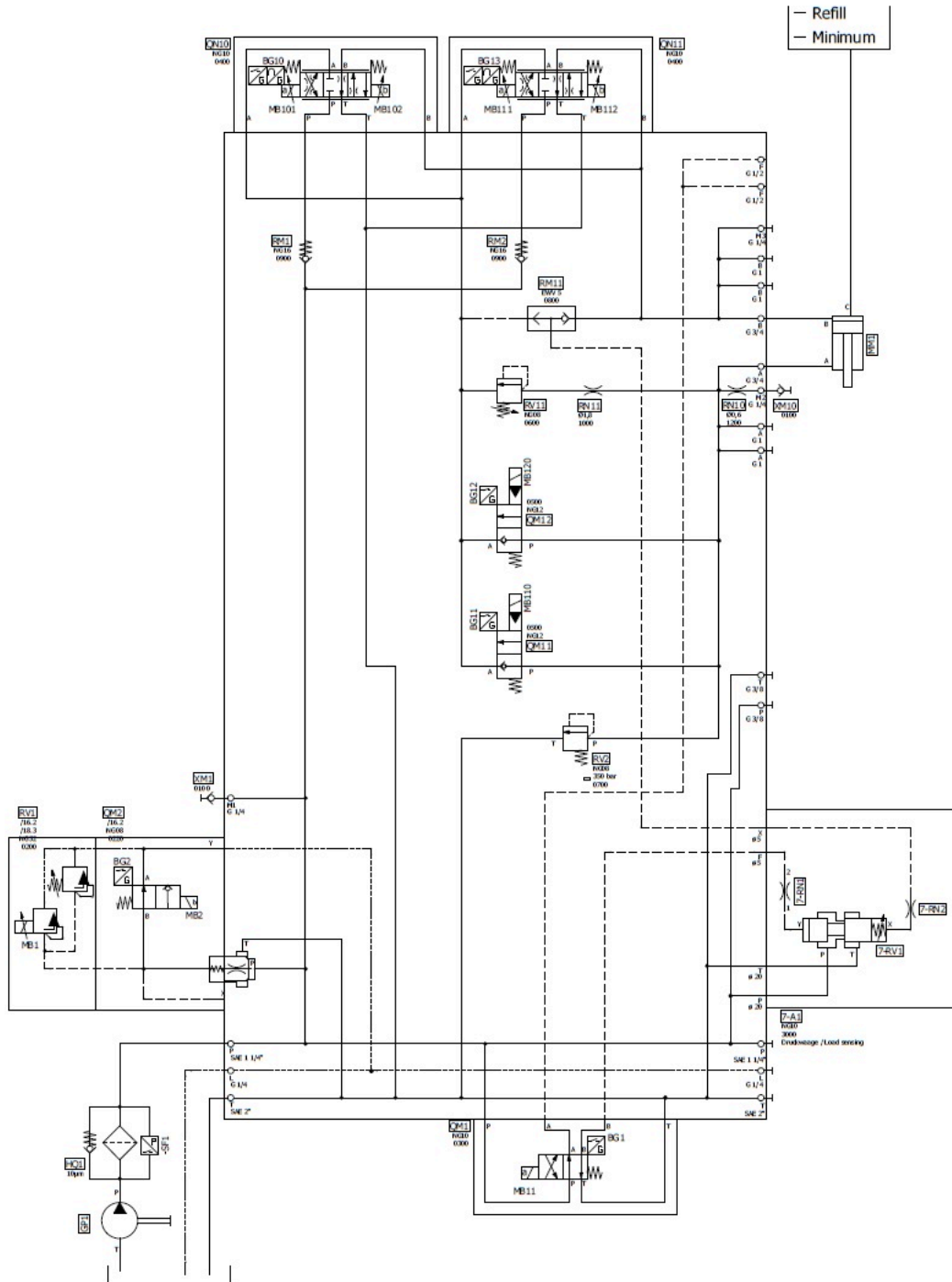


ePrAX® basic 25

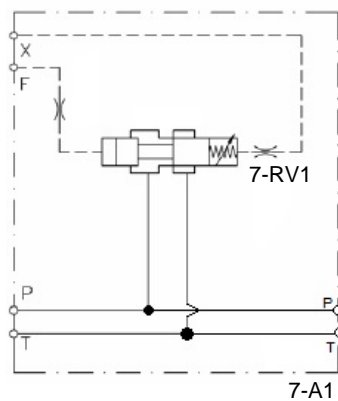
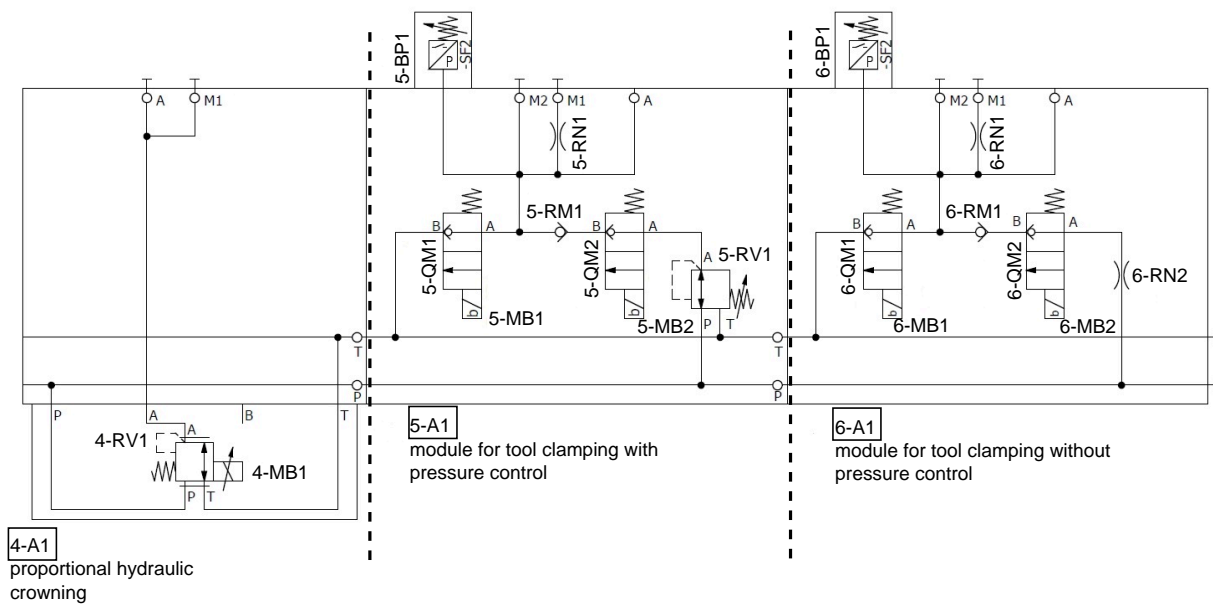








Options



option: load sensing

## Order information

### Type code

EPRAX BASIC	54554	S	I	06	B	18	X	X - - -	S...
									special design
									options
									design of suction valves NSV
									volume flow
									piston type of proportional directional valve
									size of proportional directional valves
									type of proportional directional valves
									position monitoring of valves
									number of basic block
									design

### design

ePrAX basic | hybrid system

### number of basic block

54554	NG06
55861	NG10
54559	NG25

### position monitoring of valves

S*	monitoring of: <ul style="list-style-type: none"> <li>▪ 2/2-way seated valve</li> <li>▪ 4/2-way directional valve</li> <li>▪ proportional directional valve</li> </ul> according DIN EN 12622
----	---

- no monitoring

\*preferred option

### type of proportional directional valves

I	PIL proportional directional valve with transducer and middle position signal
R	PRL proportional directional valve with transducer
S	POL proportional directional valve without transducer
Q	POH proportional directional valve without transducer

H\* PIH proportional directional valve with transducer and middle position signal

middle position signal...required for safety

transducer...faster positioning, dynamics

### size of proportional directional valves

06 PC06

10 PC10

25 2x PC10

### piston type of proportional directional valve

A symbol 500 (PIL, PRL, POL)

B\* standard symbol 400 (PIL, PRL, POL); 430 (POH, PIH)

\*preferred option

### volume flow

\_\_\_ L/min (nominal flow of the installed proportional directional control valves)

### design of suction valves NSV

W without suction valve

X\* standard suction valve, type NO (NG50 for ePrAX basic 06, NG75 for ePrAX basic 10)

Z suction valve, type NC

\* preferred option

### options

X without option

D load sensing

B crowning (NG06)

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)

