

## Flowrox™ pumps Dosing LPP-D hose pumps

Flowrox™ LPP-D pumps are designed for heavy industrial duties and are ideal for dosing and flow control of abrasive, corrosive, viscous or crystallizing media. They provide accurate dosing in all process conditions as the pump discharge flow does not depend on the pipeline pressure. There is no variation due to the discharge pressure condition, output remains the same on every cycle. Flowrox hose pumps provide exact flow per revolution. They also incorporate an advanced rolling design, which eliminates friction, maximizes hose life and lowers energy consumption. Lifetime of Flowrox pumps' hoses is 3-5 times longer than conventional hose pumps.

### Benefits

- Accurate dosing
- Capability to pump 24/7
- Energy efficiency
- Long service intervals
- Low operating costs

### Features

- Accurate dosing enabled by positive displacement pumping which also minimizes back flow.
- No overheating at high continuous flow rates due to the advanced roller design that minimizes friction and heat.
- Wear resistant hose and hose inserts are the only parts in contact with the medium
- Ideal for pumping diverse slurries and dosing a wide range of abrasive, corrosive, viscous or crystallizing media.



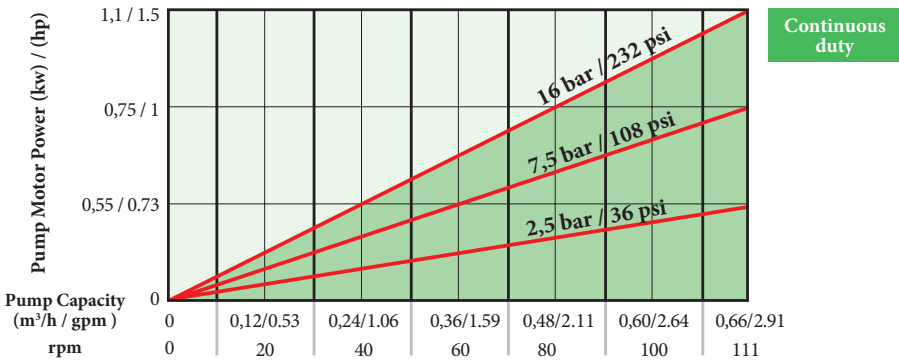
### Ideal applications:

- Chemical dosing (e.g. lime milk, Flocculants)
- Flotation
- Process analyser sample transfer

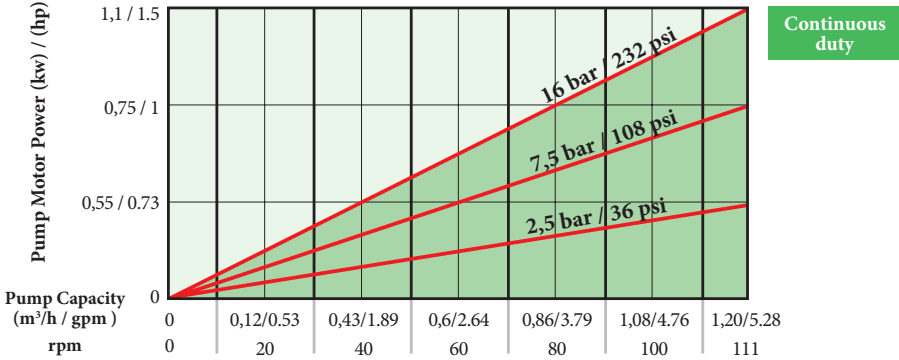
| Technical data                   | LPP-D15 / LPP-D½                                                                       | LPP-D20 / LPP-D¾          | LPP-D25 / LPP-D1          |
|----------------------------------|----------------------------------------------------------------------------------------|---------------------------|---------------------------|
| Weight                           | 47 kg / 104 lb                                                                         | 47 kg / 104 lb            | 60 kg / 132 lb            |
| Flow/revolution                  | 0,1 l / 0.026 gal                                                                      | 0,18 l / 0.047 gal        | 0,3 l / 0.079 gal         |
| Maximum flow                     | 0.66 m³/h / 2.91 gpm                                                                   | 1,2 m³/h / 5.28 gpm       | 2,0 m³/h / 8.8 gpm        |
| Maximum pressure (standard)      | 7.5 bar / 108 psi                                                                      | 7.5 bar / 108 psi         | 7.5 bar / 108 psi         |
| Maximum pressure (high pressure) | 16 bar / 232 psi                                                                       | 16 bar / 232 psi          | 16 bar / 232 psi          |
| Maximum fluid temperature        | Up to 95 °C / 203 °F (Check 'Technical specifications' for hose specific temperatures) |                           |                           |
| Lubricant volume (standard)      | 0.4 l / 0.1 gal                                                                        | 0.4 l / 0.1 gal           | 0.4 l / 0.1 gal           |
| Lubricant volume (high pressure) | 1 l / 0.26 gal                                                                         | 1 l / 0.26 gal            | 1 l / 0.26 gal            |
| Hose bore                        | 15 mm / ½"                                                                             | 20 mm / ¾"                | 25 mm / 1"                |
| Motor power                      | 0,55-1,1 kW / 0.75-1.5 hp                                                              | 0,55-1,1 kW / 0.75-1.5 hp | 0,75-1,5 kW / 0.75-2.0 hp |

