

prva desetletka
HYDRAULICS

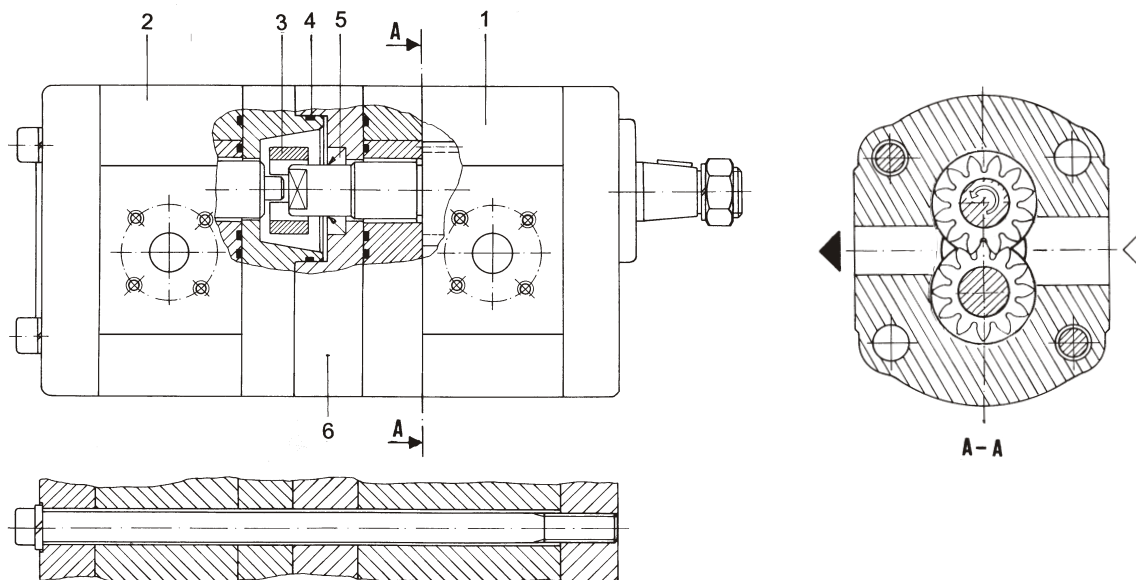
Zupčaste pumpe ZPB / ZPB Gear pumps ZPB / ZPB

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

- Dvostrujne pumpe - sa dva odvojena protoka
 - 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
- Double pumps - with two separate flow circuits
 - 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



PRESEK - PRINCIP RADA SECTION - MODE OF OPERATION



1. Prva pumpa
2. Druga pumpa
3. Spojnica
4. O - prsten
5. Osovinska zaptivka
6. Međuploča

1. First pump
2. Second pump
3. Coupling
4. O - ring
5. Shaft seal
6. Midplate

A

POGON

Pumpe se pogone preko elastične spojnice. Radialne 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

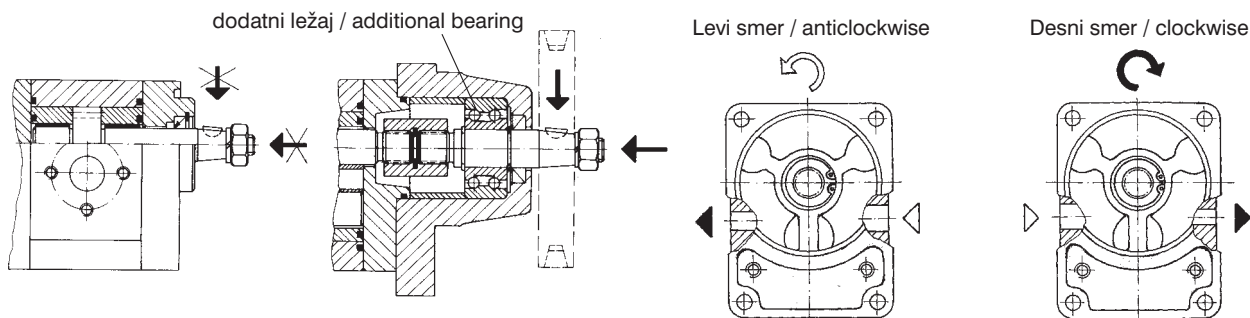
The pumps are driven by flexible coupling. Radial and axial forces on to driven shaft are not permissible. If the pump by V-belt or gear wheel driven is, then must be pump with additional

SMER OBRTANJA

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
Priključivanje vodova Line connection	otvori sa navojem ili priрубnice 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 with torque
Temperatura okoline (°C) Ambient temperature	bez dodatnog ležaja (radijal. i aksijal. sile nisu dozvoljene) sa dodatnim ležajem (radijal. i aksijal. sile su dozvoljene) without additional bearing (rad. and axial forces not perm.) with additional bearing (radial and axial forces permissible)
	-20 ... +40

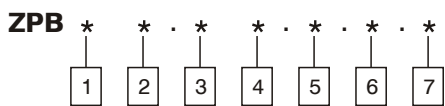
**HIDRAULIČKE
HYDRAULIC**

Radna zapremina (cm ³)** Displacement	4+...	5,5+...	8+...	11+...	14+...	16+...	19+...	22,5+...	
nominal (I pump)			250				210	180*	
nominal (II pump)			230				190	160	
max (I pump)			300				250	210	
max (II pump)			300			250	210	180	
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

