

prva desetletka  
HYDRAULICS

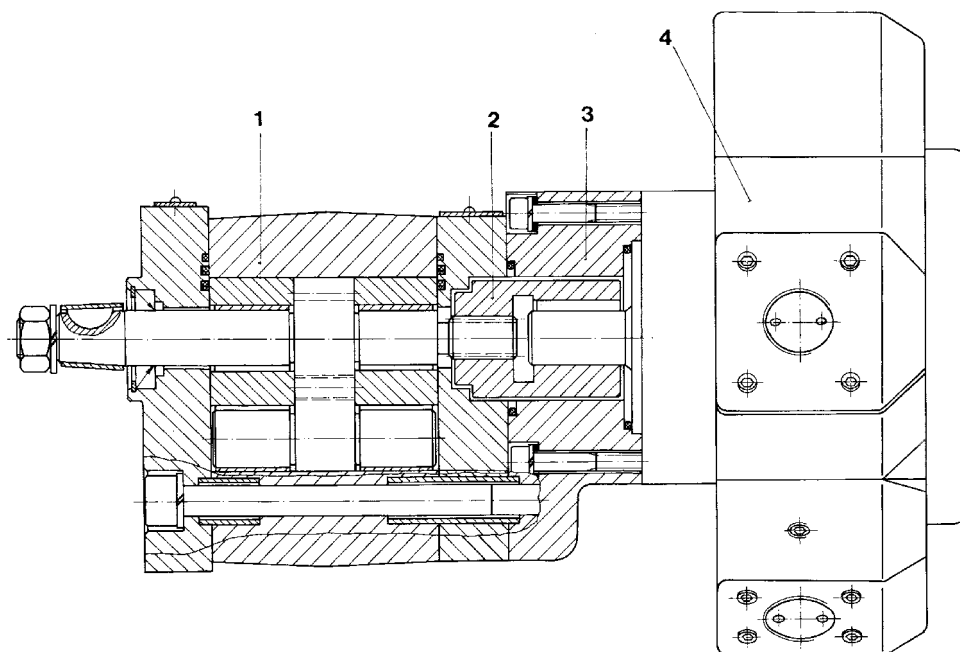
# Kombinovane pumpe - dvostrujne 3119 Gear/ radial piston double pumps 3119

VISOKOG PRITISKA  
HIGH PRESSURE

- Pumpe kompaktne konstrukcije sa dva odvojena protoka
- Zajednički pogon sa jednog pogonskog vratila
- Pogodne za ugradnju u horizontalnom položaju ili vertikalnom - potopljene u ulju
- Sve tehničke napomene kao i način pogona, smer obrtanja i položaj priključnih otvora videti kod zupčastih pumpi 3115 i klipno-radijalnih pumpi 3113
- The pumps of compact design with two separate flow circuits
- Common drive from one drive shaft
- Suitable for horizontal and vertical installation
- Technical description and operation principles identical to those given for gear pumps 3115 and radial piston pumps 3113



## PRESEK - PRINCIP RADA SECTION - MODE OF OPERATION



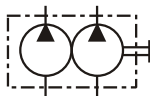
1. Zupčasta pumpa
2. Spojnica
3. Međuploča
4. Klipna pumpa

