



## VERSIONS

| Mounting flange                | Shaft        | Port size     | European version | US version | Side port version | End port version | Flange port version | Standard shaft seal | High pressure shaft seal | Drain connection | Check valve | Specials | Main type designation |
|--------------------------------|--------------|---------------|------------------|------------|-------------------|------------------|---------------------|---------------------|--------------------------|------------------|-------------|----------|-----------------------|
| 2 hole oval flange (A2-flange) | Cyl. 25 mm   | G 1/2         | X                |            | X                 |                  |                     |                     | X                        | No               | No          |          | OMP                   |
|                                |              | G 1/2         | X                |            | X                 |                  |                     |                     | X                        | Yes              | No          |          | OMP                   |
|                                |              | G 1/2         | X                |            | X                 |                  |                     | X                   |                          | Yes              | Yes         | A        | OMP C                 |
|                                |              | G 1/2         | X                |            |                   | X                |                     | X                   |                          | Yes              | Yes         |          | OMP                   |
|                                | Cyl. 1 in    | G 1/2         | X                |            | X                 |                  |                     |                     | X                        | No               | No          |          | OMP                   |
|                                |              | G 1/2         | X                |            | X                 |                  |                     |                     | X                        | Yes              | No          |          | OMP                   |
|                                |              | 7/8 - 14 UNF  |                  | X          | X                 |                  |                     | X                   |                          | Yes              | Yes         |          | OMP                   |
|                                | Splined 1 in | G 1/2         | X                |            | X                 |                  |                     |                     | X                        | No               | No          |          | OMP                   |
|                                |              | G 1/2         | X                |            | X                 |                  |                     |                     | X                        | Yes              | No          |          | OMP                   |
| 4 hole oval flange (A4 flange) | Cyl. 32 mm   | G 1/2         | X                |            | X                 |                  |                     | X                   |                          | Yes              | Yes         |          | OMP                   |
| Square flange (C-flange)       | Cyl. 25 mm   | G 1/2         | X                |            |                   | X                |                     | X                   |                          | Yes              | Yes         |          | OMP                   |
|                                | Cyl. 1 in    | 7/8 - 14 UNF  |                  | X          | X                 |                  |                     | X                   |                          | Yes              | Yes         |          | OMP                   |
|                                |              | 1/2 - 14 NPTF |                  | X          | X                 |                  |                     | X                   |                          | Yes              | Yes         |          | OMP                   |
| Wheel                          | Cyl. 25 mm   | G 1/2         | X                |            |                   |                  | X                   | X                   |                          | Yes              | Yes         |          | OMPW                  |
|                                | Tap. 28.5 mm | G 1/2         | X                |            |                   |                  | X                   | X                   |                          | Yes              | Yes         | B        | OMPW N                |

Function diagram – see page : →

### Specials:

A : Corrosion resistant parts

B : With needle bearings

### Features available (options) :

Free running gearset

Low leakage (low speed valve)

Speed sensor

Viton shaft seal

Reverse rotation

Drain

Corrosion protected

Painted

With needle bearings

## CODE NUMBERS

| CODE NUMBERS | DISPLACEMENT [cm <sup>3</sup> ] |      |      |      |      |      |                    |      |      |      |      |      | Technical data – Page | Dimensions – Page |
|--------------|---------------------------------|------|------|------|------|------|--------------------|------|------|------|------|------|-----------------------|-------------------|
|              | 25                              | 32   | 40   | 50   | 80   | 100  | 125                | 160  | 200  | 250  | 315  | 400  |                       |                   |
| 151-         | 0340                            | 0341 | 0342 | 0310 | 0311 | 0312 | 0313               | 0314 | 0315 | 0316 | 0317 | 0318 | 10                    | 27                |
| 151-         | 0640                            | 0641 | 0642 | 0610 | 0611 | 0612 | 0613               | 0614 | 0615 | 0616 | 0617 | 0618 | 10                    | 28                |
| 151-         | -                               | -    | -    | 1208 | 1209 | 1210 | 1217               | 1211 | 1212 | 1213 | 1214 | 1215 | 10                    | 29                |
| 151-         | -                               | -    | -    | 5191 | 5192 | 5193 | 5194               | 5195 | 5196 | 5197 | 5198 | 5199 | 10                    | 30                |
| 151-         | -                               | -    | -    | 0300 | 0301 | 0302 | 0303               | 0304 | 0305 | 0306 | 0307 | 0308 | 10                    | 27                |
| 151-         | -                               | -    | -    | 0600 | 0601 | 0602 | 0603               | 0604 | 0605 | 0606 | 0607 | 0608 | 10                    | 28                |
| 151-         | 7080                            | 7081 | 7082 | 7041 | 7042 | 7043 | 7044 <sup>1)</sup> | 7045 | 7046 | 7047 | 7048 | 7049 | 10                    | 31                |
| 151-         | -                               | -    | -    | 0330 | 0331 | 0332 | 0333               | 0334 | 0335 | 0336 | 0337 | 0338 | 11                    | 27                |
| 151-         | -                               | -    | -    | 0630 | 0631 | 0632 | 0633               | 0634 | 0635 | 0636 | 0637 | 0638 | 11                    | 28                |
| 151-         | -                               | -    | -    | 5001 | 5002 | 5003 | 5004               | 5005 | 5006 | 5007 | 5008 | 5009 | 12                    | 32                |
| 151-         | -                               | -    | -    | 5211 | 5212 | 5213 | 5214               | 5215 | 5216 | 5217 | 5218 | 5219 | 10                    | 33                |
| 151-         | -                               | -    | -    | 7061 | 7062 | 7063 | 5174               | 7065 | 7066 | 7067 | 7068 | 7069 | 10                    | 34                |
| 151-         | -                               | -    | -    | 7021 | 7022 | 7023 | 7024               | 7025 | 7026 | 7027 | 7028 | 7029 | 10                    | 34                |
| 151-         | -                               | -    | -    | 7101 | 7102 | 7103 | 7104               | 7105 | 7106 | 7107 | 7108 | 7109 | 10                    | 35                |
| 151-         | -                               | -    | -    | 5301 | 5302 | 5303 | 5304               | 5305 | 5306 | 5307 | 5308 | 5309 | 11                    | 35                |
| →            | 18                              | 18   | 19   | 19   | 20   | 20   | 21                 | 21   | 22   | 22   | 23   | 23   |                       |                   |

1) Motor is painted black

### Ordering

Add the four digit prefix "151-" to the four digit numbers from the chart for complete code number.

### Example:

151-0305 for an OMP 200 with A2 flange, cyl. 1 in shaft, port size G 1/2 and high pressure shaft seal.

Note: Orders will not be accepted without the four digit prefix.

**TECHNICAL DATA FOR OMP/OMPW WITH 25 MM AND 1 IN CYLINDRICAL SHAFT**

| Type                                          |                                        |                    | OMP            | OMP            | OMP            | OMP            | OMP            | OMP            | OMP             | OMP             | OMP              | OMP              | OMP              |                  |
|-----------------------------------------------|----------------------------------------|--------------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|
| Motor size                                    |                                        |                    | 25             | 32             | 40             | 50             | 80             | 100            | 125             | 160             | 200              | 250              | 315              | 400              |
| Geometric displacement                        | cm <sup>3</sup><br>[in <sup>3</sup> ]  |                    | 25.0<br>[1.53] | 32.0<br>[1.96] | 40.0<br>[2.45] | 48.6<br>[2.97] | 77.8<br>[4.76] | 97.3<br>[5.95] | 125.0<br>[7.65] | 155.7<br>[9.53] | 194.6<br>[11.91] | 242.3<br>[14.83] | 306.1<br>[18.73] | 389.2<br>[23.82] |
| Max. speed                                    | min <sup>-1</sup><br>[rpm]             | cont.              | 1600           | 1560           | 1500           | 1230           | 770            | 615            | 480             | 385             | 310              | 250              | 195              | 155              |
|                                               |                                        | int <sup>1)</sup>  | 1800           | 1720           | 1750           | 1540           | 960            | 770            | 600             | 480             | 385              | 310              | 245              | 190              |
| Max. torque                                   | Nm<br>[lbf·in]                         | cont.              | 33<br>[290]    | 43<br>[380]    | 52<br>[460]    | 93<br>[820]    | 150<br>[1330]  | 190<br>[1680]  | 240<br>[2120]   | 300<br>[2660]   | 300<br>[2660]    | 300<br>[2660]    | 300<br>[2660]    | 300<br>[2660]    |
|                                               |                                        | int. <sup>1)</sup> | 47<br>[420]    | 61<br>[540]    | 74<br>[660]    | 120<br>[1060]  | 190<br>[1680]  | 230<br>[2040]  | 290<br>[2570]   | 370<br>[3280]   | 380<br>[3360]    | 410<br>[3630]    | 390<br>[3450]    | 420<br>[3720]    |
|                                               |                                        | peak <sup>2)</sup> | 67<br>[590]    | 86<br>[760]    | 107<br>[950]   | 140<br>[1240]  | 220<br>[1950]  | 270<br>[2390]  | 370<br>[3280]   | 430<br>[3810]   | 540<br>[4780]    | 550<br>[4870]    | 600<br>[5310]    | 600<br>[5310]    |
|                                               |                                        |                    |                |                |                |                |                |                |                 |                 |                  |                  |                  |                  |
| Max. output                                   | kW<br>[hp]                             | cont.              | 4.5<br>[6.0]   | 5.8<br>[7.8]   | 7.0<br>[9.4]   | 10.0<br>[13.4] | 10.0<br>[13.4] | 11.0<br>[14.8] | 10.0<br>[13.4]  | 10.0<br>[13.4]  | 8.0<br>[10.7]    | 6.0<br>[8.1]     | 5.0<br>[6.7]     | 4.0<br>[5.4]     |
|                                               |                                        | int. <sup>1)</sup> | 6.1<br>[8.2]   | 7.8<br>[10.5]  | 10.6<br>[14.2] | 12.0<br>[16.1] | 12.0<br>[16.1] | 13.0<br>[17.4] | 12.0<br>[16.1]  | 12.0<br>[16.1]  | 11.0<br>[14.8]   | 9.0<br>[12.1]    | 7.0<br>[9.4]     | 6.0<br>[8.1]     |
| Max. pressure drop                            | bar<br>[psi]                           | cont.              | 100<br>[1450]  | 100<br>[1450]  | 100<br>[1450]  | 140<br>[2030]  | 140<br>[2030]  | 140<br>[2030]  | 140<br>[2030]   | 140<br>[2030]   | 115<br>[1670]    | 90<br>[1310]     | 75<br>[1090]     | 60<br>[870]      |
|                                               |                                        | int. <sup>1)</sup> | 140<br>[2030]  | 140<br>[2030]  | 140<br>[2030]  | 175<br>[2540]  | 175<br>[2540]  | 175<br>[2540]  | 175<br>[2540]   | 175<br>[2540]   | 150<br>[2180]    | 125<br>[1810]    | 100<br>[1450]    | 80<br>[1160]     |
|                                               |                                        | peak <sup>2)</sup> | 225<br>[3260]  | 225<br>[3260]  | 225<br>[3260]  | 225<br>[3260]  | 225<br>[3260]  | 225<br>[3260]  | 225<br>[3260]   | 225<br>[3260]   | 225<br>[3260]    | 180<br>[2610]    | 160<br>[2320]    | 130<br>[1890]    |
| Max. oil flow                                 | l/min<br>[USgal/min]                   | cont.              | 40<br>[10.6]   | 50<br>[13.2]   | 60<br>[15.9]   | 60<br>[15.9]   | 60<br>[15.9]   | 60<br>[15.9]   | 60<br>[15.9]    | 60<br>[15.9]    | 60<br>[15.9]     | 60<br>[15.9]     | 60<br>[15.9]     | 60<br>[15.9]     |
|                                               |                                        | int. <sup>1)</sup> | 45<br>[11.9]   | 55<br>[14.5]   | 70<br>[18.5]   | 75<br>[19.8]   | 75<br>[19.8]   | 75<br>[19.8]   | 75<br>[19.8]    | 75<br>[19.8]    | 75<br>[19.8]     | 75<br>[19.8]     | 75<br>[19.8]     | 75<br>[19.8]     |
| Max. starting pressure<br>with unloaded shaft | bar<br>[psi]                           |                    | 10<br>[145]    | 10<br>[145]    | 10<br>[145]    | 10<br>[145]    | 10<br>[145]    | 10<br>[145]    | 9<br>[130]      | 7<br>[100]      | 5<br>[75]        | 5<br>[75]        | 5<br>[75]        | 5<br>[75]        |
| Min. starting<br>torque                       | at max. press. drop cont.              |                    | 30<br>[270]    | 40<br>[350]    | 45<br>[400]    | 80<br>[710]    | 135<br>[1200]  | 170<br>[1510]  | 210<br>[1860]   | 280<br>[2480]   | 270<br>[2390]    | 280<br>[2480]    | 280<br>[2480]    | 280<br>[2480]    |
|                                               | at max. press. drop int. <sup>1)</sup> |                    | 40<br>[350]    | 55<br>[490]    | 63<br>[560]    | 100<br>[890]   | 170<br>[1510]  | 210<br>[1860]  | 270<br>[2390]   | 350<br>[3100]   | 360<br>[3190]    | 390<br>[3450]    | 370<br>[3280]    | 400<br>[3540]    |
|                                               | Nm [lbf·in]                            |                    |                |                |                |                |                |                |                 |                 |                  |                  |                  |                  |
| Min. speed <sup>3)</sup>                      | min <sup>-1</sup><br>[rpm]             |                    | 20             | 15             | 10             | 10             | 10             | 9              | 9               | 8               | 7                | 5                | 5                | 5                |

<sup>1)</sup> Intermittent operation: the permissible values may occur for max. 10% of every minute.

