

TECHNICAL DATA

Displacement ⁽¹⁾	cm ³ /rev	46	50	64
Charge pump displacement	cm ³ /rev	13		
Max. speed ^(2, 3)	rpm	3600		
Min. speed	rpm	700		
Rated pressure	bar	250		
Peak pressure ^(3, 4)	bar	350		
Rated charge pressure	bar	15 ÷ 25		
Max. charge pressure	bar	35		
Max. case drain pressure ⁽⁵⁾	bar	2		
Suction pressure ⁽⁶⁾	bar	≥ 0,8		
Rotating parts moment of inertia	kg m ²	0,0046		
Drive shaft radial load	N	3000		
Drive shaft axial load	N	1500		
Oil operating temperature	°C	-25 ÷ 80		
Viscosity range at operating temperature ⁽⁷⁾	cSt	15 ÷ 60		
Max. permissible contamination level in circuit ⁽⁸⁾	according to ISO 4406:1999	20/18/15		
Filtering cartridge grade ⁽⁸⁾	µm	22		
Connection flange		SAE B		
Standard seals ⁽⁹⁾		NBR		
Installation position and direction		any		
Approx. weight	kg	29		

Notes:

(1) The same body is used for 46, 50 and 18 cm³ pumps. Displacement limitation can be obtained by means of two setting screws which limit the control piston stroke.

(2) Stated max. speed value is valid with suction inlet port absolute pressure of 1 bar, in case of use of mineral oil.

(3) Simultaneous operation at max. speed and max. pressure is not recommended.

(4) Peak operation must not exceed 1% of every minute.

For short periods or upon cold start:

(5) a case drain pressure of 6 bar is allowed. A higher pressure can damage the main shaft seal or reduce its life.

(6) an absolute suction pressure of 0,5 bar is allowed.

(7) a max. viscosity of 800 cSt or a viscosity range of 10 ÷ 15 cSt are allowed. Viscosities less than 10 cSt are not allowed. It is however suggested the use of anticorrosive and antioxidant mineral-base oil with wear-preventing additives.

(8) In order to improve the control of the fluid contamination levels, the pump can be equipped with a boost flow filter positioned on the delivery outlet of the boost pump. Only the flow necessary to reintegrate the oil lost due to leakage will pass through this filter. All the excess flow, which is discharged through the boost pump valve, is therefore not filtered to ensure a longer life of the filter cartridge.

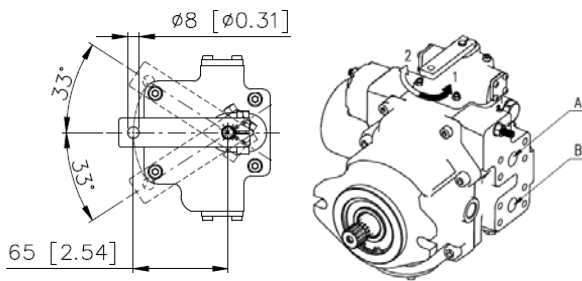
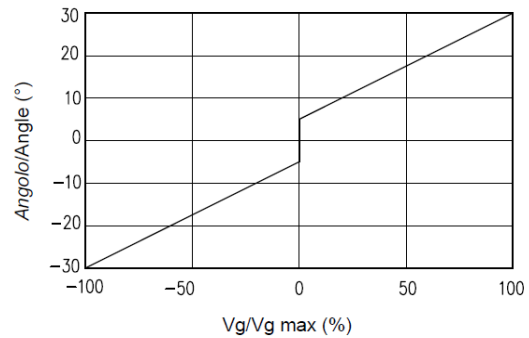
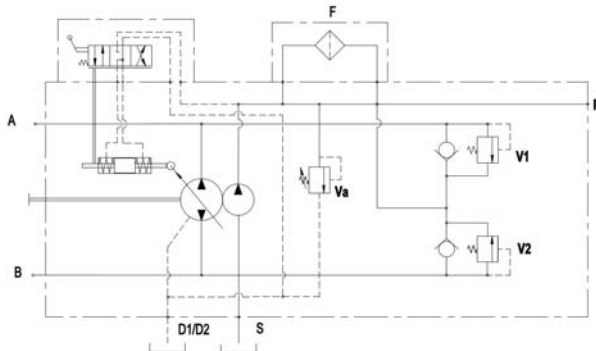
(9) Specific seals are required in case of use of special fluids: in this event, please contact Lutz-Hydraulik.