1. Gear pump
2. Coupling
3. Midplate
4. Piston pump

**A**

**TEHNIČKE KARAKTERISTIKE**  
**TECHNICAL DATA**

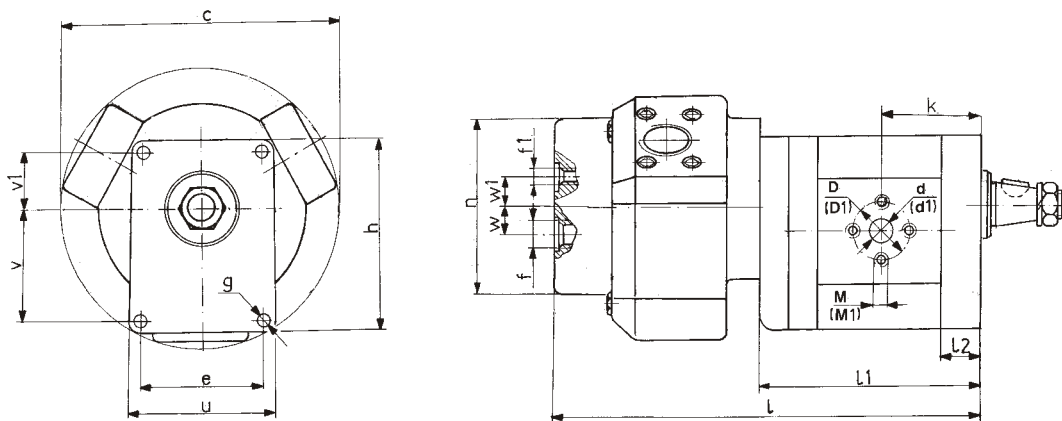
simbol/ symbol



| oznaka<br>designation      |                         | radna zapremina<br>displacement<br>(cm <sup>3</sup> ) |                             | pritisak<br>pressure (bar) |     |                             |     | broj obrtaja<br>speed<br>(min <sup>-1</sup> )<br>(rpm) |      | masa<br>mass<br>(kg) |
|----------------------------|-------------------------|---|-----------------------------|----------------------------|-----|-----------------------------|-----|--|------|----------------------|
|                            |                         |   |                             | zupč. pumpa<br>gear pump   |     | klipna pumpa<br>piston pump |     |  |      |                      |
| levi smer<br>anticlockwise | desni smer<br>clockwise | zupč. pumpa<br>gear pump                              | klipna pumpa<br>piston pump | nom                        | max | nom                         | max | min  | max  |                      |
| 3119.052.89                | 3119.052.90             | 6,66  | 1,2                         | 160                        | 200 | 320                         | 400 | 500  | 1500 |                      |
| 3119.081.89                |                         | 10,66   | 2,8                         |                            |     |                             |     |  |      |                      |
| 3119.115.89                |                         | 13,33   | 2,0                         |                            |     |                             |     |  |      | 12,2                 |
| 3119.160.89                |                         | 16,66   | 2,8                         |                            |     |                             |     |  |      | 13,7                 |
| 3119.211.89                |                         | 26,66   | 2,0                         |                            |     |                             |     |  |      | 16,4                 |
| 3119.213.89                |                         | 26,66   | 2,8                         |                            |     |                             |     |  |      | 17,7                 |
|                            | 3119.216.94             | 26,66   | 15,38                       |                            |     |                             |     |  |      |                      |
| 3119.215.89                |                         | 26,66   | 10,9                        |                            |     |                             |     |  |      |                      |
| 3119.217.89                |                         | 26,66   | 21,9                        |                            |     |                             |     |  |      |                      |
| 3119.309.19M               |                         | 42,0  | 2,0                         |                            |     |                             |     |  |      |                      |
| 3119.374.19M               |                         | 53,33   | 4,4                         |                            |     |                             |     |  |      |                      |
| 3119.374.91                |                         | 53,33   | 6,6                         |                            |     |                             |     |  |      |                      |
| 3119.377.91                |                         | 53,33   | 21,9                        |                            |     |                             |     |  |      |                      |
| 3119.420.91M               |                         | 66,66   | 21,9                        |                            |     |                             |     |  |      |                      |
| 3119.538.91                |                         | 106,66  | 10,99                       |                            |     |                             |     |  |      |                      |
| 3119.614.19                |                         | 133,33  | 6,6                         |                            |     |                             |     |  |      |                      |
| 3119.679.19                |                         | 133,33  | 30,8                        |                            |     |                             |     |  |      |                      |