** Videti označavanje
See designation

**OZNAČAVANJE
DESIGNATION**



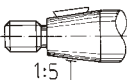
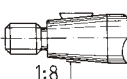
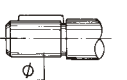
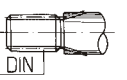
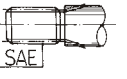
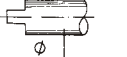
1 Veličina:
Size:

F

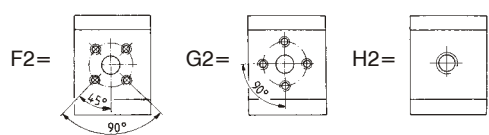
2 Radna zapremina:
Displacement:

4/4 = 4+4 cm ³	14/4 = 14+4 cm ³	19/4 = 19+4 cm ³
5/4 = 5,5+4 cm ³	14/5 = 14+5,5 cm ³	19/5 = 19+5,5 cm ³
5/5 = 5,5+5,5 cm ³	14/8 = 14+8 cm ³	19/8 = 19+8 cm ³
8/4 = 8+4 cm ³	14/11 = 14+11 cm ³	19/11 = 19+11 cm ³
8/5 = 8+5,5 cm ³	14/14 = 14+14 cm ³	19/14 = 19+14 cm ³
8/8 = 8+8 cm ³	16/4 = 16+4 cm ³	19/16 = 19+16 cm ³
11/4 = 11+4 cm ³	16/5 = 16+5,5 cm ³	19/19 = 19+19 cm ³
11/5 = 11+5,5 cm ³	16/8 = 16+8 cm ³	22/4 = 22,5+4 cm ³
11/8 = 11+8 cm ³	16/11 = 16+11 cm ³	22/5 = 22,5+5,5 cm ³
11/11 = 11+11 cm ³	16/14 = 16+14 cm ³	22/8 = 22,5+8 cm ³
	16/16 = 16+16 cm ³	22/11 = 22,5+11 cm ³
		22/14 = 22,5+14 cm ³
		22/19 = 22,5+19 cm ³
		22/22 = 22,5+22,5 cm ³



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 Priključni otvori:
Connection ports:



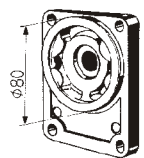
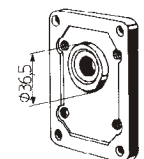
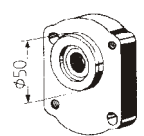
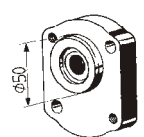
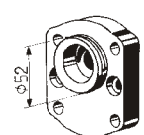
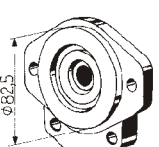
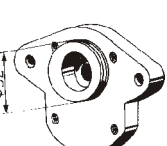
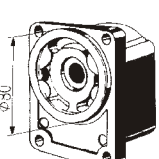
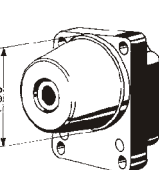
6 Smer obrtnja:
Rotation direction:

- L= levi anticlockwise 
- D= desni clockwise 

7 Varijanta pumpe:
Pumps variant:

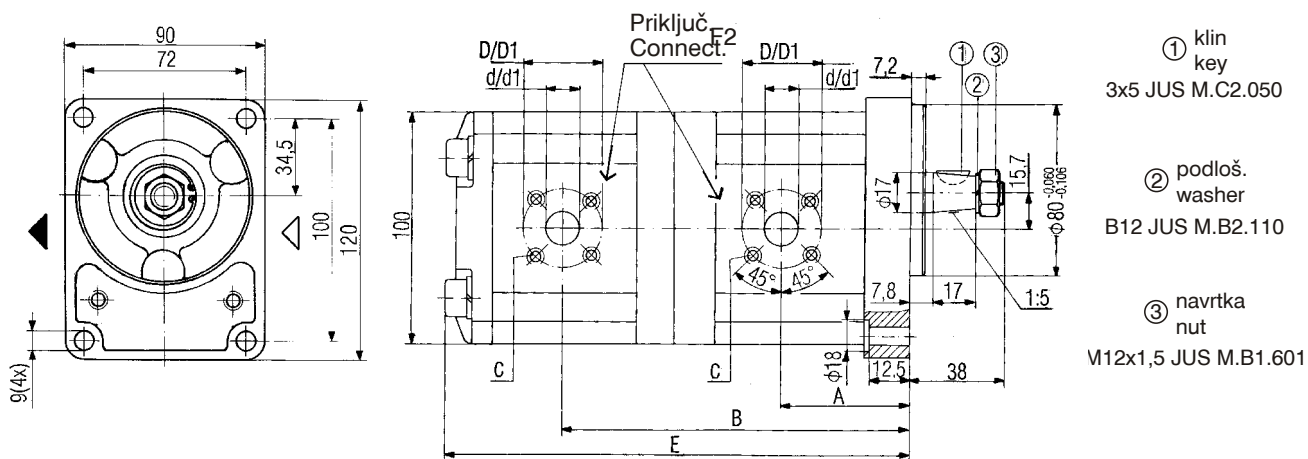
- =standard
- VP/12 = sa ventilom with valve (Q const = 12 l/min)