CONTROLS

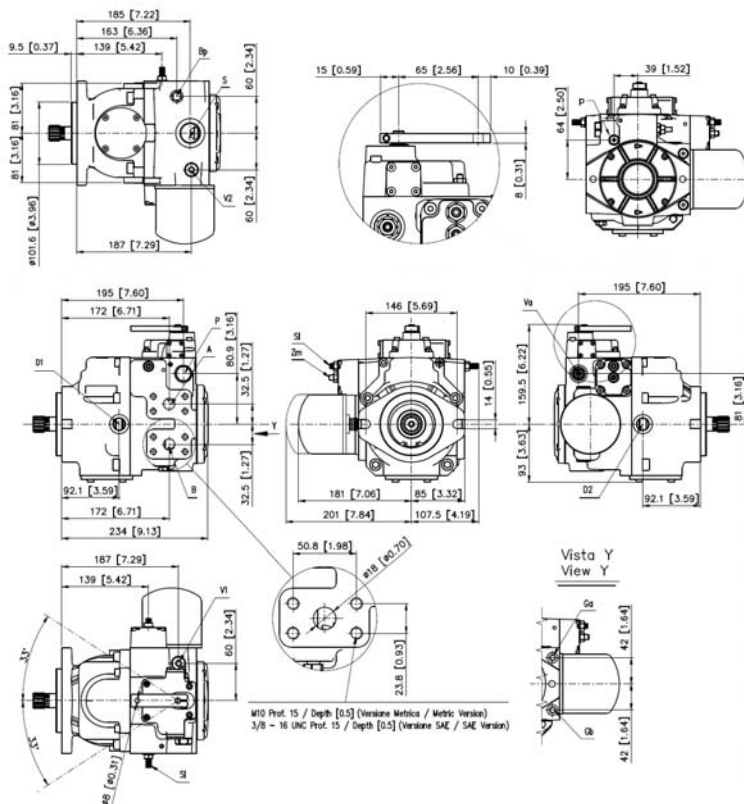
Manual lever with feedback

LF

The pump displacement variation is achieved through a pilot pressure, which can be provided by charge pressure port and can be controlled by a joystick or by a pressure reducing valve (not included).



Necessary torque to turn the control lever	Minimum		Nm	0,6
	Maximum		Nm	1,2
Control lever max. torque			Nm	3,0
Control lever rotation	1		2	
Shaft rotation	CW	CCW	CW	CCW
Oil outlet port	B	A	A	B



	Ports	Metric threads	SAE threads
A B	Pressure	3/4" SAE 6000	3/4" SAE 6000
Ga Gb	Pressure gauge	1/8" G (BSPP)	5/16" 24 UNF - 2B
D1 D2	Drain	1/2" G (BSPP)	3/4" 16 UNF - 2B
S	Suction	1" G (BSPP)	1 5/16" 12 UNF - 2B
P	Charge pressure gauge	3/4 - 16 UNF - 2B	3/4" 16 UNF - 2B
p	Charge pressure	1/8" G (BSPP)	7/16" 20 UNF - 2B

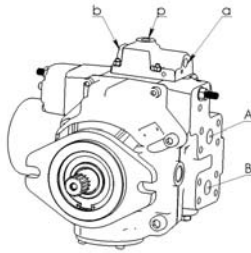
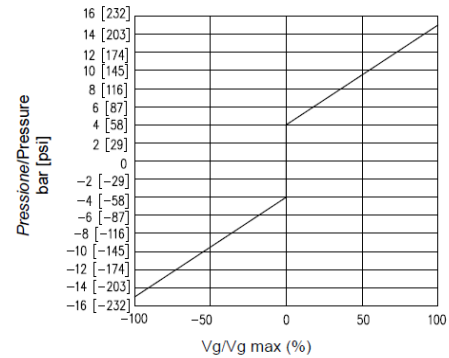
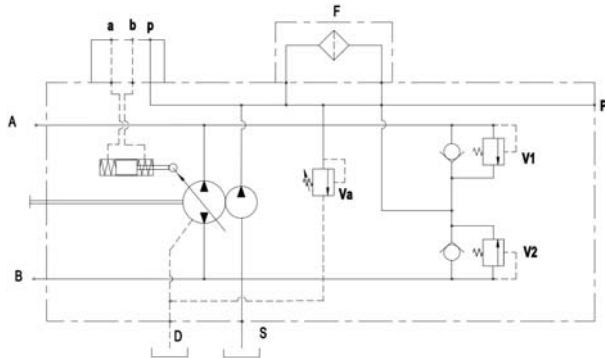
	Valves
Va	Charge pump
V1 V2	Pressure relief
Bp	By-pass
Sl	Stroke limiter
Zm	Zero adjustment screw

CONTROLS

Hydraulic proportional without feedback

H

The pump displacement variation is achieved through a pilot pressure, which can be provided by charge pressure port and can be controlled by a joystick or by a pressure reducing valve (not included).

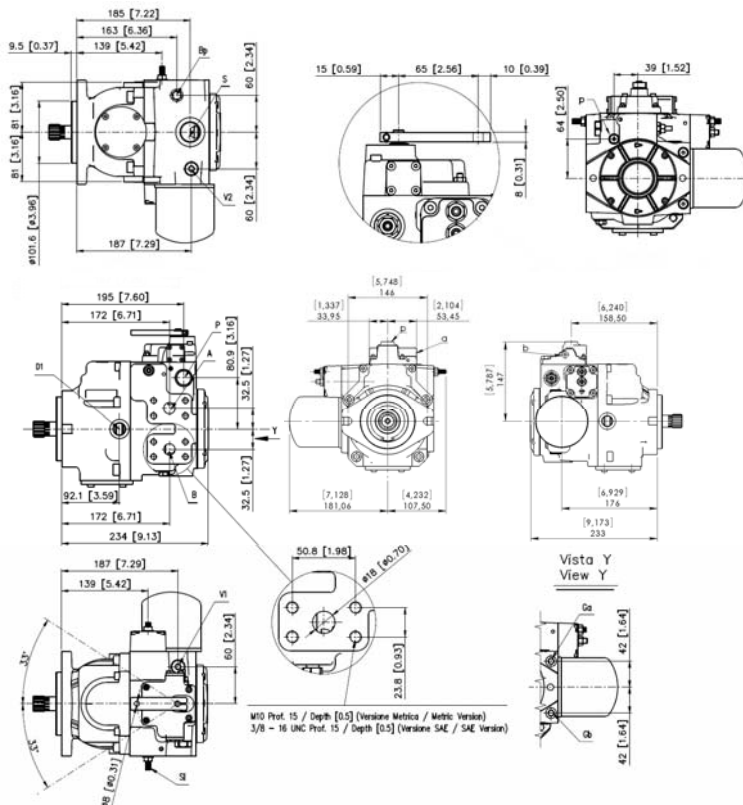


Max. pilot pressure	bar	30
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Pressurized pilot port	a		b	
Shaft rotation	CW	CCW	CW	CCW
Oil outlet port	B	A	A	B

