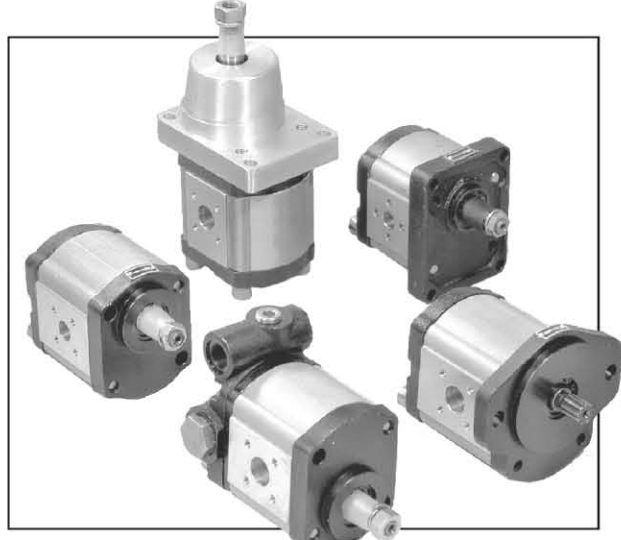


Zupčaste pumpe ZPB Gear pumps ZPB

VISOKOG PRITISKA, SA SPOLJAŠNJIM OZUBLJENJEM
HIGH PRESSURE, WITH OUTER GEARING

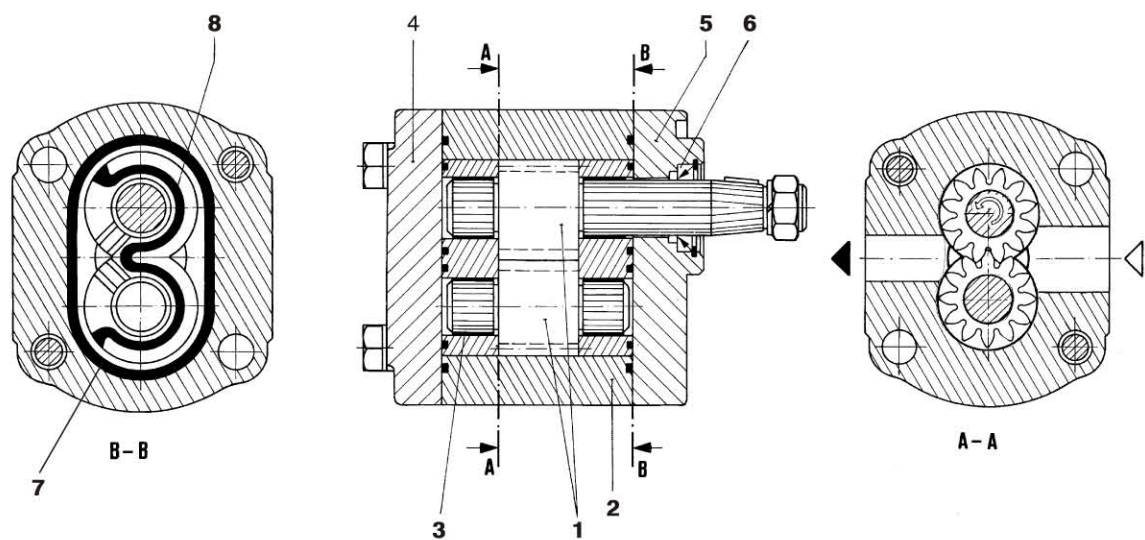
- Velika hidraulička snaga
 - Visok zapreminski stepen korisnog dejstva
 - Kućište izrađeno od presovanog aluminijuma
 - Zupčanici imaju dvanaest zubaca što smanjuje na minimum pulzacije protoka i buku
 - DU ležaji obezbeđuju visok pritisak
 - Specijalno profilisane zaptivke zaptivaju zonu visokog pritiska
 - Prednji i zadnji poklopci izrađeni od čeličnog liva
 - Simering zaptivka u prednjem poklopcu zaptiva pogonsko vratilo
 - Serijska proizvodnja sa strogom kontrolom kvaliteta
 - Ispitivanje svih pumpi nakon montaže
- Dve varijante izvođenja:
1. Standard



- High hydraulic power
 - High volumetric efficiency
 - Extruded aluminum body
 - The gears have twelve teeth and this keeps both flow pulsation and noise emission to a minimum
 - DU bearings ensure high pressure capability
 - Special seals boundary of the high pressure zone
 - Cast iron front and rear covers
 - The drive shaft protrudes from the front cover where it is sealed
 - by the shaft seal
 - Serial production with accurate control of quality
 - All pumps are tested after assembly
- Two variant pumps:
1. Standard
 2. With flow control valve (const. flow independent of drive)

**PRESEK - PRINCIP RADA
SECTION - MODE OF OPERATION**

1. STANDARD



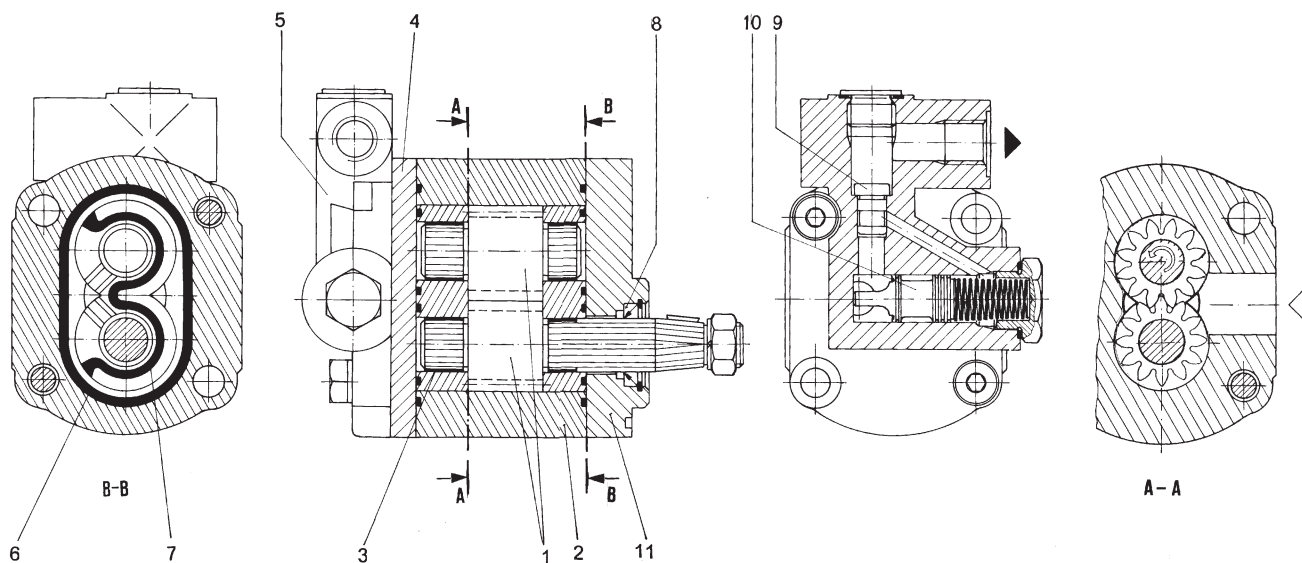
1. Zupčasti par
2. Kućište
3. Ležaji
4. Zadnji poklopac
5. Prednji poklopac
6. Osovinska zaptivka
7. Zaptivka za sprečavanje spoljašnjeg curenja
8. Zaptivka za kompenzaciju aksijalnog zazor