4 Prednji poklopac:
Front cover:

- 1 = 
- 2 = 
- 3 = 
- 4 = 
- 5 = 
- 7 = 
- 8 = 
- *9 = 
- *10 = 

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

A



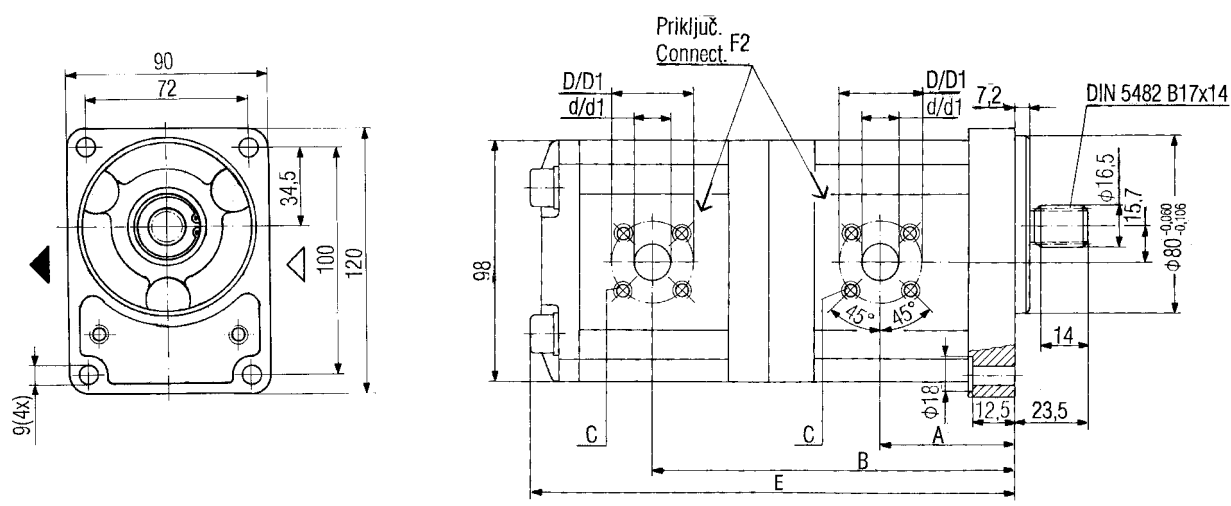
① klin
key
3x5 JUS M.C2.050

② podlož.
washer
B12 JUS M.B2.110

③ navrtka
nut
M12x1,5 JUS M.B1.601

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

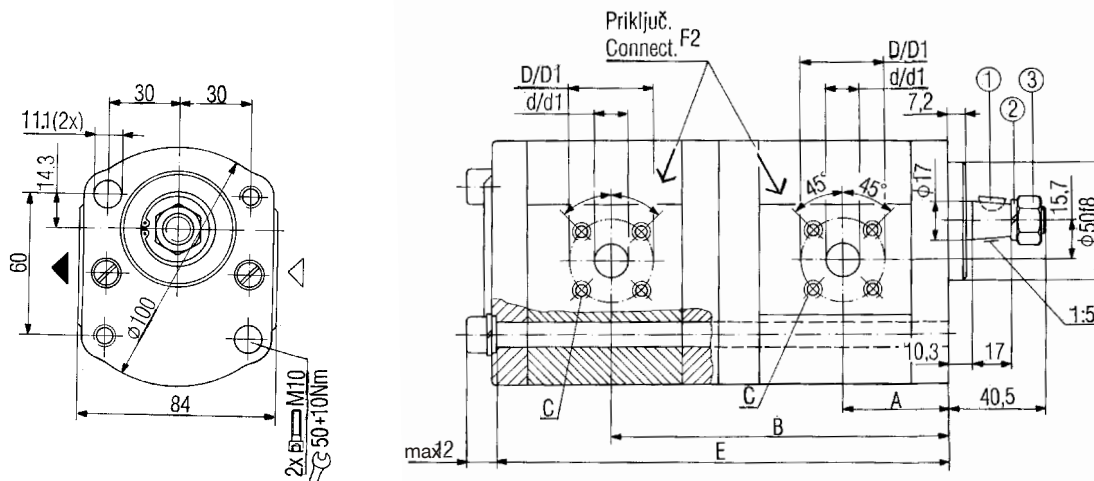
Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	E	Usisni otvor/ Potisni otvor Inlet port/ Outlet port		C	Masa Mass (kg)
					d/d1	D/D1		
ZPB.F4/4.A1.F2.L	4+4	39,8	121,6	164,9	15/15			5,1
ZPB.F4/4.A1.F2.D								
ZPB.F5/4.A1.F2.L	5,5+4	41	124,1	167,4	15/15			5,1
ZPB.F5/4.A1.F2.D			125,3	169,9				5,1
ZPB.F5/5.A1.F2.L	5,5+5,5	43,1	128,2	171,5	15/15			6,0
ZPB.F8/4.A1.F2.L	8+4		129,4	174				6,2
ZPB.F8/4.A1.F2.D	8+5,5							
ZPB.F8/5.A1.F2.L	8+8							
ZPB.F8/5.A1.F2.D		47,5	133,2	176,5	20/15	40/35	M6/13	6,3
ZPB.F11/4.A1.F2.L	11+4		134,4	179				6,3
ZPB.F11/4.A1.F2.D	11+5,5							
ZPB.F11/5.A1.F2.L	11+8		140,3	188,1				6,5
ZPB.F11/5.A1.F2.D	11+11							
ZPB.F11/8.A1.F2.L	14+8		145,3	193,1				6,9
ZPB.F11/8.A1.F2.D	14+11	145,8			198,1	7,0		
ZPB.F14/8.A1.F2.L	14+14		47,5	141,6			184,9	20/15
ZPB.F14/8.A1.F2.D	16+4	142,8		187,4	6,7			
ZPB.F16/4.A1.F2.L	16+5,5					144,9	191,5	
ZPB.F16/4.A1.F2.D	16+11	148,7		196,5	6,9			
ZPB.F16/5.A1.F2.L	16+14		149,2			204,9	7,3	
ZPB.F16/5.A1.F2.D	16+16	47,5		147,8	192,4			20/15
ZPB.F19/5.A1.F2.L	19+5,5		149,9	196,5	7,0			
ZPB.F19/5.A1.F2.D	19+11					153,9	201,5	
ZPB.F19/11.A1.F2.L	19+14		154,2	209,9	7,5			
ZPB.F19/11.A1.F2.D	19+16					154,2	214,9	
ZPB.F19/14.A1.F2.L	19+19		55	167,2	213,9			
ZPB.F19/14.A1.F2.D	22,5+8	171,5		218,2	7,8			
ZPB.F22/8.A1.F2.L	22,5+11					171,6	227,3	8,1
ZPB.F22/8.A1.F2.D	22,5+16	185,2		249,7	8,5			
ZPB.F22/11.A1.F2.L	22,5+19							
ZPB.F22/11.A1.F2.D								
ZPB.F22/16.A1.F2.L								
ZPB.F22/16.A1.F2.D								
ZPB.F22/22.A1.F2.L								
ZPB.F22/22.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

