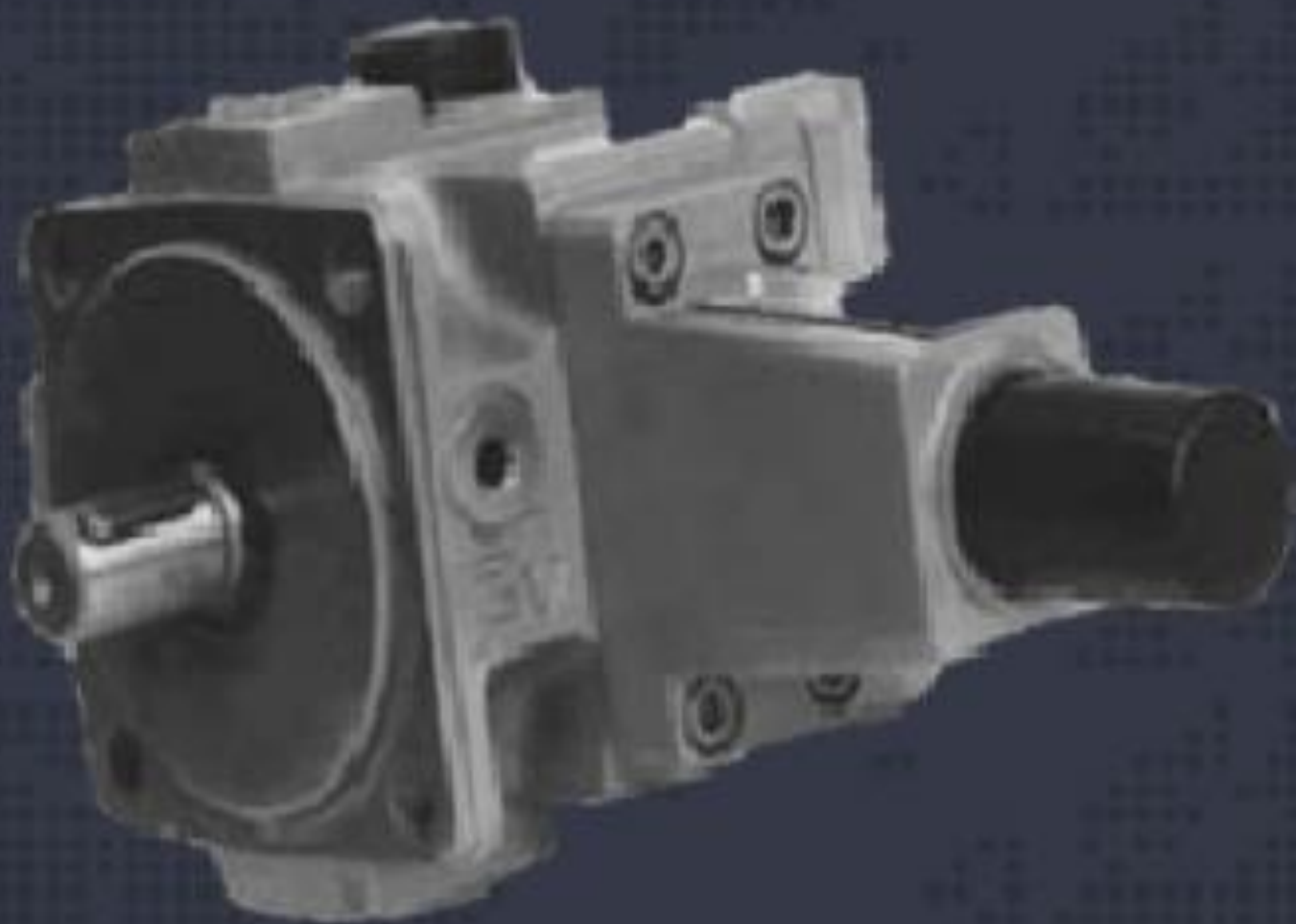




HUADE
AMÉRICA

Catálogo de Productos



VANE PUMP TYPE V3

Hal Automation Ltda	Vane Pump Type V3			
	Size 12 - 63	Up to 10Mpa	Up to 63 L/min	

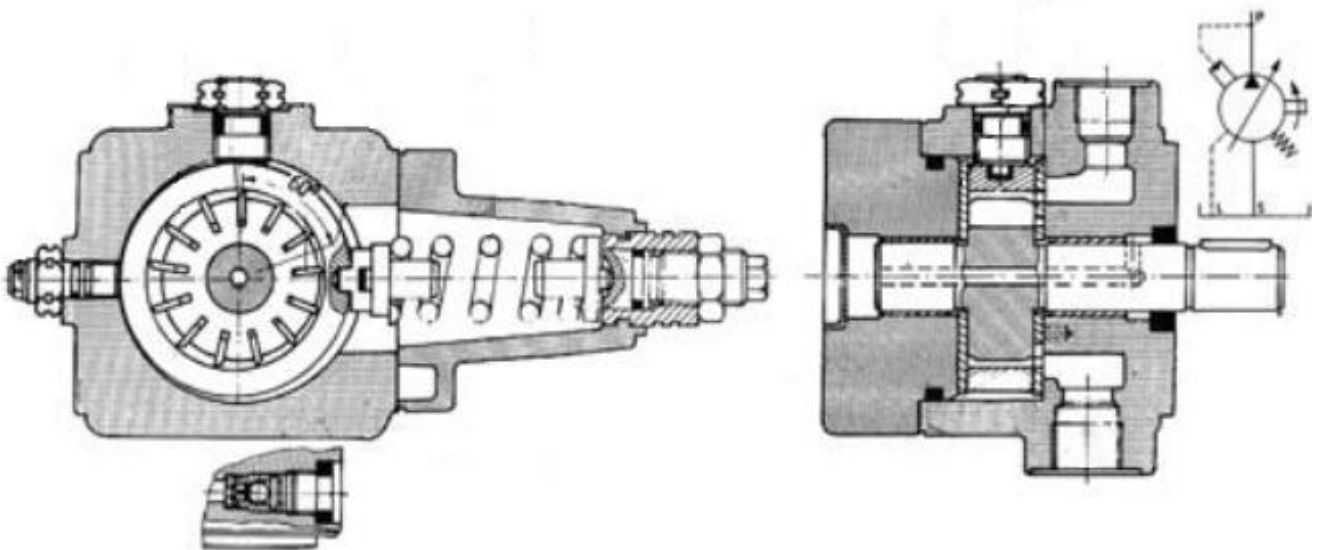


Features:

- Low noise level.
- Long service life.
- Easy commissioning due to automatic bleed facility.
- Lubricated bearings for long bearing life.
- Good sliding characteristics of control discs due to bronze coating and semi-fluid friction.

Functional, section, symbol

Hydraulic pumps type V3 are vane pumps with variable displacement and pressure control, can be installed in any desired position. The pump may be connected to systems only by means of flexible lines hydraulics. The pump may be connected to motor only by means of a flexible coupling. All the coaxial conditions formulated by the coupling manufacturer must be maintained. Pumps type V3 are composed of a housing, rotor with simple vanes, stator, pressure regulator, volume screw, valve for automatic air bleed and control discs. They decrease their volume and thus fluid is pushed to the pressure channel P and into the system.



Suction and delivery

The pumps are delivered in the assemble state, primed. The pump top coat can be carried out in agreement with the producer. The spare parts, fastening bolts and connections are not parts of delivery. Instruction manual is delivered with each pump. Production materials used are cast iron, steel and non-ferrous metals.

PRESSURE REGULATION

The circular stator ring is kept in an eccentric position by means of the spring 10. Maximum working pressure required in the system is adjusted by the spring 10. On reaching the set pressure the stator 4 (overcoming resistance of the spring 10) moves out of its eccentric position. The eccentricity decreases till the minimum flow replacing the leakage oil is obtained. After a pressure drop in the system the stator 4 returns to the eccentric position and the pump delivers the full value of the set output flow.

OIL TANK AND FILTRATION

The tank capacity must be properly selected so that the working temperatures of oil do not exceed recommendations. If that is impossible a cooler must be installed. The contents of the tank must accomplish the drive requirements, so that the working temperature must not exceed recommended level. If necessary a cooler must be fitted. Usage of a pressure oil filter or a filter in return channel T is recommended. If a suction filter is used then an under pressure switch must be fitted.



ATTENTION!

In case that difference of temperature of the hydraulic oil is more than 20°C during a start the pump, it is recommended to start the pump by short pulses (switch on approx. 1 sec. and switch off approx. 5 sec.) to prevent of seizure. In the case that hydraulic oil is heated by meaning of heater it is necessary to switch on the pump in the same time.

HD	1 PV		V3										
01	02	03	04	05	06	07	08	09	10	11	12	13	14

01	HD - Technology of Beijing Huade Hydraulic
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02	1PV - One-flow pump with variable geometrical displacement
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Mounting Method	
------------------------	--

03	2 – Flange (Standard)
	6 - Subplate

Pump	
-------------	--

04	V3 - Vane pump type V3
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Series Number	
----------------------	--

05	30 - Series 30; nominal size 40 - 63
	40 - Series 40; nominal size 12 - 25

Nominal Size	
---------------------	--

06	12 - Nominal size 12 – 8.5 cm ³ /rev
	25 - Nominal size 25 – 19 cm ³ /rev
	30 - Nominal size 40 – 32 cm ³ /rev
	40 - Nominal size 63 – 47 cm ³ /rev

Rotation Direction	
---------------------------	--

07	R – Right (Standard)
	L - Left
	D – Model with double shaft

Connections Method	
---------------------------	--

08	1 - Threaded connections (Standard)
	8 - Subplate

Sealing	
----------------	--

09	M - For fluids on mineral oil base (Standard)
	V - For fluids on phosphate ester base

Pressure Setting	
-------------------------	--

10	C - With hexagon end screw (Standard)
	H - With square end screw
	S – Lockable pressure regulator

Zero stroke pressure range	
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11	100 – 100 bar zero stroke pressure
	63 - 63 bar zero stroke pressure
	40 - 40 bar zero stroke pressure
	25 - 25 bar zero stroke pressure