1. Couple of gears
2. Housing
3. Bearings
4. Rear cover
5. Front cover
6. Shaft seal
7. Seal to prevent external leakage
8. Axial clearance compensating seal

A

PRESEK - PRINCIP RADA SECTION - MODE OF OPERATION

2. SA VENTILOM WITH VALVE



1. Zupčasti par
2. Kućište
3. Ležaji
4. Međuploča
5. Telo ventila
6. Zaptivka za sprečavanje spoljašnjeg curenja
7. Zaptivka za kompenzaciju aksijalnog zazora
8. Osovinska zaptivka
9. Prigušnik
10. Ventil
11. Prednji poklopac

1. Couple of gears
2. Housing
3. Bearings
4. Midplate
5. Valve body
6. Seal to prevent external leakage
7. Axial clearance compensating seal
8. Shaft seal
9. Throttle
10. Valve
11. Front cover

POGON

Pumpe se pogone preko elastične spojnice. Radijalne i aksijalne sile nisu dozvoljene. Ako se pumpe pogone preko kaišnika ili zupčanika neophodno je izabrati pumpu sa dodatnim ležajem u prednjem poklopcu.

DRIVE ARRANGEMENTS

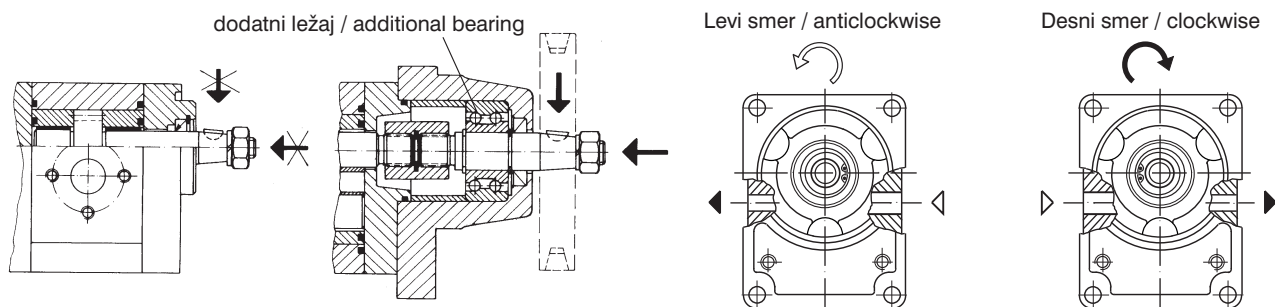
The pumps are driven by flexible coupling. Radial and axial forces on to driven shaft are not permissible. If the pump by V-belt or gear wheel driven is, then must be pump with additional

SMER OBRRTANJA

Pumpe se isporučuju za rad u levom ili desnom smeru obrtanja. Nije dozvoljen rad pumpe u suprotnom smeru. Smer se određuje posmatranjem pumpe sa čela pogonskog vratila i označen je strelicom na prednjem poklopcu.


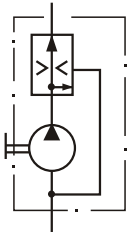
DIRECTION OF ROTATION

Clockwise or anticlockwise (looking on shaft). The pump may only be driven in the direction indicated. Direction of rotation is marked on the front cover.



TEHNIČKE KARAKTERISTIKE
TECHNICAL DATA

 OPŠTE
 GENERAL

Simbol Symbol	Standard 	Sa ventilom With valve 
Priključivanje vodova Line connection	otvori sa navojem ili prirubnice threaded ports or flanges	
Smer obrtanja Rotation direction	levi ili desni anticlockwise or clockwise	
Položaj ugradnje Mounting position	proizvoljan optional	
Način pogona Drive mode	obrnim momentom	bez dodatnog ležaja (radijal. i aksijal. sile nisu dozvoljene) sa dodatnim ležajem (radijal. i aksijal. sile su dozvoljene)
	with torque	without additional bearing (rad. i aksijal. sile not perm.) with additional bearing (radial and axial forces permissible)
Temperatura okoline (°C) Ambient temperature	-20 ... +40	

HIDRAULIČKE
HYDRAULIC

Radna zapremina Displacement (cm ³)	4	5,5	8	11	14	16	19	22,5	
Protok - Const Flow - const (l/min) ²⁾	12 ± 15% 10								
Pritisak (bar) Pressure	nominal ¹⁾	250					210	180*	
	nominal ²⁾	150							
	max ¹⁾	300					250	210	
	max ²⁾	210							
Broj obrtaja (min ⁻¹) Speed (rpm)	min	500							
	nominal	1500							
	max	3500		3000		2500	2000		
Finoća filtriranja (µm) Filtering fineness	usisni vod suction line	150							
	potisni vod pressure line	25							
Potpritisak u usisnom vodu Suction line permissible subpressure (bar)	0,3								
Nadpritisak u usisnom vodu Suction line permissible overpressure (bar)	1,5								
Radna tečnost Working fluid	mineralno ulje mineral oil								
	viskozitet (mm ² /s) viscosity	optimalni: optimal:	16 ... 90		/		kratko pri startu: intermittent for starting:	800	
	temperatura (°C) temperature	-20 ... +80							

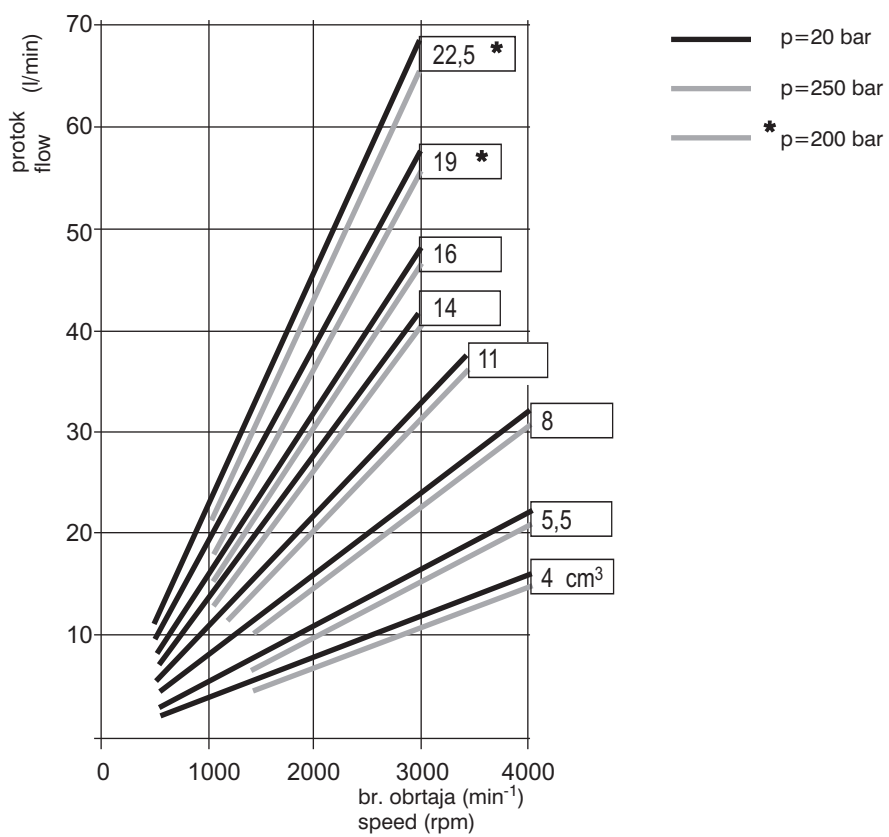
 * Na zahtev 210 bar
 On request 210 bar