A

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	E	Usisni otvor/ Potisni otvor Inlet port/ Outlet port		C	Masa Mass (kg)
					d/d1	D/D1		
ZPB.F8/5.D1.F2.L	8+5,5	43,1	129,4	174	15/15			6,2
ZPB.F8/5.D1.F2.D								
ZPB.F8/8.D1.F2.L	8+8	43,1	131,5	178,1	15/15			6,3
ZPB.F8/8.D1.F2.D								
ZPB.F11/4.D1.F2.L	11+4	47,5	133,2	176,5	20/15	40/35	M6/13	6,3
ZPB.F11/4.D1.F2.D								
ZPB.F11/5.D1.F2.L	11+5,5	47,5	134,4	179	20/15	40/35	M6/13	6,3
ZPB.F11/5.D1.F2.D								
ZPB.F11/8.D1.F2.L	11+8	47,5	136,5	183,1	20/15	40/35	M6/13	6,4
ZPB.F11/8.D1.F2.D								
ZPB.F11/11.D1.F2.L	11+11	47,5	140,3	188,1	20/15	40/35	M6/13	6,5
ZPB.F11/11.D1.F2.D								
ZPB.F14/4.D1.F2.L	14+4	47,5	138,2	181,5	20/15	40/35	M6/13	6,4
ZPB.F14/4.D1.F2.D								
ZPB.F14/5.D1.F2.L	14+5,5	47,5	139,4	183,7	20/15	40/35	M6/13	6,4
ZPB.F14/5.D1.F2.D								
ZPB.F14/8.D1.F2.L	14+8	47,5	141,5	188,1	20/15	40/35	M6/13	6,5
ZPB.F14/8.D1.F2.D								
ZPB.F16/4.D1.F2.L	16+4	47,5	141,6	184,9	20/15	40/35	M6/13	6,7
ZPB.F16/4.D1.F2.D								
ZPB.F16/8.D1.F2.L	16+8	47,5	144,9	191,5	20/15	40/35	M6/13	6,8
ZPB.F16/8.D1.F2.D								
ZPB.F16/11.D1.F2.L	16+11	47,5	148,7	196,5	20/15	40/35	M6/13	6,9
ZPB.F16/11.D1.F2.D								
ZPB.F16/16.D1.F2.L	16+16	47,5	149,2	204,9	20/15	40/35	M6/13	7,3
ZPB.F16/16.D1.F2.D								
ZPB.F19/11.D1.F2.L	19+11	47,5	153,7	201,5	20/15	40/35	M6/13	7,5
ZPB.F19/11.D1.F2.D								
ZPB.F19/19.D1.F2.L	19+19	47,5	154,2	214,9	20/15	40/35	M6/13	7,5
ZPB.F19/19.D1.F2.D								
ZPB.F22/5.D1.F2.L	22,5+5,5	55	165,2	209,8	20/15	40/35	M6/13	7,5
ZPB.F22/5.D1.F2.D								
ZPB.F22/8.D1.F2.L	22,5+8	55	167,3	213,9	20/15	40/35	M6/13	7,6
ZPB.F22/8.D1.F2.D								

