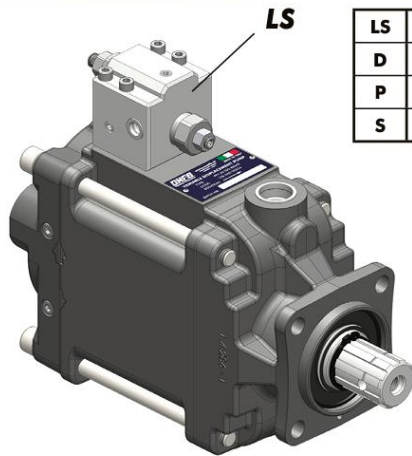


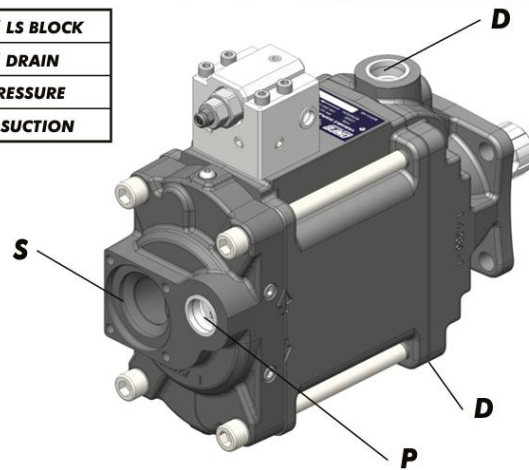
**POMPE A CILINDRATA
VARIABILE
VARIABLE DISPLACEMENT
PUMPS**

**FAMIGLIA
FAMILY**

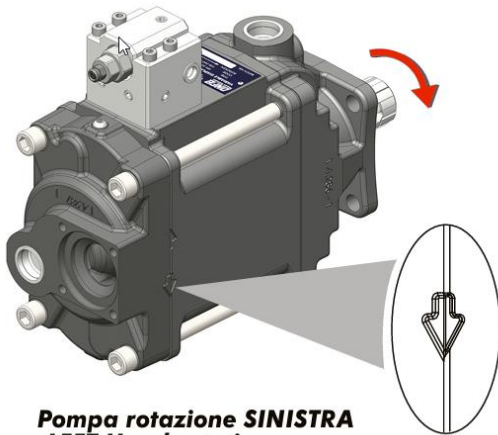
**PPV 60
PPV 90
PPV 110
PPV 130**



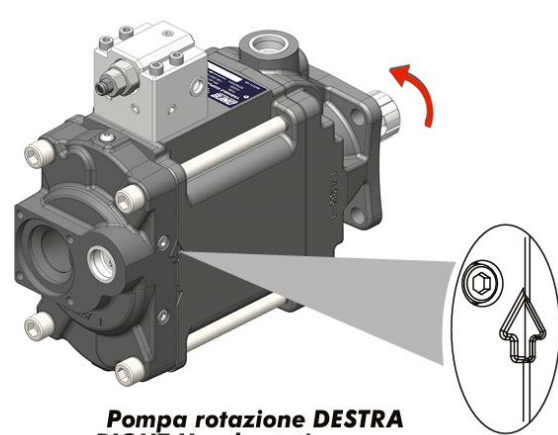
LS	BLOCCHETTO LS/ LS BLOCK
D	DRENAGGIO / DRAIN
P	PRESSIONE / PRESSURE
S	ASPIRAZIONE / SUCTION



The OMFB variable displacement axial piston pump has got a swash plate. The displacement of the pump depends on the stroke of the pistons, which is determined by the inclination of the swash plate. At the start, the pump is at its maximum displacement position because of the springs pushing against the swash plate. The displacement of the pump is reduced by means of two pistons hydraulically operated that win the force of the springs. The cylinders block rotates together with the shaft forcing the pistons to rotate at the same speed of the shaft and make a circular path on the swash plate that causes the reciprocating movement. In this way, the pump is able to deliver from the maximum to zero flow rate. The variation of the displacement is controlled by a regulator, which is fitted on the pump itself. These pumps are designed to operate in open circuit. They allow very quick reaction time and thanks to its compact size they can be coupled directly onto PTO's of commercial vehicles. When ordering please specify the required direction of rotation.



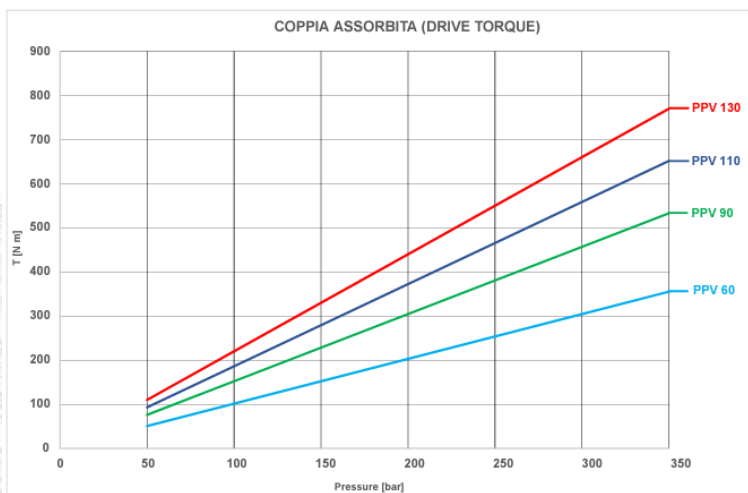
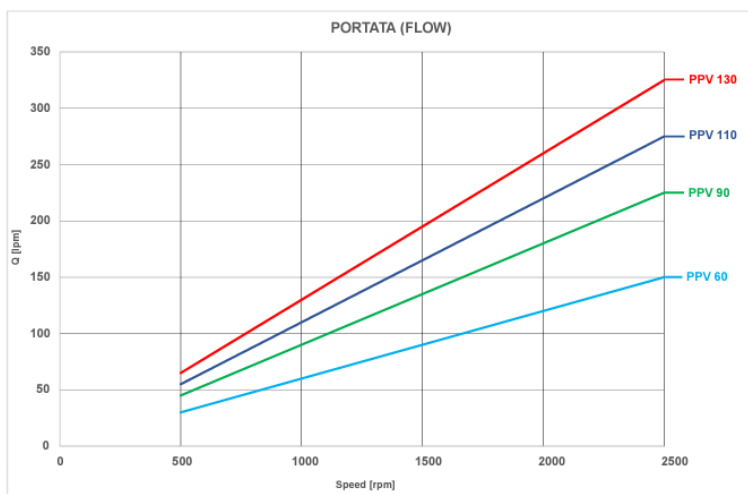
**Pompa rotazione SINISTRA
LEFT Hand rotating pump**