	Ports	Metric threads	SAE threads
A B	Pressure	3/4" SAE 6000	3/4" SAE 6000
Ga Gb	Pressure gauge	1/8" G (BSPP)	5/16" 24 UNF - 2B
a b	Pilot pressure	1/8" G (BSPP)	7/16" 20 UNF - 2B
D1 D2	Drain	1/2" G (BSPP)	3/4" 16 UNF - 2B
S	Suction	1" G (BSPP)	1 5/16" 12 UNF - 2B
P	Charge pressure gauge	3/4 - 16 UNF - 2B	3/4" 16 UNF - 2B
p	Charge pressure	1/8" G (BSPP)	7/16" 20 UNF - 2B

	Valves
Va	Charge pump
V1 V2	Pressure relief
Bp	By-pass
Sl	Stroke limiter
Zm	Zero adjustment screw

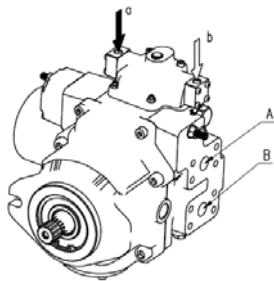
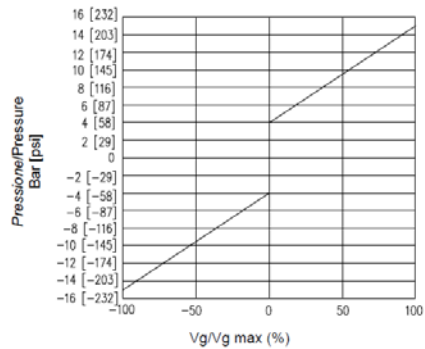
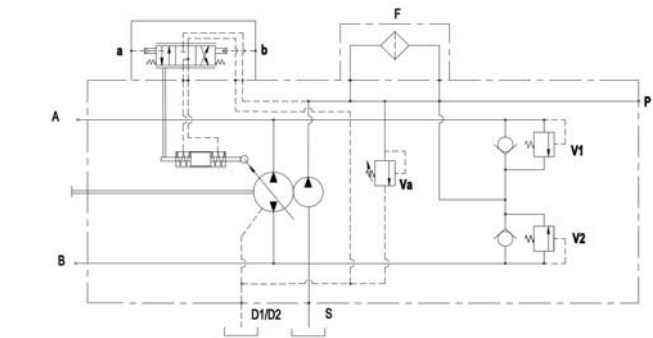


CONTROLS

Hydraulic proportional with feedback

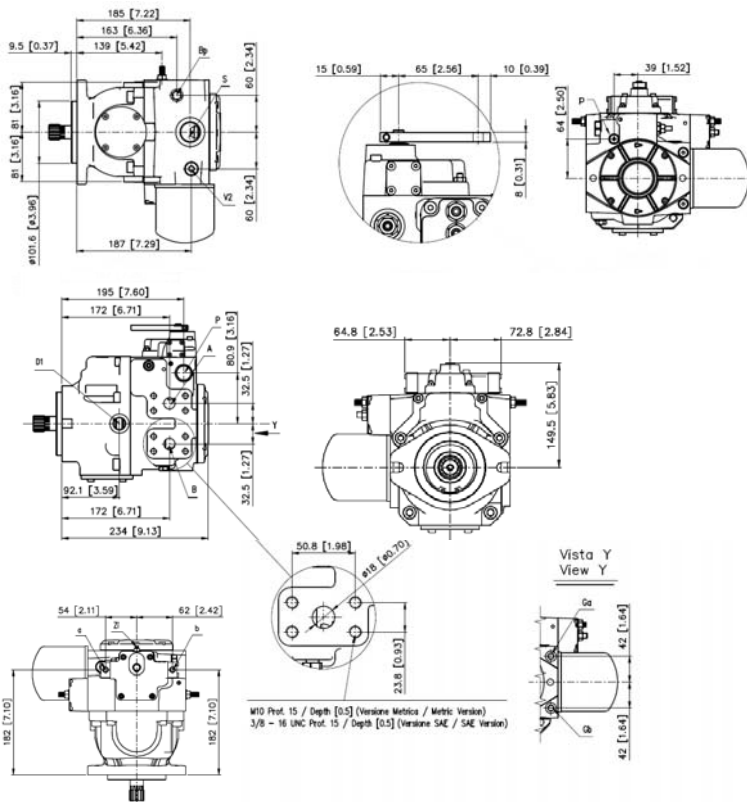
HF

The pump displacement variation is achieved through a pilot pressure, which can be provided by charge pressure port and can be controlled by a joystick or by a pressure reducing valve (not included).



Max. pilot pressure	bar	25
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Pressurized pilot port	a		b	
Shaft rotation	CW	CCW	CW	CCW
Oil outlet port	A	B	B	A