¹⁾ Za pumpe standard
 For standard pumps

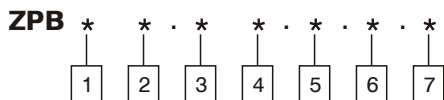
²⁾ Za pumpe sa ventilom
 For pumps with valve

A

KARAKTERISTIČNI DIJAGRAMI (za ulje viskoziteta 35mm²/s, 50°C)
CHARACTERISTIC DIAGRAMS (for oil of 35mm²/s viscosity, 50°C)



**OZNAČAVANJE
DESIGNATION**



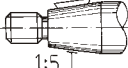
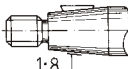
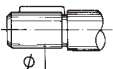
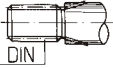


1 Veličina:
Size:

F

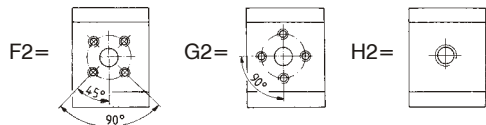
2 Radna zapremina:
Displacement:

- 4 = 4 cm³
- 5 = 5,5 cm³
- 8 = 8 cm³
- 11 = 11 cm³
- 14 = 14 cm³
- 16 = 16 cm³
- 19 = 19 cm³
- 22 = 22,5 cm³



3 Pogonsko vratilo:
Drive shaft:

- A =  odgovara prednji poklopac 1, 3, 4, 9, 10
front cover 1, 3, 4, 9, 10 fits into it
- B =  odgovara prednji poklopac 2
front cover 2 fits into it
- C =  odgovara prednji poklopac 7
front cover 7 fits into it
- D =  odgovara prednji poklopac 1, 2, 3, 4
front cover 1, 2, 3, 4 fits into it
- E =  odgovara prednji poklopac 7
front cover 7 fits into it
- F =  odgovara prednji poklopac 5, 8
front cover 5, 8 fits into it

5 Prikjučni otvori:
Connection ports:



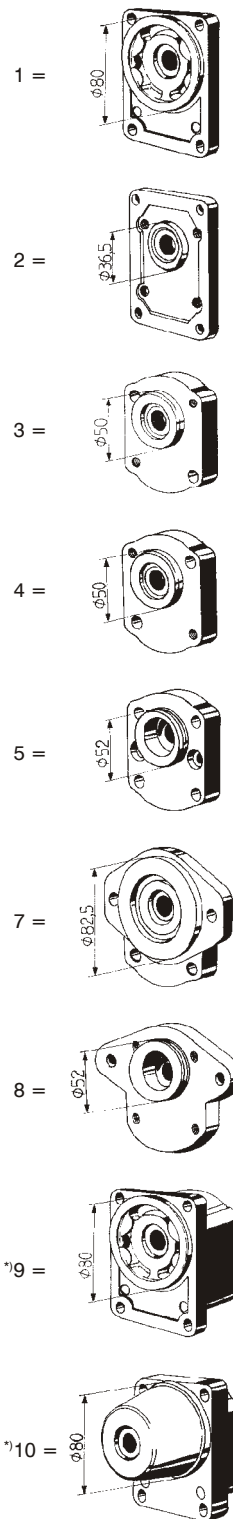
6 Smer obrtanja:
Rotation direction:

- L = levi anticlockwise 
- D = desni clockwise 

7 Varijanta pumpe:
Pumps variant:

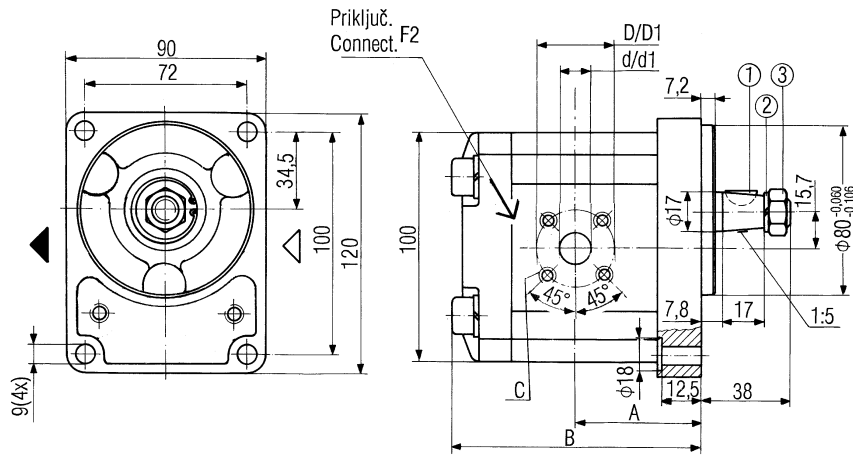
- = standard
- VP/12 = sa ventilom with valve (Q const = 12 l/min)

4 Prednji poklopac:
Front cover:



^{*)} Za primenu kod pogona preko zupčanika ili kaišnika
For drive arrangement with V - belt or gearwheel

A

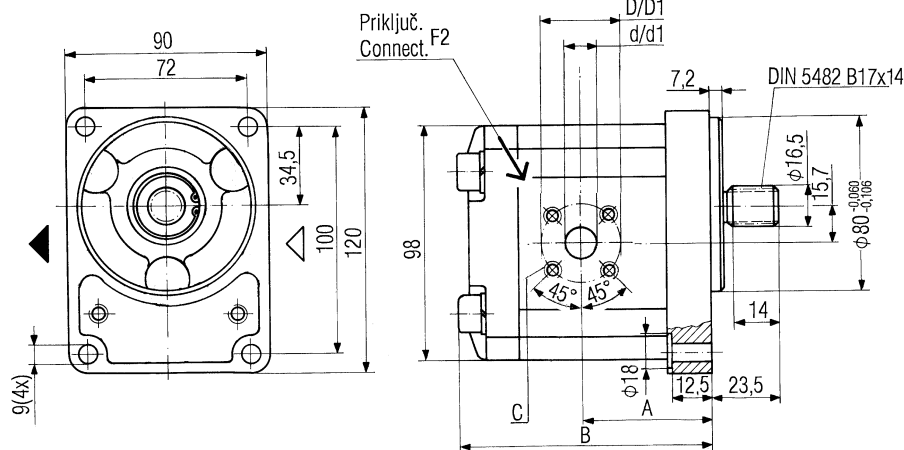


- ① klin 3x5 JUS M.C2.050
 ② podloš. washer B12 JUS M.B2.110
 ③ navrtka nut M12x1,5 JUS M.B1.601

Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

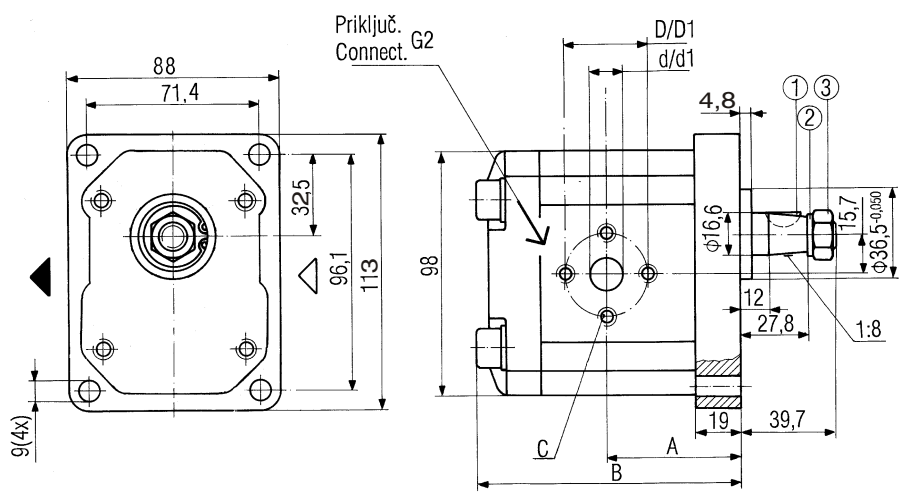
Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1 D/D1		C	Masa Mass (kg)
				(mm)			
ZPB.F4.A1.F2.L	4	39,8	86,5	15/15	40/35	M6/13	2,8
ZPB.F4.A1.F2.D							
ZPB.F5.A1.F2.L	5,5	41	89	15/15	40/35	M6/13	2,8
ZPB.F5.A1.F2.D							
ZPB.F8.A1.F2.L	8	43,1	93,3	20/15	40/35	M6/13	2,9
ZPB.F8.A1.F2.D							
ZPB.F11.A1.F2.L	11	47,5	98,3	20/15	40/35	M6/13	3,0
ZPB.F11.A1.F2.D							
ZPB.F14.A1.F2.L	14	47,5	103,1	20/15	40/35	M6/13	3,2
ZPB.F14.A1.F2.D							
ZPB.F16.A1.F2.L	16	47,5	106,5	20/15	40/35	M6/13	3,4
ZPB.F16.A1.F2.D							
ZPB.F19.A1.F2.L	19	47,5	111,5	20/15	40/35	M6/13	3,6
ZPB.F19.A1.F2.D							
ZPB.F22.A1.F2.L	22,5	55	116,9	20/15	40/35	M6/13	3,8
ZPB.F22.A1.F2.D							



Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1 D/D1		C	Masa Mass (kg)
				(mm)			
ZPB.F4.D1.F2.L	4	39,8	86,5	15/15	40/35	M6/13	2,8
ZPB.F4.D1.F2.D							
ZPB.F5.D1.F2.L	5,5	41	89	15/15	40/35	M6/13	2,8
ZPB.F5.D1.F2.D							
ZPB.F8.D1.F2.L	8	43,1	93,3	20/15	40/35	M6/13	2,9
ZPB.F8.D1.F2.D							
ZPB.F11.D1.F2.L	11	47,5	98,3	20/15	40/35	M6/13	3,0
ZPB.F11.D1.F2.D							
ZPB.F14.D1.F2.L	14	47,5	103,1	20/15	40/35	M6/13	3,2
ZPB.F14.D1.F2.D							
ZPB.F16.D1.F2.L	16	47,5	106,5	20/15	40/35	M6/13	3,4
ZPB.F16.D1.F2.D							
ZPB.F19.D1.F2.L	19	47,5	111,5	20/15	40/35	M6/13	3,6
ZPB.F19.D1.F2.D							
ZPB.F22.D1.F2.L	22,5	55	116,9	20/15	40/35	M6/13	3,8
ZPB.F22.D1.F2.D							



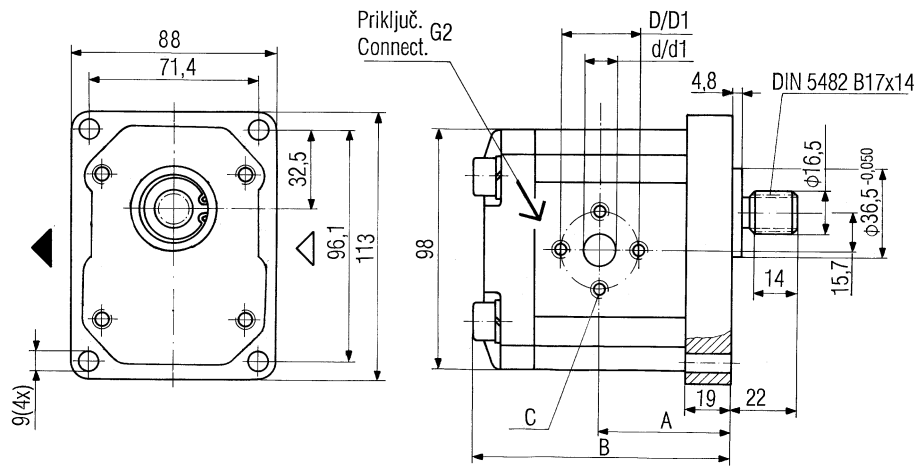
- ① klin key 3x5 JUS M.C2.050
- ② podlož. washer B12 JUS M.B2.110
- ③ navrtka nut M12x1,5 JUS M.B1.601

Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1 D/D1		C	Masa Mass (kg)
				(mm)			
ZPB.F4.B2.G2.L	4	41,4	86,5	13,5/13,5	30,2/30,2	M6/13	2,8
ZPB.F4.B2.G2.D							
ZPB.F5.B2.G2.L	5,5	42,5	89	20/13,5	39,7/30,2	M8/13 M6/13	2,8
ZPB.F5.B2.G2.D							
ZPB.F8.B2.G2.L	8	44,6	93,3	20/13,5	39,7/30,2	M8/13 M6/13	2,9
ZPB.F8.B2.G2.D							
ZPB.F11.B2.G2.L	11	49	98,3	20/13,5	39,7/30,2	M8/13 M6/13	3,0
ZPB.F11.B2.G2.D							
ZPB.F14.B2.G2.L	14	49	103,1	20/13,5	39,7/30,2	M8/13 M6/13	3,2
ZPB.F14.B2.G2.D							
ZPB.F16.B2.G2.L	16	49	106,5	20/13,5	39,7/30,2	M8/13 M6/13	3,4
ZPB.F16.B2.G2.D							
ZPB.F19.B2.G2.L	19	49	111,5	20/13,5	39,7/30,2	M8/13 M6/13	3,6
ZPB.F19.B2.G2.D							
ZPB.F22.B2.G2.L	22,5	56,6	116,9	20/13,5	39,7/30,2	M8/13 M6/13	3,8
ZPB.F22.B2.G2.D							