Flow setting	
---------------------	--

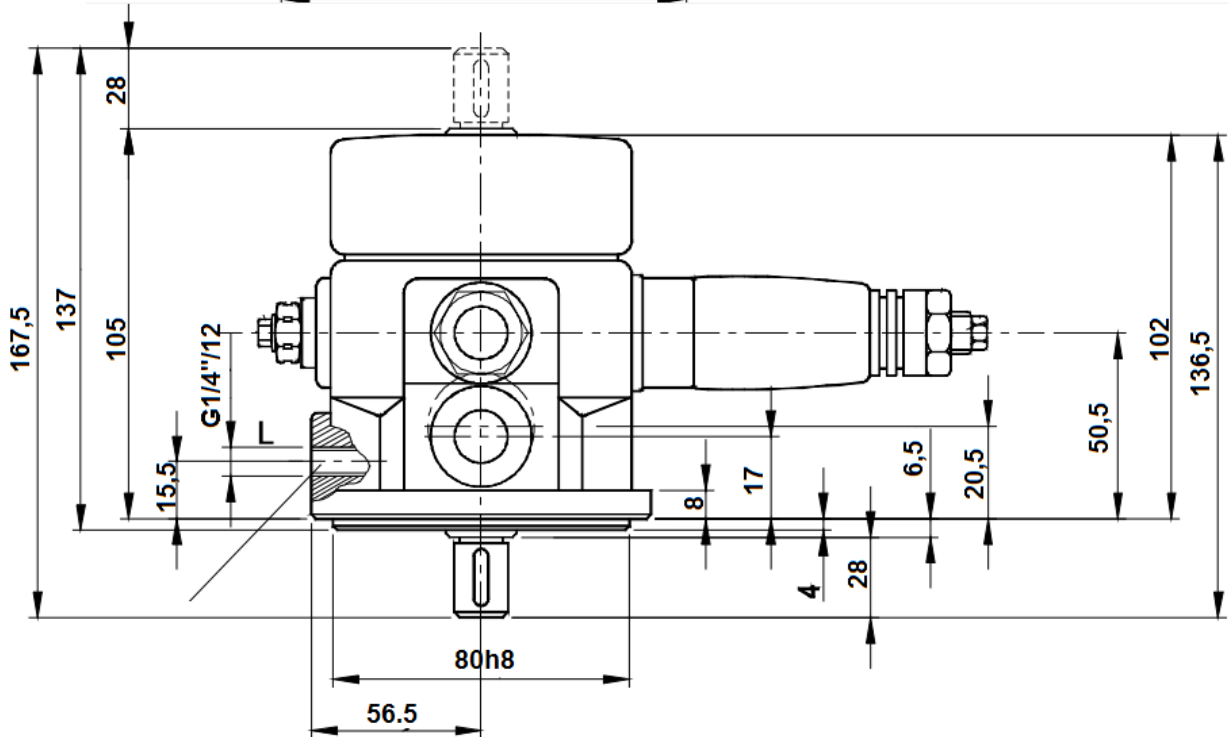
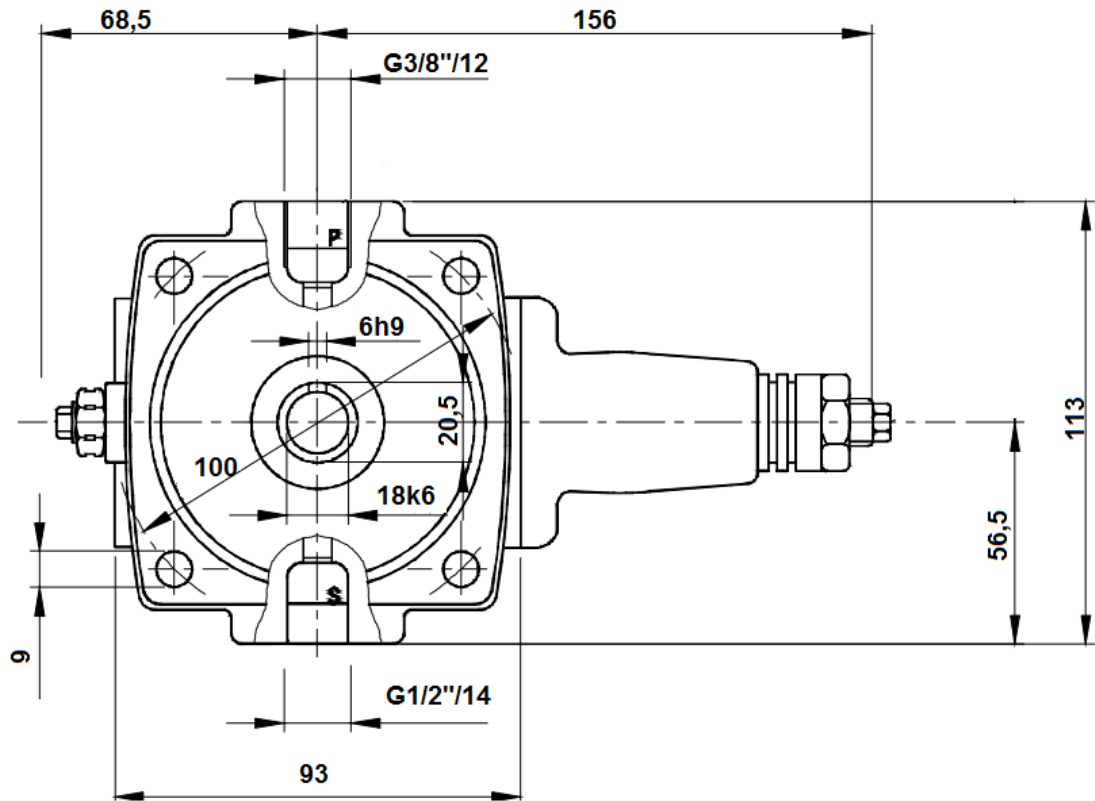
12	A - With hexagon end screw (Standard)
	H - With square end screw
	S – Lockable pressure regulator

13	Air bleed valve
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14	Additional requirements in clear text (to be agreed with the manufacturer)
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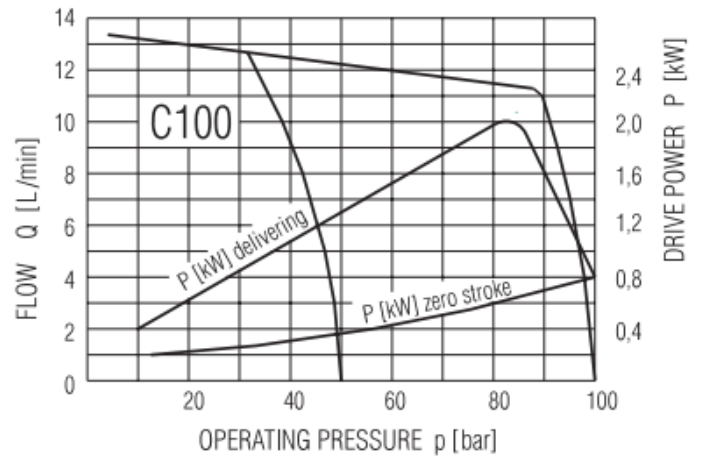
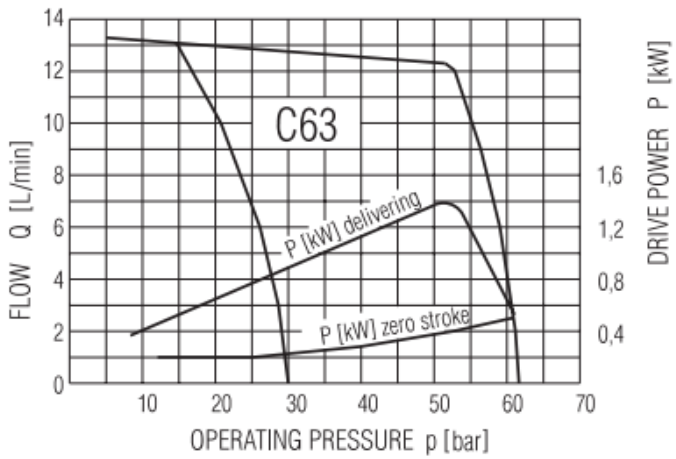
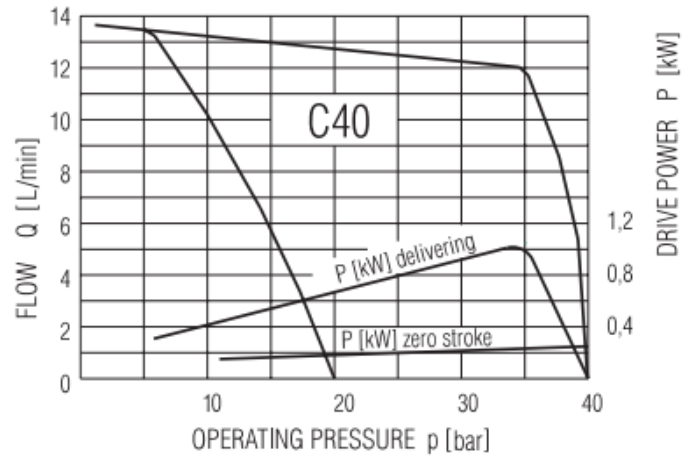
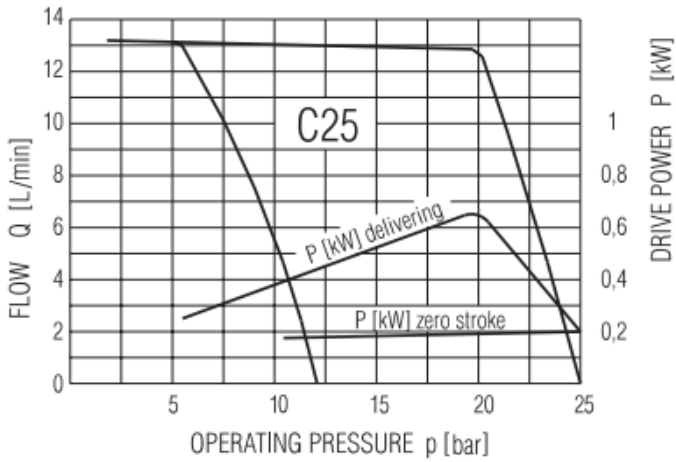
Technical Data	Symbol	Units	Nominal Sizes			
			V3/12	V3/25	V3/40	V3/63
Nominal displacement	Vg	cm ³ /rev	8.5	19	32	47
Nominal output flow at n = 1450 rpm	Qn	L/min	13	27.5	47	67
Speed range	n	Min ⁻¹	950 up to 1800			
Spring type			C25, C40, C63, C100			
Pressure range	p	bar	12 ... 25 20 ... 40 30 ... 63 50 ... 100			
Operating pressure: Input Output	P	bar	0.2 (underpressure) up to 5 (overpressure)			
	p	bar	max. 100 – continuous op. pressure			
Leakage port	p	bar	Max.2			
Hydraulic medium			Mineral oils HLP DIN 51 524 part 2			
Temperature range		°C	-10 up to +70			
Fluid filtration			25 absolute ($\beta_{20} \geq 100$) We recommend 10 μm in order to achieve long working life, with heavy loading, high duty and low viscosity			
Oil viscosity range - at pzero stroke < 6.3 MPa - at pzero stroke > 6.3 MPa	v	mm ² /s mm ² /s	16 to 160 25 to 160			
Efficiency			see curves			
Weight	m	kg	6.25	11.1	26.5	29.5
Pipe connections			threaded connections			
Shaft loading			radial or axial loads can't be transferred			
Rotation direction			right (or left for 1 PV6 only)			