① klin
key

3x5 JUS M.C2.050

② podloš.
washer

B12 JUS M.B2.110

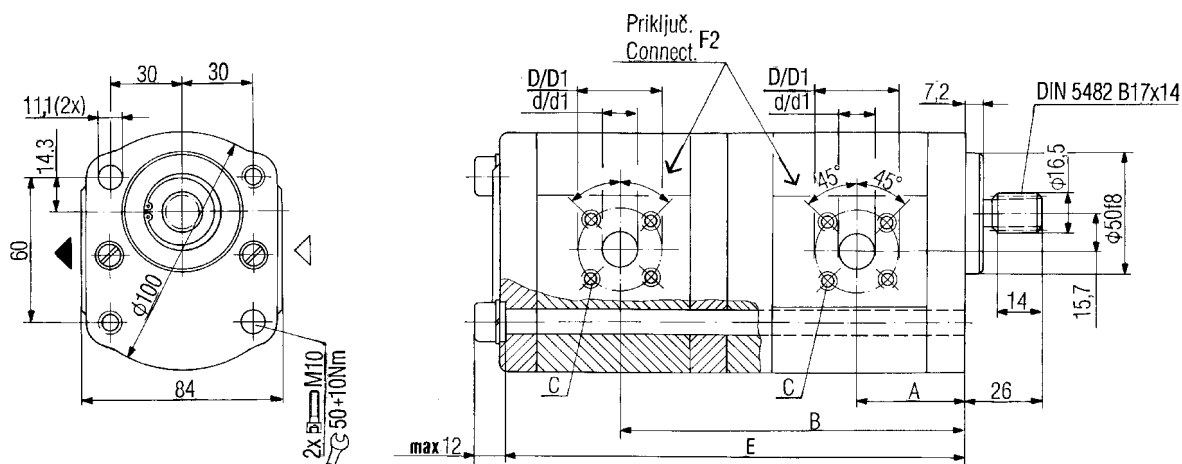
③ navrtka
nut

M12x1,5 JUS M.B1.601

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

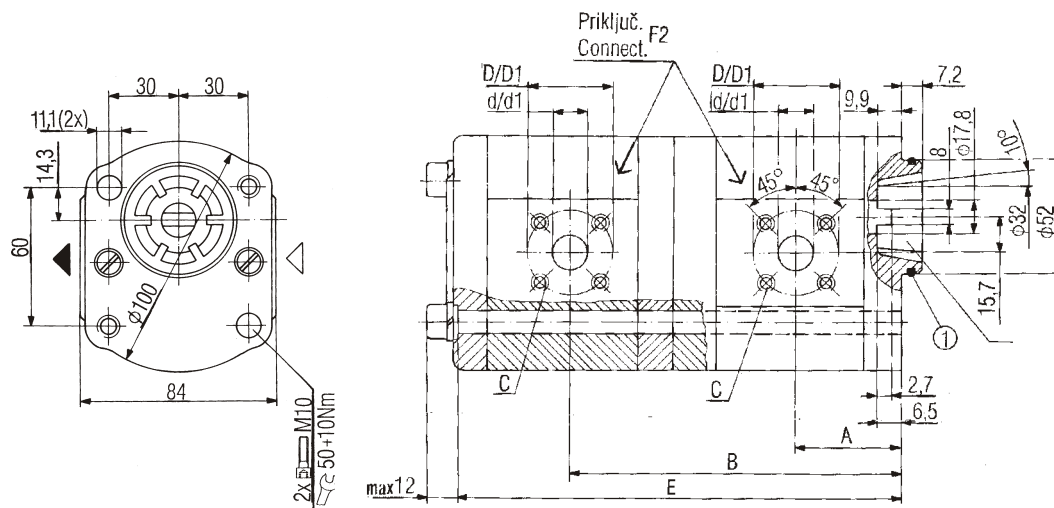
Note: Pump with anticlockwise rotation - as shown in drawing, for clockwise rotation inlet and outlet port changed

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	E	Usisni otvor/ Potisni otvor Inlet port/ Outlet port		C	Masa Mass (kg)
					d/d1	D/D1		
ZPB.F5/4.A3.F2.L	5,5+4	38,7	121,6	157,9	15/15			5,7
ZPB.F5/4.A3.F2.D								
ZPB.F8/4.A3.F2.L	8+4	40,7	125,7	162				5,8
ZPB.F8/4.A3.F2.D								
ZPB.F8/5.A3.F2.L	8+5,5	40,7	126,9	164,5				5,8
ZPB.F8/5.A3.F2.D								
ZPB.F8/8.A3.F2.L	8+8	40,7	129	168,6				5,4
ZPB.F8/8.A3.F2.D								
ZPB.F11/4.A3.F2.L	11+4	44,5	130,7	167				4,5
ZPB.F11/4.A3.F2.D								
ZPB.F11/5.A3.F2.L	11+5,5	44,5	131,9	169,5				5,6
ZPB.F11/5.A3.F2.D								
ZPB.F11/8.A3.F2.L	11+8	44,5	134	173,6				5,8
ZPB.F11/8.A3.F2.D								
ZPB.F11/11.A3.F2.L	11+11	44,5	137,8	178,6				6,1
ZPB.F11/11.A3.F2.D								
ZPB.F14/8.A3.F2.L	14+8	45	139	178,6				6,2
ZPB.F14/8.A3.F2.D								
ZPB.F16/4.A3.F2.L	16+4	45	139,1	175,4	20/15 40/35		M6/13	6,3
ZPB.F16/4.A3.F2.D								
ZPB.F16/5.A3.F2.L	16+5,5	45	140,3	177,9				6,3
ZPB.F16/5.A3.F2.D								
ZPB.F16/8.A3.F2.L	16+8	45	142,4	182				6,4
ZPB.F16/8.A3.F2.D								
ZPB.F16/11.A3.F2.L	16+11	45	146,2	187				6,5
ZPB.F16/11.A3.F2.D								
ZPB.F16/14.A3.F2.L	16+14	45	146,7	192				6,6
ZPB.F16/14.A3.F2.D								
ZPB.F16/16.A3.F2.L	16+16	45	146,7	195,4				6,9
ZPB.F16/16.A3.F2.D								
ZPB.F19/4.A3.F2.L	19+4	45	144,1	180,4				6,2
ZPB.F19/4.A3.F2.D								
ZPB.F19/11.A3.F2.L	19+11	45	146,2	192				6,8
ZPB.F19/11.A3.F2.D								
ZPB.F19/19.A3.F2.L	19+19	45	151,7	205,4				7,4
ZPB.F19/19.A3.F2.D								
ZPB.F22/11.A3.F2.L	22,5+11	58,7	156,6	197,4				6,9
ZPB.F22/11.A3.F2.D								
ZPB.F22/16.A3.F2.L	22,5+16	58,7	157,1	205,8				7,3
ZPB.F22/16.A3.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