<sup>2)</sup> Peak load: the permissible values may occur for max. 1% of every minute.

<sup>3)</sup> Operation at lower speeds may be slightly less smooth.

**TECHNICAL DATA FOR OMP/OMPW WITH 1 IN SPLINED AND 28,5 MM TAPERED SHAFT**

| Type                                          |                                        |                    | OMP            | OMP            | OMP            | OMP             | OMP             | OMP              | OMP              | OMP              |                  |
|-----------------------------------------------|----------------------------------------|--------------------|----------------|----------------|----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|
| Motor size                                    |                                        |                    | 50             | 80             | 100            | 125             | 160             | 200              | 250              | 315              | 400              |
| Geometric displacement                        | cm <sup>3</sup><br>[in <sup>3</sup> ]  |                    | 48.6<br>[2.97] | 77.8<br>[4.76] | 97.3<br>[5.95] | 125.0<br>[7.65] | 155.7<br>[9.53] | 194.6<br>[11.91] | 242.3<br>[14.83] | 306.1<br>[18.73] | 389.2<br>[23.82] |
| Max. speed                                    | min <sup>-1</sup><br>[rpm]             | cont.              | 1230           | 770            | 615            | 480             | 385             | 310              | 250              | 195              | 155              |
|                                               |                                        | int. <sup>1)</sup> | 1540           | 960            | 770            | 600             | 480             | 385              | 310              | 245              | 190              |
| Max. torque                                   | Nm<br>[lbf·in]                         | cont.              | 93<br>[820]    | 150<br>[1330]  | 190<br>[1680]  | 240<br>[2120]   | 300<br>[2660]   | 360<br>[3190]    | 360<br>[3190]    | 360<br>[3190]    | 360<br>[3190]    |
|                                               |                                        | int. <sup>1)</sup> | 120<br>[1060]  | 190<br>[1680]  | 230<br>[2040]  | 290<br>[2570]   | 370<br>[3280]   | 450<br>[3980]    | 460<br>[4070]    | 470<br>[4160]    | 460<br>[4070]    |
|                                               |                                        | peak <sup>2)</sup> | 140<br>[1240]  | 220<br>[1950]  | 270<br>[2390]  | 370<br>[3280]   | 430<br>[3810]   | 540<br>[4780]    | 550<br>[4870]    | 540<br>[4780]    | 560<br>[4960]    |
|                                               |                                        |                    |                |                |                |                 |                 |                  |                  |                  |                  |
| Max. output                                   | kW<br>[hp]                             | cont.              | 10.0<br>[13.4] | 10.0<br>[13.4] | 11.0<br>[14.8] | 10.0<br>[13.4]  | 10.0<br>[13.4]  | 10.0<br>[13.4]   | 8.0<br>[10.7]    | 6.0<br>[8.0]     | 5.0<br>[6.7]     |
|                                               |                                        | int. <sup>1)</sup> | 12.0<br>[16.1] | 12.0<br>[16.1] | 13.0<br>[17.4] | 12.0<br>[16.1]  | 12.0<br>[16.1]  | 12.0<br>[16.1]   | 10.5<br>[14.1]   | 7.5<br>[10.1]    | 6.0<br>[8.0]     |
| Max. pressure drop                            | bar<br>[psi]                           | cont.              | 140<br>[2030]  | 140<br>[2030]  | 140<br>[2030]  | 140<br>[2030]   | 140<br>[2030]   | 140<br>[2030]    | 105<br>[1520]    | 90<br>[1310]     | 70<br>[1020]     |
|                                               |                                        | int. <sup>1)</sup> | 175<br>[2540]  | 175<br>[2540]  | 175<br>[2540]  | 175<br>[2540]   | 175<br>[2540]   | 175<br>[2540]    | 140<br>[2030]    | 120<br>[1740]    | 90<br>[1310]     |
|                                               |                                        | peak <sup>2)</sup> | 225<br>[3260]  | 225<br>[3260]  | 225<br>[3260]  | 225<br>[3260]   | 225<br>[3260]   | 225<br>[3260]    | 180<br>[2610]    | 160<br>[2320]    | 130<br>[1890]    |
| Max. oil flow                                 | l/min<br>[USgal/min]                   | cont.              | 60<br>[15.9]   | 60<br>[15.9]   | 60<br>[15.9]   | 60<br>[15.9]    | 60<br>[15.9]    | 60<br>[15.9]     | 60<br>[15.9]     | 60<br>[15.9]     | 60<br>[15.9]     |
|                                               |                                        | int. <sup>1)</sup> | 75<br>[19.8]   | 75<br>[19.8]   | 75<br>[19.8]   | 75<br>[19.8]    | 75<br>[19.8]    | 75<br>[19.8]     | 75<br>[19.8]     | 75<br>[19.8]     | 75<br>[19.8]     |
| Max. starting pressure<br>with unloaded shaft | bar<br>[psi]                           |                    | 10<br>[145]    | 10<br>[145]    | 10<br>[145]    | 9<br>[130]      | 7<br>[100]      | 5<br>[75]        | 5<br>[75]        | 5<br>[75]        | 5<br>[75]        |
| Min. starting<br>torque                       | at max. press. drop cont.              |                    | 80<br>[710]    | 135<br>[1200]  | 170<br>[1510]  | 210<br>[1860]   | 280<br>[2480]   | 340<br>[3010]    | 330<br>[2920]    | 340<br>[3010]    | 345<br>[3050]    |
|                                               | at max. press. drop int. <sup>1)</sup> |                    | 100<br>[890]   | 170<br>[1510]  | 210<br>[1860]  | 270<br>[2390]   | 350<br>[3100]   | 420<br>[3720]    | 440<br>[3890]    | 450<br>[3980]    | 425<br>[3760]    |
|                                               |                                        |                    |                |                |                |                 |                 |                  |                  |                  |                  |
| Min. speed <sup>3)</sup>                      | min <sup>-1</sup><br>[rpm]             |                    | 10             | 10             | 9              | 9               | 8               | 7                | 5                | 5                | 5                |

<sup>1)</sup> Intermittent operation: the permissible values may occur for max. 10% of every minute.

<sup>2)</sup> Peak load: the permissible values may occur for max. 1% of every minute.

<sup>3)</sup> Operation at lower speeds may be slightly less smooth.

# TECHNICAL DATA FOR OMP/OMPW WITH 32 MM CYLINDRICAL SHAFT

| Type                                          |                                        |                    | OMP            | OMP            | OMP            | OMP             | OMP             | OMP              | OMP              | OMP              | OMP              |
|-----------------------------------------------|----------------------------------------|--------------------|----------------|----------------|----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|
| Motor size                                    |                                        |                    | 50             | 80             | 100            | 125             | 160             | 200              | 250              | 315              | 400              |
| Geometric displacement                        | cm <sup>3</sup><br>[in <sup>3</sup> ]  |                    | 48.6<br>[2.97] | 77.8<br>[4.76] | 97.3<br>[5.95] | 125.0<br>[7.65] | 155.7<br>[9.53] | 194.6<br>[11.91] | 242.3<br>[14.83] | 306.1<br>[18.73] | 389.2<br>[23.82] |
| Max. speed                                    | min <sup>-1</sup><br>[rpm]             | cont.              | 1230           | 770            | 615            | 480             | 385             | 310              | 250              | 195              | 155              |
|                                               |                                        | int <sup>1)</sup>  | 1540           | 960            | 770            | 600             | 480             | 385              | 310              | 245              | 190              |
| Max. torque                                   | Nm<br>[lbf·in]                         | cont.              | 93<br>[820]    | 150<br>[1330]  | 190<br>[1680]  | 240<br>[2120]   | 300<br>[2660]   | 360<br>[3190]    | 460<br>[4070]    | 470<br>[4160]    | 490<br>[4340]    |
|                                               |                                        | int. <sup>1)</sup> | 120<br>[1060]  | 190<br>[1680]  | 230<br>[2040]  | 290<br>[2570]   | 370<br>[3280]   | 450<br>[3980]    | 570<br>[5050]    | 620<br>[5490]    | 630<br>[5580]    |
|                                               |                                        | peak <sup>2)</sup> | 140<br>[1240]  | 220<br>[1950]  | 270<br>[2390]  | 370<br>[3280]   | 430<br>[3810]   | 540<br>[4780]    | 670<br>[5930]    | 820<br>[7260]    | 840<br>[7440]    |
|                                               |                                        |                    |                |                |                |                 |                 |                  |                  |                  |                  |
| Max. output                                   | kW<br>[hp]                             | cont.              | 10.0<br>[13.4] | 10.0<br>[13.4] | 11.0<br>[14.8] | 10.0<br>[13.4]  | 10.0<br>[13.4]  | 10.0<br>[13.4]   | 9.5<br>[12.7]    | 7.5<br>[10.1]    | 6.5<br>[8.7]     |
|                                               |                                        | int. <sup>1)</sup> | 12.0<br>[16.1] | 12.0<br>[16.1] | 13.0<br>[17.4] | 12.0<br>[16.1]  | 12.0<br>[16.1]  | 12.0<br>[16.1]   | 12.0<br>[16.1]   | 9.0<br>[12.1]    | 7.5<br>[10.1]    |
| Max. pressure drop                            | bar<br>[psi]                           | cont.              | 140<br>[2030]  | 140<br>[2030]  | 140<br>[2030]  | 140<br>[2030]   | 140<br>[2030]   | 140<br>[2030]    | 140<br>[2030]    | 120<br>[1741]    | 95<br>[1380]     |
|                                               |                                        | int. <sup>1)</sup> | 175<br>[2540]  | 175<br>[2540]  | 175<br>[2540]  | 175<br>[2540]   | 175<br>[2540]   | 175<br>[2540]    | 175<br>[2540]    | 160<br>[2320]    | 125<br>[1810]    |
|                                               |                                        | peak <sup>2)</sup> | 225<br>[3260]  | 225<br>[3260]  | 225<br>[3260]  | 225<br>[3260]   | 225<br>[3260]   | 225<br>[3260]    | 225<br>[3260]    | 225<br>[3260]    | 180<br>[2610]    |
| Max. oil flow                                 | l/min<br>[USgal/min]                   | cont.              | 60<br>[15.9]   | 60<br>[15.9]   | 60<br>[15.9]   | 60<br>[15.9]    | 60<br>[15.9]    | 60<br>[15.9]     | 60<br>[15.9]     | 60<br>[15.9]     | 60<br>[15.9]     |
|                                               |                                        | int. <sup>1)</sup> | 75<br>[19.8]   | 75<br>[19.8]   | 75<br>[19.8]   | 75<br>[19.8]    | 75<br>[19.8]    | 75<br>[19.8]     | 75<br>[19.8]     | 75<br>[19.8]     | 75<br>[19.8]     |
| Max. starting pressure<br>with unloaded shaft | bar<br>[psi]                           |                    | 10<br>[145]    | 10<br>[145]    | 10<br>[145]    | 9<br>[130]      | 7<br>[100]      | 5<br>[75]        | 5<br>[75]        | 5<br>[75]        | 5<br>[75]        |
| Min. starting<br>torque                       | at max. press. drop cont.              |                    | 80<br>[710]    | 135<br>[1200]  | 170<br>[1510]  | 210<br>[1860]   | 280<br>[2480]   | 340<br>[3010]    | 420<br>[3720]    | 460<br>[4070]    | 460<br>[4070]    |
|                                               | at max. press. drop int. <sup>1)</sup> |                    | 100<br>[890]   | 170<br>[1510]  | 210<br>[1860]  | 270<br>[2390]   | 350<br>[3100]   | 420<br>[3720]    | 530<br>[4690]    | 600<br>[5310]    | 600<br>[5310]    |
|                                               | Nm [lbf·in]                            |                    |                |                |                |                 |                 |                  |                  |                  |                  |
| Min. speed <sup>3)</sup>                      | min <sup>-1</sup><br>[rpm]             |                    | 10             | 10             | 9              | 9               | 8               | 7                | 5                | 5                | 5                |

| Type         |                                 | Max. inlet pressure | Max. return pressure<br>with drain line |
|--------------|---------------------------------|---------------------|-----------------------------------------|
| OMP 25 - 400 | bar<br>[psi] cont.              | 175<br>[2540]       | 175<br>[2540]                           |
|              | bar<br>[psi] int. <sup>1)</sup> | 200<br>[2900]       | 200<br>[2900]                           |
|              | bar<br>[psi] peak <sup>2)</sup> | 225<br>[3260]       | 225<br>[3260]                           |

<sup>1)</sup> Intermittent operation: the permissible values may occur for max. 10% of every minute.

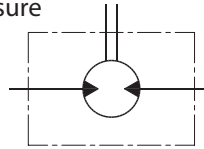
<sup>2)</sup> Peak load: the permissible values may occur for max. 1% of every minute.

<sup>3)</sup> Operation at lower speeds may be slightly less smooth.