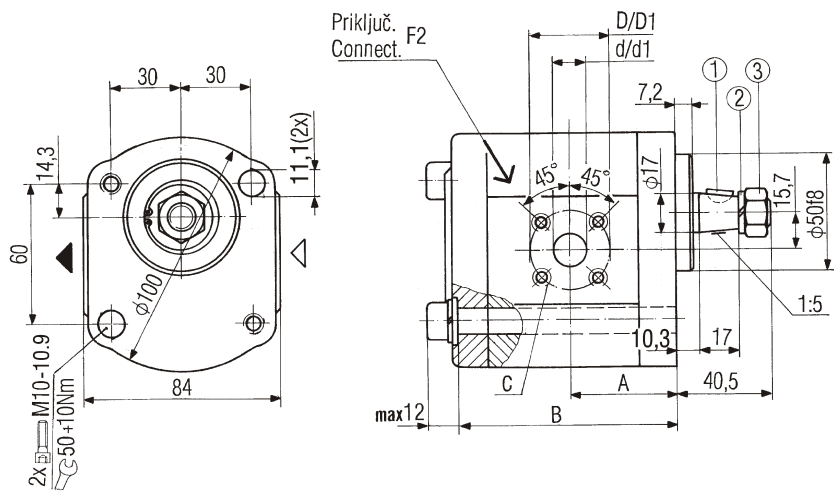
A



Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1 D/D1		C	Masa Mass (kg)
				(mm)			
ZPB.F4.D2.G2.L	4	41,4	86,5	13,5/13,5	30,2/30,2	M6/13	2,8
ZPB.F4.D2.G2.D							
ZPB.F5.D2.G2.L	5,5	42,5	89	20/13,5	39,7/30,2	M8/13 M6/13	2,8
ZPB.F5.D2.G2.D							
ZPB.F8.D2.G2.L	8	44,6	93,3	20/13,5	39,7/30,2	M8/13 M6/13	2,9
ZPB.F8.D2.G2.D							
ZPB.F11.D2.G2.L	11	49	98,3	20/13,5	39,7/30,2	M8/13 M6/13	3,0
ZPB.F11.D2.G2.D							
ZPB.F14.D2.G2.L	14	49	103,1	20/13,5	39,7/30,2	M8/13 M6/13	3,2
ZPB.F14.D2.G2.D							
ZPB.F16.D2.G2.L	16	49	106,5	20/13,5	39,7/30,2	M8/13 M6/13	3,4
ZPB.F16.D2.G2.D							
ZPB.F19.D2.G2.L	19	49	111,5	20/13,5	39,7/30,2	M8/13 M6/13	3,6
ZPB.F19.D2.G2.D							
ZPB.F22.D2.G2.L	22,5	56,6	116,9	20/13,5	39,7/30,2	M8/13 M6/13	3,8
ZPB.F22.D2.G2.D							



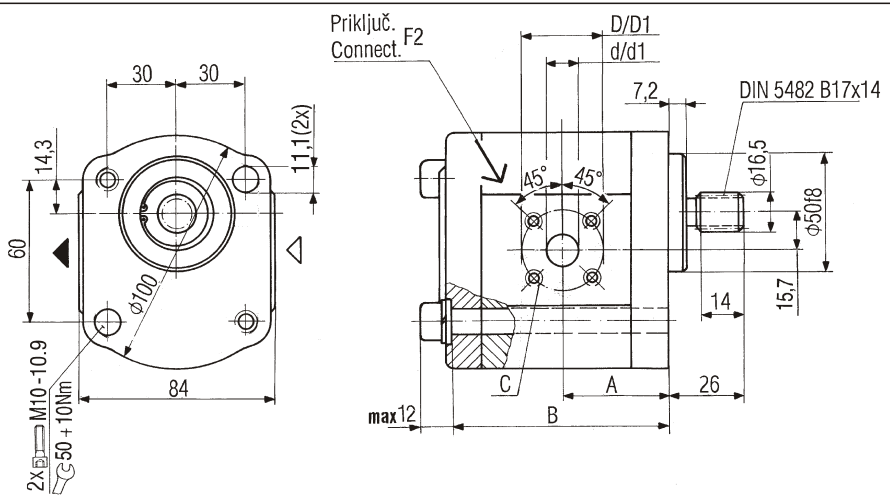
- ① klin key 3x5 JUS M.C2.050
- ② podlož. washer B12 JUS M.B2.110
- ③ navrtka nut M12x1,5 JUS M.B1.601

Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklij. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1		C	Masa Mass (kg)
		(mm)					
ZPB.F4.A4.F2.L	4	37,4	73,7	15/15	40/35	M6/13	2,4
ZPB.F4.A4.F2.D							
ZPB.F5.A4.F2.L	5,5	38,7	76,2	20/15	40/35	M6/13	2,4
ZPB.F5.A4.F2.D							
ZPB.F8.A4.F2.L	8	40,7	80,3	20/15	40/35	M6/13	2,5
ZPB.F8.A4.F2.D							
ZPB.F11.A4.F2.L	11	44,5	85,3	20/15	40/35	M6/13	2,6
ZPB.F11.A4.F2.D							
ZPB.F14.A4.F2.L	14	45	90,3	20/15	40/35	M6/13	2,8
ZPB.F14.A4.F2.D							
ZPB.F16.A4.F2.L	16	45	93,7	20/15	40/35	M6/13	3,0
ZPB.F16.A4.F2.D							
ZPB.F19.A4.F2.L	19	45	98,7	20/15	40/35	M6/13	3,2
ZPB.F19.A4.F2.D							
ZPB.F22.A4.F2.L	22,5	58,6	116,1	20/15	40/35	M6/13	3,5
ZPB.F22.A4.F2.D							

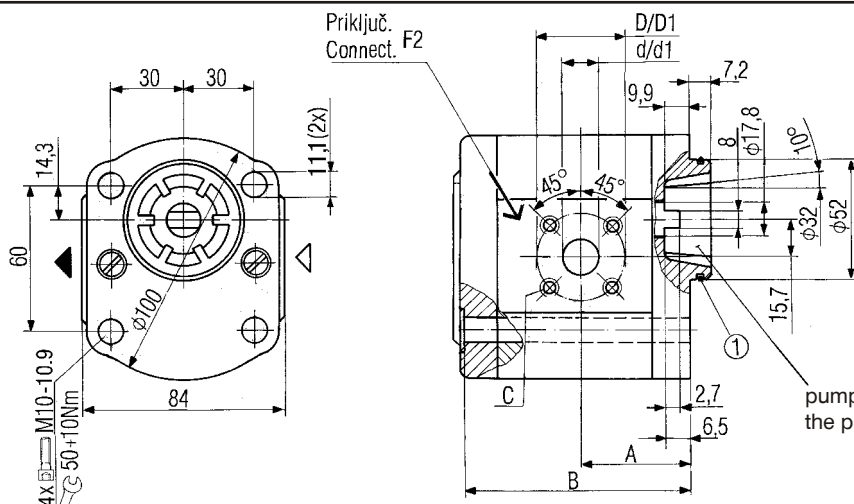
A



Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklij. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1		C	Masa Mass (kg)
		(mm)					
ZPB.F4.D4.F2.L	4	37,4	73,7	15/15	40/35	M6/13	2,4
ZPB.F4.D4.F2.D							
ZPB.F5.D4.F2.L	5,5	38,7	76,2	20/15	40/35	M6/13	2,4
ZPB.F5.D4.F2.D							
ZPB.F8.D4.F2.L	8	40,7	80,3	20/15	40/35	M6/13	2,5
ZPB.F8.D4.F2.D							
ZPB.F11.D4.F2.L	11	44,5	85,3	20/15	40/35	M6/13	2,6
ZPB.F11.D4.F2.D							
ZPB.F14.D4.F2.L	14	45	90,3	20/15	40/35	M6/13	2,8
ZPB.F14.D4.F2.D							
ZPB.F16.D4.F2.L	16	45	93,7	20/15	40/35	M6/13	3,0
ZPB.F16.D4.F2.D							
ZPB.F19.D4.F2.L	19	45	98,7	20/15	40/35	M6/13	3,2
ZPB.F19.D4.F2.D							
ZPB.F22.D4.F2.L	22,5	58,6	116,1	20/15	40/35	M6/13	3,5
ZPB.F22.D4.F2.D							