## Type code

### Digital amplifier

PVR	600	5	H	B	30	6	R	K
								<b>filter</b> K no filter
							<b>function</b> R ramp	
						<b>control</b> 6 number of solenoids		
					<b>output current</b> 30 3,000 mA I <sub>max</sub>			
				<b>final stage</b> B quick de-energizing				
			<b>installation</b> H mounting rail according DIN 50022					
		<b>control</b> 5 multi-valve						
	<b>design</b> 600 standard							
	601 EtherCAT							
<b>type</b>	electronic digital amplifier							

accessories: socket board KC3832



## Type code

### HQI 2

HQI	2	-	025	R	K	0	3	-10	S122
	size		displacement volume and weight	rotation direction	shaft end	fastening flange	suction and pressure port	design	
type									

### type

HQI | internal gear pump in segment design

### size

2 | size 2

### displacement volume and weight

004	4.2		4.9
005	5.4		4.9
006	6.4		5.0
008	7.9		5.2
011	10.9	cm <sup>3</sup> /rev	5.4
013	13.3		5.5
016	15.8		5.7
019	19.3		7.4
022	22.2		7.8
025	25.2		8.0

kg

### rotation direction

R | right

### shaft end

K | cylindrical (with cone)

P | cone toothing (only for further multiple pump)

### fastening flange

0 | SAE-A2 flange

### suction port and pressure port

3 | SAE flange

6 | enlarged suction port for speed controlled drive applications

0 | suction side closed, common suction

### design

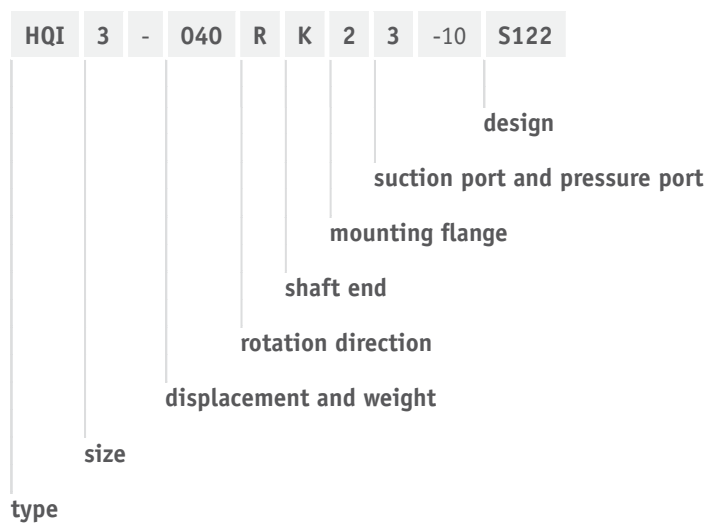
S122 | pressure port and suction port radial

S122/3...\* | pressure port radial; common radial suction port

\* For double pump versions the type repeats itself following the size.

## Type code

### HQI 3



### type

HQI | internal gear pump in segment design

### size 3

3 | size 3

### displacement and weight

014	14.6	9.4
016	16.0	10.1
020	20.0	10.5
025	24.8	11.2
032	32.1	12.0
040	40.1	15.0
050	50.3	17.0
064	64.6	18.0

cm<sup>3</sup>/rev      kg

### rotation direction

R | right

### shaft end

- K | cylindrical (with cone)
- P | cone toothing (only for further multiple pump)

### mounting flange

2 | SAE-B-2 flange

### suction port and pressure port

3	SAE flange
6	enlarged suction port for speed controlled drive applications
0	suction side closed, common suction

### design

S122	pressure port and suction port radial
S122/3...*	pressure port radial; common radial suction port

\* For double pump versions the type repeats itself following the size.

## Type code

### HQI 6

HQI	6	-	040	R	K	2	3	-10	S122
type	size		displacement and weight	rotation direction	shaft end	mounting flange	suction port and pressure port	design	

### type

HQI | internal gear pump in segment design

### size

6 | size 6

### displacement and weight

040	40.8		31
050	50.6		32
064	65.3		34
080	80.0		36
100	101.2	cm <sup>3</sup> /rev	39
125	125.7		42
160	160.1		46
200	200.9		51
250	249.9		58

kg

### rotation direction

R | right

### shaft end

K | cylindrical (with cone)

P | cone toothing (only for further multiple pump)

**mounting flange**

2 | SAE-D-2 flange

**suction port and pressure port**

3 | SAE flange

6 | enlarged suction port for speed controlled drive applications

0 | suction side closed, common suction

**design**

S122 | pressure port and suction port radial

S122/3...\* | pressure port radial; common radial suction port

\* For double pump versions the type repeats itself following the size.

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