INSTALLATION DIMENSIONS V3/12

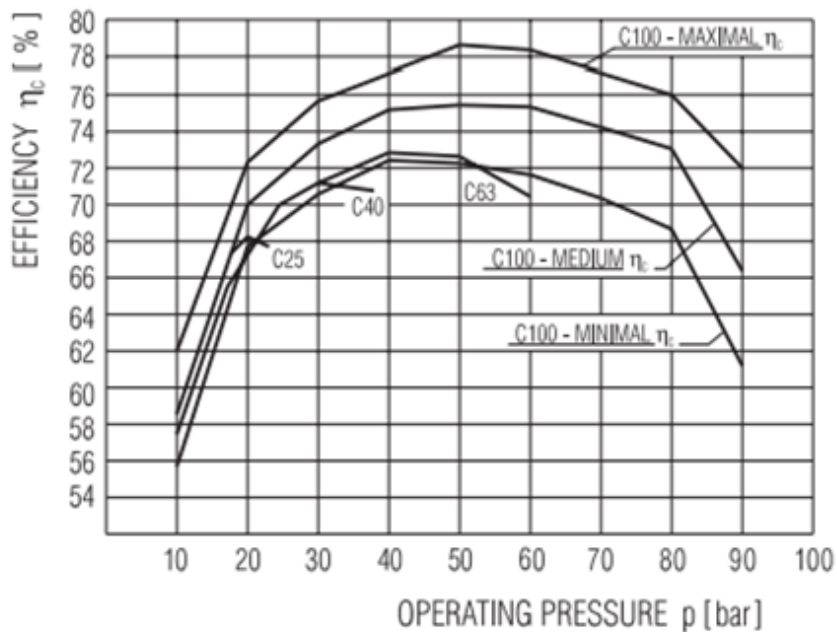


PERFORMANCE CURVES V3/12

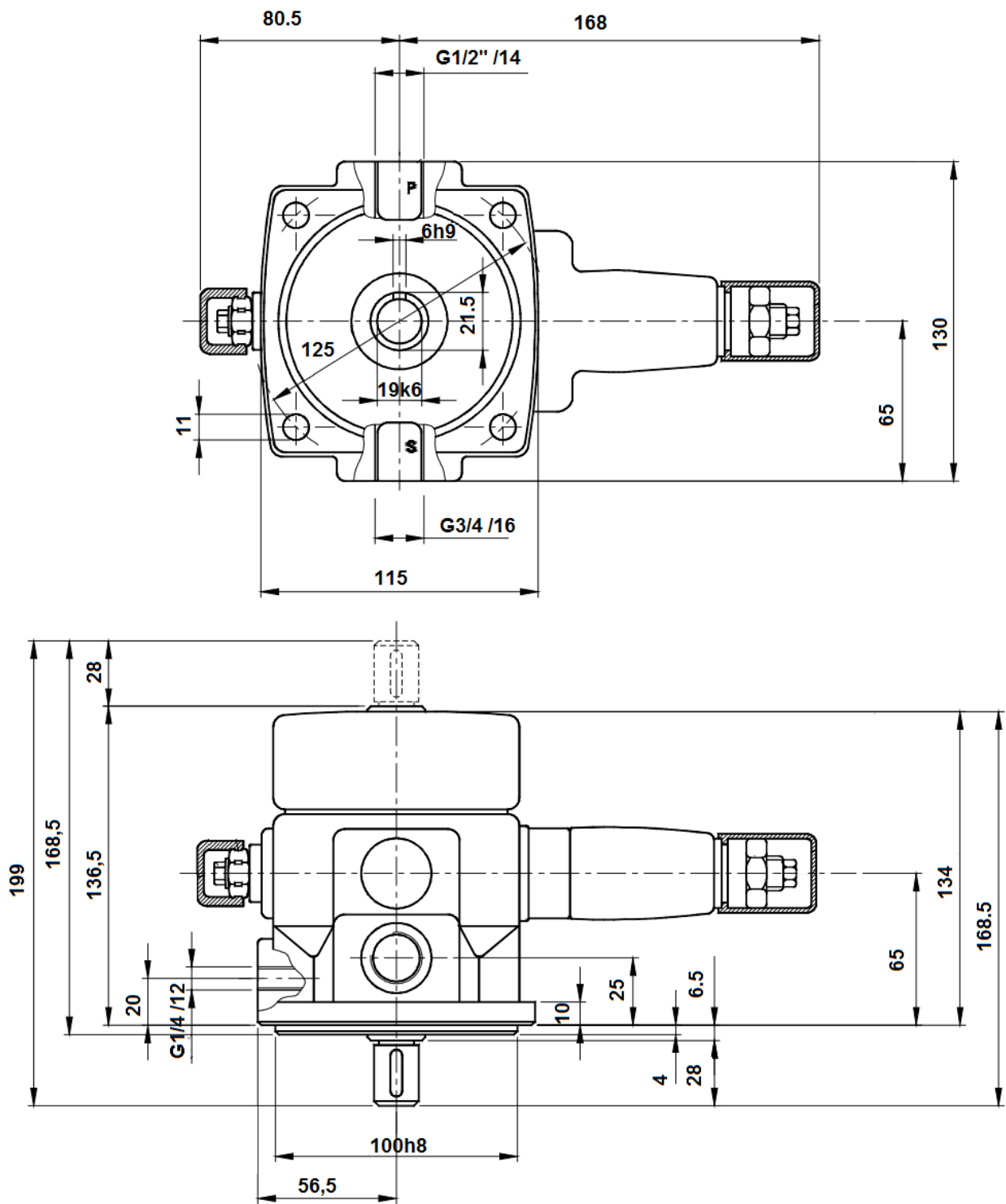
measured at $n = 1450 \text{ rpm}$, $v = 36 \text{ mm}^2/\text{s}$, $t = 50^\circ\text{C}$



EFFICIENCY CURVE V3/12 - ($n = 1500 \text{ rpm}$, $t = 50^\circ\text{C}$)

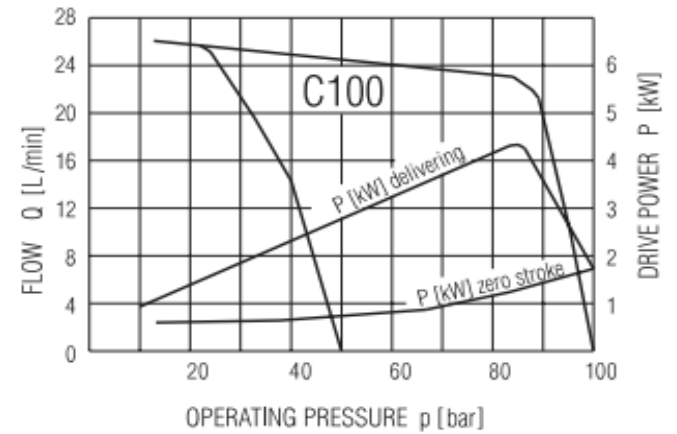
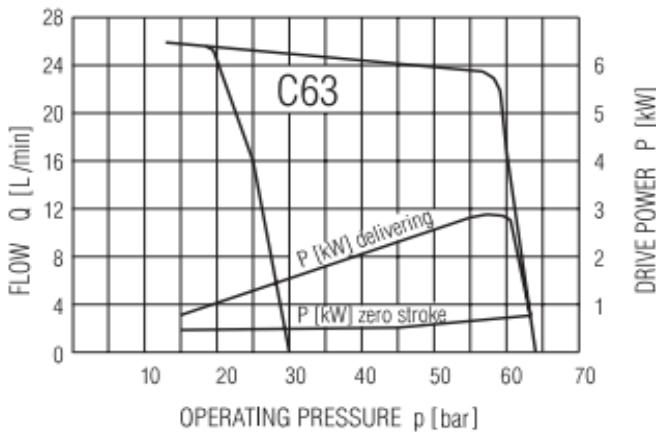
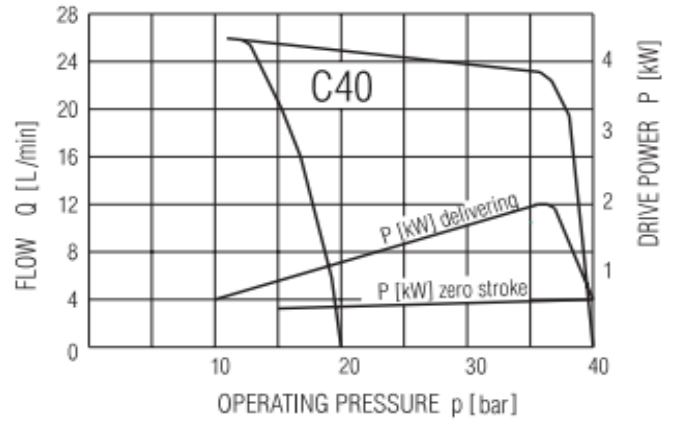
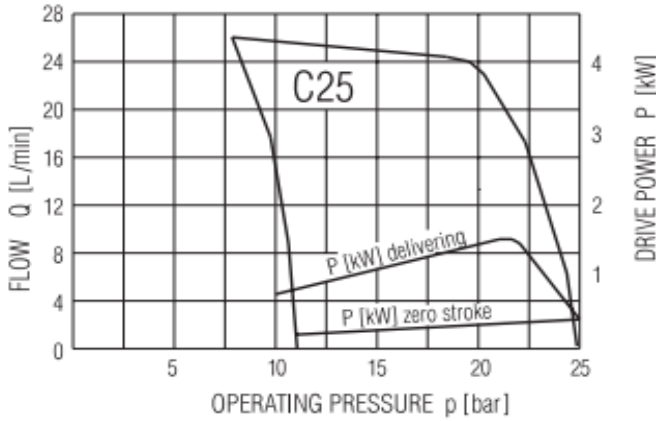


INSTALLATION DIMENSIONS V3/25

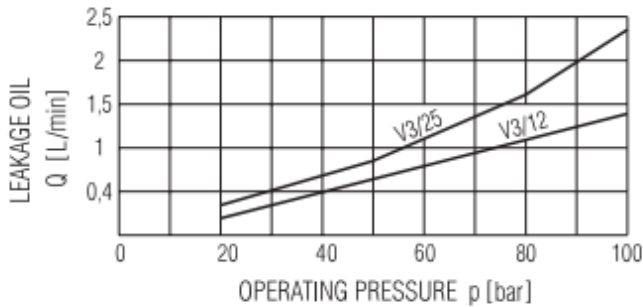


PERFORMANCE CURVES V3/25

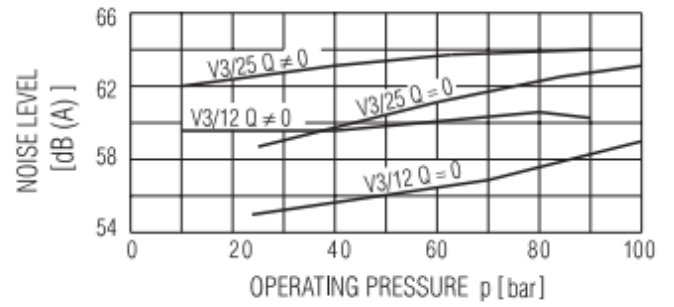
measured at $n = 1450 \text{ rpm}$, $v = 36 \text{ mm}^2/\text{s}$, $t = 50^\circ\text{C}$