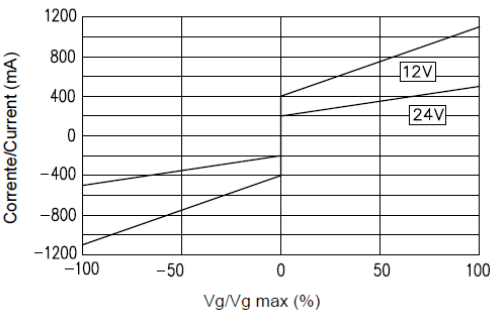
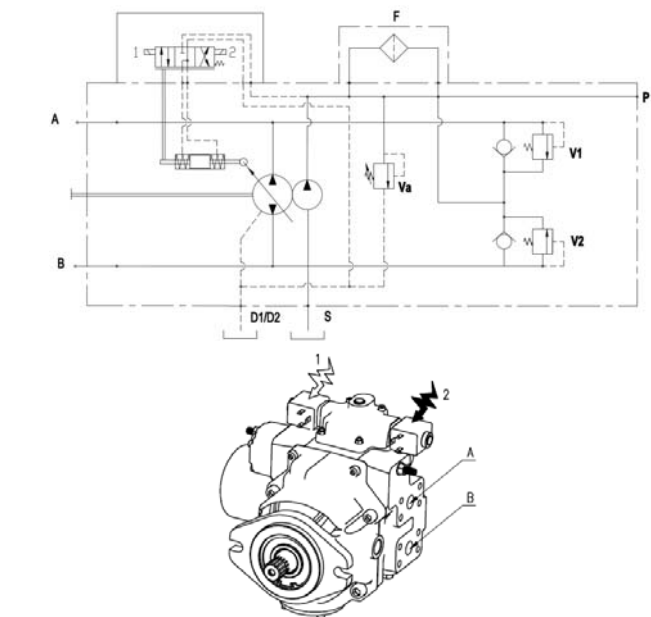
	Ports	Metric threads	SAE threads
A B	Pressure	3/4" SAE 6000	3/4" SAE 6000
Ga Gb	Pressure gauge	1/8" G (BSPP)	5/16" 24 UNF - 2B
a b	Pilot pressure	1/8" G (BSPP)	7/16" 20 UNF - 2B
D1 D2	Drain	1/2" G (BSPP)	3/4" 16 UNF - 2B
S	Suction	1" G (BSPP)	1 5/16" 12 UNF - 2B
P	Charge pressure gauge	3/4 -16 UNF - 2B	3/4" 16 UNF - 2B
p	Charge pressure	1/8" G (BSPP)	7/16" 20 UNF - 2B

Valves	
Va	Charge pump
V1 V2	Pressure relief
Bp	By-pass
SI	Stroke limiter
Zm	Zero adjustment screw

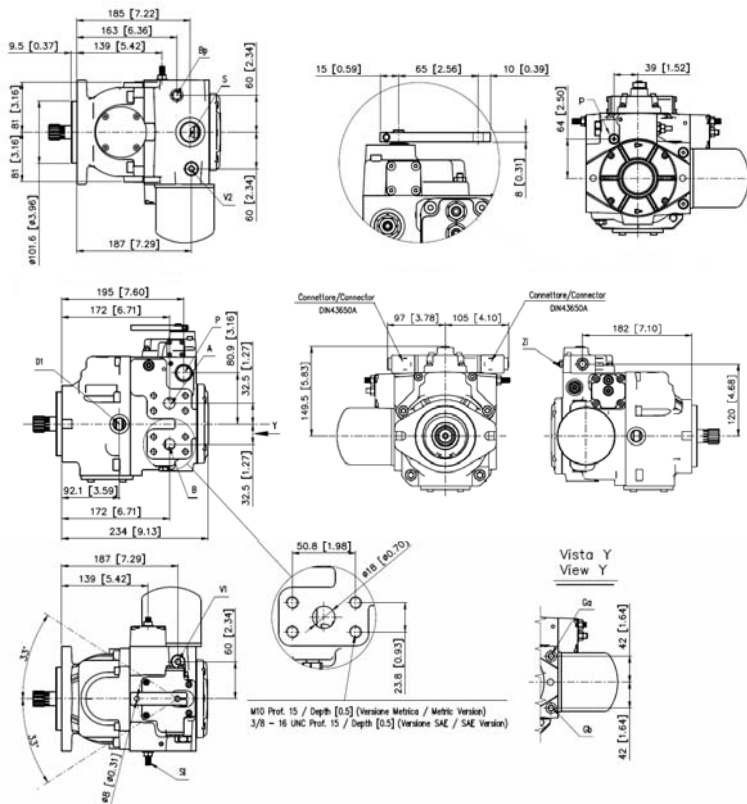
CONTROLS

Electric proportional with feedback

EF



Energized solenoid	1		2	
Shaft rotation	CW	CCW	CW	CCW
Oil outlet port	A	B	B	A



Ports		Metric threads	SAE threads
A B	Pressure	3/4" SAE 6000	3/4" SAE 6000
Ga Gb	Pressure gauge	1/8" G (BSPP)	5/16" 24 UNF - 2B
D1 D2	Drain	1/2" G (BSPP)	3/4" 16 UNF - 2B
S	Suction	1" G (BSPP)	1 5/16" 12 UNF - 2B
P	Charge pressure gauge	3/4 -16 UNF - 2B	3/4" 16 UNF - 2B
p	Charge pressure	1/8" G (BSPP)	7/16" 20 UNF - 2B

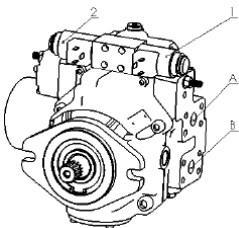
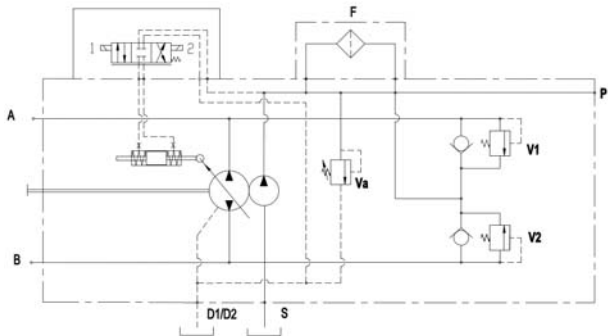
Valves	
Va	Charge pump
V1 V2	Pressure relief
Bp	By-pass
SI	Stroke limiter
Zm	Zero adjustment screw