**OMP WITH HIGH  
PRESSURE SHAFT SEAL  
(HPS)**

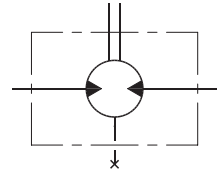
*OMP with HPS and  
without drain connection:*  
The shaft seal pressure equals the  
average of input pressure  
and return pressure.

$$P_{\text{seal}} = \frac{P_{\text{in}} + P_{\text{return}}}{2}$$



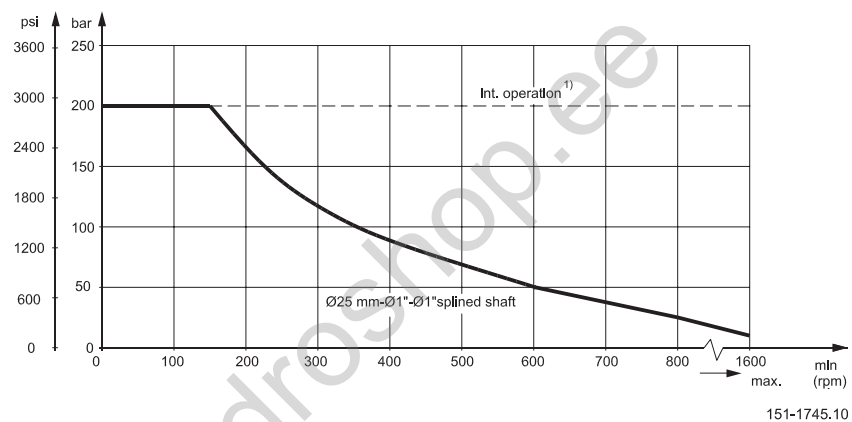
151-1743.10

*OMP with HPS and drain connection:*  
The shaft seal pressure equals the  
pressure in the drain line.



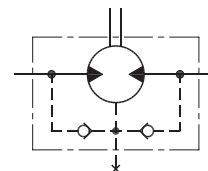
151-1855.10

*Max. permissible shaft seal pressure*



**OMP WITH STANDARD  
SHAFT SEAL**

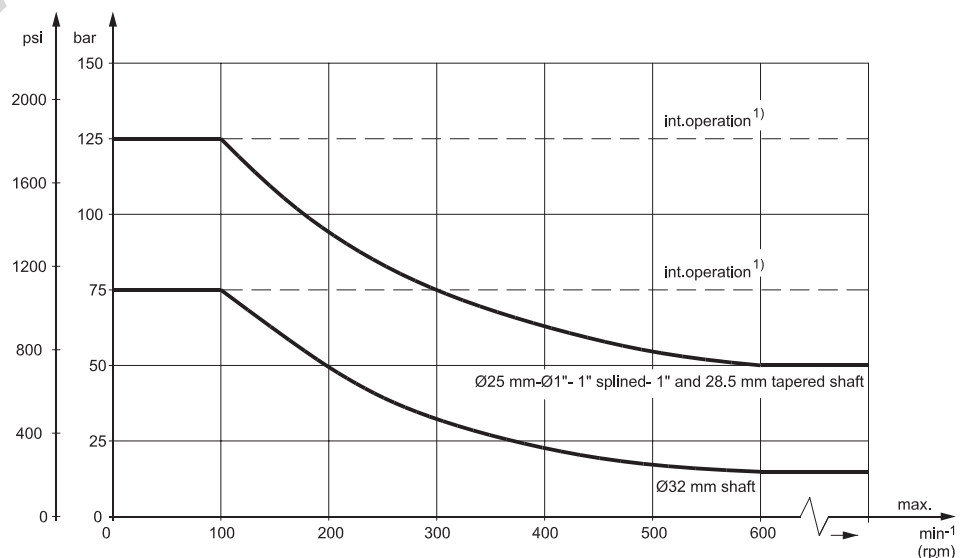
*OMP with standard shaft seal,  
check valves and without  
use of drain connection:*  
The pressure on the shaft seal  
never exceeds the pressure in  
the return line



151-320.10

*OMP with standard shaft seal,  
check valves and with  
drain connection:*  
The shaft seal pressure equals  
the pressure on the drain line.

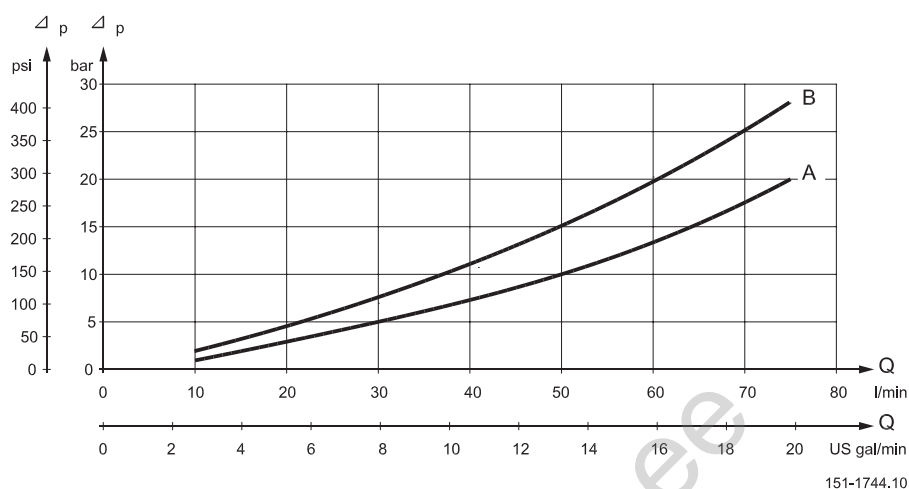
*Max. return pressure without drain line or max. pressure in the drain line*



<sup>1)</sup> Intermittent operation: the permissible values may occur for max. 10% of every minute.

151-1563.10

## PRESSURE DROP IN MOTOR



The curve applies to an unloaded motor shaft and an oil viscosity of 35 mm<sup>2</sup>/s [165 SUS]

A: OMP 50 - 400

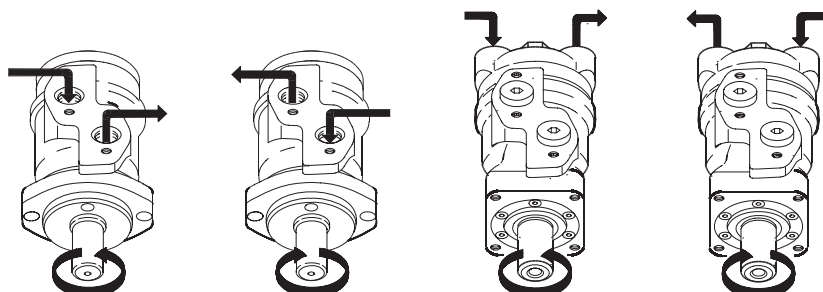
B: OMP 25 - 40 / OMPW

## OIL FLOW IN DRAIN LINE

The table shows the max. oil flow in the drain line at a return pressure less than 5-10 bar [75-150 psi].

| Pressure drop<br>bar<br>[psi] | Viscosity<br>mm <sup>2</sup> /s<br>[SUS] | Oil flow in<br>drain line<br>l/min<br>[US gal/min] |
|-------------------------------|------------------------------------------|----------------------------------------------------|
| 100<br>[1450]                 | 20<br>[100]                              | 2.5<br>[0.66]                                      |
|                               | 35<br>[165]                              | 1.8<br>[0.78]                                      |
| 140<br>[2030]                 | 20<br>[100]                              | 3.5<br>[0.93]                                      |
|                               | 35<br>[165]                              | 2.8<br>[0.74]                                      |

## DIRECTION OF SHAFT ROTATION



151-1836.10

## PERMISSIBLE SHAFT LOADS FOR OMP

The permissible radial shaft load ( $P_R$ ) depends on

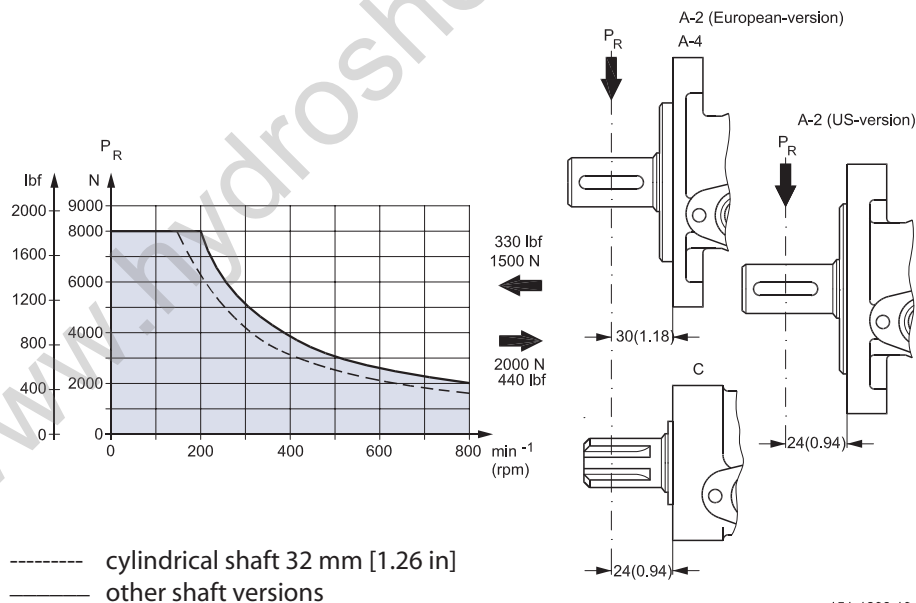
- speed ( $n$ )
- distance ( $l$ ) from the point of load to the mounting flange
- mounting flange version
- shaft version

| Mounting flange                              | 4-hole oval flange**<br>2-hole oval flange<br>(European version)        | 4-hole oval flange                                         | Square flange**<br>2-hole oval flange<br>(US version)      |
|----------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|
| Shaft version                                | 25 mm cylindrical shaft<br>1 in cylindrical shaft<br>1 in splined shaft | 32 mm cylindrical shaft                                    | 25 mm cylindrical shaft                                    |
| Permissible shaft load ( $P_R$ ) $l$ in mm   | $\frac{800}{n} \times \frac{250000}{95 + l} \text{ N}^*$                | $\frac{800}{n} \times \frac{187500}{95 + l} \text{ N}^*$   | $\frac{800}{n} \times \frac{250000}{101 + l} \text{ N}^*$  |
| Permissible shaft load ( $P_R$ ) $l$ in inch | $\frac{800}{n} \times \frac{2215}{3.74 + l} \text{ lbf}^*$              | $\frac{800}{n} \times \frac{1660}{3.74 + l} \text{ lbf}^*$ | $\frac{800}{n} \times \frac{2215}{3.98 + l} \text{ lbf}^*$ |

\*  $n \geq 200 \text{ min}^{-1} \text{ (rpm)}$ ;  $l \leq 55 \text{ mm [2.2 in]}$

$n < 200 \text{ min}^{-1} \text{ (rpm)}$ ;  $\Rightarrow P_{R\text{max}} = 8000 \text{ N [1800 lbf]}$

\*\* For both European and US version



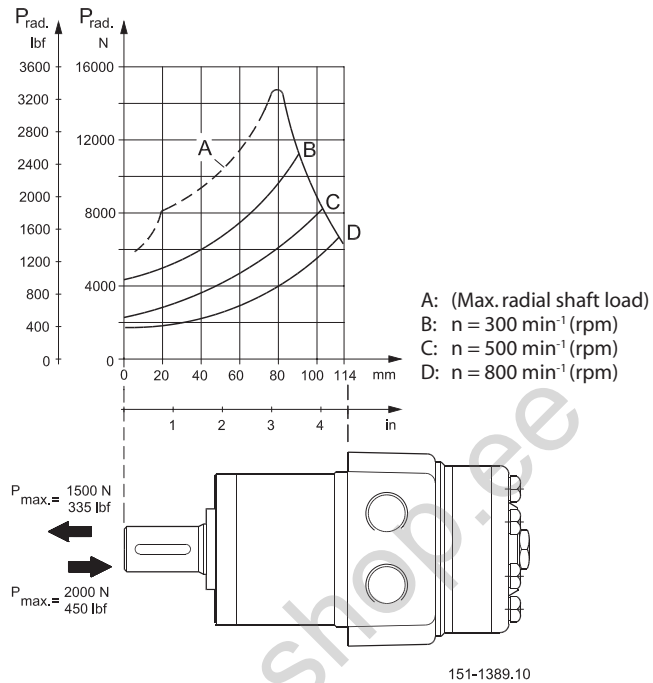
151-1203.10

The curve shows the relation between  $P_R$  and  $n$

- when  $l = 30 \text{ mm [1.18 in]}$  for motors with A2 (European version) and A4 oval mounting flange
- when  $l = 24 \text{ mm [0.94 in]}$  for motors with square mounting flange and A2 (US version)

For applications with special performance requirements we recommend OMP with the output shaft running in needle bearings.