measured after 10 min. at zero stroke

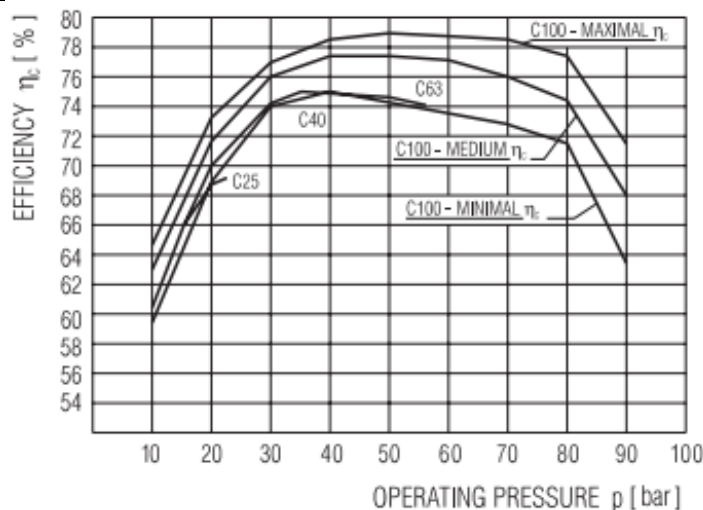


measured in noise measurement chamber DIN 45 635 sheet 1

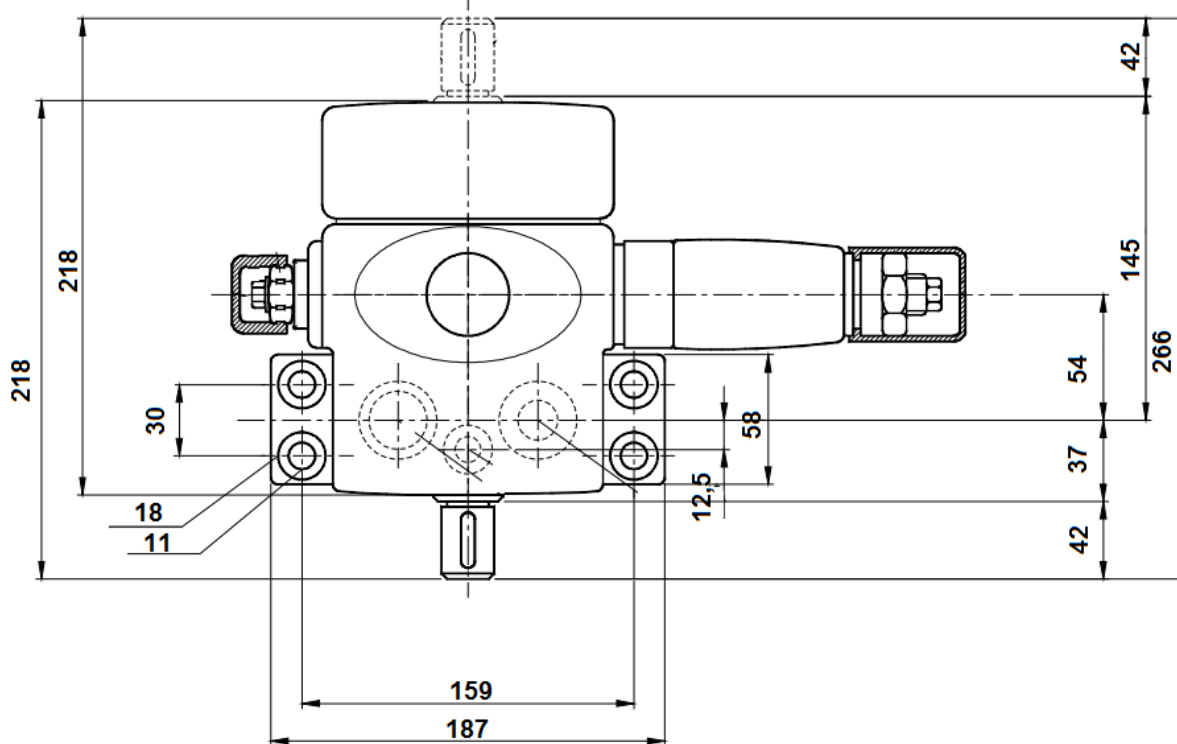
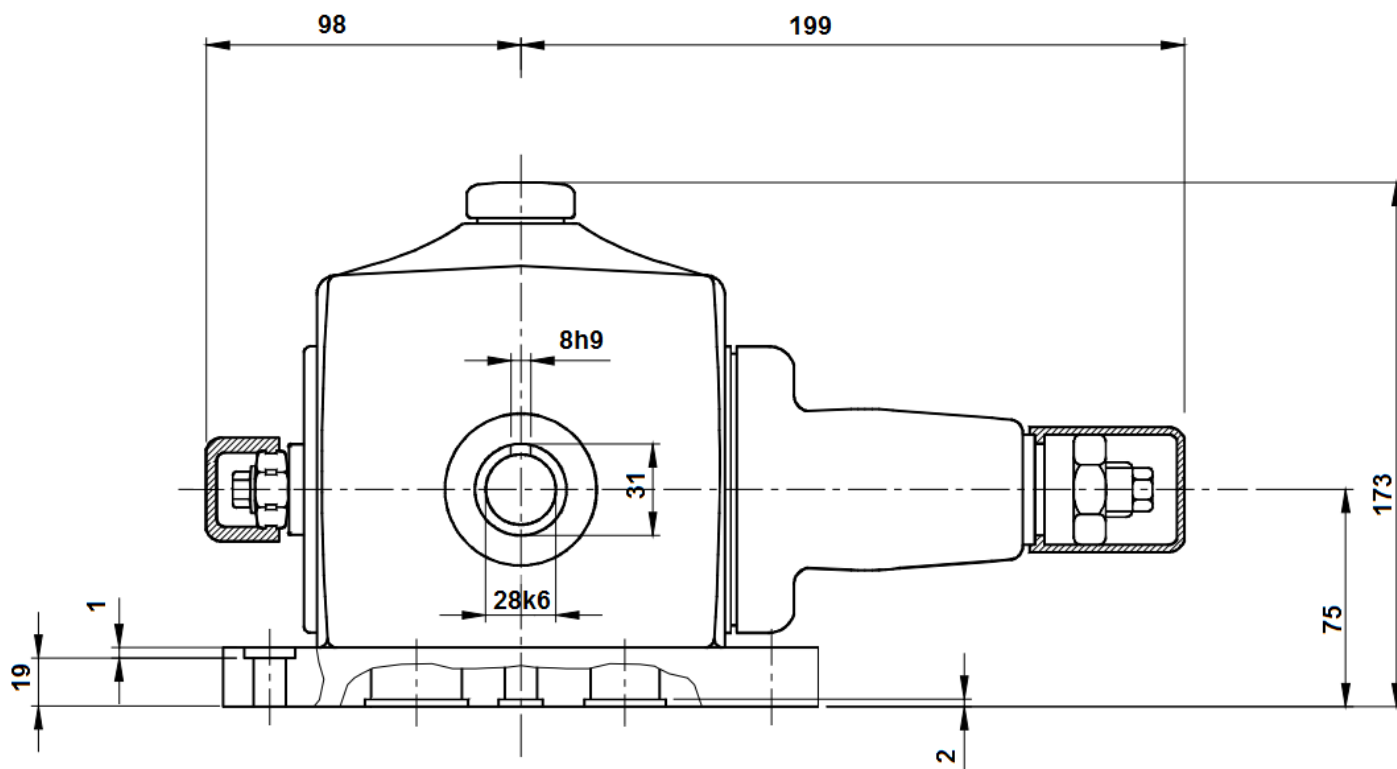


measured at distance of 1 m from the pump

EFFICIENCY CURVE V3/25 - ($n = 1500 \text{ rpm}$, $t = 50^\circ\text{C}$)

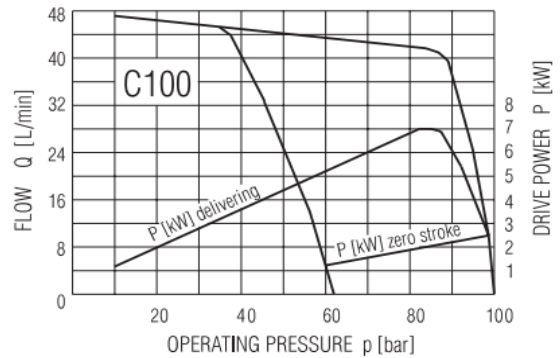
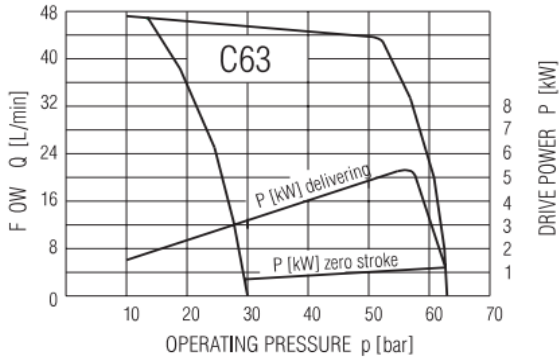
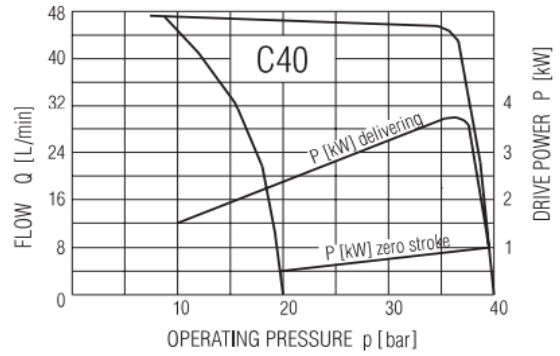
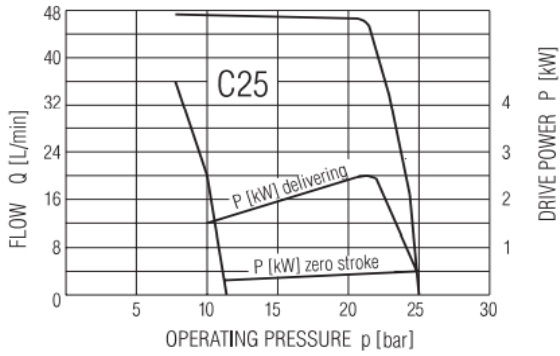


INSTALLATION DIMENSIONS V3/40

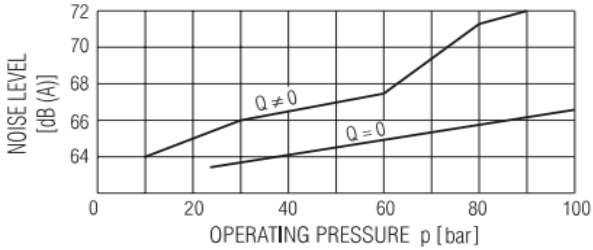


PERFORMANCE CURVES V3/40

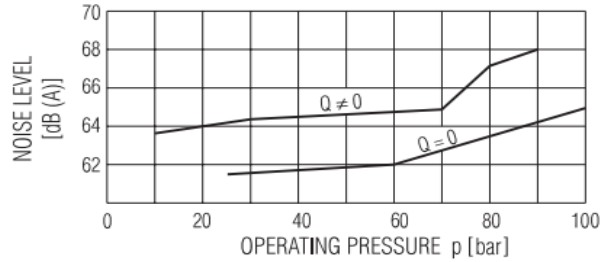
measured at $n = 1450 \text{ rpm}$, $v = 36 \text{ mm}^2/\text{s}$, $t = 50^\circ\text{C}$



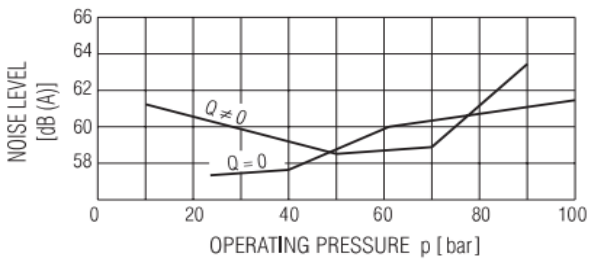
measured in noise measurement chamber DIN 45 635 sheet 1 at $n = 1800 \text{ rpm}$



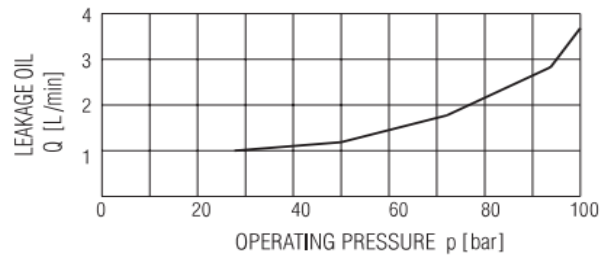
measured at distance of 1 m from the pump at $n = 1450 \text{ rpm}$