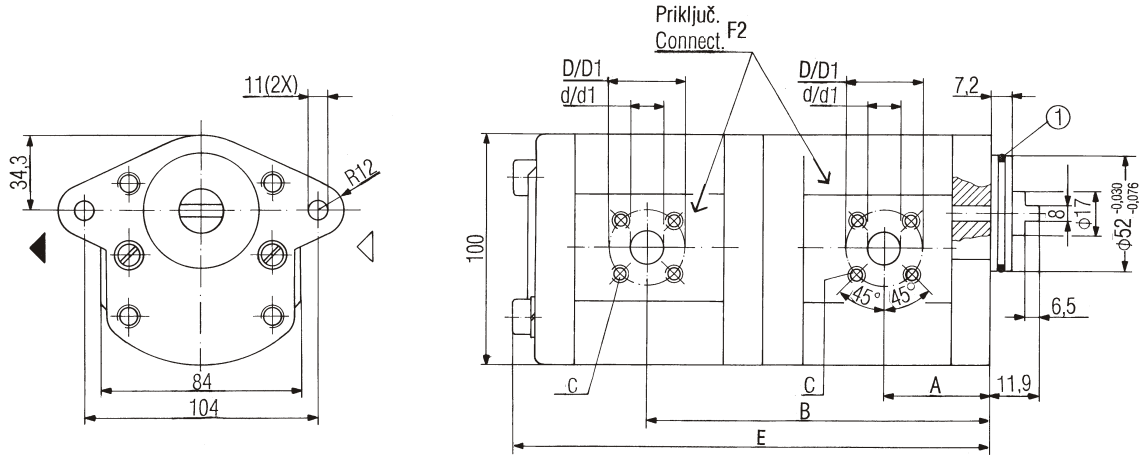
Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	E	Usisni otvor/ Potisni otvor Inlet port/ Outlet port		C	Masa Mass (kg)															
					d/d1	D/D1																	
(mm)																							
ZPB.F8/4.D3.F2.L	8+4	40,7	125,7	162	20/15	40/35	M6/13	5,8															
ZPB.F8/4.D3.F2.D																							
ZPB.F11/8.D3.F2.L	11+8	44,5	134	173,6				20/15	40/35	M6/13	6,0												
ZPB.F11/8.D3.F2.D																							
ZPB.F16/8.D3.F2.L	16+8	45	142,4	182							20/15	40/35	M6/13	6,4									
ZPB.F16/8.D3.F2.D																							
ZPB.F16/11.D3.F2.L	16+11		146,2	187										20/15	40/35	M6/13	6,5						
ZPB.F16/11.D3.F2.D																							
ZPB.F16/14.D3.F2.L	161+14		146,7	192													20/15	40/35	M6/13	6,7			
ZPB.F16/14.D3.F2.D																							
ZPB.F16/16.D3.F2.L	16+16	146,7	195,4	20/15																40/35	M6/13	6,9	
ZPB.F16/16.D3.F2.D																							
ZPB.F19/11.D3.F2.L	19+11	45	151,7		192,5	20/15	40/35															M6/13	6,8
ZPB.F19/11.D3.F2.D																							
ZPB.F22/14.D3.F2.L	22,5+14	58,6	169		215			20/15	40/35	M6/13													7,4
ZPB.F22/14.D3.F2.D																							
ZPB.F22/19.D3.F2.L	22,5+19	58,6	169		233						20/15	40/35	M6/13										7,8
ZPB.F22/19.D3.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

Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	E	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1 D/D1		C	Masa Mass (kg)
		(mm)						
ZPB.F5/4.F5.F2.L	5,5+4	38,7	121,6	157,9	15/15			5,7
ZPB.F5/4.F5.F2.D								
ZPB.F8/4.F5.F2.L	8+4	40,7	125,7	162				5,8
ZPB.F8/4.F5.F2.D								
ZPB.F8/5.F5.F2.L	8+5,5	40,7	126,9	164,5				5,8
ZPB.F8/5.F5.F2.D								
ZPB.F8/8.F5.F2.L	8+8	40,7	129	168,6				5,9
ZPB.F8/8.F5.F2.D								
ZPB.F11/4.F5.F2.L	11+4	44,5	130,7	167	20/15	40/35	M6/13	5,9
ZPB.F11/4.F5.F2.D								
ZPB.F11/5.F5.F2.L	11+5,5	44,5	131,9	169,5				5,9
ZPB.F11/5.F5.F2.D								
ZPB.F11/8.F5.F2.L	11+8	44,5	134	173,6				6,0
ZPB.F11/8.F5.F2.D								
ZPB.F16/16.F5.F2.L	16+16	45	146,7	195,4				6,9
ZPB.F16/16.F5.F2.D								
ZPB.F22/8.F5.F2.L	22,5+8	52,6	152,8	192,4				6,8
ZPB.F22/8.F5.F2.D								