**PERMISSIBLE SHAFT  
LOAD FOR OMPW WITH  
SLIDE BEARINGS**



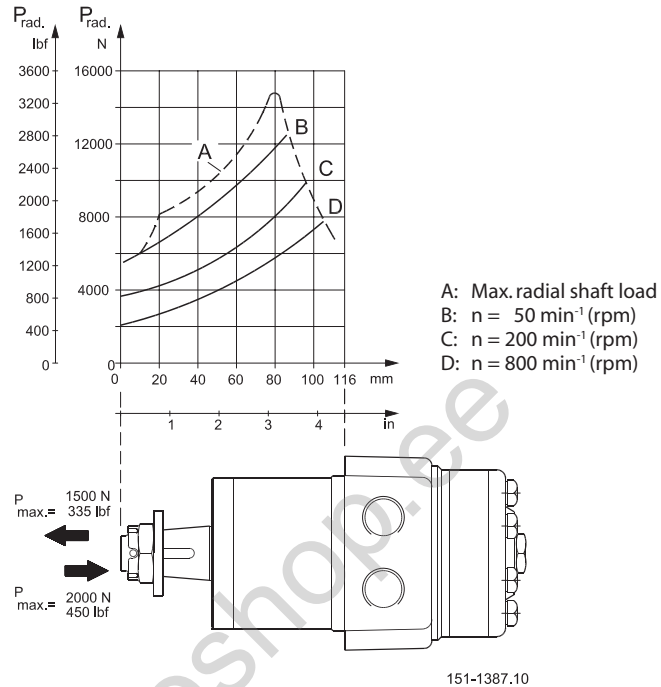
The output shaft on OMPW can be offered in slide bearings similar to the other OMP-motors. The permissible higher radial load is therefore due to the recessed mounting flange moving the point of load closer to the motor bearings.

The permissible radial load on the shaft is shown for different speeds as a function of the distance from the mounting flange to the point of load application.

The curves are not based on calculations of B10 bearing life. They represent absolute limits that must not be exceeded.

Curve A indicates the max. radial shaft load. Any shaft load exceeding the values quoted in curve A will involve risk of breakage.

**PERMISSIBLE SHAFT  
LOAD FOR OMPW N WITH  
NEEDLE BEARING**



The output shaft on OMPW N can be offered in needle bearings. These bearings and the recessed mounting flange allow a higher permissible radial load in comparison to OMP motors.

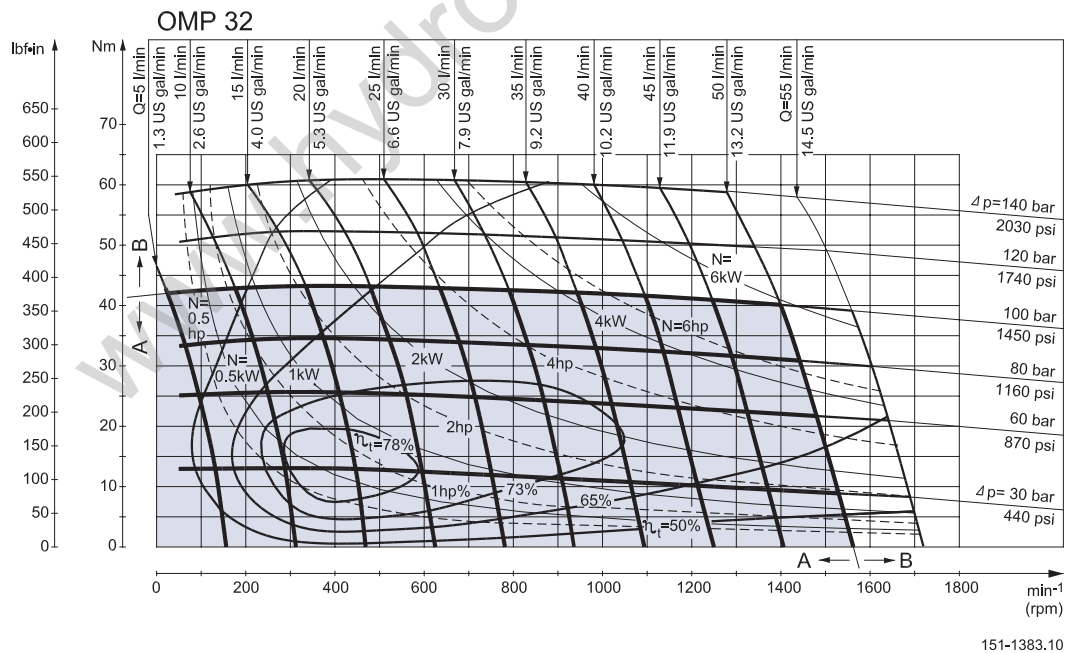
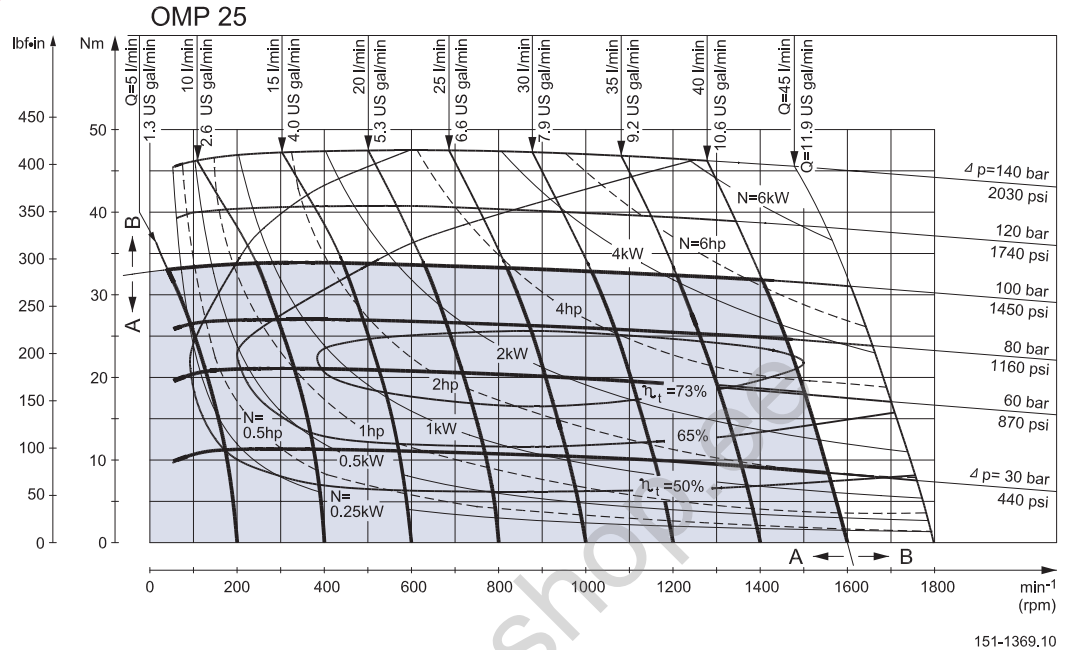
The permissible radial load on the shaft is shown for different speeds as a function of the distance from the mounting flange to the point of load application.

Curve A indicates the max. radial shaft load. Any shaft load exceeding the values quoted in curve A will involve risk of breakage.

The other curves apply to a B10 bearing life of 2000 hours at the number of revolutions indicated by the curve letter. Mineral based hydraulic oil with a sufficient content of anti-wear additives must be used.

Bearing life calculations can be made using the explanation and formula provided in the chapter "Bearing dimensioning" in the technical information "General" DHMH.PK.100.G2.02 520L0232.

## FUNCTION DIAGRAMS



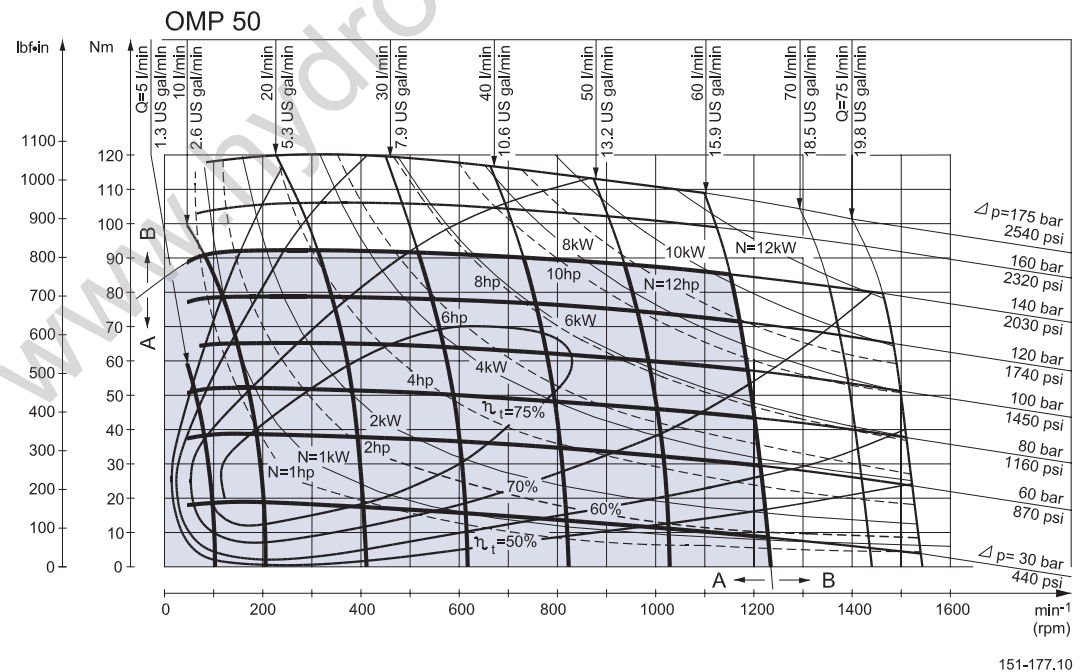
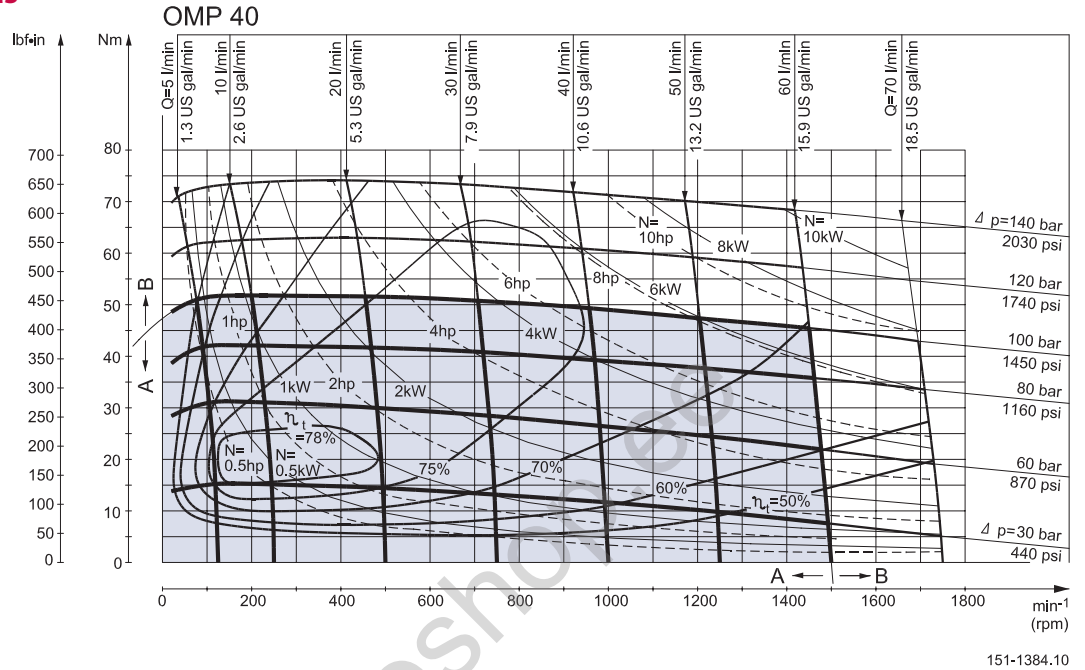
Explanation of function diagram use, basis and conditions can be found on page 7.

- A: Continuous range
- B: Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-12.

Note: Intermittent pressure drop and oil flow must not occur simultaneously.