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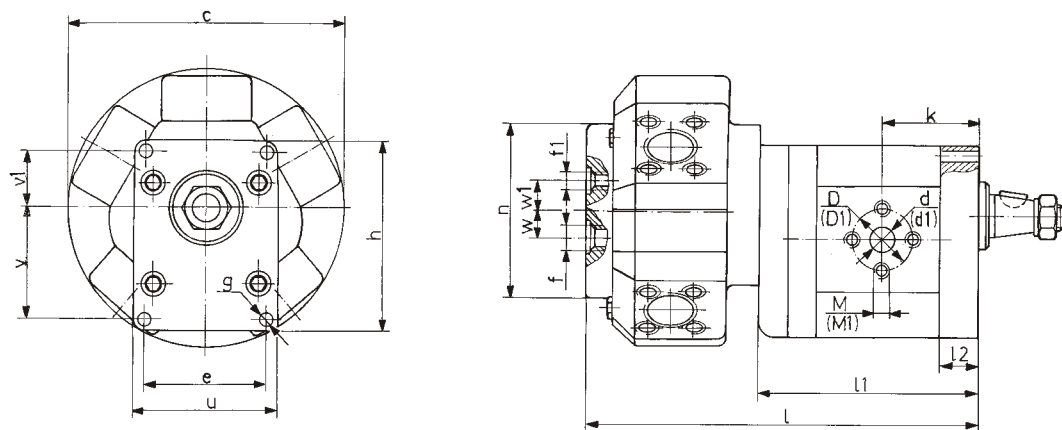
**UGRADNI CRTEŽ (mere u mm)**  
**MOUNTING DRAWING (dimensions in mm)**



| Oznaka/ Designation |                | c    | e  | g  | h     | n    | k  | l   | l1  | l2 | u  | V    | V1 | W  | W1 |
|---------------------|----------------|------|----|----|-------|------|----|-----|-----|----|----|------|----|----|----|
| Levi/ Anticlockwise | Desni/ Clockw. |      |    |    |       |      |    |     |     |    |    |      |    |    |    |
| 3119.052.89         | 3119.052.90    | Ø210 | 78 | Ø9 | 118,5 | Ø122 | 54 | 260 | 132 | 22 | 92 | 68,5 | 36 | 32 | 25 |

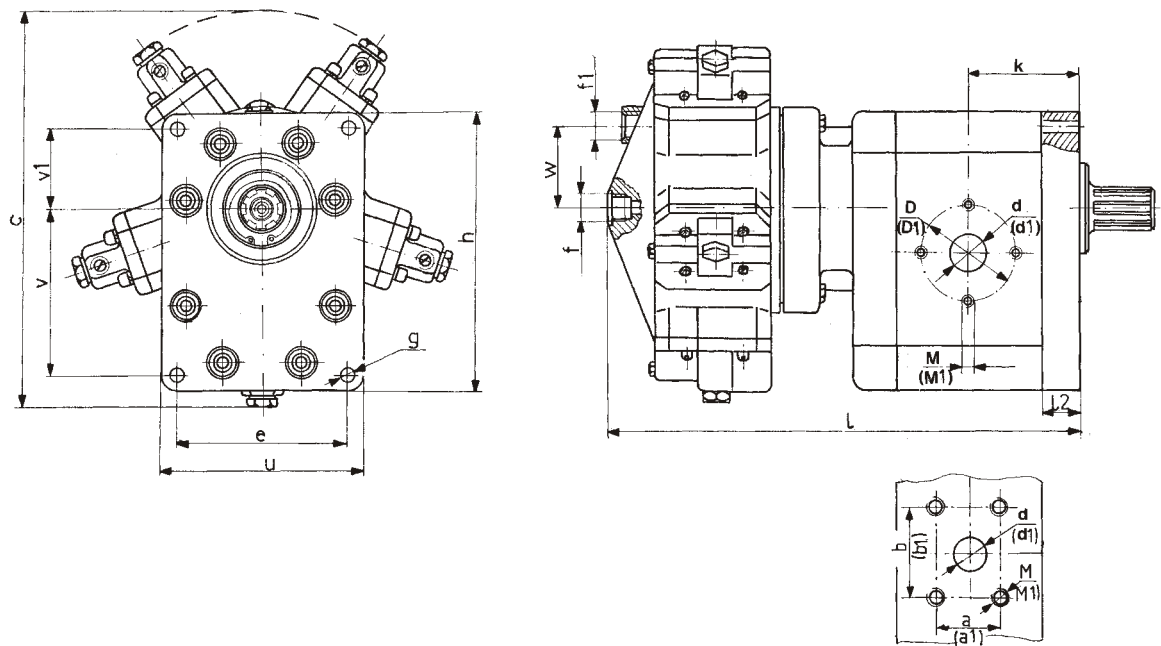
| Oznaka/ Designation |                | Usisni otvor/ Inlet port |    |    |       | Potisni otvor/ Outlet port |    |    |       | Vratilo Shaft |
|---------------------|----------------|--------------------------|----|----|-------|----------------------------|----|----|-------|---------------|
| Levi/ Anticlockwise | Desni/ Clockw. | f                        | d  | D  | M     | f1                         | d1 | D1 | M1    |               |
| 3119.052.89         | 3119.052.90    | M22X1,5                  | 12 | 30 | M6/16 | M16X1,5                    | 8  | 26 | M6/16 | Type I        |