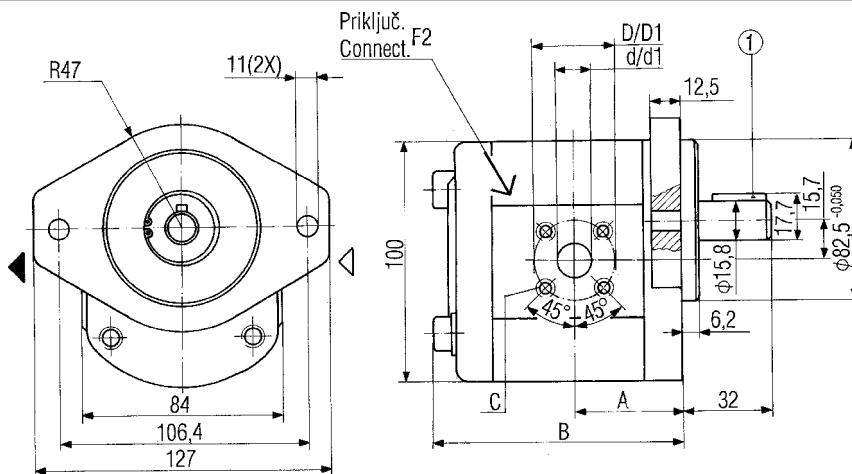
- ① O - prsten 46,3x2,4
- O - ring

Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

pumpa bez osovinske zaptivke
the pump is without shaft seal

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1		C	Masa Mass (kg)
				(mm)			
ZPB.F4.F5.F2.L	4	37,4	73,7	15/15	40/35	M6/13	2,4
ZPB.F4.F5.F2.D							
ZPB.F5.F5.F2.L	5,5	38,7	76,2	15/15	40/35	M6/13	2,4
ZPB.F5.F5.F2.D							
ZPB.F8.F5.F2.L	8	40,7	80,3	20/15	40/35	M6/13	2,5
ZPB.F8.F5.F2.D							
ZPB.F11.F5.F2.L	11	44,5	85,3	20/15	40/35	M6/13	2,6
ZPB.F11.F5.F2.D							
ZPB.F14.F5.F2.L	14	45	90,3	20/15	40/35	M6/13	2,8
ZPB.F14.F5.F2.D							
ZPB.F16.F5.F2.L	16	45	93,7	20/15	40/35	M6/13	3,0
ZPB.F16.F5.F2.D							
ZPB.F19.F5.F2.L	19	45	98,7	20/15	40/35	M6/13	3,2
ZPB.F19.F5.F2.D							
ZPB.F22.F5.F2.L	22,5	52,6	104,1	20/15	40/35	M6/13	3,4
ZPB.F22.F5.F2.D							

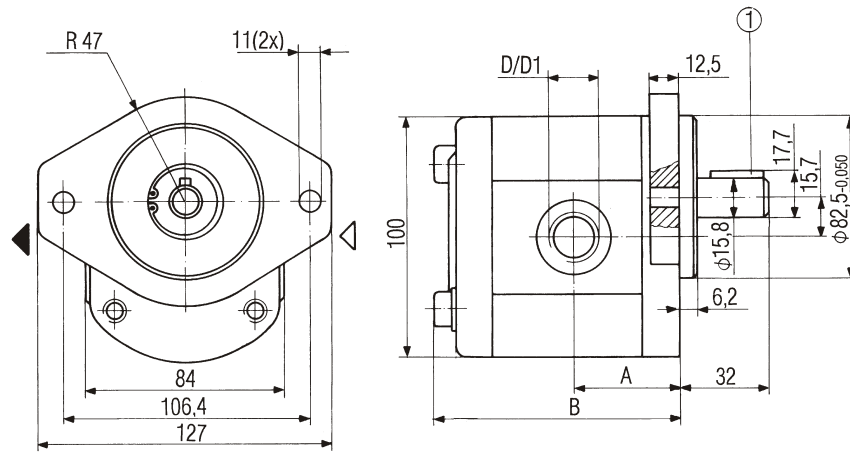


- ① klin key A4x4x20 JUS M.C2.060

Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1		C	Masa Mass (kg)
				(mm)			
ZPB.F4.C7.F2.L	4	39,9	88,4	15/15	40/35	M6/13	3,0
ZPB.F4.C7.F2.D							
ZPB.F5.C7.F2.L	5,5	41,1	90,9	15/15	40/35	M6/13	3,1
ZPB.F5.C7.F2.D							
ZPB.F8.C7.F2.L	8	43,2	95	20/15	40/35	M6/13	3,2
ZPB.F8.C7.F2.D							
ZPB.F11.C7.F2.L	11	47	100	20/15	40/35	M6/13	3,4
ZPB.F11.C7.F2.D							
ZPB.F16.C7.F2.L	16	47,5	108,4	20/15	40/35	M6/13	3,6
ZPB.F16.C7.F2.D							
ZPB.F19.C7.F2.L	19	47,5	113,4	20/15	40/35	M6/13	3,7
ZPB.F19.C7.F2.D							
ZPB.F22.C7.F2.L	22,5	55,1	118,8	20/15	40/35	M6/13	3,8
ZPB.F22.C7.F2.D							



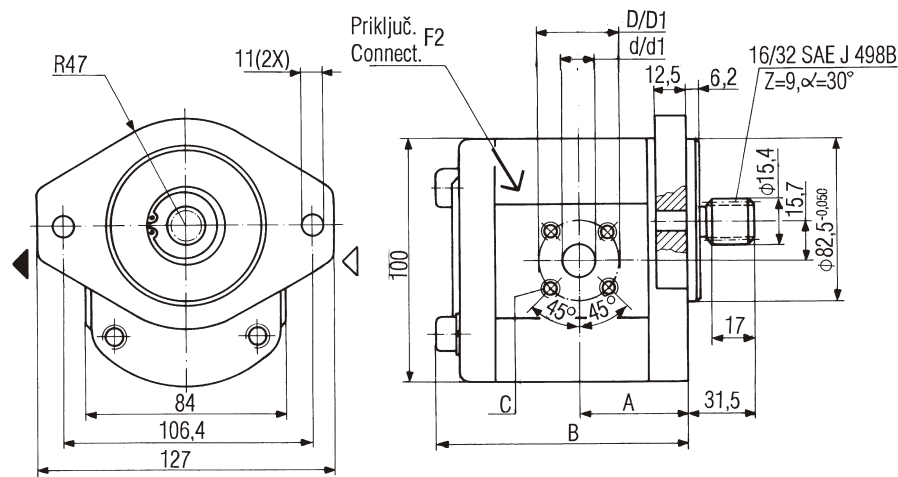
① klin key A4x4x20 JUS M.C2.060

Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1		Masa Mass (kg)
				(mm)		
ZPB.F4.C7.H2.L	4	39,9	88,4	M16x1,5	M16x1,5	3,0
ZPB.F4.C7.H2.D						
ZPB.F5.C7.H2.L	5,5	41,1	90,9	M22x1,5	M22x1,5	3,1
ZPB.F5.C7.H2.D						
ZPB.F8.C7.H2.L	8	43,2	95	M27x2	M22x1,5	3,2
ZPB.F8.C7.H2.D						
ZPB.F11.C7.H2.L	11	47	100	M27x2	M22x1,5	3,3
ZPB.F11.C7.H2.D						
ZPB.F14.C7.H2.L	14	47,5	105	M27x2	M22x1,5	3,5
ZPB.F14.C7.H2.D						
ZPB.F16.C7.H2.L	16	47,5	108,4	M27x2	M22x1,5	3,6
ZPB.F16.C7.H2.D						
ZPB.F19.C7.H2.L	19	47,5	113,4	M27x2	M22x1,5	3,7
ZPB.F19.C7.H2.D						
ZPB.F22.C7.H2.L	22,5	55,1	118,8	M27x2	M22x1,5	3,8
ZPB.F22.C7.H2.D						