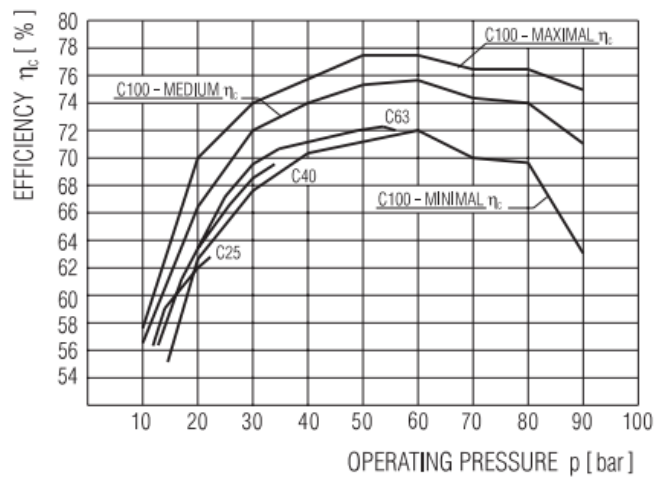
at $n = 1000 \text{ rpm}$



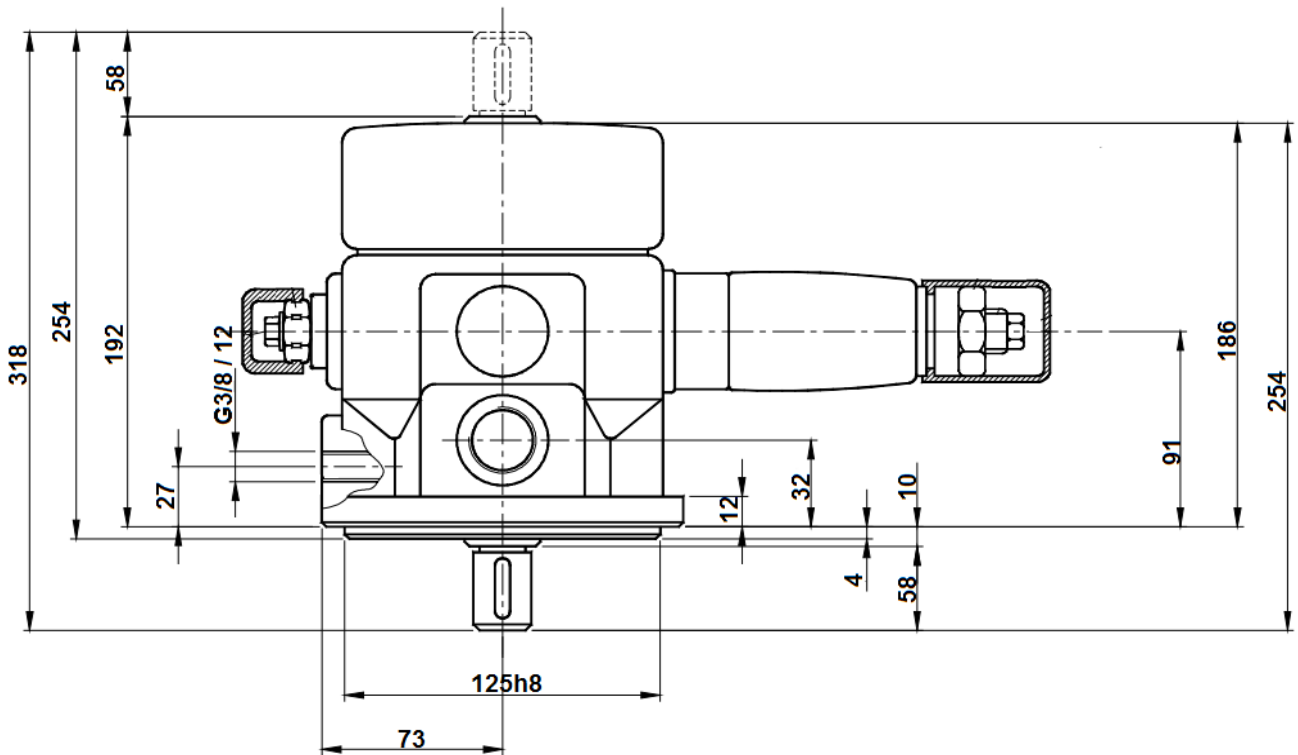
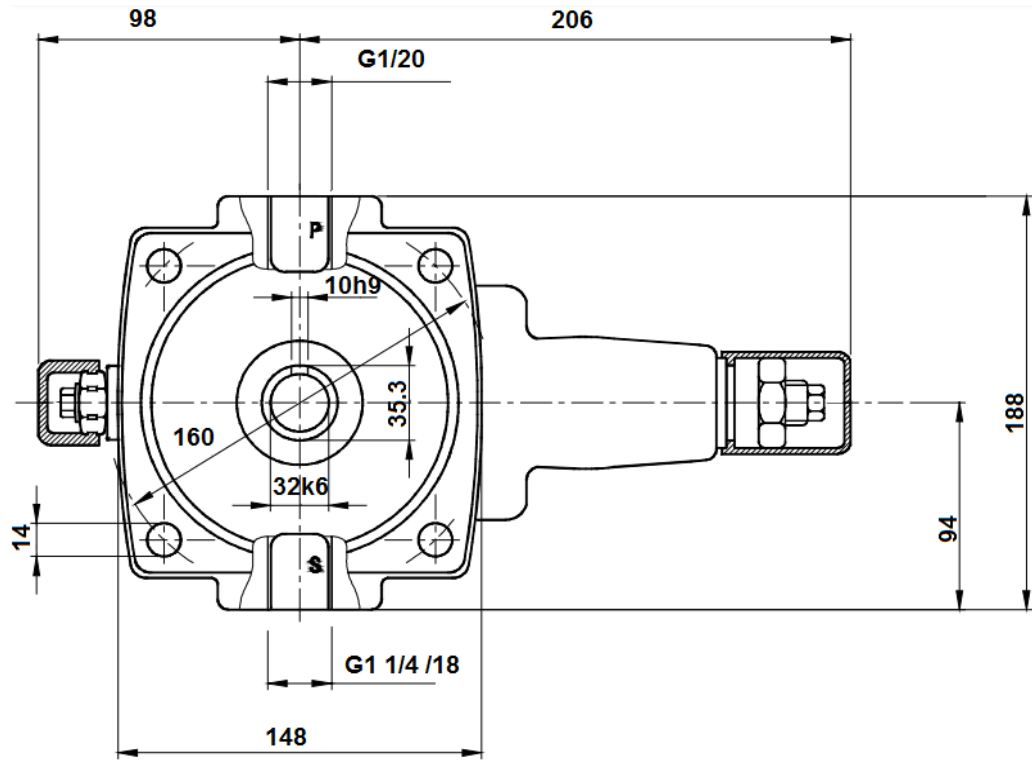
measured after 10 minutes at zero stroke



EFFICIENCY CURVE V3/25 - ($n = 1500 \text{ rpm}$, $t = 50^\circ\text{C}$)

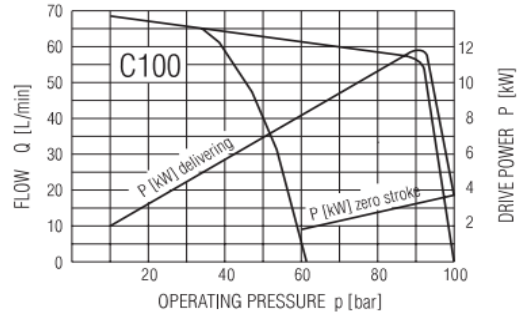
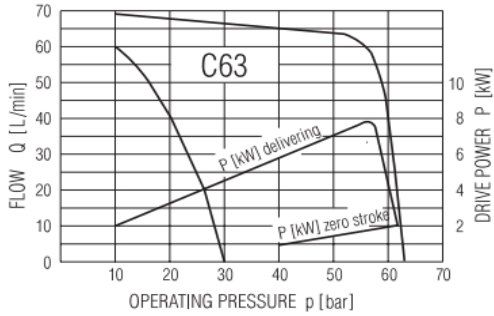
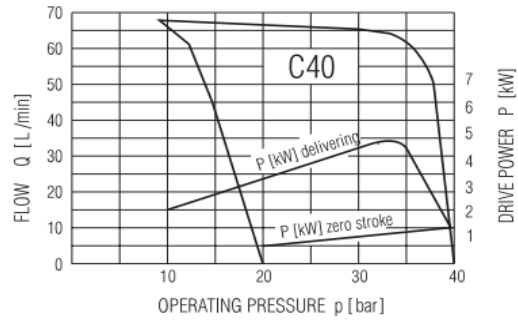
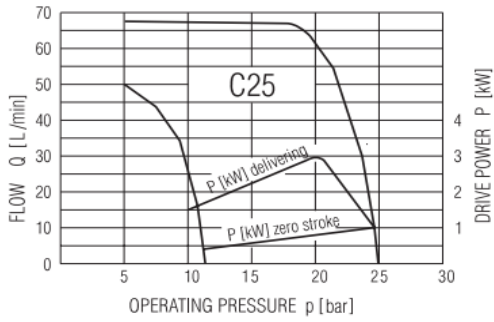


INSTALLATION DIMENSIONS V3/63

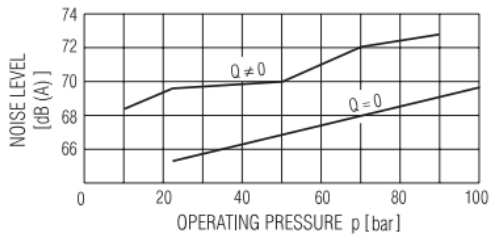


PERFORMANCE CURVES V3/63

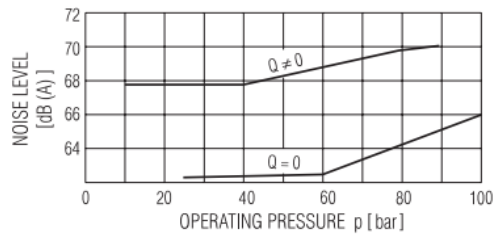
measured at $n = 1450 \text{ rpm}$, $v = 36 \text{ mm}^2/\text{s}$, $t = 50^\circ\text{C}$



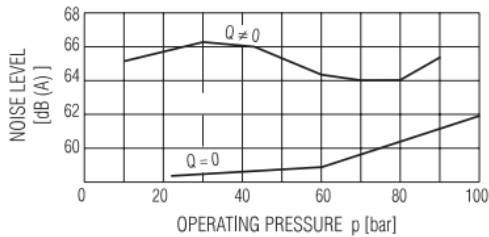
measured in noise measurement chamber DIN 45 635 sheet 1
measured at distance of 1 m from the pump
at $n = 1800 \text{ rpm}$



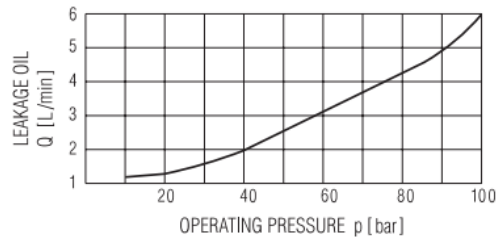
at $n = 1450 \text{ rpm}$



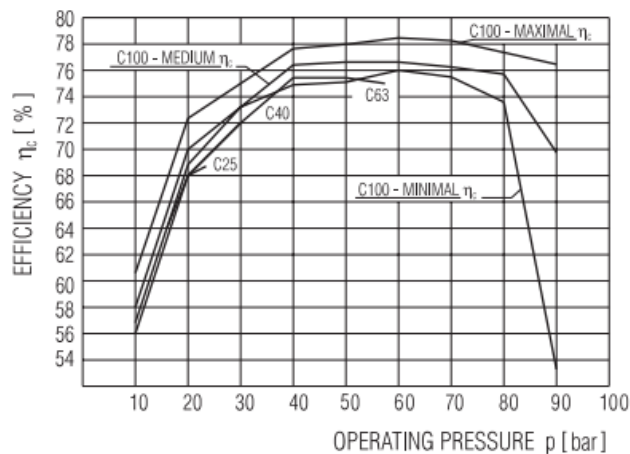
at $n = 1000 \text{ rpm}$



measured after 10 minutes at zero stroke



EFFICIENCY CURVE V3/25 - ($n = 1500 \text{ rpm}$, $t = 50^\circ\text{C}$)

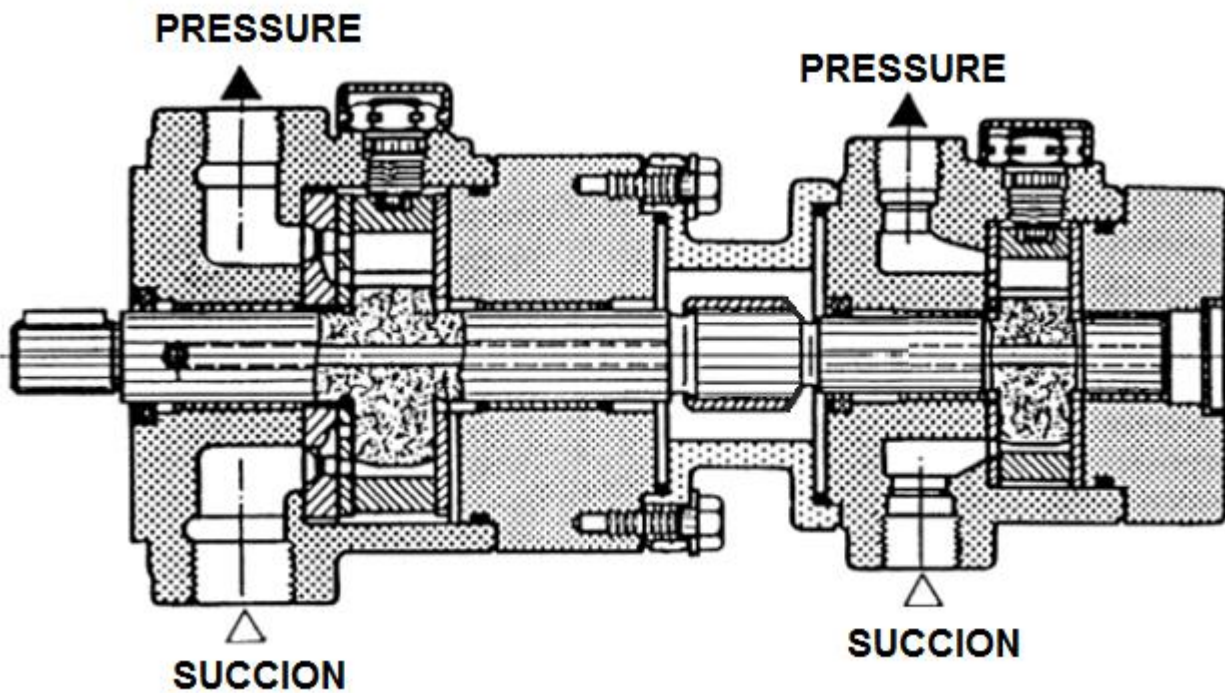


DATA FOR ORDERING MULTIPLE PUMPS – REAR PUMP

The pump combination V3 + V3 is composed of two variable displacement vane pumps. The front pump is flange or subplate mounted for systems hydraulics. Variable flow displacement is gained by means of the pressure compensator.

Because of this, loss of power in the circuit is kept to a minimum. For further details

on the individual pumps see the data cards of pumps V3. Both pumps are works from one common shaft. Their delivery flow varies from Q_{min} (zero) to Q_{max} as required by the user.