**Pompa rotazione DESTRA
RIGHT Hand rotating pump**

POMPE A CILINDRATA VARIABILE / VARIABLE DISPLACEMENT PUMPS

DATI TECNICI / TECHNICAL FEATURES	PPV60	PPV90	PPV110	PPV130
Portata / Flow	60 l/min.	90 l/min.	110 l/min.	130 l/min.
Angolo di regolazione massima / Max. swash plate angle	21,5°			
Pressione di lavoro / Working pressure	Continua Continuous	Intermittente Intermittent	Continua Continuous	Intermittente Intermittent
	375 bar	400 bar	375 bar	400 bar
Pressione d'ingresso assoluta necessaria nel circuito aperto Absolute inlet pressure required in open circuit	0,85 bar			
Pressione massima ammissibile sul corpo (statica/dinamica) Max. permissible housing pressure (static/dynamic)	1 bar	3 bar		
Pressione d'ingresso massima ammissibile Max. permissible inlet pressure (static/dynamic)	2 bar			
Numero di giri max. con angolo di regolazione max. a una pressione d'ingresso assoluta di 1 bar. / Max. speed during suction operation and max. swash plate angle at 1 bar abs. Inlet pressure	2500 rpm	2300 rpm	2200 rpm	2100 rpm
Numero giri max. in annullamento e pressione d'ingresso assoluta 1 bar. / Max. speed with zero stroke and 1 bar abs. Inlet pressure	3000 rpm			
Numero di giri minimo in funzionamento continuo Min. speed in continuous operation	500 rpm			
Coppia motrice necessaria a 100 bar Required drive torque at 100 bar	100 Nm	150 Nm	185 Nm	220 Nm
Potenza motrice a 250 bar e 2.000 rpm Drive power at 250 bar and 2000 rpm	53 kW	80 kW	100 kW	145 kW
Peso / Weight	24 Kg	29 Kg	30 Kg	27 Kg

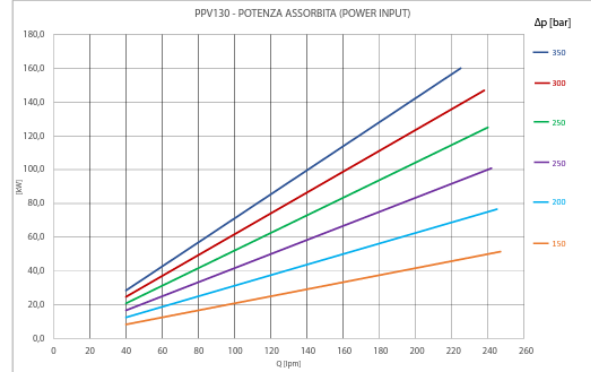
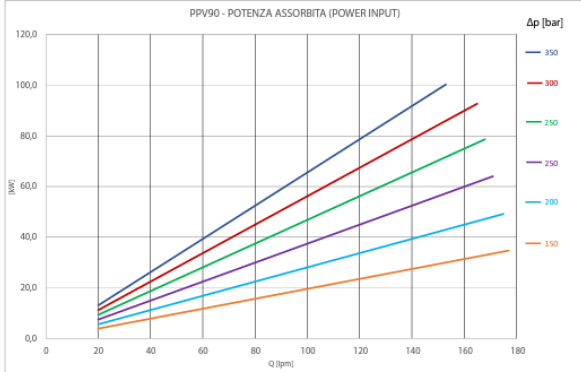
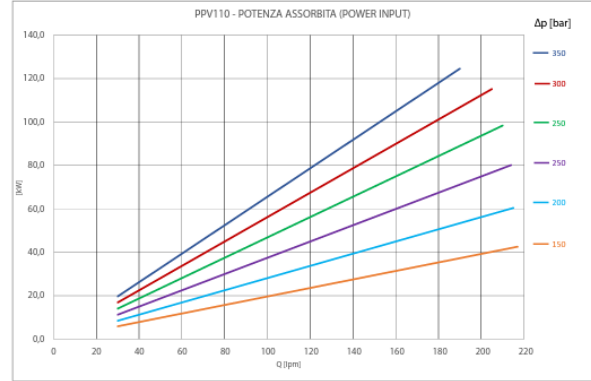
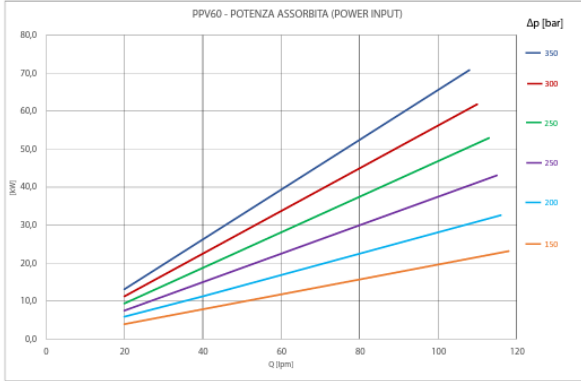


La versione **ADJUSTABLE**, prevede una vite di regolazione posteriore che limita la cilindrata massima della pompa a valori inferiori a quella nominale.