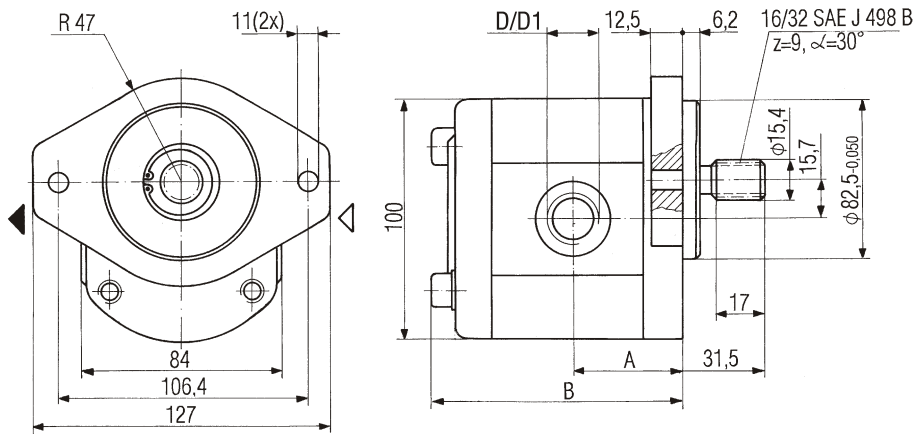
A



Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

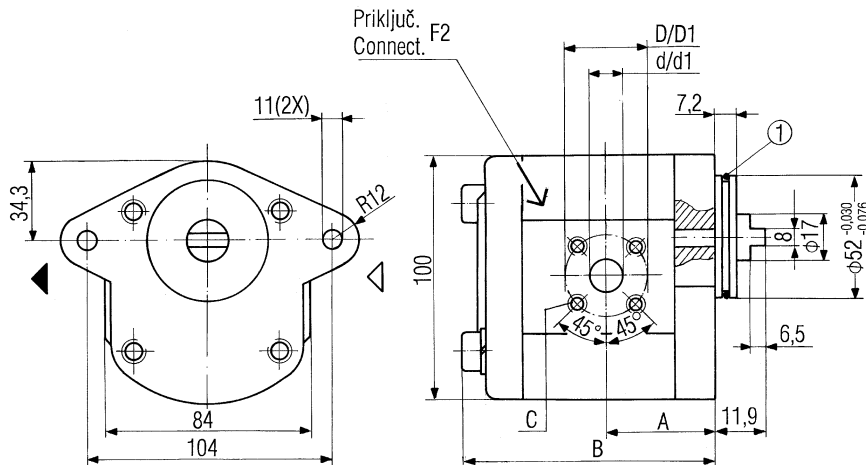
Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1		C	Masa Mass (kg)
				(mm)			
ZPB.F4.E7.F2.L	4	39,9	88,4	15/15	M6/13	2,8	
ZPB.F4.E7.F2.D							
ZPB.F5.E7.F2.L	5,5	41,1	90,9	20/15	M6/13	2,8	
ZPB.F5.E7.F2.D							
ZPB.F8.E7.F2.L	8	43,2	95	20/15	M6/13	2,9	
ZPB.F8.E7.F2.D							
ZPB.F11.E7.F2.L	11	47	100	20/15	M6/13	3,0	
ZPB.F11.E7.F2.D							
ZPB.F14.E7.F2.L	14	47,5	105	20/15	M6/13	3,2	
ZPB.F14.E7.F2.D							
ZPB.F16.E7.F2.L	16	47,5	108,4	20/15	M6/13	3,4	
ZPB.F16.E7.F2.D							
ZPB.F19.E7.F2.L	19	47,5	113,4	20/15	M6/13	3,6	
ZPB.F19.E7.F2.D							
ZPB.F22.E7.F2.L	22,5	55,1	118,8	20/15	M6/13	4,1	
ZPB.F22.E7.F2.D							



Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor Inlet port D	Potisni otvor Outlet port D1	Masa Mass (kg)
				(mm)		
ZPB.F4.E7.H2.L	4	39,9	88,4	M16x1,5	M16x1,5	3,0
ZPB.F4.E7.H2.D						
ZPB.F5.E7.H2.L	5,5	41,1	90,9	M22x1,5	M22x1,5	3,1
ZPB.F5.E7.H2.D						
ZPB.F8.E7.H2.L	8	43,2	95	M27x2	M22x1,5	3,2
ZPB.F8.E7.H2.D						
ZPB.F11.E7.H2.L	11	47	100	M27x2	M22x1,5	3,3
ZPB.F11.E7.H2.D						
ZPB.F14.E7.H2.L	14	47,5	105	M27x2	M22x1,5	3,5
ZPB.F14.E7.H2.D						
ZPB.F16.E7.H2.L	16	47,5	108,4	M27x2	M22x1,5	3,6
ZPB.F16.E7.H2.D						
ZPB.F19.E7.H2.L	19	47,5	113,4	M27x2	M22x1,5	3,7
ZPB.F19.E7.H2.D						
ZPB.F22.E7.H2.L	22,5	55,1	118,8	M27x2	M22x1,5	3,8
ZPB.F22.E7.H2.D						