## FUNCTION DIAGRAMS



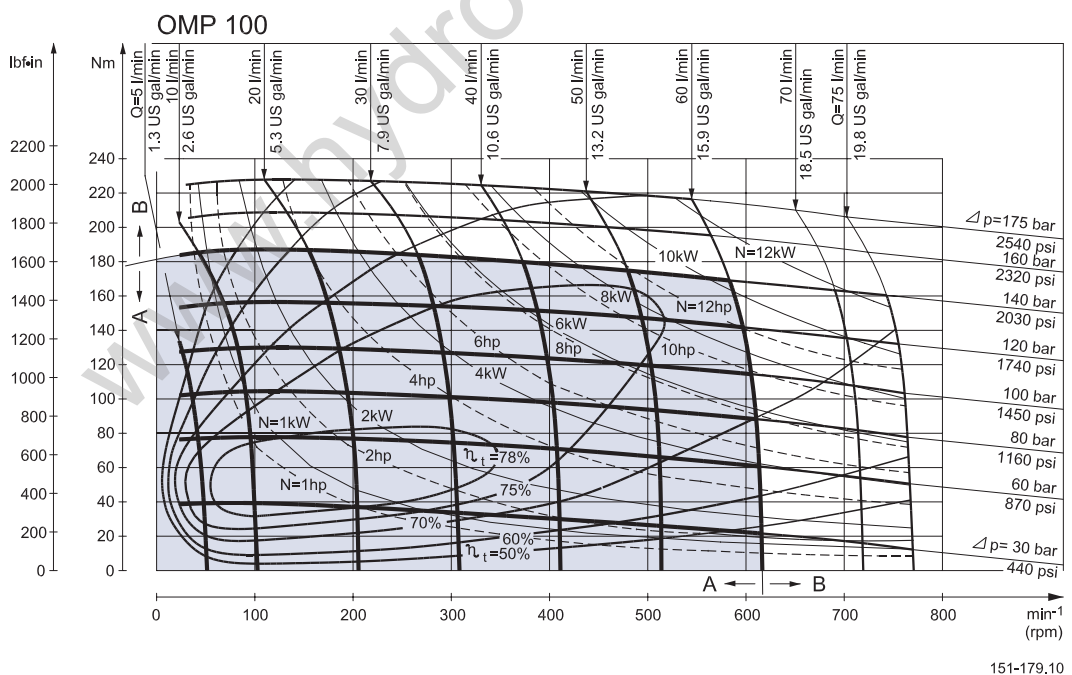
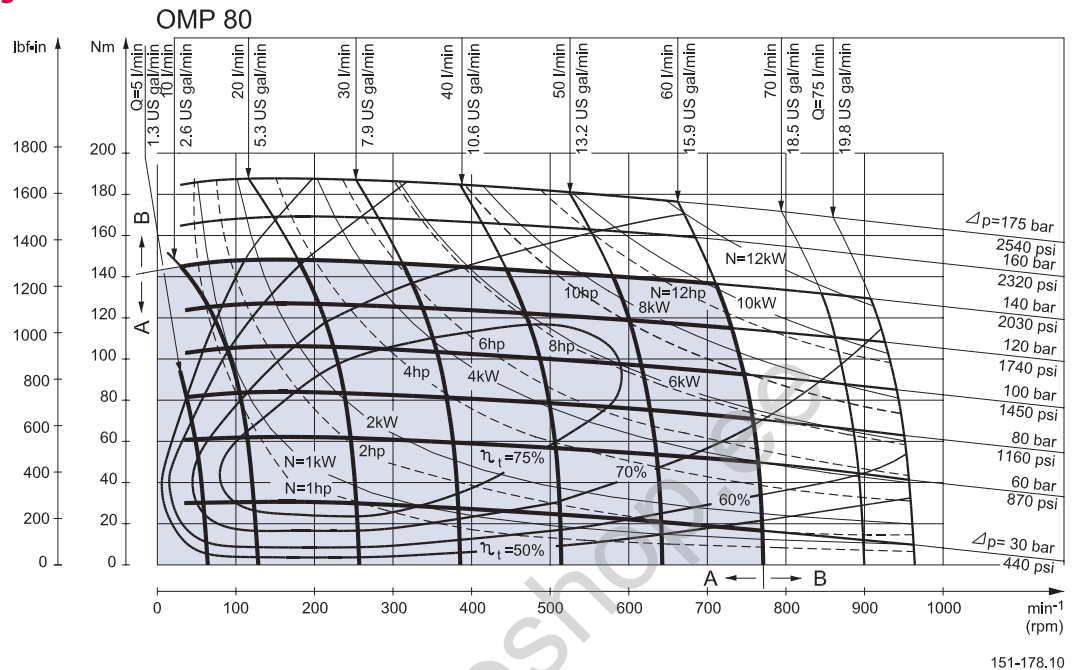
Explanation of function diagram use, basis and conditions can be found on page 7.

- A: Continuous range
- B: Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-12.

Note: Intermittent pressure drop and oil flow must not occur simultaneously.

## FUNCTION DIAGRAMS



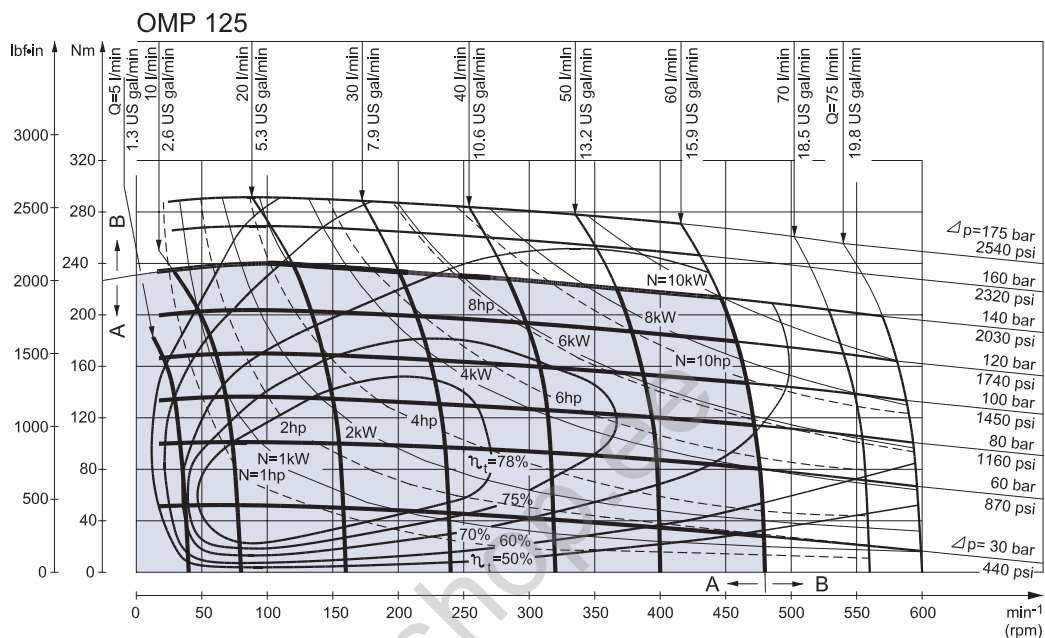
Explanation of function diagram use, basis and conditions can be found on page 7.

- A: Continuous range
- B: Intermittent range (max. 10% operation every minute)

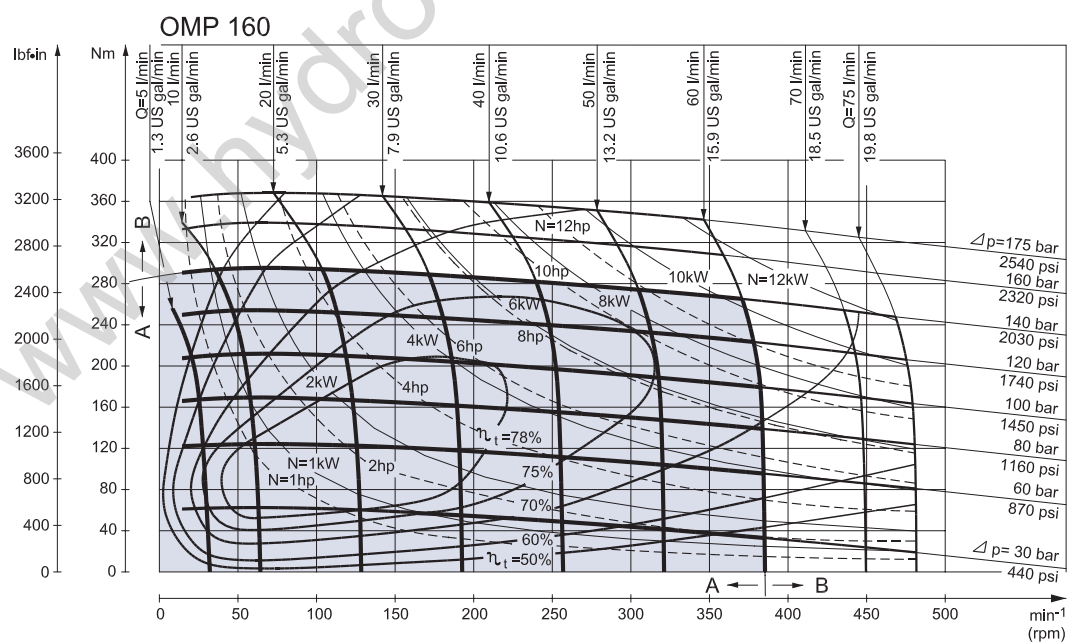
Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-12.

**Note:** Intermittent pressure drop and oil flow must not occur simultaneously.

## FUNCTION DIAGRAMS



151-1416.10



151-180.10

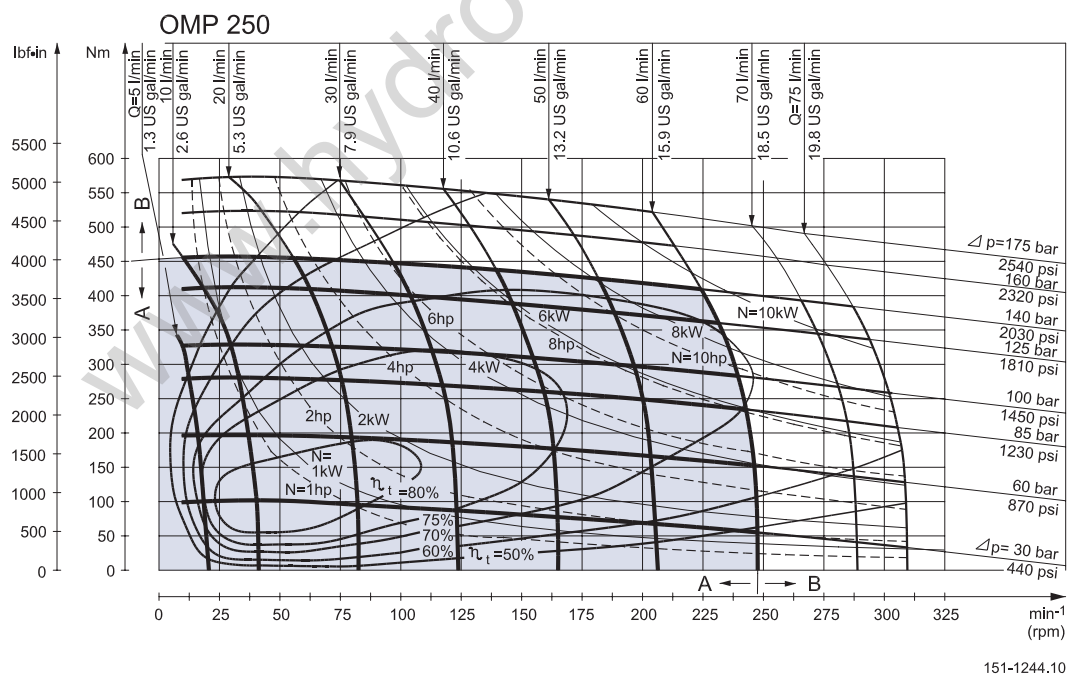
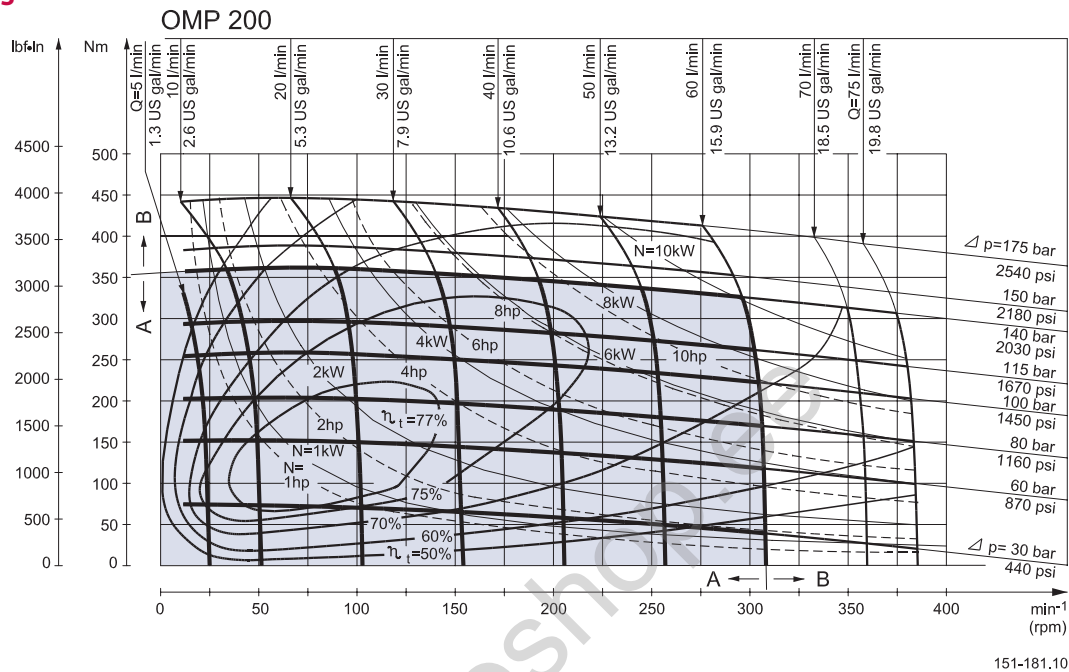
Explanation of function diagram use, basis and conditions can be found on page 7.

- A: Continuous range
- B: Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-12.

Note: Intermittent pressure drop and oil flow must not occur simultaneously.