The **ADJUSTABLE** version consists of a rear setting screw that limits the max. displacement of the pumps to lower values than the nominal one.

CILINDRATA / DISPLACEMENT 60cc	
Campo regolazione cilindrata Displacement limitation range	40 - 60 cm ³
Limitazione della cilindrata Displacement limitation range	4,3 cm ³ /rev
CILINDRATA / DISPLACEMENT 90cc	
Campo regolazione cilindrata Displacement limitation range	55 - 90 cm ³
Limitazione della cilindrata Displacement limitation range	5,7 cm ³ /rev
CILINDRATA / DISPLACEMENT 110cc	
Campo regolazione cilindrata Displacement limitation range	85 - 110 cm ³
Limitazione della cilindrata Displacement limitation range	6,6 cm ³ /rev
CILINDRATA / DISPLACEMENT 130cc	
Campo regolazione cilindrata Displacement limitation range	90 - 130 cm ³
Limitazione della cilindrata Displacement limitation range	12 cm ³ /rev

POMPE A CILINDRATA VARIABILE / VARIABLE DISPLACEMENT PUMPS



Fluido idraulico / Fluid	Minerale o sintetico compatibile con guarnizioni: Mineral or synthetic compatible with the following seals: HNBR				
Temp. consentita / Allowed temperature	-25 +80 °C				
Viscosità cinematica consigliata Kinematic viscosity suggested	T media ambiente (°C) Average ambient temp. (°C)	< -40	-40÷10	10÷35	> 35
	VG (cSt = mm²/s)	16	22	32	46
Viscosità cinematica ottimale di esercizio / Optimal kinematic viscosity		VG= 10 cSt ÷ 100 cSt			
Viscosità cinematica max consentita all'avviamento / Max kinematic viscosity suggested at the start-up		VG= 750 cSt			
Indice di viscosità consigliato / Viscosity index suggested		VI > 100			

Grandezze nominali
Nominal values

FORMULE / FORMULAS

Portata
Flow

$$Q [lpm] = \frac{V \cdot n \cdot \eta_V}{1000}$$

Coppia motrice
Torque

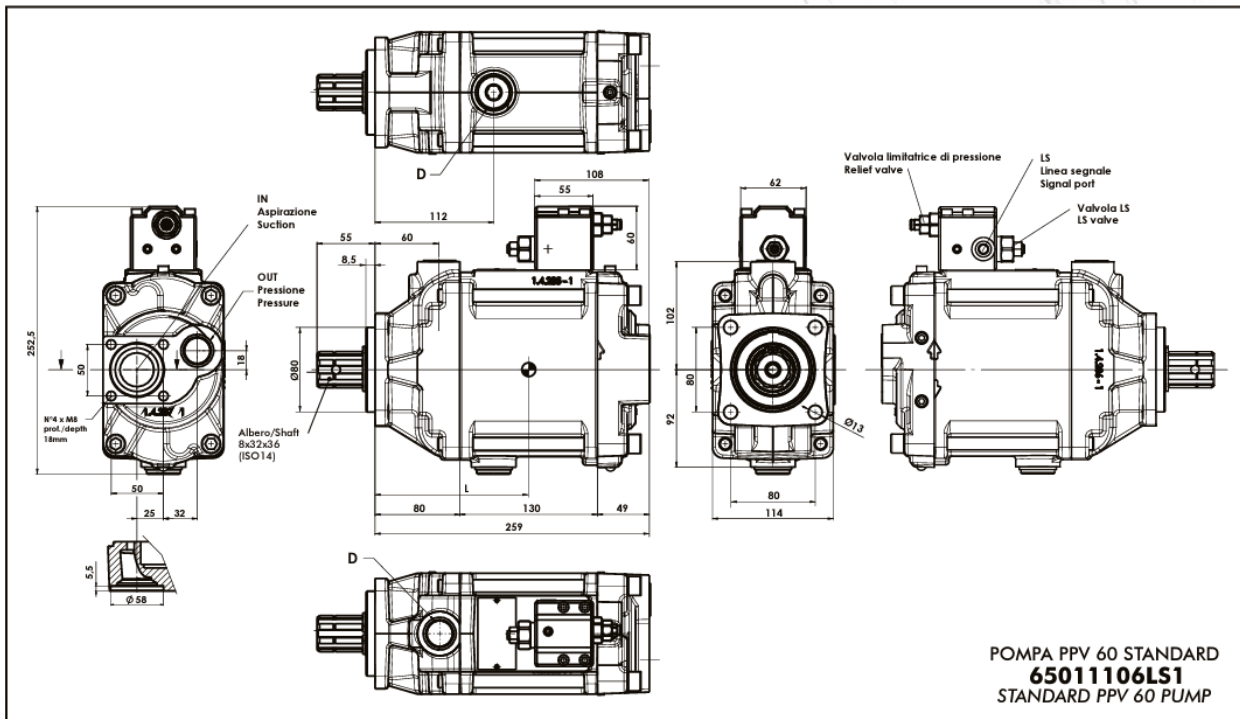
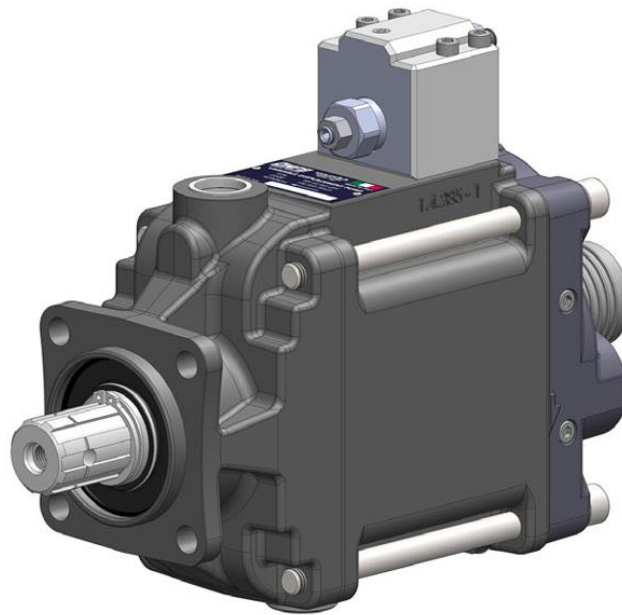
$$T [N \cdot m] = \frac{V \cdot \Delta p}{20 \cdot \pi \cdot \eta_{hm}}$$