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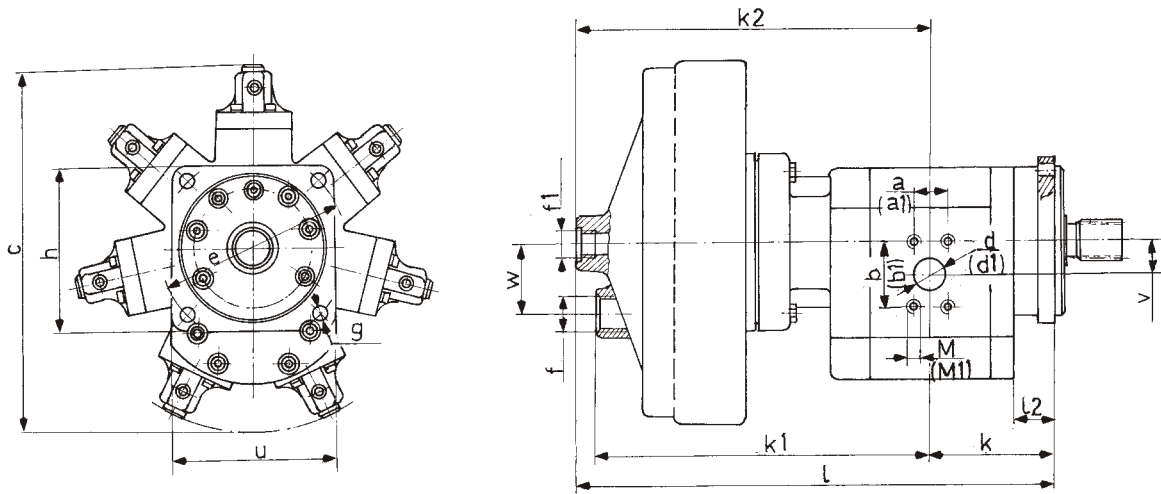
| Oznaka/ Designation |                | c   | e   | g  | h     | n    | k  | l   | l1  | l2 | u   | V     | V1   | W  | W1 |
|---------------------|----------------|-----|-----|----|-------|------|----|-----|-----|----|-----|-------|------|----|----|
| Levi/ Anticlockwise | Desni/ Clockw. |     |     |    |       |      |    |     |     |    |     |       |      |    |    |
| 3119.081.89         |                | 210 | 78  | 9  | 118,5 | Ø122 | 57 | 275 | 138 | 22 | 92  | 68,5  | 36   | 32 | 25 |
| 3119.309.19M        |                |     | 120 | 11 | 181   |      | 83 | 231 | 174 | 27 | 140 | 107,5 | 52,5 |    |    |
| 3119.374.19M        |                |     | 120 | 11 | 181   |      | 86 | 237 | 180 | 27 | 140 | 107,5 | 52,5 |    |    |

| Oznaka/ Designation |                | Usisni otvor/ Inlet port |    |    |        | Potisni otvor/ Outlet port |    |    |       | Vratilo Shaft |
|---------------------|----------------|--------------------------|----|----|--------|----------------------------|----|----|-------|---------------|
| Levi/ Anticlockwise | Desni/ Clockw. | f                        | d  | D  | M      | f1                         | d1 | D1 | M1    |               |
| 3119.081.89         |                | M22X1,5                  | 16 | 36 | M8/16  | M16X1,5                    | 10 | 28 | M6/16 | type I        |
| 3119.309.19M        |                |                          | 25 | 50 | M10/18 |                            | 16 | 36 | M8/16 | type II       |
| 3119.374.19M        |                |                          | 32 | 62 | M10/18 |                            | 20 | 40 | M8/16 | type II       |