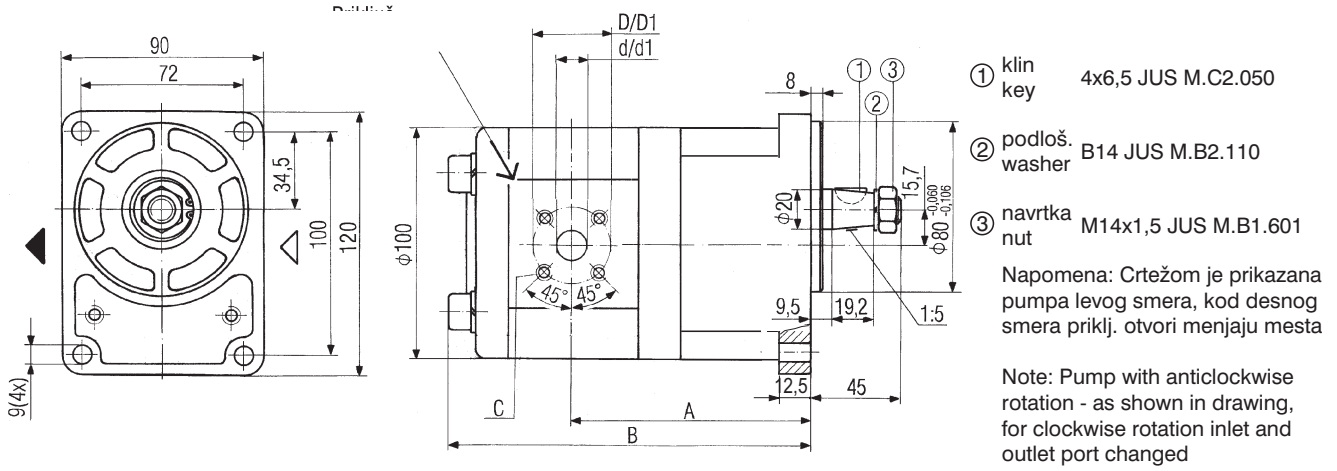


① O - prsten 46,3x2,4
O - ring

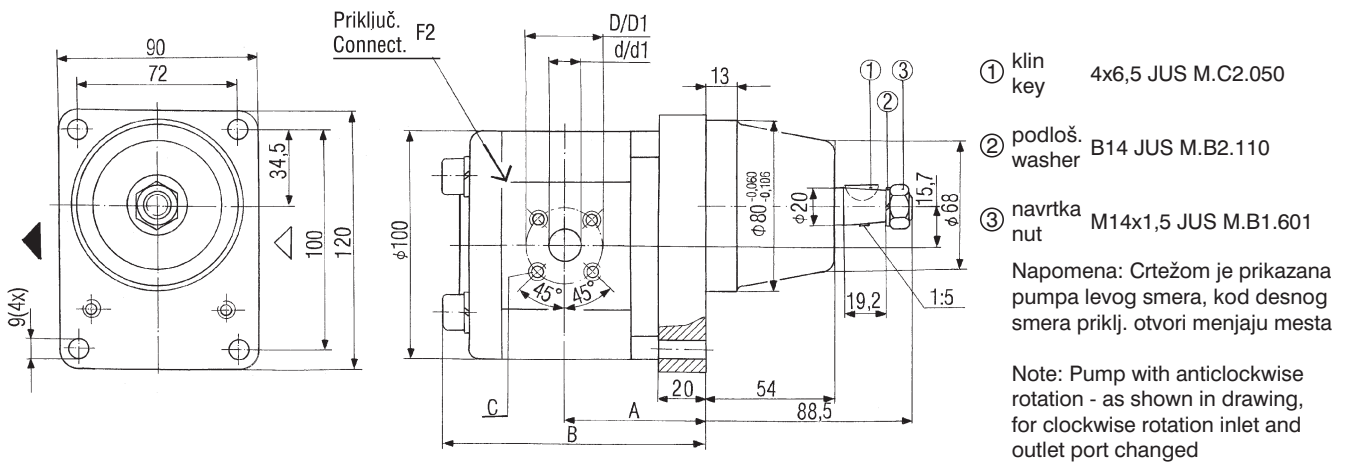
Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Inlet port/ d/d1	Potisni otvor/ Outlet port D/D1	C	Masa Mass (kg)
				(mm)			
ZPB.F4.F8.F2.L	4	37,3	82,7	15/15	40/35	M6/13	2,4
ZPB.F4.F8.F2.D							
ZPB.F5.F8.F2.L	5,5	38,6	85,2	15/15	40/35	M6/13	2,4
ZPB.F5.F8.F2.D							
ZPB.F8.F8.F2.L	8	40,6	89,3	15/15	40/35	M6/13	2,5
ZPB.F8.F8.F2.D							
ZPB.F11.F8.F2.L	11	44,5	94,1	15/15	40/35	M6/13	2,6
ZPB.F11.F8.F2.D							
ZPB.F16.F8.F2.L	16	45	102,7	15/15	40/35	M6/13	3,0
ZPB.F16.F8.F2.D							
ZPB.F22.F8.F2.L	22,5	58,5	125,2	15/15	40/35	M6/13	3,8
ZPB.F22.F8.F2.D							

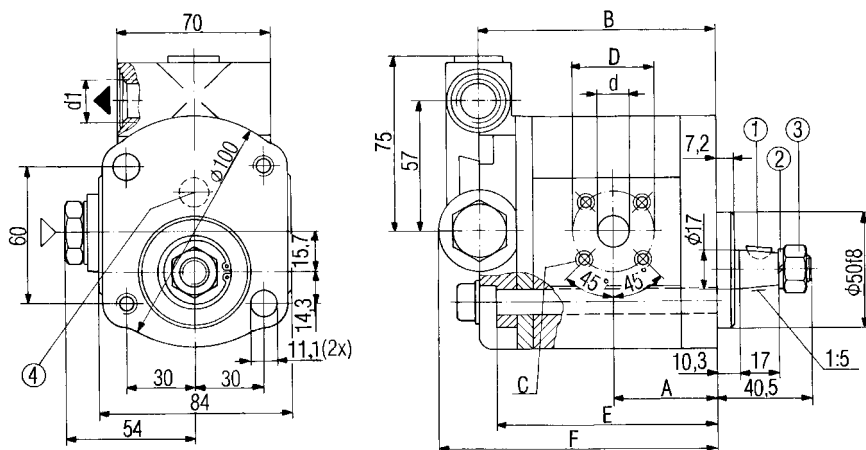


Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1		C	Masa Mass (kg)
				(mm)			
ZPB.F4.A9.F2.L	4	71,3	116,7	15/15	40/35	M6/13	3,4
ZPB.F4.A9.F2.D							
ZPB.F5.A9.F2.L	5,5	72,6	119,2	20/15	40/35	M6/13	3,4
ZPB.F5.A9.F2.D							
ZPB.F8.A9.F2.L	8	74,7	121,5	20/15	40/35	M6/13	3,5
ZPB.F8.A9.F2.D							
ZPB.F11.A9.F2.L	11	79	126,5	20/15	40/35	M6/13	3,6
ZPB.F11.A9.F2.D							
ZPB.F16.A9.F2.L	16	79	134,9	20/15	40/35	M6/13	4,0
ZPB.F16.A9.F2.D							
ZPB.F19.A9.F2.L	19	79	134,9	20/15	40/35	M6/13	4,2
ZPB.F19.A9.F2.D							



Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1		C	Masa Mass (kg)
				(mm)			
ZPB.F11.A10.F2.L	11	64,5	113,8	20/15	40/35	M6/13	4,5
ZPB.F11.A10.F2.D							
ZPB.F14.A10.F2.L	14	65,5	119,1	20/15	40/35	M6/13	4,6
ZPB.F14.A10.F2.D							
ZPB.F16.A10.F2.L	16	65,5	122,5	20/15	40/35	M6/13	4,7
ZPB.F16.A10.F2.D							
ZPB.F19.A10.F2.L	19	78,6	127,5	20/15	40/35	M6/13	5,1
ZPB.F19.A10.F2.D							
ZPB.F22.A10.F2.L	22,5	78,6	144,9	20/15	40/35	M6/13	5,4
ZPB.F22.A10.F2.D							

A



- ① klin key 3x5 JUS M.C2.050
- ② podlož. washer B12 JUS M.B2.110
- ③ navrtka nut M12x1,5 JUS M.B1.601
- ④ položaj vratila za desni smer obrtanja shaft position at clockwise rotation

Napomena: Crtežom je prikazana pumpa levog smera, kod desnog smera priklj. otvori ne menjaju mesta

Note: Pump with anticlockwise rotation - as shown in drawing, ports are not changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	E	F	Usisni otvor Inlet port		Potisni otvor Outlet port d1	C	Masa Mass (kg)
						d	D			
(mm)										
ZPB.F11.A3.F2.L.VP/12	11	45	95,3	87,3	114,3	20	40	M18x1,5	M6/13	3,0
ZPB.F11.A3.F2.D.VP/12										
ZPB.F16.A3.F2.L.VP/12	16	45	103,7	95,7	122,7	20	40	M18x1,5	M6/13	4,2
ZPB.F16.A3.F2.D.VP/12										
ZPB.F19.A3.F2.L.VP/12	19	45	108,7	100,7	127,7	20	40	M18x1,5	M6/13	4,2
ZPB.F19.A3.F2.D.VP/12										