Potenza motrice
Power

$$P [kW] = \frac{2 \cdot \pi \cdot T \cdot n}{60000} = \frac{Q \cdot \Delta p}{600 \cdot \eta_{tot}}$$

V = cilindrata [cm³ / rev] / displacement
 Δp = salto di pressione [bar] / pressure drop
 n = velocità di rotazione [rpm] / rotation speed
 η_V = rendimento volumetrico / volumetric efficiency
 η_{hm} = rendimento idro-meccanico / hydro-mechanic efficiency
 η_{tot} = η_V × η_{hm} = rendimento totale / overall efficiency

PB PPV60



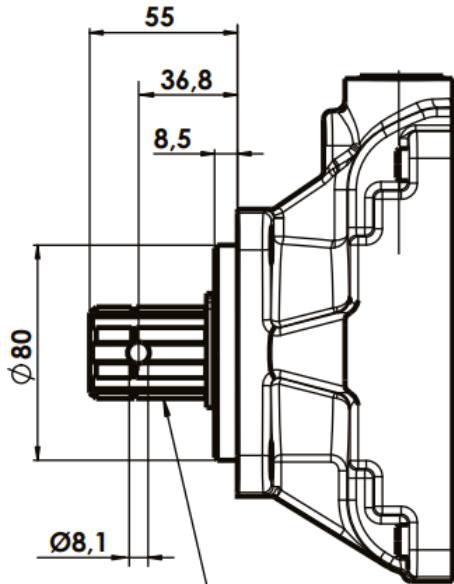
POMPA PPV 60 STANDARD
65011106LS1
 STANDARD PPV 60 PUMP

		FFFS1BDDRX	FFFS5BDDRX
LS	BLOCCHETTO LS/ LS BLOCK	G 1/4	
D	DRENAGGIO / DRAIN	G 3/4	1 1/16-12 UN-2B
OUT	PRESSIONE / PRESSURE	G 3/4	1 5/16-12 UN-2B
IN	ASPIRAZIONE / SUCTION Raccordo da ordinare separatamente Suction fitting to be ordered separately	Ø50 mm	
L	BARICENTRO / CENTER OF MASS	145 mm circa/approx	

FLANGIATURA ANTERIORE / FRONT FLANGE

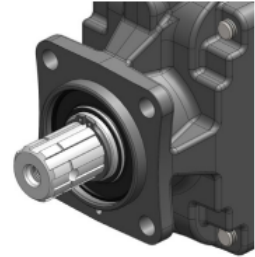
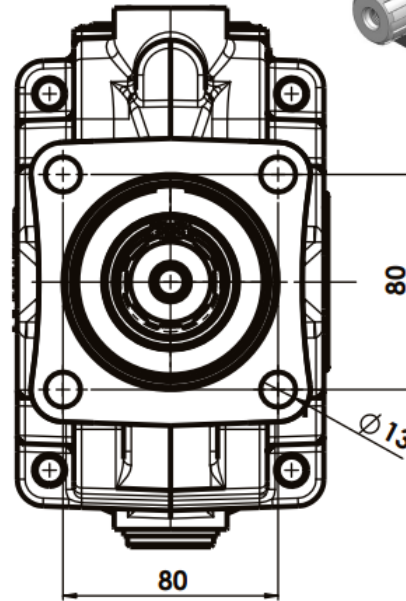
PPV60

6501TBDDRRX

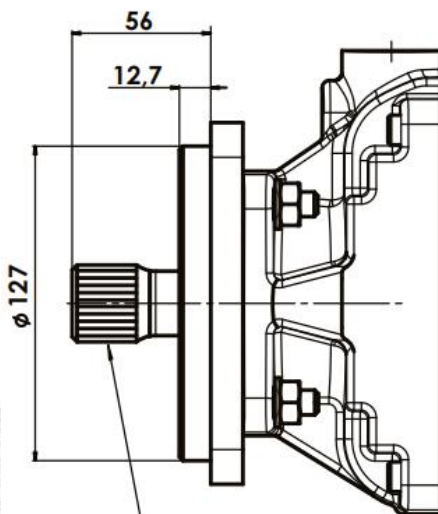


Albero/Shaft
8x32x36
(ISO 14)