HD	1 PV	2	V3			R	G	1					
01	02	03	04	05	06	07	08	09	10	11	12	13	14

01	HD - Technology of Beijing Huade Hydraulic
----	---

02	1PV - One-flow pump with variable geometrical displacement
----	---

Mounting Method	
------------------------	--

03	2 – Flange (Standard)
	6 - Subplate

Series Number	
----------------------	--

05	for V3/12 i 25 (30 – 39)	Connection and installation dimensions remain unchanged
	for V3/40 i 63 (20 – 29)	

Nominal Size		
---------------------	--	--

06	WN12 + WN12	WN40 + WN40
	WN25 + WN12	WN63 + WN12
	WN25 + WN25	WN63 + WN25
	WN40 + WN12	WN63 + WN40
	WN40 + WN25	WN63 + WN63

Connection	
-------------------	--

9	1 – Threads
	8 - Subplate

Sealing	
----------------	--

10	M - For fluids on mineral oil base (Standard)
	V - For fluids on phosphate ester base

Pressure Setting	
-------------------------	--

11	C - With hexagon end screw (Standard)
	H - With square end screw
	S – Lockable pressure regulator

Zero stroke pressure range	
-----------------------------------	--

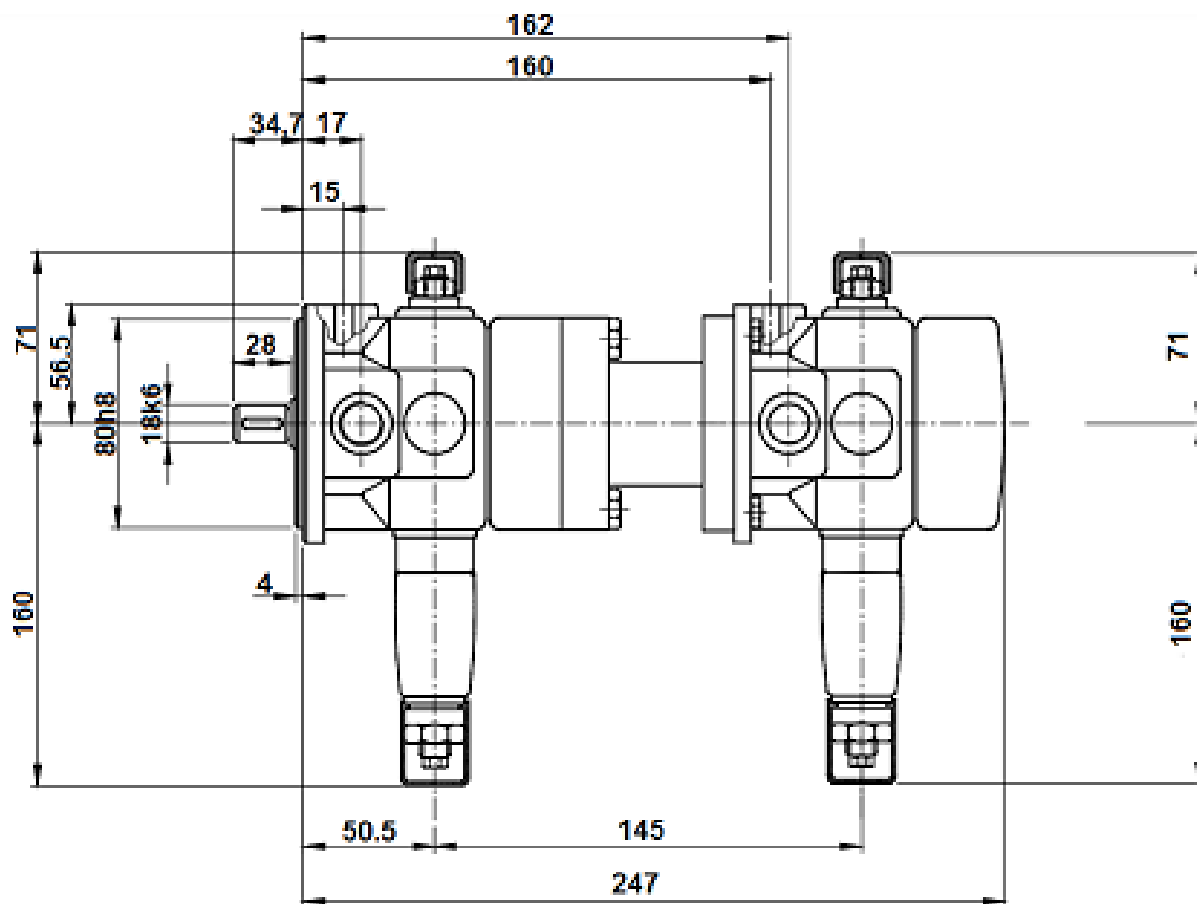
12	100 – 100 bar zero stroke pressure
	63 - 63 bar zero stroke pressure
	40 - 40 bar zero stroke pressure
	25 - 25 bar zero stroke pressure

Flow setting	
---------------------	--

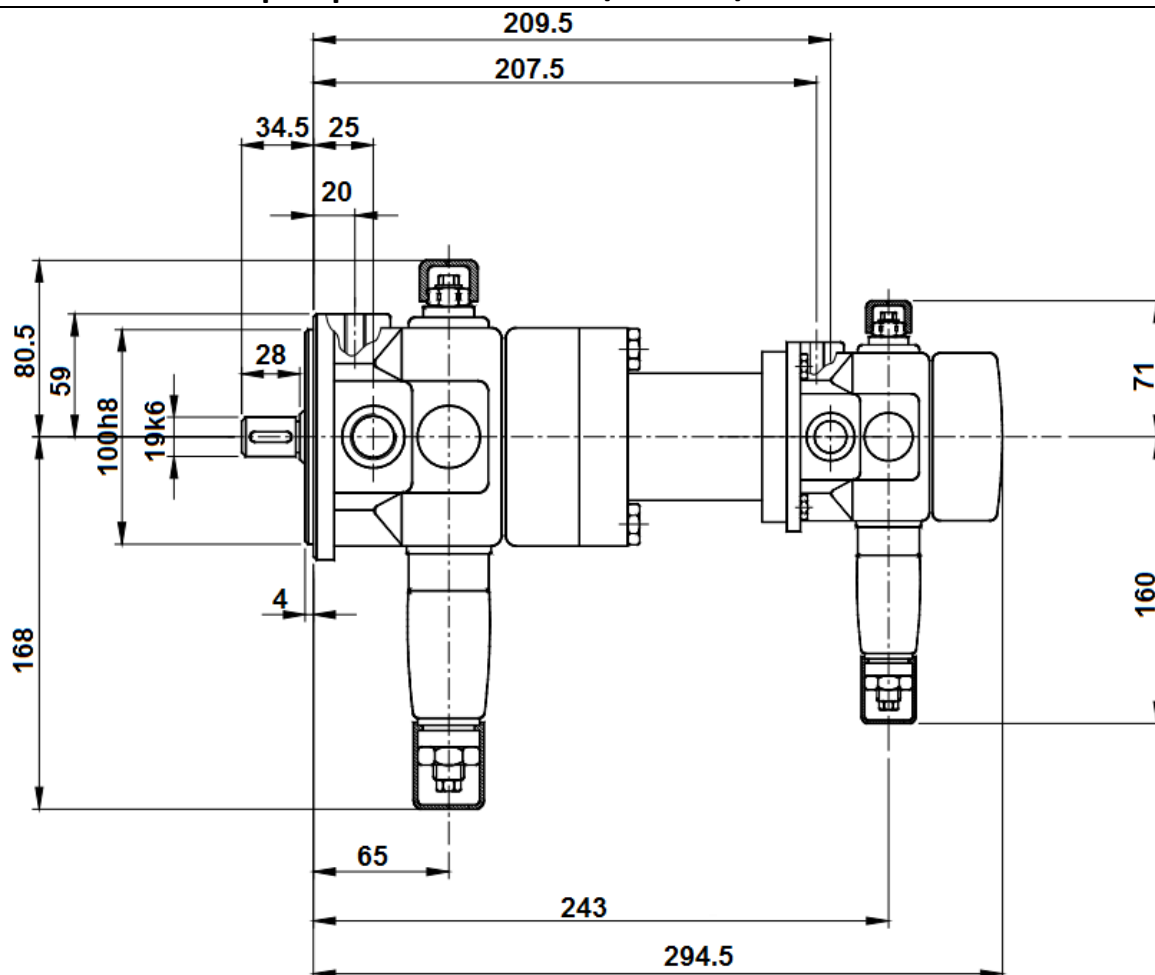
13	A - With hexagon end screw (Standard)
	H - With square end screw
	S – Lockable pressure regulator

14	Air bleed valve
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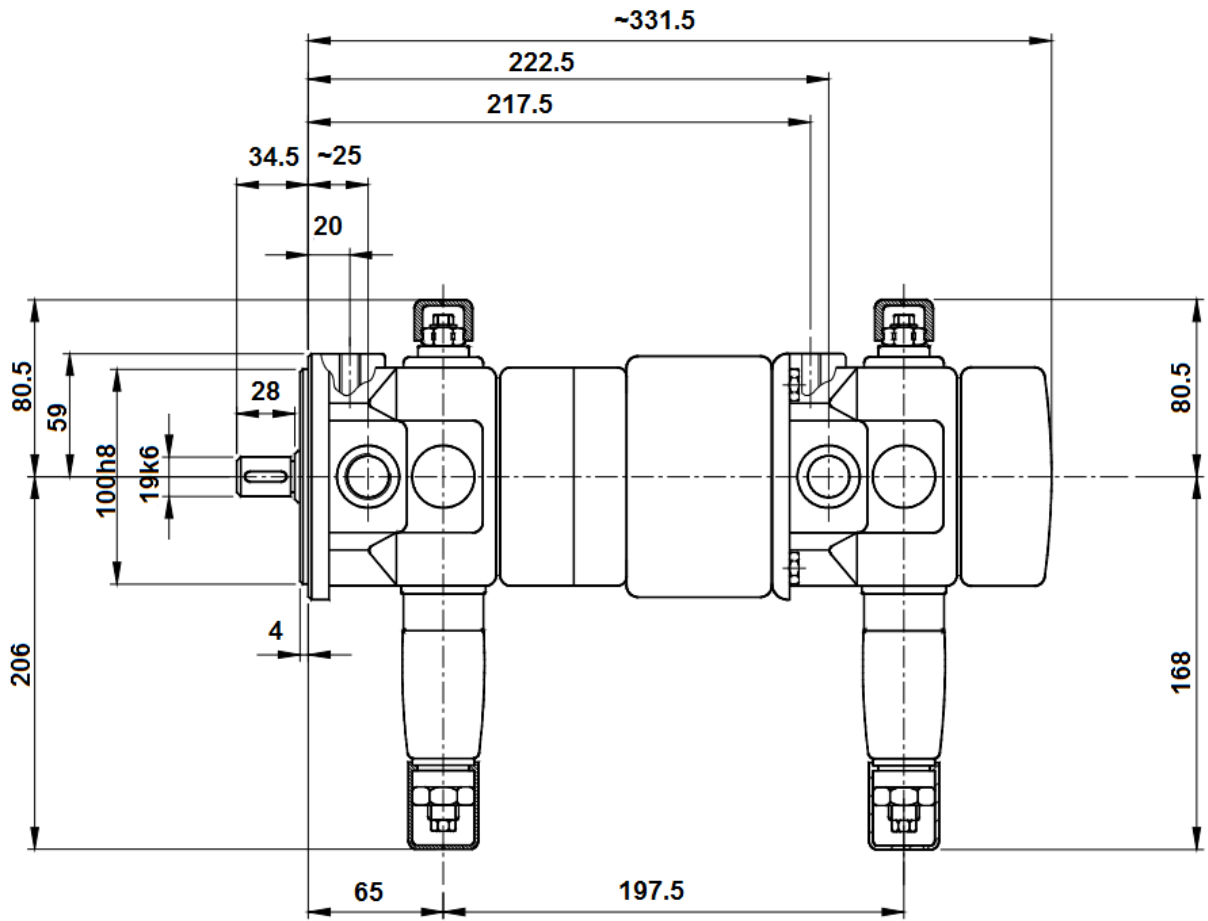
Overall dimensions for pump combination V3/12 + V3/12