| Oznaka/ Designation |                | c   | e   | g   | h     | k     | l   | l2 | u   | v     | v1   | w       | Vratilo Shaft |
|---------------------|----------------|-----|-----|-----|-------|-------|-----|----|-----|-------|------|---------|---------------|
| Levi/ Anticlockwise | Desni/ Clockw. |     |     |     |       |       |     |    |     |       |      |         |               |
| 3119.115.89         |                | 210 | 78  | 9   | 118,5 | 59    | 270 | 22 | 92  | 68,5  | 36   | 57      | type I        |
| 3119.160.89         |                |     |     |     |       | 61,5  | 275 |    |     |       |      |         |               |
| 3119.211.89         |                |     | 90  | 154 | 71,5  | 290   |     |    |     |       |      |         |               |
| 3119.213.89         |                |     |     |     | 71,5  | 290   |     |    |     |       |      |         |               |
| 3119.215.89         |                | 310 |     |     | 79    | 360   |     |    |     |       |      | type II |               |
| 3119.217.89         |                |     |     |     | 79    | 360   |     |    |     |       |      |         |               |
| 3119.374.91         |                | 300 | 120 | 11  | 181   | 86    | 374 | 27 | 140 | 107,5 | 52,5 |         | 60            |
| 3119.377.91         |                | 310 |     |     |       | 86    | 374 |    |     |       |      |         |               |
| 3119.420.91M        |                |     |     |     |       | 89,5  | 381 |    |     |       |      |         |               |
| 3119.538.91         |                | 306 | 134 | 14  | 218   | 101,5 | 403 | 30 | 160 | 128,5 | 63,5 | 60      |               |
| 3119.619.19         |                | 310 |     |     |       | 106   | 412 |    |     |       |      |         |               |

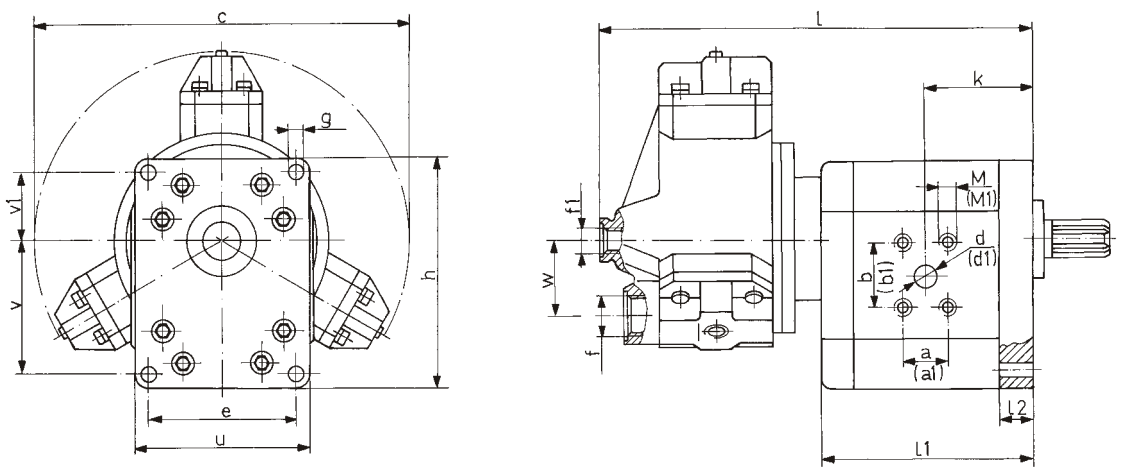
| Oznaka/ Designation |                | Usisni otvor/ Inlet port |    |    |      |      | Potisni otvor/ Outlet port |         |    |    |      |      |        |      |      |        |    |    |      |      |        |       |
|---------------------|----------------|--------------------------|----|----|------|------|----------------------------|---------|----|----|------|------|--------|------|------|--------|----|----|------|------|--------|-------|
| Levi/ Anticlockwise | Desni/ Clockw. | f                        | d  | D  | a    | b    | M                          | f1      | d1 | D1 | a1   | b1   | M1     |      |      |        |    |    |      |      |        |       |
| 3119.115.89         |                | M22x1,5                  | 20 | 40 |      |      | M8/18                      | M16x1,5 | 12 | 30 |      |      | M6/13  |      |      |        |    |    |      |      |        |       |
| 3119.160.89         |                |                          |    |    |      |      | M8/16                      |         |    |    |      |      | M6/16  |      |      |        |    |    |      |      |        |       |
| 3119.211.89         |                |                          |    |    |      |      | M10/18                     |         |    |    |      |      | M8/16  |      |      |        |    |    |      |      |        |       |
| 3119.213.89         |                |                          |    |    |      |      | M10/18                     |         |    |    |      |      | M8/16  |      |      |        |    |    |      |      |        |       |
| 3119.215.89         |                | M33x2                    | 25 |    | 26,2 | 52,3 | M10/16                     | M22x1,5 | 20 |    | 22,2 | 47,6 | M10/16 |      |      |        |    |    |      |      |        |       |
| 3119.217.89         |                |                          |    |    |      |      | M10/16                     |         |    |    |      |      | M10/16 |      |      |        |    |    |      |      |        |       |
| 3119.374.91         |                |                          |    |    |      |      | 32                         |         |    |    |      |      | 62     |      |      | M10/18 | 20 | 40 |      |      |        | M8/16 |
| 3119.377.91         |                |                          |    |    |      |      |                            |         |    |    |      |      |        |      |      | M10/18 |    |    |      |      |        | M8/16 |
| 3119.420.91M        |                | 40                       | 72 |    |      |      | M10/18                     | 25      | 50 |    |      |      | M8/16  |      |      |        |    |    |      |      |        |       |
| 3119.538.91         |                |                          |    |    |      |      | M12/20                     |         |    |    |      |      | M10/18 |      |      |        |    |    |      |      |        |       |
| 3119.619.19         |                |                          |    |    |      |      | 60                         |         |    |    |      |      |        | 50,8 | 88,9 | M12/14 | 38 |    | 35,7 | 69,7 | M12/14 |       |