COPPIA TRASMISSIBILE
MASSIMA 900Nm
MAX. TORQUE 900Nm

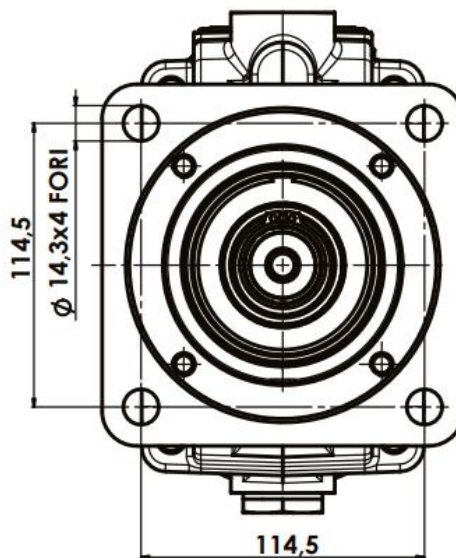


6512TBDDRRX



Albero/Shaft
SAE C-14T 12/24DP
(ISO 3019-1 32-4)

COPPIA TRASMISSIBILE
MASSIMA 640Nm
MAX. TORQUE 640Nm

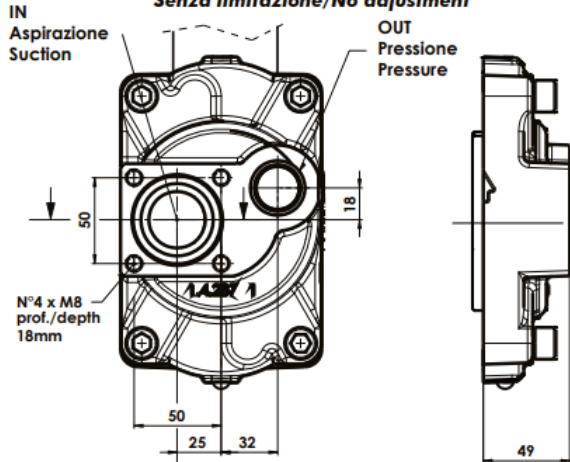


PPV60

FONDELLO POSTERIORE / REAR COVER

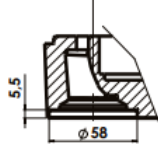
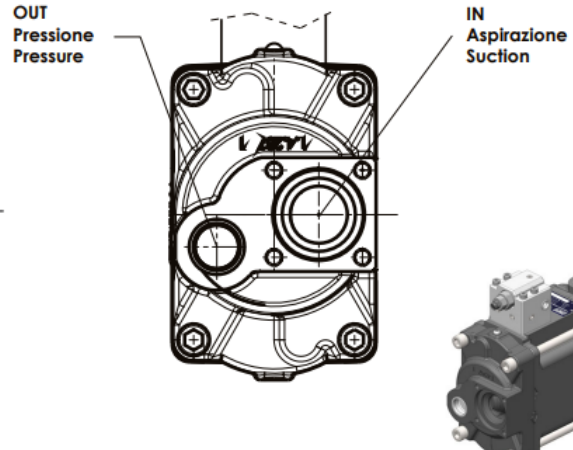
FFFST 1 DDDR 1

Rotazione destra/Right rotation
Senza limitazione/No adjustment

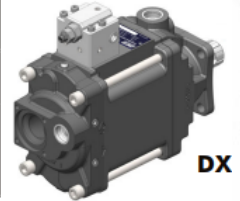
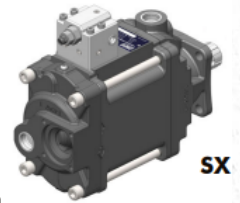


FFFST 1 DDDR 6

Rotazione sinistra/Left rotation
Senza limitazione/No adjustment

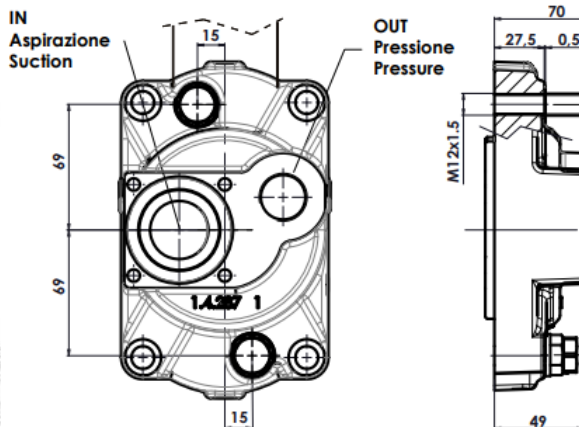


AX	VERSIONE ASSIALE AXIAL VERSION	FFFS 1 BDDRRX	FFFS5 BDDRRX
OUT	PRESSIONE PRESSURE	G 3/4	1 5/16-12 UN-2B
IN	ASPIRAZIONE / SUCTION Raccordo da ordinare separatamente Suction fitting to be ordered separately	Ø50mm	



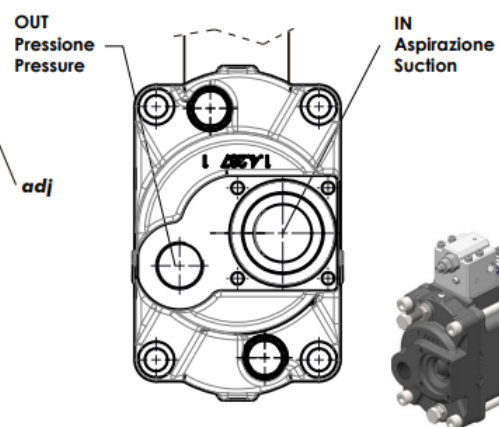
FFFST 1 DDDR 2

Rotazione destra/Right rotation
Con limitazione/With adjustment

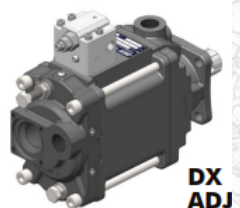
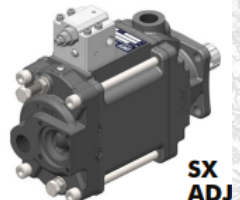