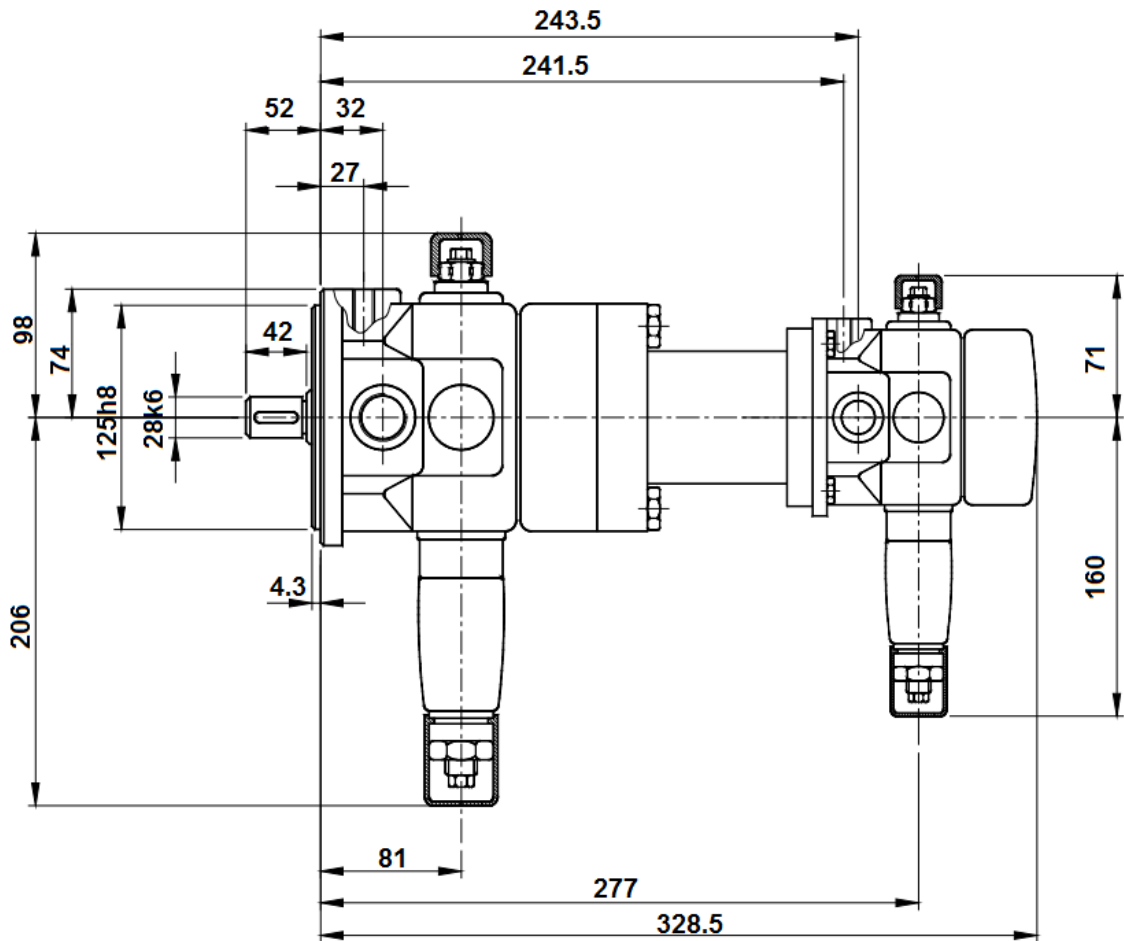
Overall dimensions for pump combination V3/25 + V3/12



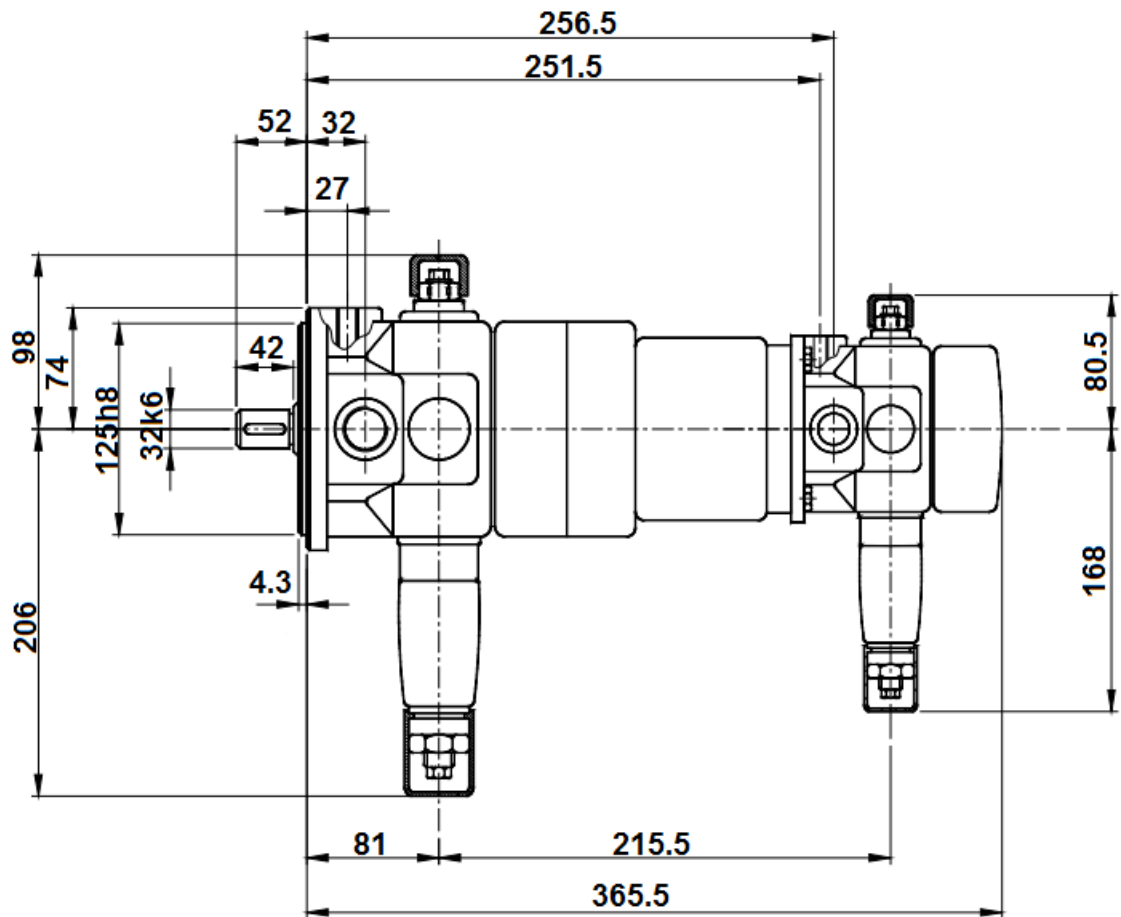
Overall dimensions for pump combination V3/25 + V3/25



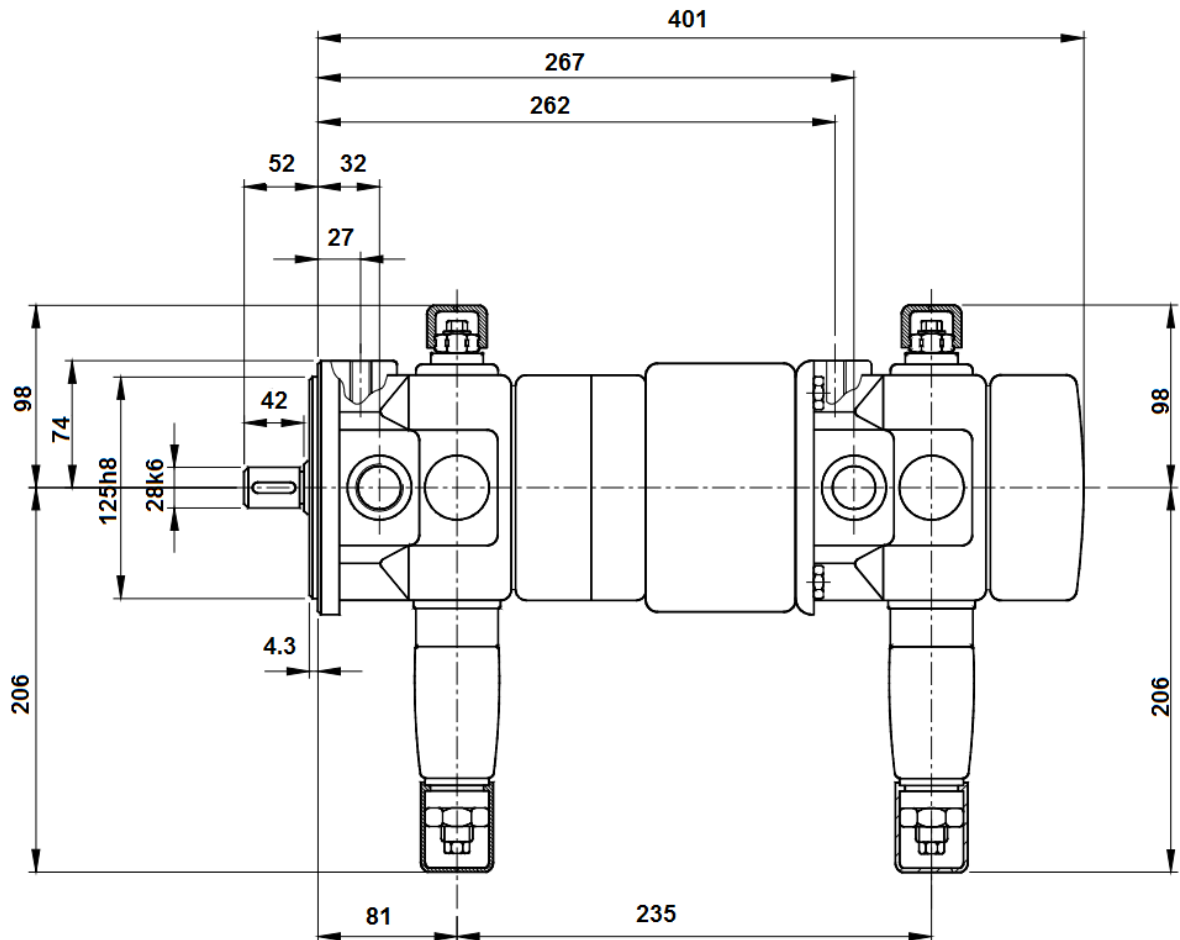
Overall dimensions for pump combination V3/40 + V3/12



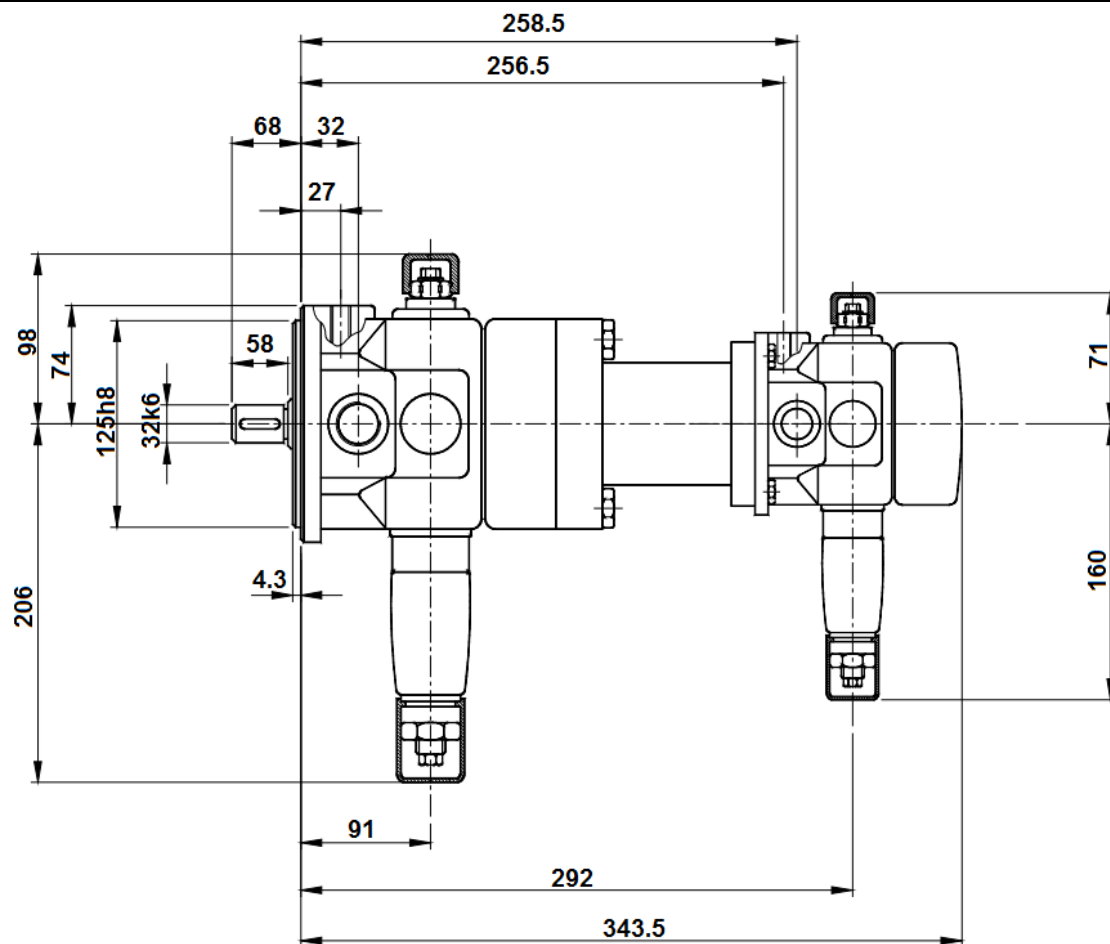
Overall dimensions for pump combination V3/40 + V3/25