| Oznaka/ Designation |                | c    | e     | g  | h   | k   | k1  | k2    | l     | l2 | u   | v    | w  | Vratilo Shaft |
|---------------------|----------------|------|-------|----|-----|-----|-----|-------|-------|----|-----|------|----|---------------|
| Levi/ Anticlockwise | Desni/ Clockw. |      |       |    |     |     |     |       |       |    |     |      |    |               |
|                     | 3119.216.94    | Ø310 | 161,9 | 14 | 140 | 108 | 266 | 281,5 | 389,5 | 35 | 140 | 27,5 | 60 | type III      |

| Oznaka/ Designation |                | Usisni otvor/ Inlet port |    |   |      |      |        | Potisni otvor/ Outlet port |    |    |      |      |        |
|---------------------|----------------|--------------------------|----|---|------|------|--------|----------------------------|----|----|------|------|--------|
| Levi/ Anticlockwise | Desni/ Clockw. | f                        | d  | D | a    | b    | M      | f1                         | d1 | D1 | a1   | b1   | M1     |
|                     | 3119.216.94    | M33x2                    | 25 | - | 26,2 | 52,3 | M10/16 | M22x1,5                    | 20 | -  | 22,2 | 47,6 | M10/16 |

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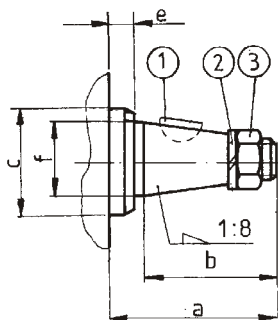


| Oznaka/ Designation |                | c    | e   | g  | h   | k   | l   | l1  | l2 | u   | v     | v1   | w  | Vratilo Shaft |
|---------------------|----------------|------|-----|----|-----|-----|-----|-----|----|-----|-------|------|----|---------------|
| Levi/ Anticlockwise | Desni/ Clockw. |      |     |    |     |     |     |     |    |     |       |      |    |               |
|                     | 3119.614.19    | Ø300 | 134 | 14 | 218 | 106 | 412 | 210 | 30 | 160 | 128,5 | 63,5 | 60 | type II       |