CONTROLS

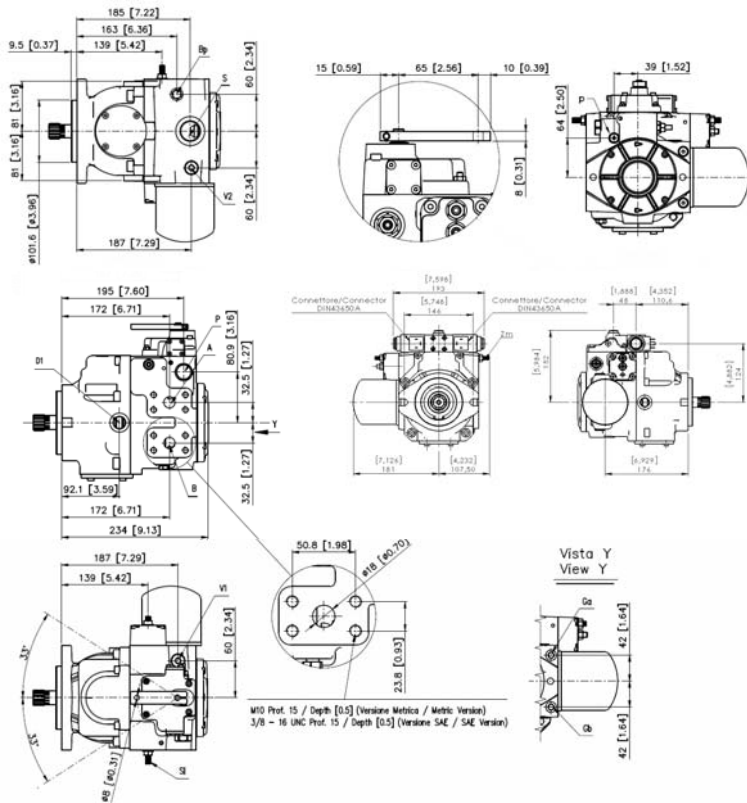
Electric impulse

EI

The pump displacement variation is achieved through inputs of current to one of the two proportional solenoids. There is no zeroing spring, therefore the piston of the servo-control stays in position until a new input of current is given to one of two solenoids.



Energized solenoid	1		2	
Shaft rotation	CW	CCW	CW	CCW
Oil outlet port	A	B	B	A



	Ports	Metric threads	SAE threads
A B	Pressure	3/4" SAE 6000	3/4" SAE 6000
Ga Gb	Pressure gauge	1/8" G (BSPP)	5/16" 24 UNF - 2B
D1 D2	Drain	1/2" G (BSPP)	3/4" 16 UNF - 2B
S	Suction	1" G (BSPP)	1 5/16" 12 UNF - 2B
P	Charge pressure gauge	3/4 -16 UNF - 2B	3/4" 16 UNF - 2B
p	Charge pressure	1/8" G (BSPP)	7/16" 20 UNF - 2B

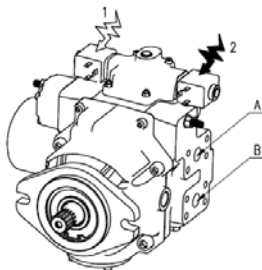
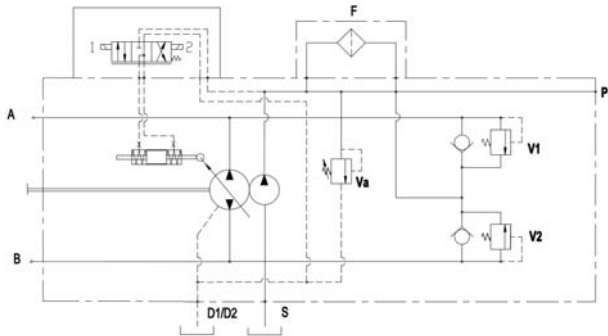
Valves	
Va	Charge pump
V1 V2	Pressure relief
Bp	By-pass
SI	Stroke limiter
Zm	Zero adjustment screw

CONTROLS

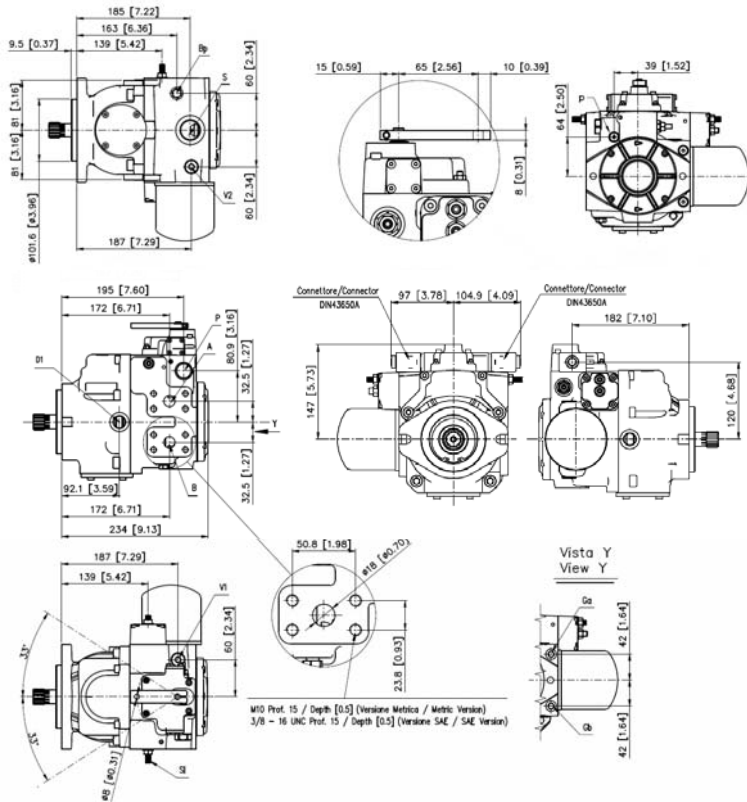
Electric 2 positions

ET

The pump displacement variation is achieved through inputs of current to one of the two proportional solenoids. There is no zeroing spring, therefore the piston of the servo-control stays in position until a new input of current is given to one of two solenoids.