FFFST 1 DDDR 7

Rotazione sinistra/Left rotation
Con limitazione/With adjustment



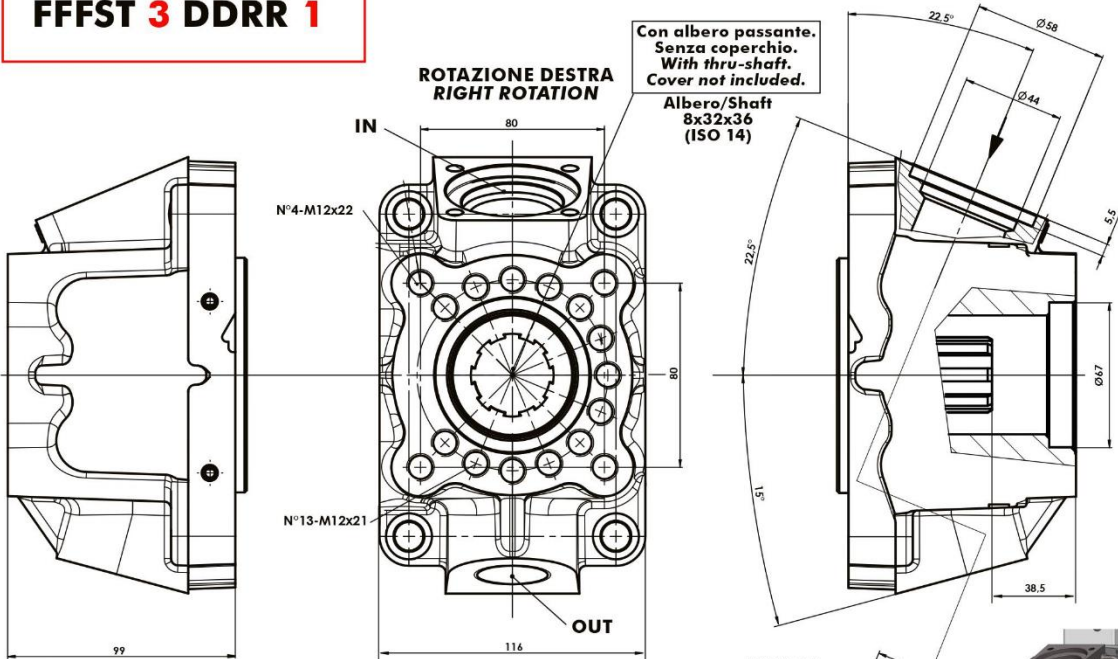
AX	VERSIONE ASSIALE AXIAL VERSION	FFFS 1 BDDRRX	FFFS5 BDDRRX
OUT	PRESSIONE PRESSURE	G 3/4	1 5/16-12 UN-2B
IN	ASPIRAZIONE / SUCTION Raccordo da ordinare separatamente Suction fitting to be ordered separately	Ø50mm	