## FUNCTION DIAGRAMS



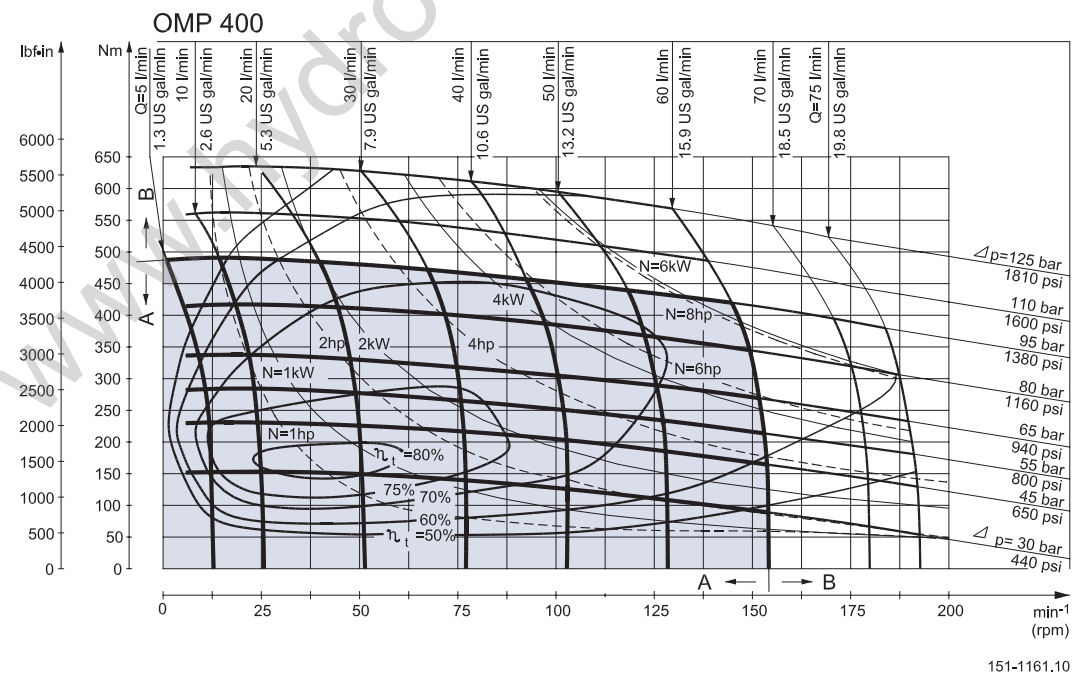
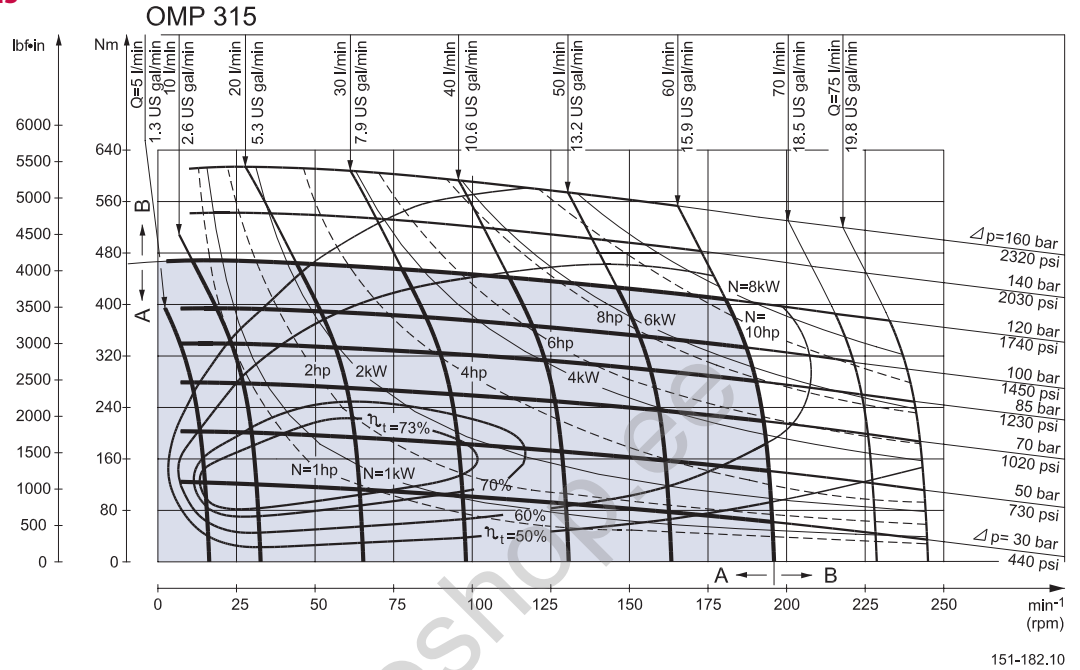
Explanation of function diagram use, basis and conditions can be found on page 7.

- A: Continuous range
- B: Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-12.

**Note:** Intermittent pressure drop and oil flow must not occur simultaneously.

## FUNCTION DIAGRAMS



Explanation of function diagram use, basis and conditions can be found on page 7.

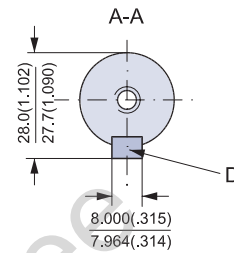
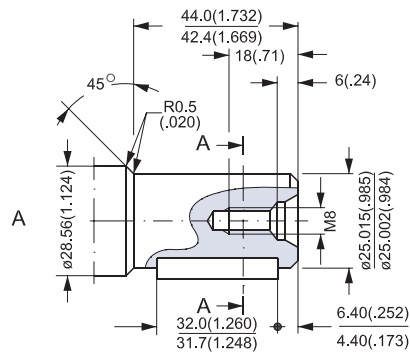
- A: Continuous range
- B: Intermittent range (max. 10% operation every minute)

Max. permissible continuous/intermittent pressure drop for the actual shaft version can be found on page 10-12.

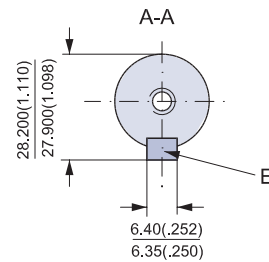
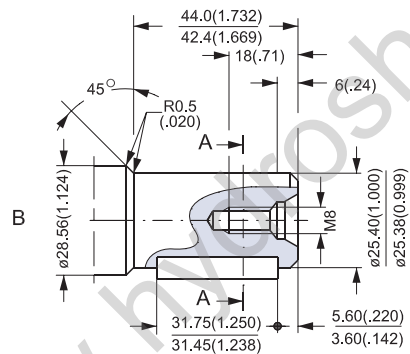
Note: Intermittent pressure drop and oil flow must not occur simultaneously.

## SHAFT VERSION

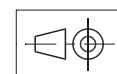
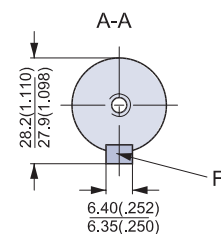
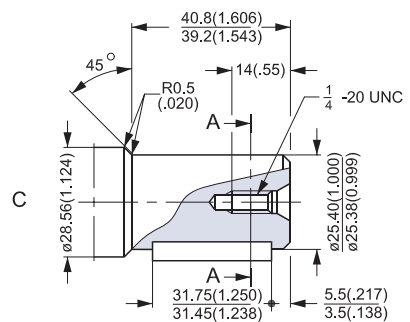
A: Cylindrical shaft  
25 mm  
D: Parallel key  
A8 × 7 × 32  
DIN 6885



B: Cylindrical shaft  
1 in  
E: Parallel key  
1/4 × 1/4 × 1 1/4 in  
B.S. 46



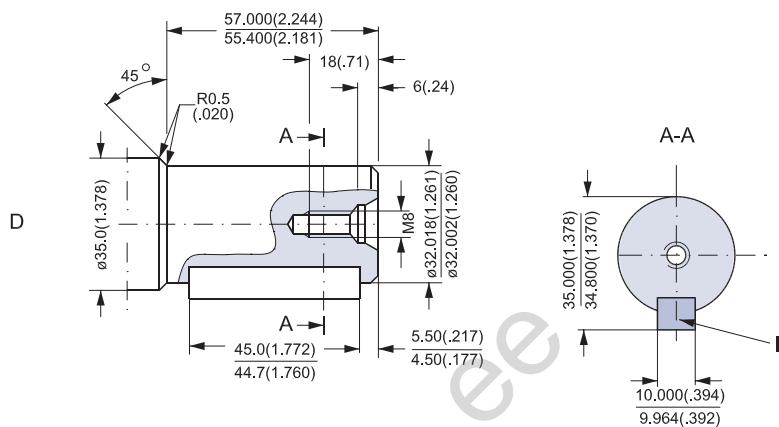
US version  
C: Cylindrical shaft  
1 in  
F: Parallel key  
1/4 × 1/4 × 1 1/4 in  
B.S. 46



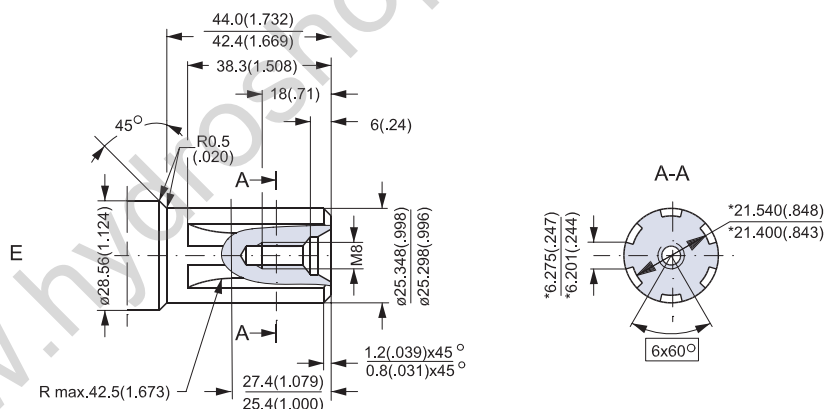
151-1842.11

## SHAFT VERSION

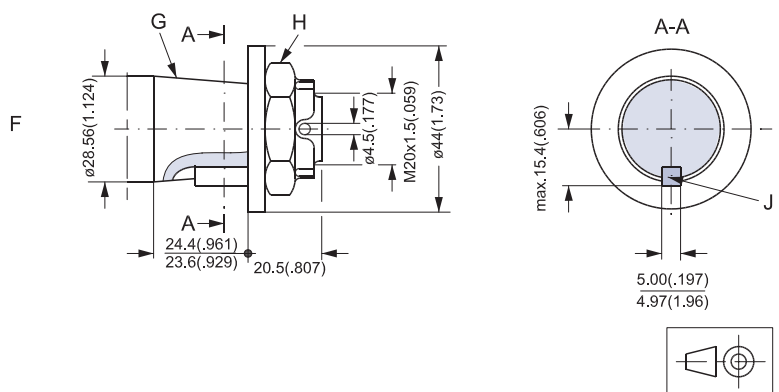
D: Cylindrical shaft  
32 mm  
I: Parallel key  
A10 × 8 × 45  
DIN 6885



E: Splined shaft  
B.S. 2059 (SAE 6 B)  
Straight-sided,  
bottom fitting, dep.  
Fit 2  
Nom. size 1 in  
\* Deviates from  
BS 2059 (SAE 6B)

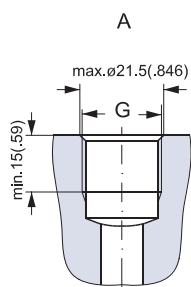


F: Tapered shaft  
(ISO/R775) →  
H: DIN 937  
NV 30  
Tightening torque:  
100 ± 10 Nm  
G: Taper 1:10  
J: Parallel key  
B5 × 5 × 14  
DIN 6885

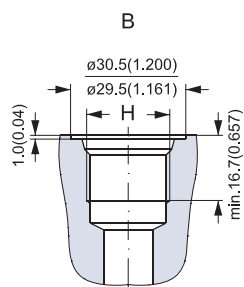


151-1843.10

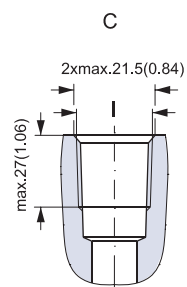
## PORT THREAD VERSIONS



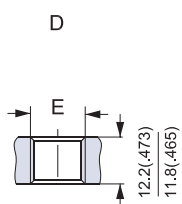
A: G main ports  
G: ISO 228/1 - G $\frac{1}{2}$



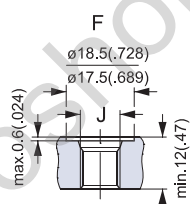
B: UNF main ports  
H:  $\frac{7}{8}$  - 14 UNF  
O-ring boss port



C: NPTF main ports  
I:  $\frac{1}{2}$  - 14 NPTF



D: G drain port  
E: ISO 228/1 - G $\frac{1}{4}$



F: UNF drain port  
J:  $\frac{7}{16}$  - 20 UNF  
O-ring boss port

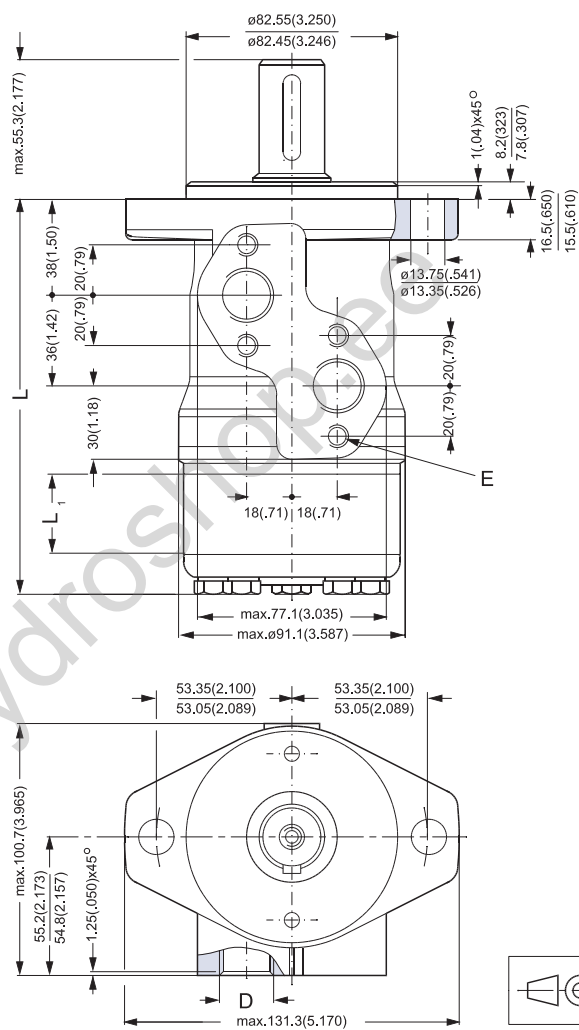
151-1844.10

## DIMENSIONS

Side port version with 2 hole oval mounting flange (A2-flange).

| Type    | L mm<br>[in]    | L' mm<br>[in]  |
|---------|-----------------|----------------|
| OMP 25  | 129.0<br>[5.08] | 4.1<br>[0.16]  |
| OMP 32  | 130.0<br>[5.12] | 5.2<br>[0.20]  |
| OMP 40  | 131.0<br>[5.16] | 6.5<br>[0.26]  |
| OMP 50  | 131.0<br>[5.16] | 6.5<br>[0.26]  |
| OMP 80  | 135.0<br>[5.31] | 10.4<br>[0.41] |
| OMP 100 | 137.5<br>[5.41] | 13.0<br>[0.51] |
| OMP 125 | 141.0<br>[5.55] | 16.7<br>[0.66] |
| OMP 160 | 145.5<br>[5.73] | 20.8<br>[0.82] |
| OMP 200 | 150.5<br>[5.93] | 26.0<br>[1.02] |
| OMP 250 | 157.0<br>[6.18] | 32.5<br>[1.28] |
| OMP 315 | 165.5<br>[6.52] | 40.9<br>[1.61] |
| OMP 400 | 176.6<br>[6.95] | 52.0<br>[2.05] |

D: G 1/2; 15 mm [0.59 in] deep  
E: M8; 13 mm [0.51 in] deep  
(4 pcs.)