Energized solenoid	1		2	
Shaft rotation	CW	CCW	CW	CCW
Oil outlet port	A	B	B	A

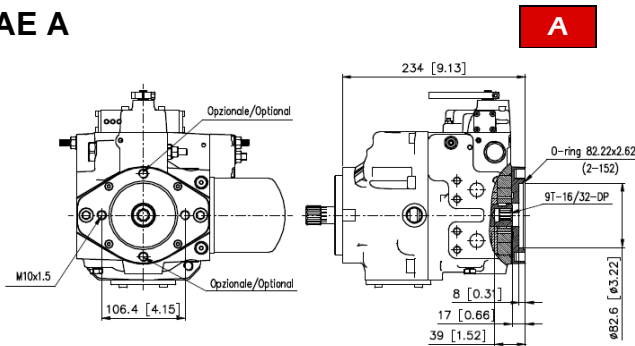


	Ports	Metric threads	SAE threads
A B	Pressure	3/4" SAE 6000	3/4" SAE 6000
Ga Gb	Pressure gauge	1/8" G (BSPP)	5/16" 24 UNF - 2B
D1 D2	Drain	1/2" G (BSPP)	3/4" 16 UNF - 2B
S	Suction	1" G (BSPP)	1 5/16" 12 UNF - 2B
P	Charge pressure gauge	3/4 -16 UNF - 2B	3/4" 16 UNF - 2B
P	Charge pressure	1/8" G (BSPP)	7/16" 20 UNF - 2B

Valves	
Va	Charge pump
V1 V2	Pressure relief
Bp	By-pass
SI	Stroke limiter
Zm	Zero adjustment screw

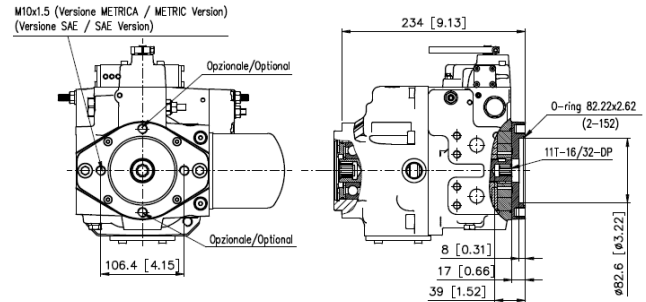
THROUGH DRIVES

SAE A



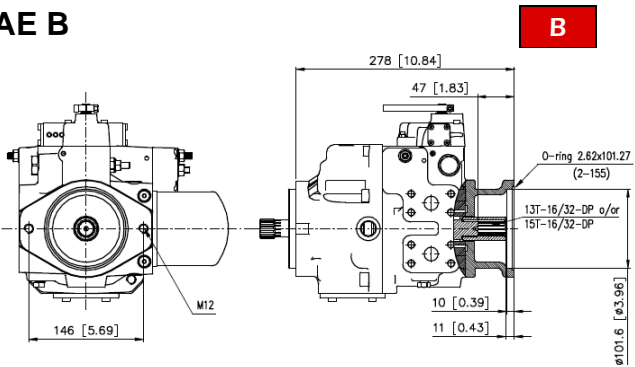
A

SAE A-A



AA

SAE B



B

TANDEM PUMPS

46	46
50	50
64	64

+

"Short version"