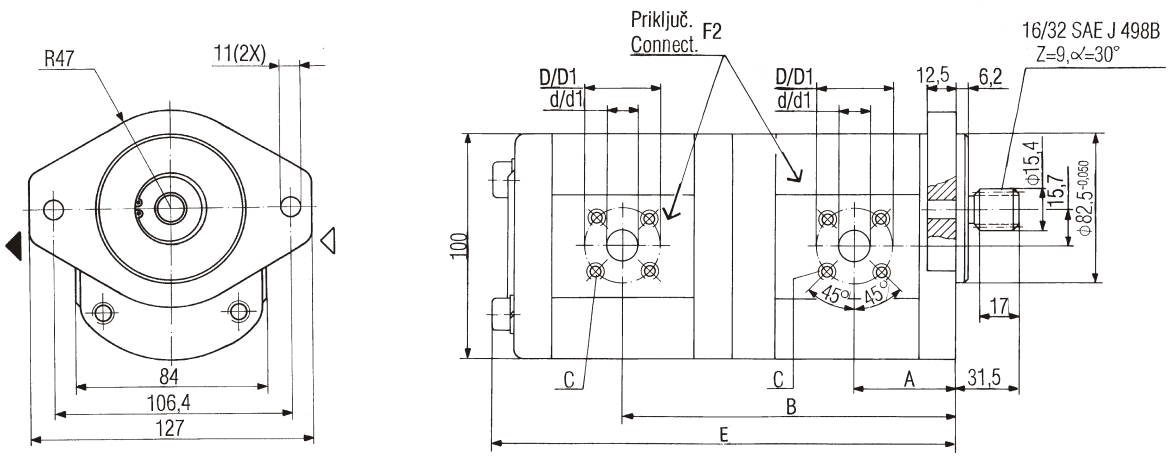


- ① O - prsten 46,3x2,4
- O - ring

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

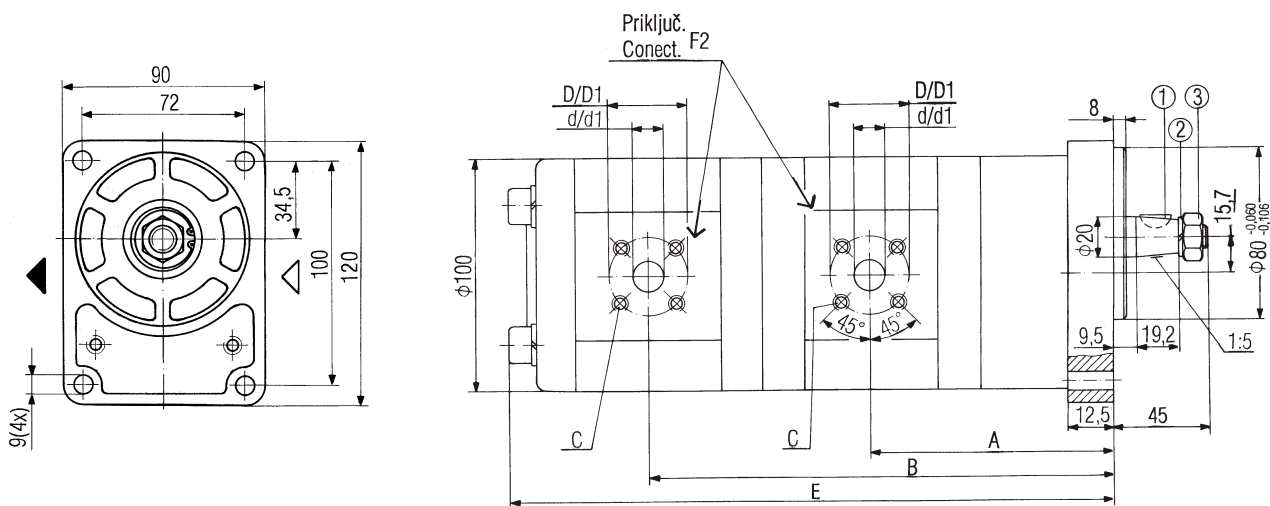
Oznaka Designation	Radna zapremina Displacement (cm ³)	A	B	E	Usisni otvor/ Potisni otvor Inlet port/ Outlet port		C	Masa Mass (kg)
					d/d1	D/D1		
ZPB.F5/5.F8.F2.L	5,5+5,5	38,6	122,8	169,2	15/15			5,8
ZPB.F5/5.F8.F2.D								
ZPB.F11/5.F8.F2.L	11+5,5	44,5	131,9	176,5	20/15	40/35	M6/13	4,8
ZPB.F11/5.F8.F2.D								
ZPB.F11/11.F8.F2.L	11+11		137,5	187,4				6,1
ZPB.F11/11.F8.F2.D								
ZPB.F16/22.F8.F2.L	16+22,5	45	160,3	226,6				7,0
ZPB.F16/22.F8.F2.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	E	Usisni otvor/ Potisni otvor Inlet port/ Outlet port		C	Masa Mass (kg)
					d/d1	D/D1		
ZPB.F11/4.E7.F2.L	11+4	47	133,2	176,5	20/15	40/35	M6/13	6,3
ZPB.F11/4.E7.F2.D								
ZPB.F11/5.E7.F2.L	11+5,5	47,5	134,4	179				6,3
ZPB.F11/5.E7.F2.D								
ZPB.F14/11.E7.F2.L	14+11	47,5	145,3	193,1				6,7
ZPB.F14/11.E7.F2.D								
ZPB.F16/11.E7.F2.L	16+11	47,5	148,7	196,5				6,9
ZPB.F16/11.E7.F2.D								
ZPB.F19/8.E7.F2.L	19+8	47,5	149,9	196,5				7,0
ZPB.F19/8.E7.F2.D								
ZPB.F19/11.E7.F2.L	19+11		153,7	201,5				7,1
ZPB.F19/11.E7.F2.D								