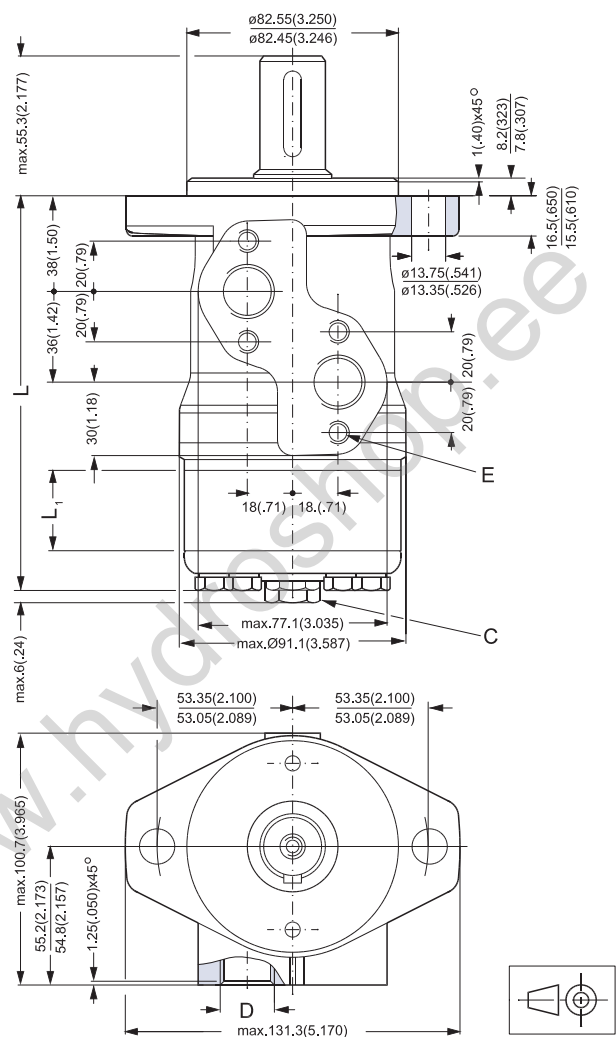
151-1840.10

## DIMENSIONS

Side port version with 2 hole oval mounting flange (A2-flange).  
With drain connection.

| Type    | L mm<br>[in]    | L <sub>1</sub> mm<br>[in] |
|---------|-----------------|---------------------------|
| OMP 25  | 129.0<br>[5.08] | 4.1<br>[0.16]             |
| OMP 32  | 130.0<br>[5.12] | 5.2<br>[0.20]             |
| OMP 40  | 131.0<br>[5.16] | 6.5<br>[0.26]             |
| OMP 50  | 131.0<br>[5.16] | 6.5<br>[0.26]             |
| OMP 80  | 135.0<br>[5.31] | 10.4<br>[0.41]            |
| OMP 100 | 137.5<br>[5.41] | 13.0<br>[0.51]            |
| OMP 125 | 141.0<br>[5.55] | 16.7<br>[0.66]            |
| OMP 160 | 145.5<br>[5.73] | 20.8<br>[0.82]            |
| OMP 200 | 150.5<br>[5.93] | 26.0<br>[1.02]            |
| OMP 250 | 157.0<br>[6.18] | 32.5<br>[1.28]            |
| OMP 315 | 165.5<br>[6.52] | 40.9<br>[1.61]            |
| OMP 400 | 176.6<br>[6.95] | 52.0<br>[2.05]            |

C: Drain connection  
G 1/4; 12 mm [0.47 in] deep  
D: G 1/2; 15 mm [0.59 in] deep  
E: M8; 13 mm [0.51 in] deep  
(4 pcs.)



151-1850.10

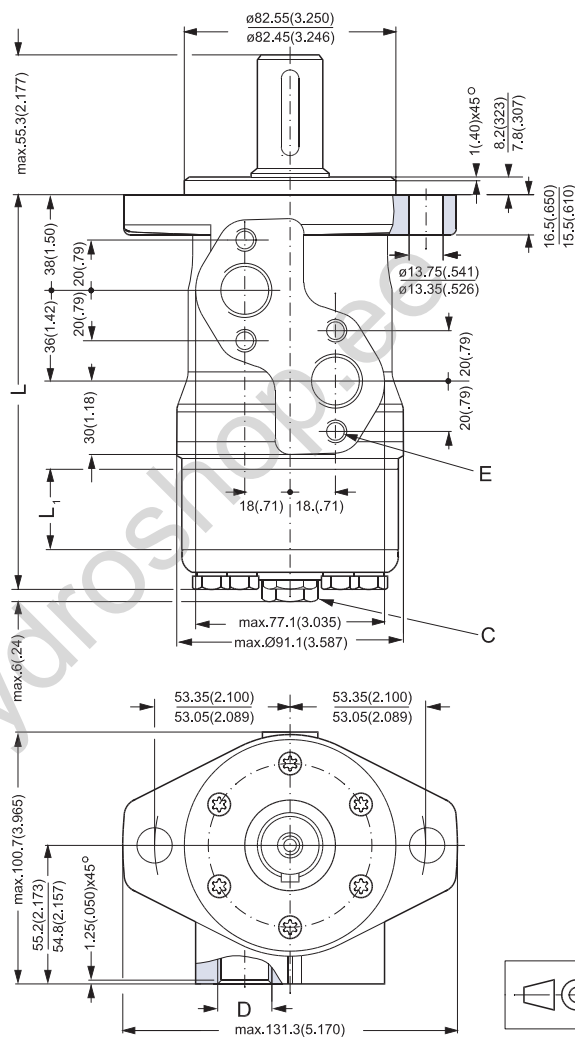
## DIMENSIONS

### OMP C

Side port version with 2 hole oval mounting flange (A2-flange).

| Type    | L<br>mm<br>[in] | L <sub>1</sub><br>mm<br>[in] |
|---------|-----------------|------------------------------|
| OMP 50  | 131.0<br>[5.16] | 6.5<br>[0.26]                |
| OMP 80  | 135.0<br>[5.31] | 10.4<br>[0.41]               |
| OMP 100 | 137.5<br>[5.41] | 13.0<br>[0.51]               |
| OMP 125 | 141.0<br>[5.55] | 16.7<br>[0.66]               |
| OMP 160 | 145.5<br>[5.73] | 20.8<br>[0.82]               |
| OMP 200 | 150.5<br>[5.93] | 26.0<br>[1.02]               |
| OMP 250 | 157.0<br>[6.18] | 32.5<br>[1.28]               |
| OMP 315 | 165.5<br>[6.52] | 40.9<br>[1.61]               |
| OMP 400 | 176.6<br>[6.95] | 52.0<br>[2.05]               |

C: Drain connection  
G 1/4; 12 mm [0.47 in] deep  
D: G 1/2; 15 mm [0.59 in] deep  
E: M8; 13 mm [0.51 in] deep  
(4 pcs.)



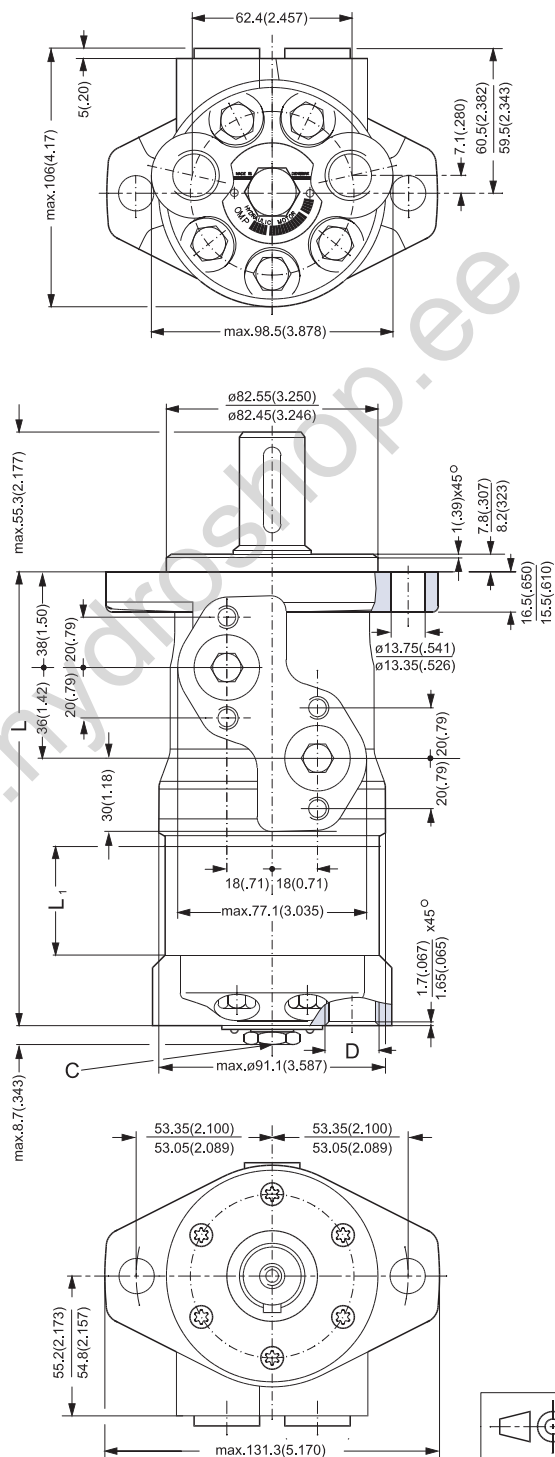
151-1841.10

## DIMENSIONS

End port version with 2 hole oval mounting flange (A2-flange).

| Type    | L mm<br>[in]    | L <sub>1</sub> mm<br>[in] |
|---------|-----------------|---------------------------|
| OMP 50  | 145.1<br>[5.71] | 6.5<br>[0.26]             |
| OMP 80  | 149.0<br>[5.87] | 10.4<br>[0.41]            |
| OMP 100 | 151.7<br>[5.97] | 13.0<br>[0.51]            |
| OMP 125 | 155.2<br>[6.11] | 16.3<br>[0.66]            |
| OMP 160 | 159.4<br>[6.28] | 20.8<br>[0.82]            |
| OMP 200 | 164.6<br>[6.48] | 26.0<br>[1.02]            |
| OMP 250 | 171.1<br>[6.74] | 32.5<br>[1.28]            |
| OMP 315 | 179.5<br>[7.07] | 40.9<br>[1.61]            |
| OMP 400 | 190.6<br>[7.50] | 52.0<br>[2.05]            |

C: Drain connection  
G 1/4; 12 mm [0.47 in] deep  
D: G 1/2; 15 mm [0.59 in] deep