THROUGH DRIVE

1st pump 2nd pump

T

SHAFT

1st pump 2nd pump

15B

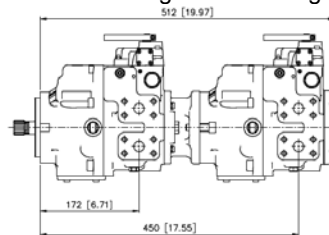
N
A
B
AA
BB

I13
I13A

46	46
50	50
64	64

+

Assembled through SAE B flange



THROUGH DRIVE

1st pump 2nd pump

B

SHAFT

1st pump 2nd pump

15B

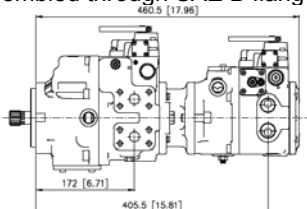
N
A
B
AA
BB

15

46	21
50	28
64	

+

Assembled through SAE B flange



THROUGH DRIVE

1st pump 2nd pump

B

SHAFT

1st pump 2nd pump

15B

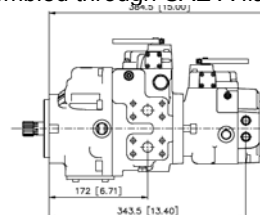
N
A
B

15

46	14
50	18
64	

+

Assembled through SAE A flange



THROUGH DRIVE

1st pump 2nd pump

A

SHAFT

1st pump 2nd pump

15B

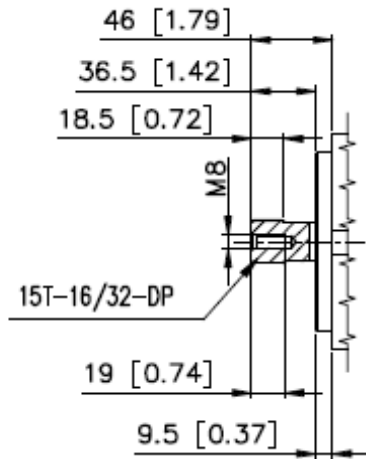
N
1
2
A

09
09B

SHAFTS

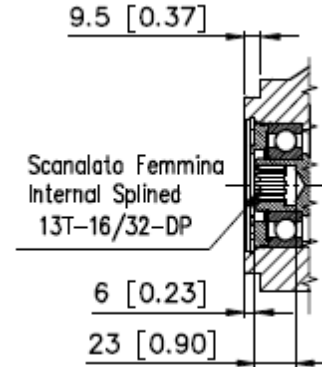
Splined 15 teeth 16/32 pitch

15
S15B



Internal Splined 13 teeth 16/32 pitch

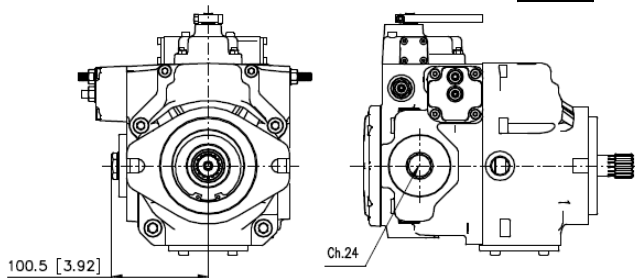
I13
I13A



OPTIONS

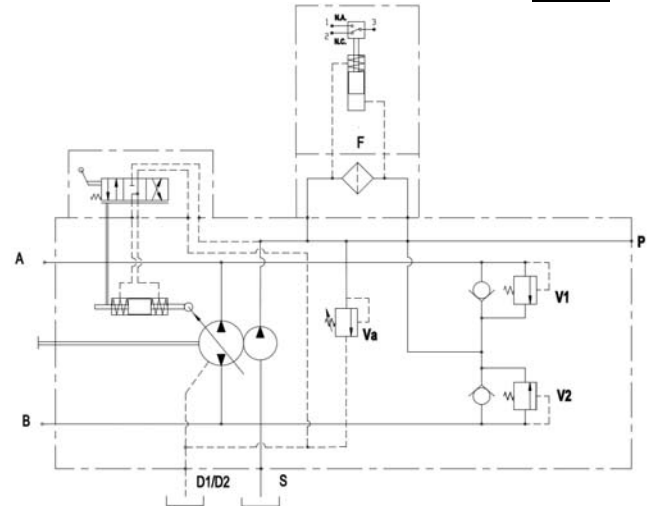
No filter

F



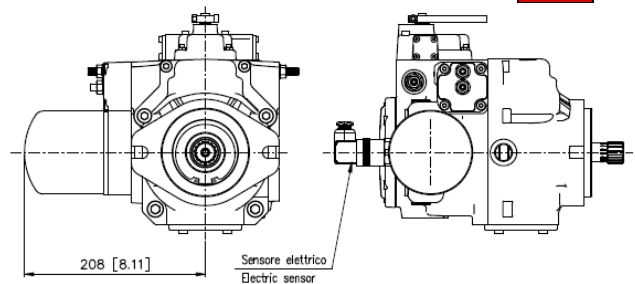
Filter

F



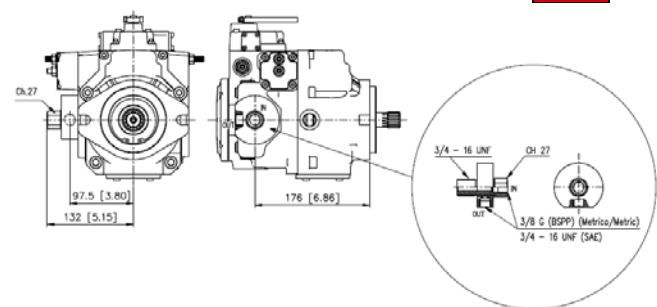
Filter with electric sensor

FE



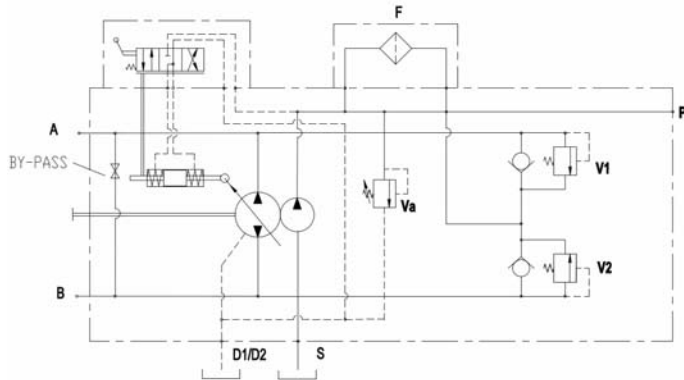
Remote filter fitting

FR

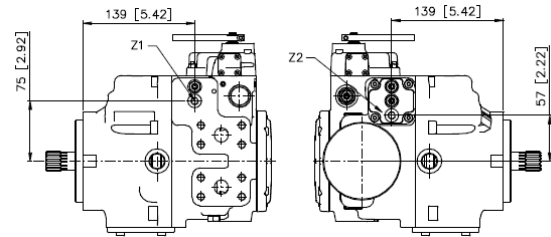
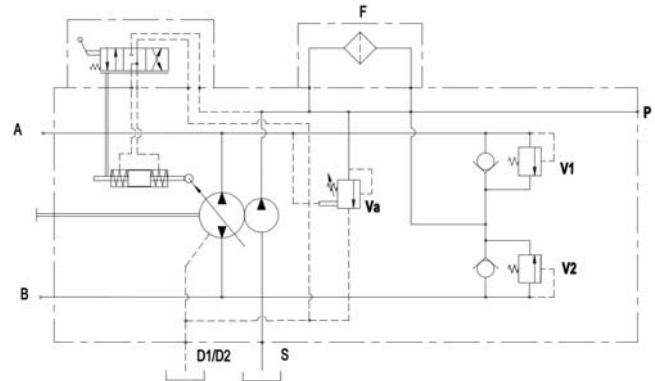