| Oznaka/ Designation |                | Usisni otvor/ Inlet port |    |   |      |      |        | Potisni otvor/ Outlet port |    |    |      |      |        |
|---------------------|----------------|--------------------------|----|---|------|------|--------|----------------------------|----|----|------|------|--------|
| Levi/ Anticlockwise | Desni/ Clockw. | f                        | d  | D | a    | b    | M      | f1                         | d1 | D1 | a1   | b1   | M1     |
|                     | 3119.614.19    | M33x2                    | 60 | - | 50,8 | 88,9 | M12/14 | M22x1,5                    | 38 | -  | 35,7 | 69,7 | M12/14 |

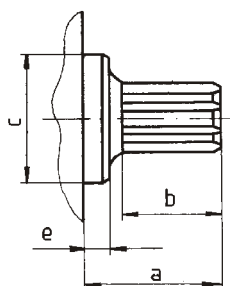
POGONSKO VRATILO  
DRIVE SHAFT

Tip / Type I

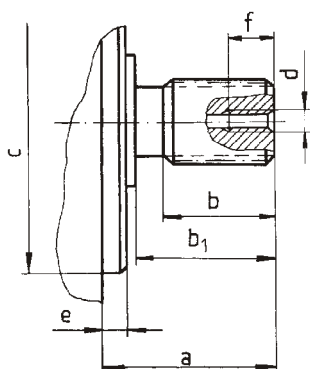


| Oznaka/ Designation |                | a  | b  | c     | e | f   | ① klin/ key<br>JUS M. C2.050 | ② podlož./ washer<br>JUS M. B2.110 | ③ navrtka/ nut<br>JUS M. B1.601 |
|---------------------|----------------|----|----|-------|---|-----|------------------------------|------------------------------------|---------------------------------|
| Levi/ Anticlockwise | Desni/ Clockw. |    |    |       |   |     |                              |                                    |                                 |
| 3119.052.89         | 3119.052.90    | 41 | 35 | Ø40h6 | 5 | Ø18 | 4x6,5                        | B12                                | M12                             |
| 3119.081.89         |                |    |    |       |   |     |                              |                                    |                                 |
| 3119.115.89         |                |    |    |       |   |     |                              |                                    |                                 |
| 3119.160.80         |                |    |    |       |   |     |                              |                                    |                                 |
| 3119.211.89         |                | 53 | 45 | Ø50h6 | 6 | Ø25 | 5x7,5                        | B16                                | M16                             |
| 3119.213.89         |                |    |    |       |   |     |                              |                                    |                                 |

Tip / Type II



| Oznaka/ Designation |                | a  | b  | c     | e | Ozubljenje/ Toothing<br>DIN5463 |
|---------------------|----------------|----|----|-------|---|---------------------------------|
| Levi/ Anticlockwise | Desni/ Clockw. |    |    |       |   |                                 |
| 3119.215.89         |                | 63 | 40 | Ø60h6 | 8 | B6x23x28<br>23f7x28a11x6e8      |
| 3119.217.89         |                |    |    |       |   |                                 |
| 3119.309.19M        |                |    |    |       |   |                                 |
| 3119.374.19M        |                |    |    |       |   |                                 |
| 3119.374.91         |                |    |    |       |   |                                 |
| 3119.377.91         |                |    |    |       |   |                                 |
| 3119.420.91M        |                | 66 | 40 | Ø70h6 | 8 | B6x26x32<br>26f7x32a11x6e8      |
| 3119.538.91M        |                |    |    |       |   |                                 |
| 3119.614.19         |                |    |    |       |   |                                 |
| 3119.619.19         |                |    |    |       |   |                                 |



Tip / Type III

| Oznaka/ Designation |                | a  | b  | b1 | c    | d   | e   | f  | Ozubljenje/ Toothing<br>DIN5480 |
|---------------------|----------------|----|----|----|------|-----|-----|----|---------------------------------|
| Levi/ Anticlockwise | Desni/ Clockw. |    |    |    |      |     |     |    |                                 |
|                     | 3119.216.94    | 56 | 40 | 48 | Ø128 | M10 | 6,3 | 22 | W32x2x9g                        |