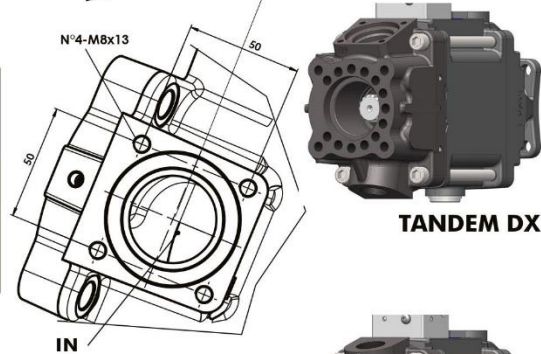
PPV60

FONDELLO POSTERIORE / REAR COVER

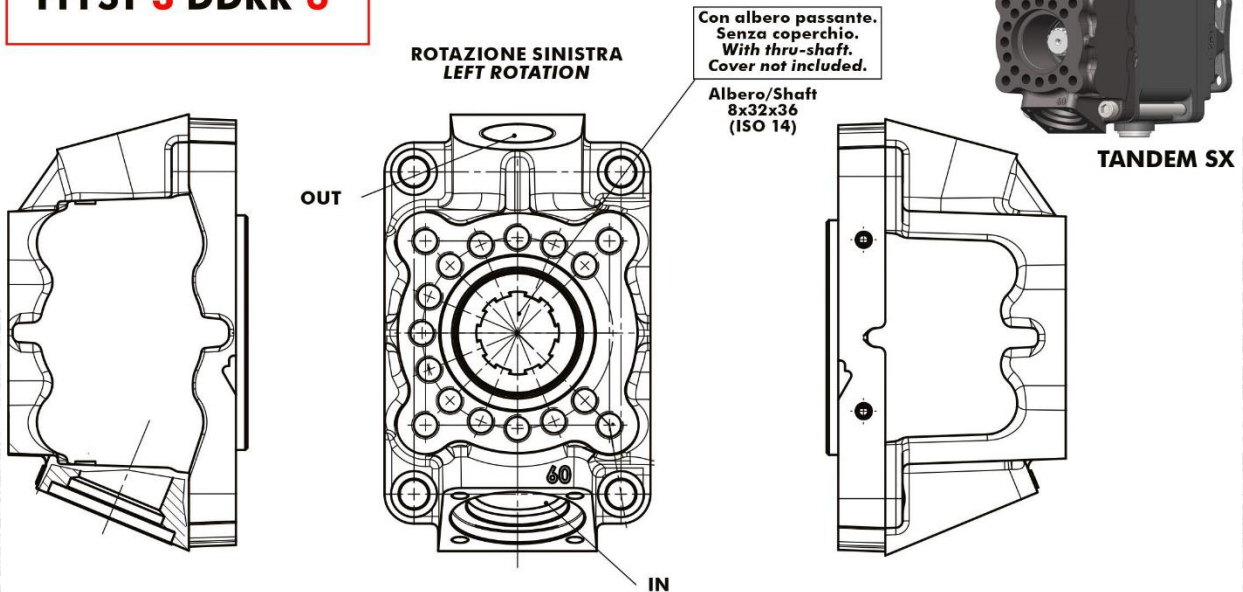
FFFST 3 DDDR 1



PV		FFFST 1 BDDR X	FFFST 5 BDDR X
OUT	PRESSIONE / PRESSURE	G 1	1 5/16-12 UN-2B
IN	ASPIRAZIONE / SUCTION Raccordo da ordinare separatamente Suction fitting to be ordered separately	Ø50mm	



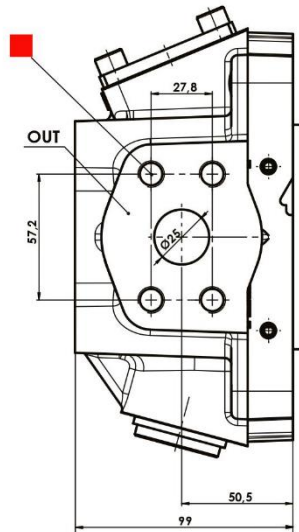
FFFST 3 DDDR 6



FONDELLO POSTERIORE / REAR COVER

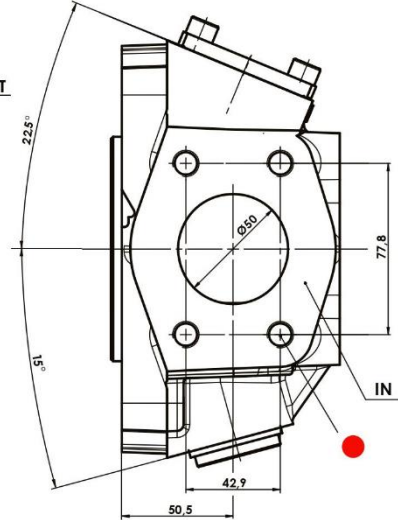
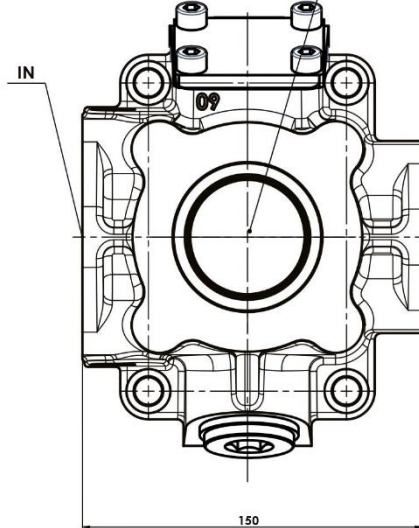
PPV60

FFFST 4 DDDR 1

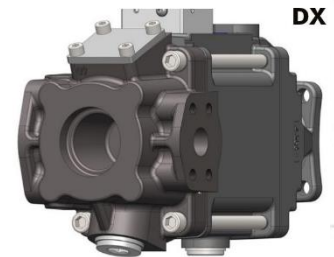


**ROTAZIONE DESTRA
RIGHT ROTATION**

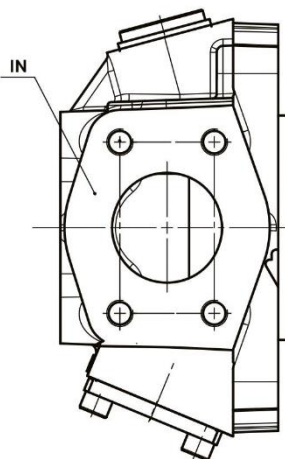
Senza albero passante.
Without thru-shaft.



RO			FFFST 1 BDDRRX	FFFST 5 BDDRRX
VERSIONE RADIALE ORIZZONTALE SAE SENZA ALBERO PASSANTE HORIZONTAL RADIAL SAE VERSION WITHOUT THRU-SHAFT				
OUT	PRESSIONE PRESSURE	1" SAE 6000	■ M12	■ 7/16"UNC
IN	ASPIRAZIONE SUCTION	2" SAE 3000	● M12	● 1/2"UNC

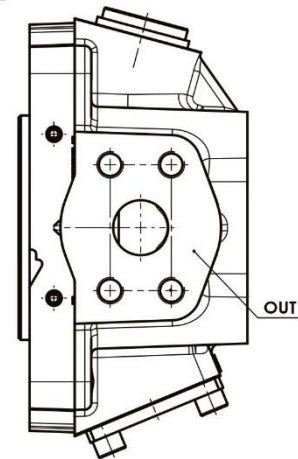
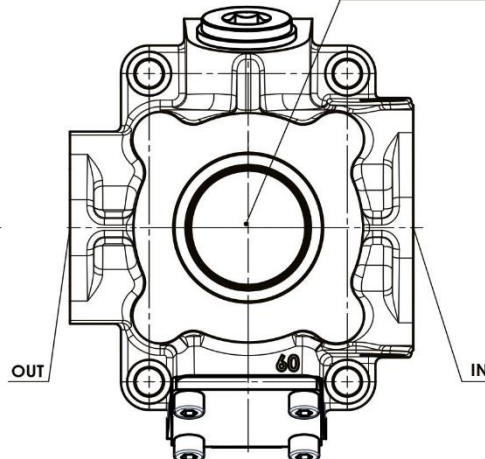