OPTIONS

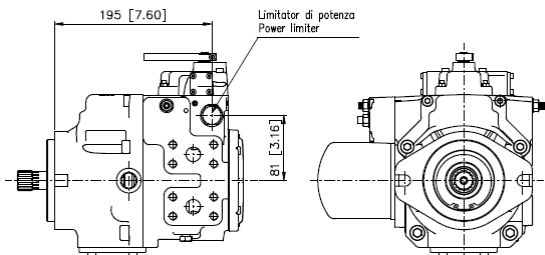
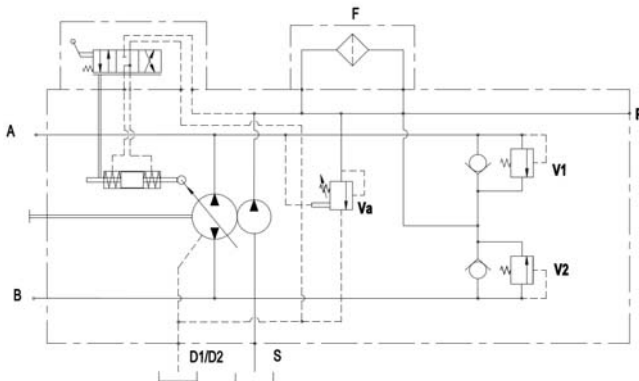
By-pass

B


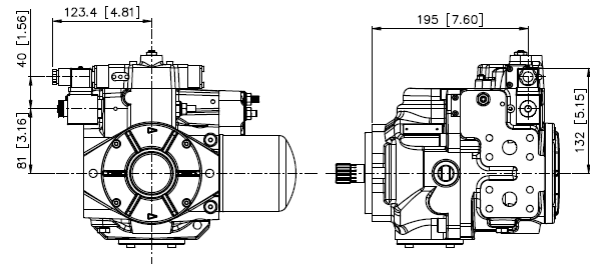
Add. control pressure gauge ports

G


Power limiter

L


Electric cut-off valve

C


MODEL CODE

ASL __ (-__) -(___) -(_) - (_)__ (_) - (_ _ _ _)
 1 2 3 4 5 6 7 8 9 10

1. SERIES

ASL

2. NOMINAL DISPLACEMENT

46 cm ³	46
50 cm ³	50
64 cm ³	64

3. DISPLACEMENT LIMITATION

Without limitation	(no code)
Displacement in cm ³ /rev (up to 45, 49 or 63 cm ³ /rev)	- __

4. CONTROL

Manual lever with feedback	LF
Hydraulic proportional without feedback	H
Hydraulic proportional with feedback	HF
Electric proportional without feedback – Voltage in V (either 12 V or 24 V)	E__
Electric proportional with feedback – Voltage in V (either 12 V or 24 V)	EF__
Electric impulse – Voltage in V (either 12 V or 24 V)	EI__
Electric 2 positions – Voltage in V (either 12 V or 24 V)	ET__
Electro-hydraulic – Voltage in V (either 12 V or 24 V)	EH__
Automotive	A

SHAFT END

5. THROUGH DRIVE

	15	15B	I13	I13A	
No through drive	•		•		N
SAE A	•		•		A
SAE B				•	B
SAE A-A	•				AA
SAE B-B		•			BB
Tandem short version		•			T

6. PRESSURE RELIEF VALVE

Pressure in bar : 10 (e.g.: 17 for 170 bar, 20 for 200 bar and so on; from 140 bar to 400 bar)	__
------------------------------------------------------------------------------------------------	----

MODEL CODE

ASL _ _ (_ _ _) _ (_ _ _) _ (_) _ _ _ (_) _ _ (_) _ (_ _ _ _ _)
 1 2 3 4 5 6 7 8 9 10

7. ROTATION DIRECTION

CW	R
CCW	L

8. SHAFT END

	Single pump	Tandem 1 st pump	Tandem 2 nd pump	
Splined 15 teeth 16/32 pitch, standard, for SAE A and SAE A-A through drives	•	•	•	15
Splined 15 teeth 16/32 pitch, for SAE B and SAE B-B t.d. and tandem “short version”	•	•		15B
Splined 13 teeth 16/32 pitch, standard	•		•	13
Internal Splined 13 teeth 16/32 pitch, standard			•	I13
Internal Splined 13 teeth 16/32 pitch, for SAE A-A through drive	•		•	I13A

9. PORT THREADS

Metric (BSPP)	M
SAE (UNF) – only for orders of at least 100 pieces	S

10. OPTIONS – more than one can be chosen

No options	N
Filter	F
Filter with electric sensor	FE
Remote filter fitting	FR
By-pass	B
Additional control pressure gauge ports	G
Exchange valve	V
Hydraulic inching	IH
Mechanical inching	IM
Power limiter – Destroke pressure in bar : 10 (either 270 bar or 320 bar, i.e.: 27 for 370 bar, 32 for 320 bar)	L__
Electric cut-off valve – Voltage in V (either 12 V or 24 V)	C__
Operator safety – Voltage in V (either 12 V or 24 V; not available with “Tandem short version”)	S__

For tandem pumps, both pumps model codes must be stated, divided by a “+”

EXAMPLES

ASL64 LF A 27 R 15 M N ASL64-58 E12 B 35 L 13 M F V ASL50 H B 40 R 15B M F + ASL46 H AA 40 R 15 M F