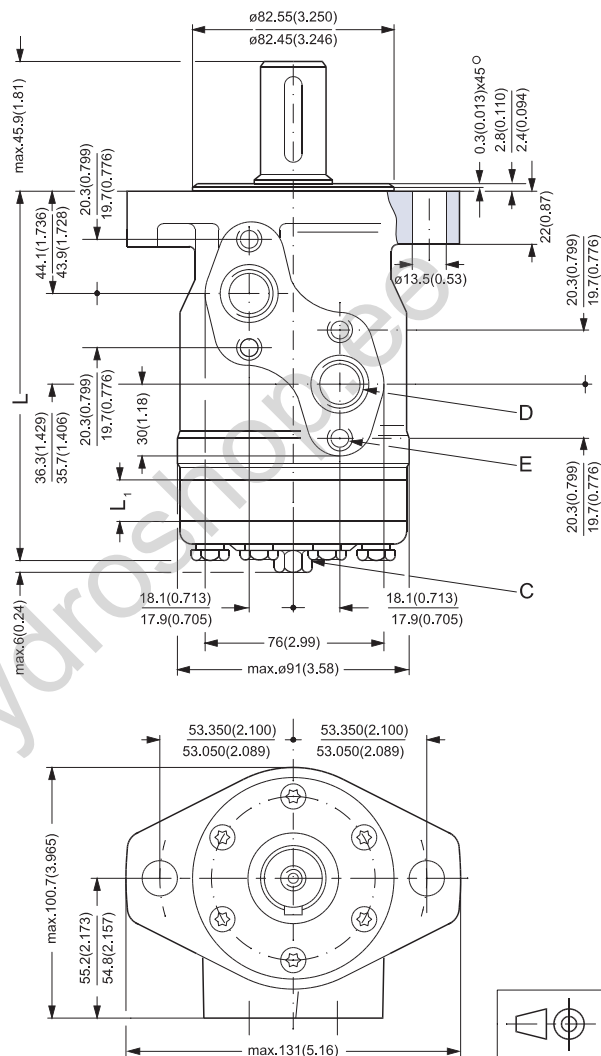
151-1748.10

## DIMENSIONS

Side port version with 2 hole oval mounting flange (A2-flange).

| Type    | L mm<br>[in]    | L <sub>1</sub> mm<br>[in] |
|---------|-----------------|---------------------------|
| OMP 25  | 135.0<br>[5.31] | 4.1<br>[0.16]             |
| OMP 32  | 136.0<br>[5.35] | 5.2<br>[0.20]             |
| OMP 40  | 137.0<br>[5.39] | 6.5<br>[0.26]             |
| OMP 50  | 137.0<br>[5.39] | 6.5<br>[0.26]             |
| OMP 80  | 141.0<br>[5.55] | 10.4<br>[0.41]            |
| OMP 100 | 143.5<br>[5.65] | 13.0<br>[0.51]            |
| OMP 125 | 147.0<br>[5.79] | 16.7<br>[0.66]            |
| OMP 160 | 151.5<br>[5.96] | 20.8<br>[0.82]            |
| OMP 200 | 156.5<br>[6.16] | 26.0<br>[1.02]            |
| OMP 250 | 163.0<br>[6.42] | 32.5<br>[1.28]            |
| OMP 315 | 171.5<br>[6.75] | 40.9<br>[1.61]            |
| OMP 400 | 182.6<br>[7.19] | 52.0<br>[2.05]            |

- C: Drain connection  
7/16 - 20 UNF;  
12 mm [0.47 in] deep
- D: 7/8 - 14 UNF;  
16.7 mm [0.66 in] deep  
or 1/2 - 14 NPTF
- E: M8; 13 mm [0.51 in] deep  
(4-off)



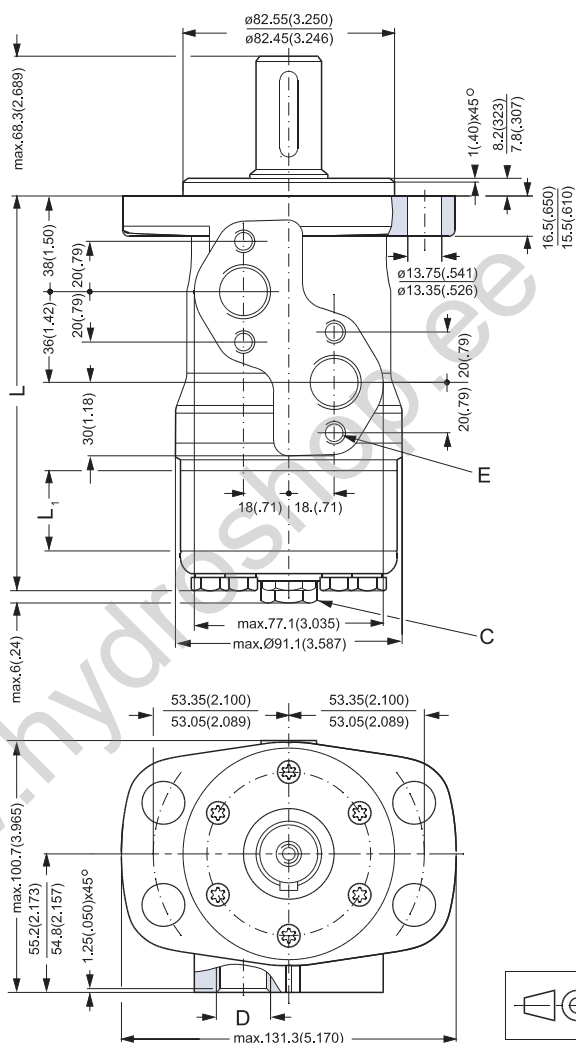
151-1217.10

## DIMENSIONS

Side port version with 4 hole oval mounting flange (A4-flange).

| Type    | L mm<br>[in]    | L' mm<br>[in]  |
|---------|-----------------|----------------|
| OMP 50  | 131.0<br>[5.16] | 6.5<br>[0.26]  |
| OMP 80  | 135.0<br>[5.31] | 10.4<br>[0.41] |
| OMP 100 | 137.5<br>[5.41] | 13.0<br>[0.51] |
| OMP 125 | 141.0<br>[5.55] | 16.7<br>[0.66] |
| OMP 160 | 145.5<br>[5.73] | 20.8<br>[0.82] |
| OMP 200 | 150.5<br>[5.93] | 26.0<br>[1.02] |
| OMP 250 | 157.0<br>[6.18] | 32.5<br>[1.28] |
| OMP 315 | 165.5<br>[6.52] | 40.9<br>[1.61] |
| OMP 400 | 176.6<br>[6.95] | 52.0<br>[2.05] |

C: Drain connection  
G 1/4; 12 mm [0.47 in] deep  
D: G 1/2; 15 mm [0.59 in] deep  
E: M8; 13 mm [0.51 in] deep  
(4 pcs.)



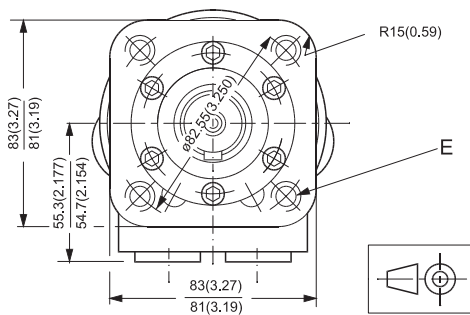
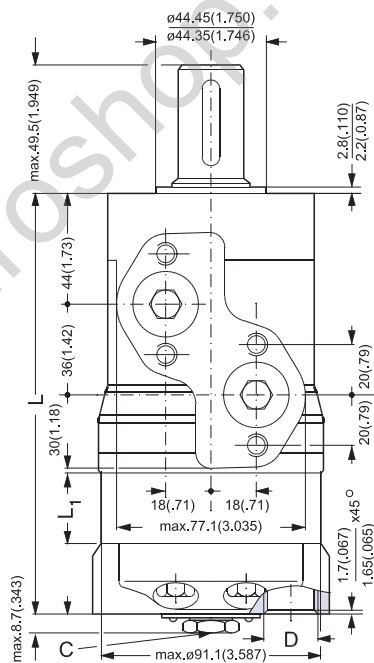
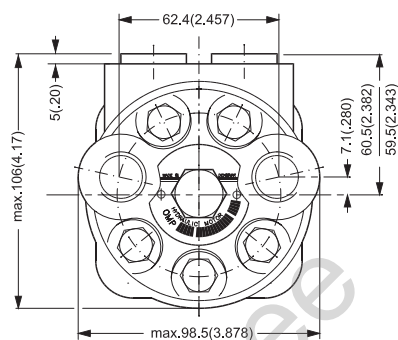
151-1747.10

## DIMENSIONS

End port version with square mounting flange (C-flange).

| Type    | L mm<br>[in]    | L' mm<br>[in]  |
|---------|-----------------|----------------|
| OMP 50  | 151.1<br>[5.94] | 6.5<br>[0.26]  |
| OMP 80  | 155.0<br>[6.10] | 10.4<br>[0.41] |
| OMP 100 | 157.6<br>[6.20] | 13.0<br>[0.51] |
| OMP 125 | 161.1<br>[6.34] | 16.7<br>[0.66] |
| OMP 160 | 165.4<br>[6.51] | 20.8<br>[0.82] |
| OMP 200 | 170.6<br>[6.72] | 26.0<br>[1.02] |
| OMP 250 | 177.1<br>[6.97] | 32.5<br>[1.28] |
| OMP 315 | 185.5<br>[7.30] | 40.9<br>[1.61] |
| OMP 400 | 196.6<br>[7.74] | 52.0<br>[2.05] |

C: Drain connection  
G 1/4; 12 mm [0.47 in] deep  
D: G 1/2; 15 mm [0.59 in] deep  
E: M10; 15 mm [0.59 in] deep  
(4 pcs.)



151-1749.10

## DIMENSIONS

Side port version with square mounting flange (C-flange).

| Type    | L mm<br>[in]    | L' mm<br>[in]  |
|---------|-----------------|----------------|
| OMP 50  | 131.0<br>[5.16] | 6.5<br>[0.26]  |
| OMP 80  | 135.0<br>[5.31] | 10.4<br>[0.41] |
| OMP 100 | 137.5<br>[5.41] | 13.0<br>[0.51] |
| OMP 125 | 141.0<br>[5.55] | 16.7<br>[0.66] |
| OMP 160 | 145.5<br>[5.73] | 20.8<br>[0.82] |
| OMP 200 | 150.5<br>[5.93] | 26.0<br>[1.02] |
| OMP 250 | 157.0<br>[6.18] | 32.5<br>[1.28] |
| OMP 315 | 165.5<br>[6.52] | 40.9<br>[1.61] |
| OMP 400 | 176.6<br>[6.95] | 52.0<br>[2.05] |

C: Drain connection

$7/16 - 20 \text{ UNF};$

11.94 mm [0.47 in] deep

D:  $\frac{7}{8}$  - 14 UNF;

16.76 mm [0.66 in] deep

or 1/2 - 14 NPTF

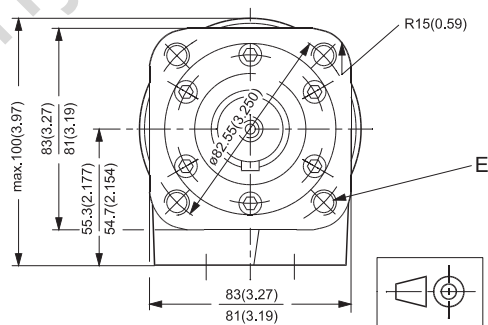
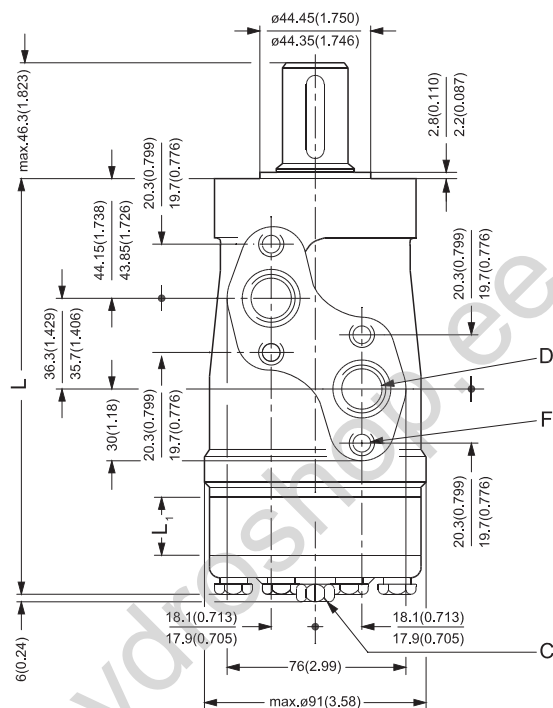
E:  $\frac{3}{8}$  - 16 UNC;

14.97 mm [0.59 in] deep

(4-off)

F: M8; 12.95 mm [0.51 in] deep  
(4-off)

(1995)



151-1214.10

## DIMENSIONS

### OMPW

### OMPW N

| Type                         | mm<br>L <sub>2</sub> [in] |
|------------------------------|---------------------------|
| OMPW with<br>Ø25 mm shaft    | 115.0<br>[4.53]           |
| OMPW N<br>with tapered shaft | 116.0<br>[4.57]           |

| Type    | L mm<br>[in]    | L <sub>1</sub> mm<br>[in] |
|---------|-----------------|---------------------------|
| OMP 50  | 70.8<br>[2.78]  | 6.5<br>[0.26]             |
| OMP 80  | 74.7<br>[2.97]  | 10.4<br>[0.41]            |
| OMP 100 | 77.3<br>[3.04]  | 13.0<br>[0.51]            |
| OMP 125 | 80.6<br>[3.17]  | 16.7<br>[0.66]            |
| OMP 160 | 85.1<br>[3.35]  | 20.8<br>[0.82]            |
| OMP 200 | 90.3<br>[3.56]  | 26.0<br>[1.02]            |
| OMP 250 | 96.8<br>[3.81]  | 32.5<br>[1.28]            |
| OMP 315 | 105.2<br>[4.14] | 40.9<br>[1.61]            |
| OMP 400 | 116.3<br>[4.58] | 52.0<br>[2.05]            |

C: Drain connection  
G 1/4; 12 mm [0.47 in] deep  
D: G 1/2; 15 mm [0.59 in] deep  
E: M10; 20 mm [0.79 in] deep  
(4 pcs.)