① klin
key 4x6,5 JUS M.C2.050

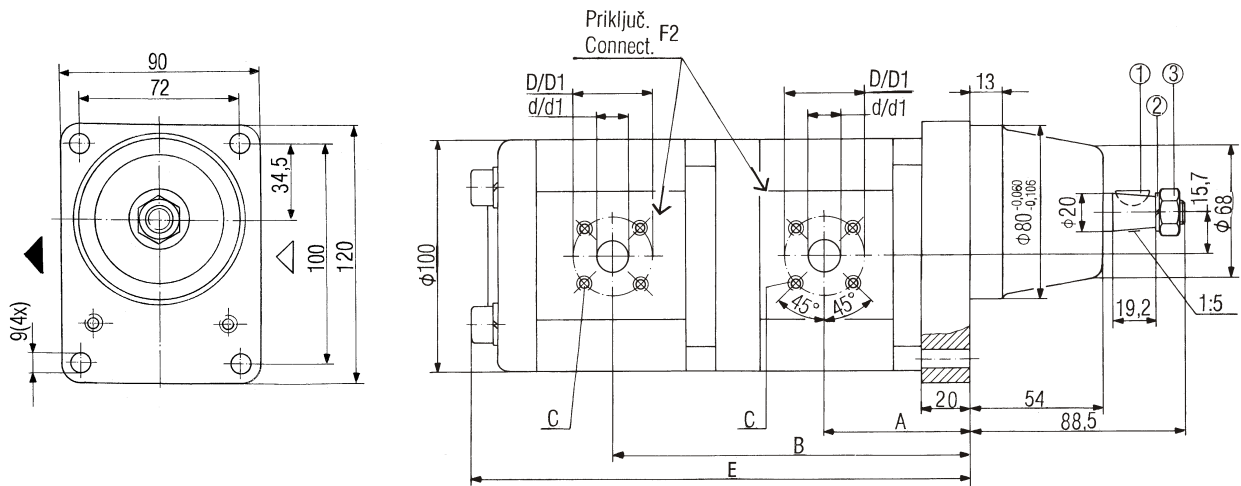
② podloš.
washer B14 JUS M.B2.110

③ navrtka
nut M14x1,5 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	E	Usisni otvor/ Potisni otvor Inlet port/ Outlet port D/D1		C	Masa Mass (kg)
					d/d1	D/D1		
ZPB.F4/4.A9.F2.L	4+4	71,3	153	197	15/15			6,7
ZPB.F4/4.A9.F2.D								
ZPB.F5/4.A9.F2.L	5,5+4	72,6	155,5	199,5	15/15			6,7
ZPB.F5/4.A9.F2.D								
ZPB.F8/5.A9.F2.L	8+5,5	74,7	160,8	205,1	15/15			5,2
ZPB.F8/5.A9.F2.D			163	210,2				
ZPB.F8/8.A9.F2.L	8+8	79	165,8	211,1	20/15	40/35	M6/13	5,3
ZPB.F8/8.A9.F2.D			168	215,2				
ZPB.F11/5.A9.F2.L	11+5,5	79	172,3	220,2	20/15	40/35	M6/13	5,5
ZPB.F11/5.A9.F2.D	11+8		173	217				
ZPB.F11/8.A9.F2.L	11+11	79	174,2	219,5	20/15	40/35	M6/13	5,5
ZPB.F11/8.A9.F2.D			176,3	223,6				
ZPB.F11/11.A9.F2.L	16+4	79	180,7	228,6	20/15	40/35	M6/13	7,5
ZPB.F11/11.A9.F2.D			177,3	224,6				
ZPB.F16/4.A9.F2.L	16+5,5	79	180,7	237	20/15	40/35	M6/13	7,5
ZPB.F16/4.A9.F2.D			173	217				
ZPB.F16/5.A9.F2.L	16+8	79	174,2	219,5	20/15	40/35	M6/13	5,5
ZPB.F16/5.A9.F2.D			176,3	223,6				
ZPB.F16/8.A9.F2.L	16+11	79	180,7	228,6	20/15	40/35	M6/13	7,5
ZPB.F16/8.A9.F2.D			177,3	224,6				
ZPB.F16/11.A9.F2.L	16+16	79	180,7	237	20/15	40/35	M6/13	7,5
ZPB.F16/11.A9.F2.D			173	217				



① klin 4x6,5 JUS M.C2.050

② podlož. washer B14 JUS M.B2.110

③ navrtka nut M14x1,5 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	E	Usisni otvor/ Potisni otvor Inlet port/ Outlet port d/d1 D/D1		C	Masa Mass (kg)		
					(mm)					
ZPB.F11/5.A10.F2.L	11+5,5	64,5	152	197	20/15	40/35	M6/13	5,5		
ZPB.F11/5.A10.F2.D										
ZPB.F11/8.A10.F2.L	11+8	64,5	154	201						5,5
ZPB.F11/8.A10.F2.D										
ZPB.F14/5.A10.F2.L	14+5,5	65,5	157	202						5,7
ZPB.F14/5.A10.F2.D										
ZPB.F16/16.A10.F2.L	16+16	65,5	166,7	223						6,3
ZPB.F16/16.A10.F2.D										