FFFST 4 DDDR 6



**ROTAZIONE SINISTRA
LEFT ROTATION**

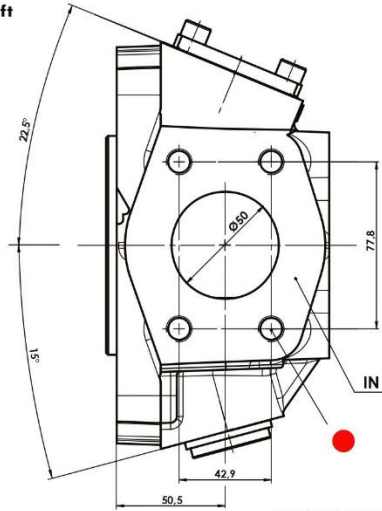
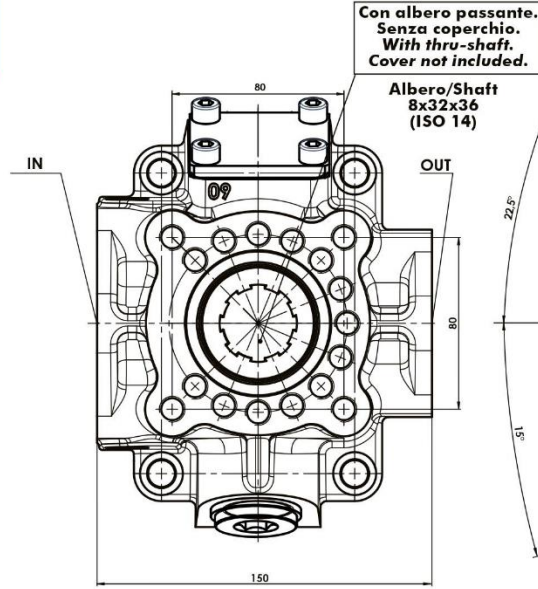
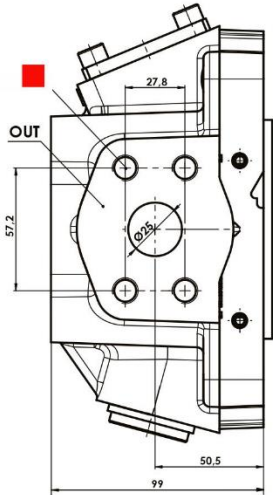
Senza albero passante.
Without thru-shaft.



PPV60

FONDELLO POSTERIORE / REAR COVER

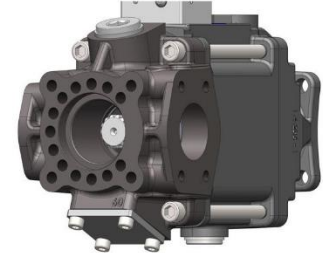
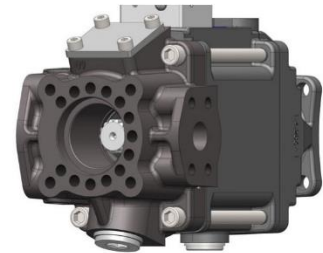
FFFST 5 DDDR 1



**ROTAZIONE DESTRA
RIGHT ROTATION**

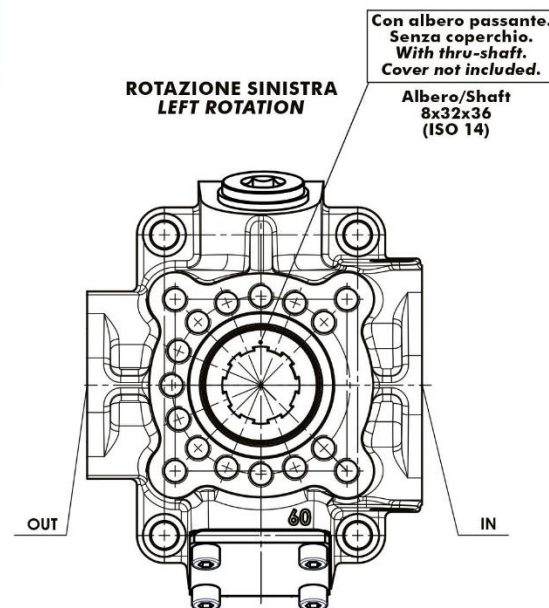
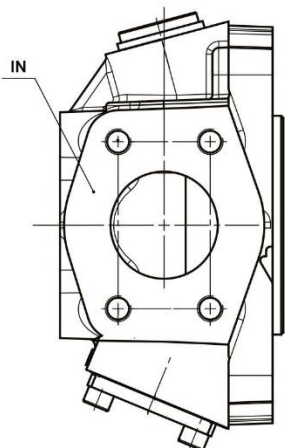
TANDEM DX

PO VERSIONE RADIALE ORIZZONTALE SAE CON ALBERO PASSANTE HORIZONTAL RADIAL SAE VERSION WITH THRU-SHAFT			FFFS1 BDDRRX	FFFS5 BDDRRX
OUT	PRESSIONE PRESSURE	1" SAE 6000	■ M12	■ 1/2"UN
IN	ASPIRAZIONE SUCTION	2 1/2" SAE 3000	● M12	● 1/2"UN



TANDEM SX

FFFST 5 DDDR 6



**ROTAZIONE SINISTRA
LEFT ROTATION**