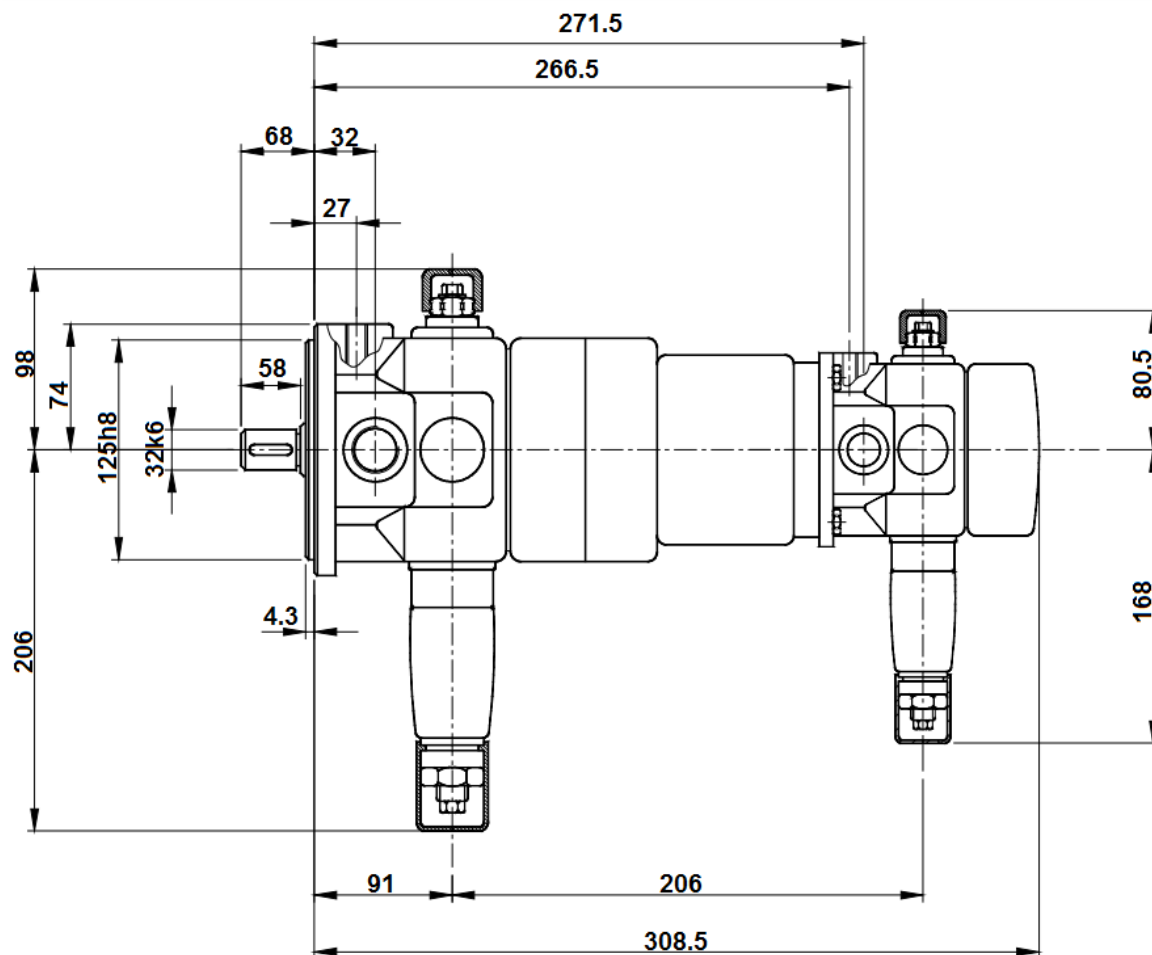
Overall dimensions for pump combination V3/40 + V3/40



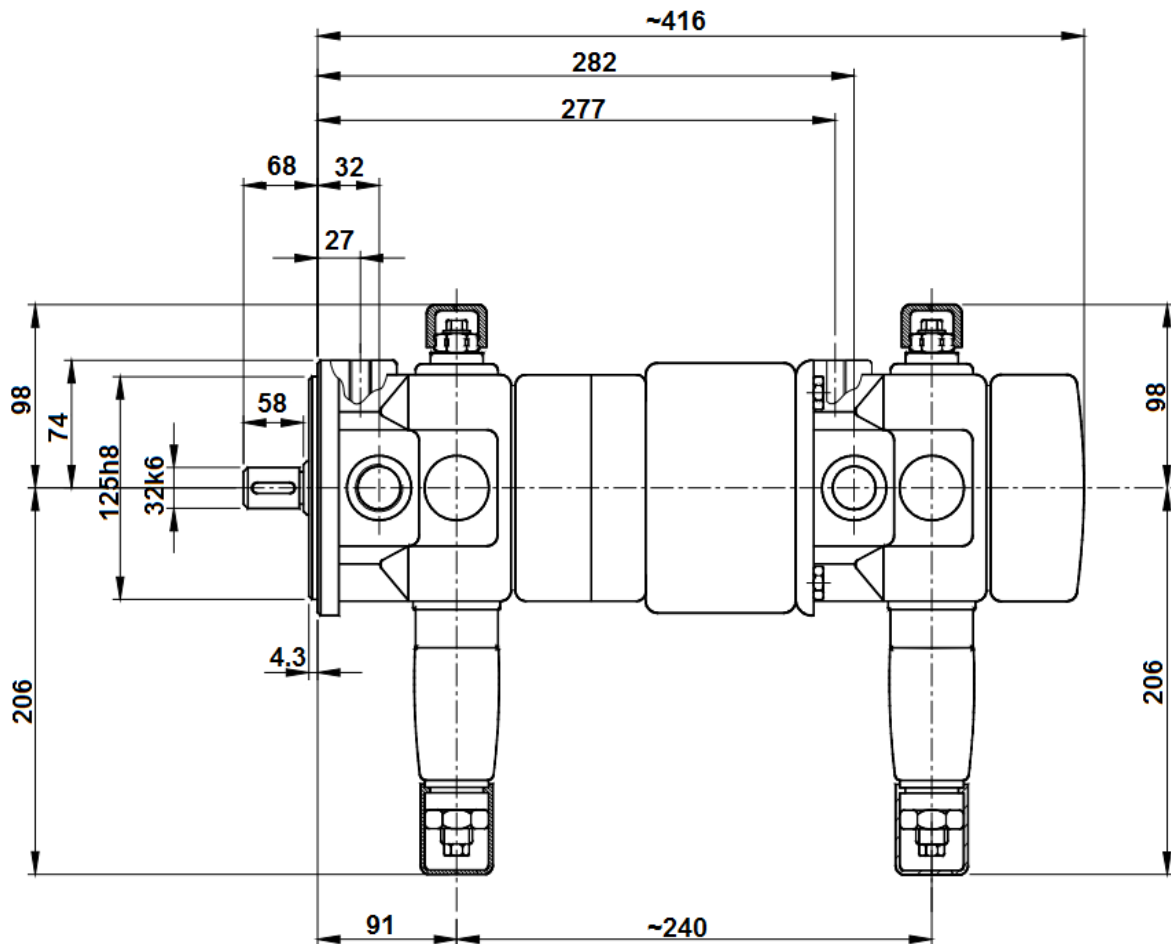
Overall dimensions for pump combination V3/63+ V3/12



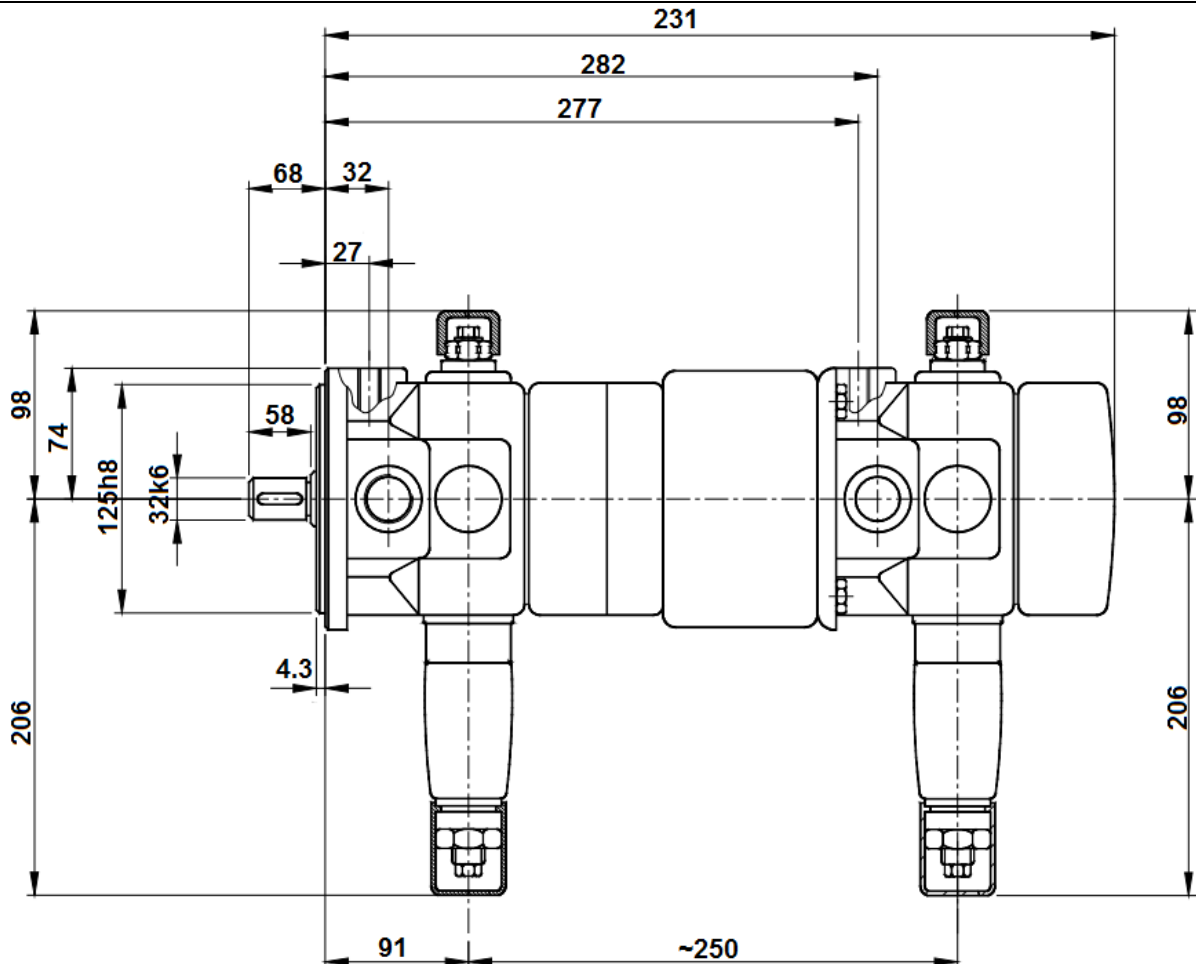
Overall dimensions for pump combination V3/63 + V3/25



Overall dimensions for pump combination V3/63 + V3/40



Overall dimensions for pump combination V3/63 + V3/63



ANNOTATIONS :

HUADE AMÉRICA

CEP : 03162-020

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