Pump curves

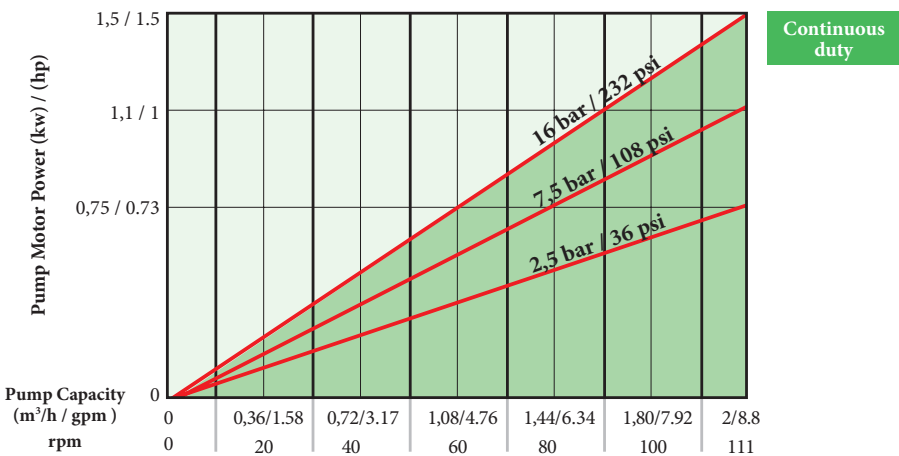
LPP-D15 CAPACITY CHART, CONTINUOUS DUTY, UP TO 95°C / 203°F  
(24 h/day/7 days per week)



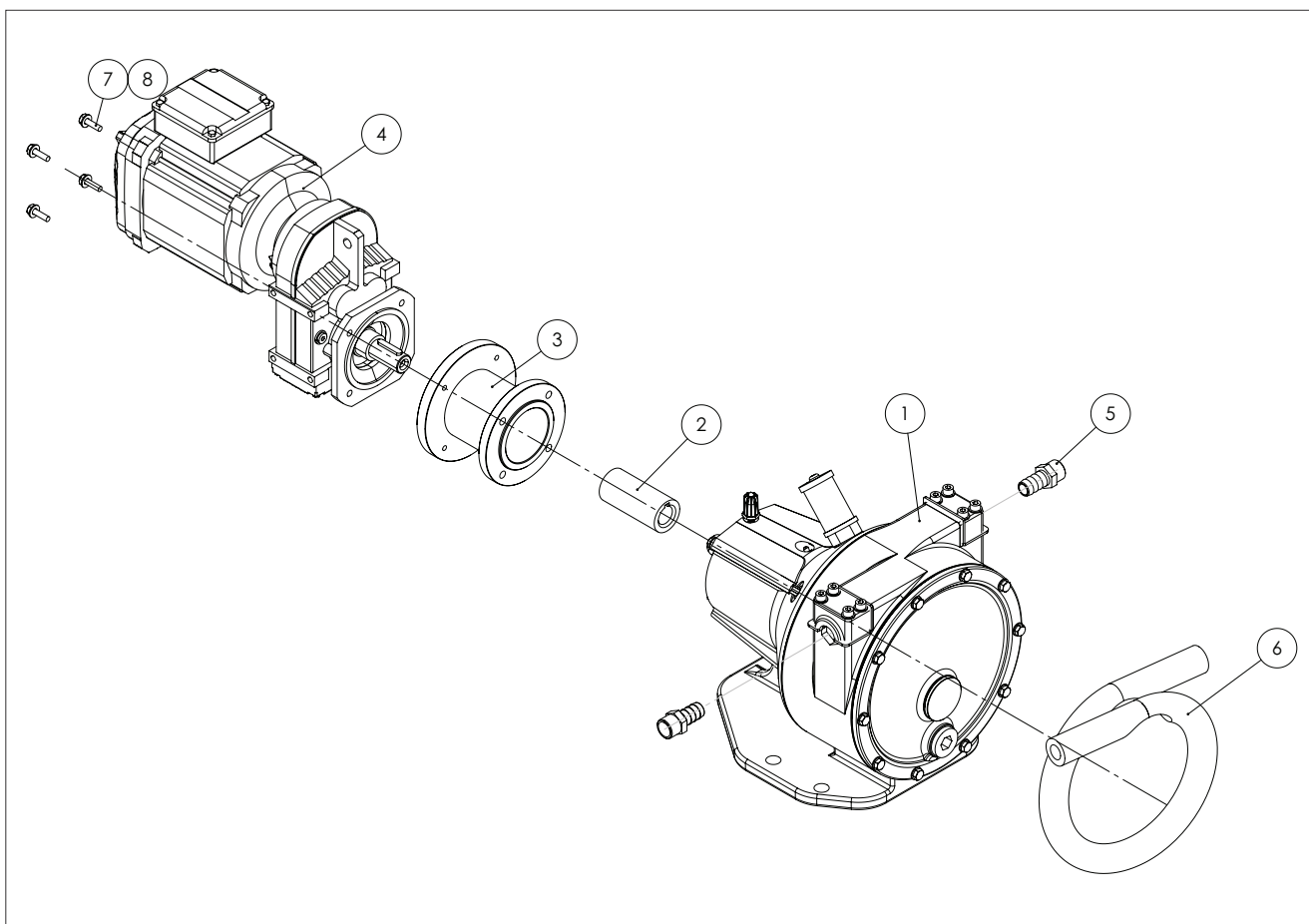
LPP-D20 CAPACITY CHART, CONTINUOUS DUTY, UP TO 95°C / 203°F  
(24 h/day/7 days per week)



LPP-D25 CAPACITY CHART, CONTINUOUS DUTY, UP TO 95°C / 203°F  
(24 h/day/7 days per week)



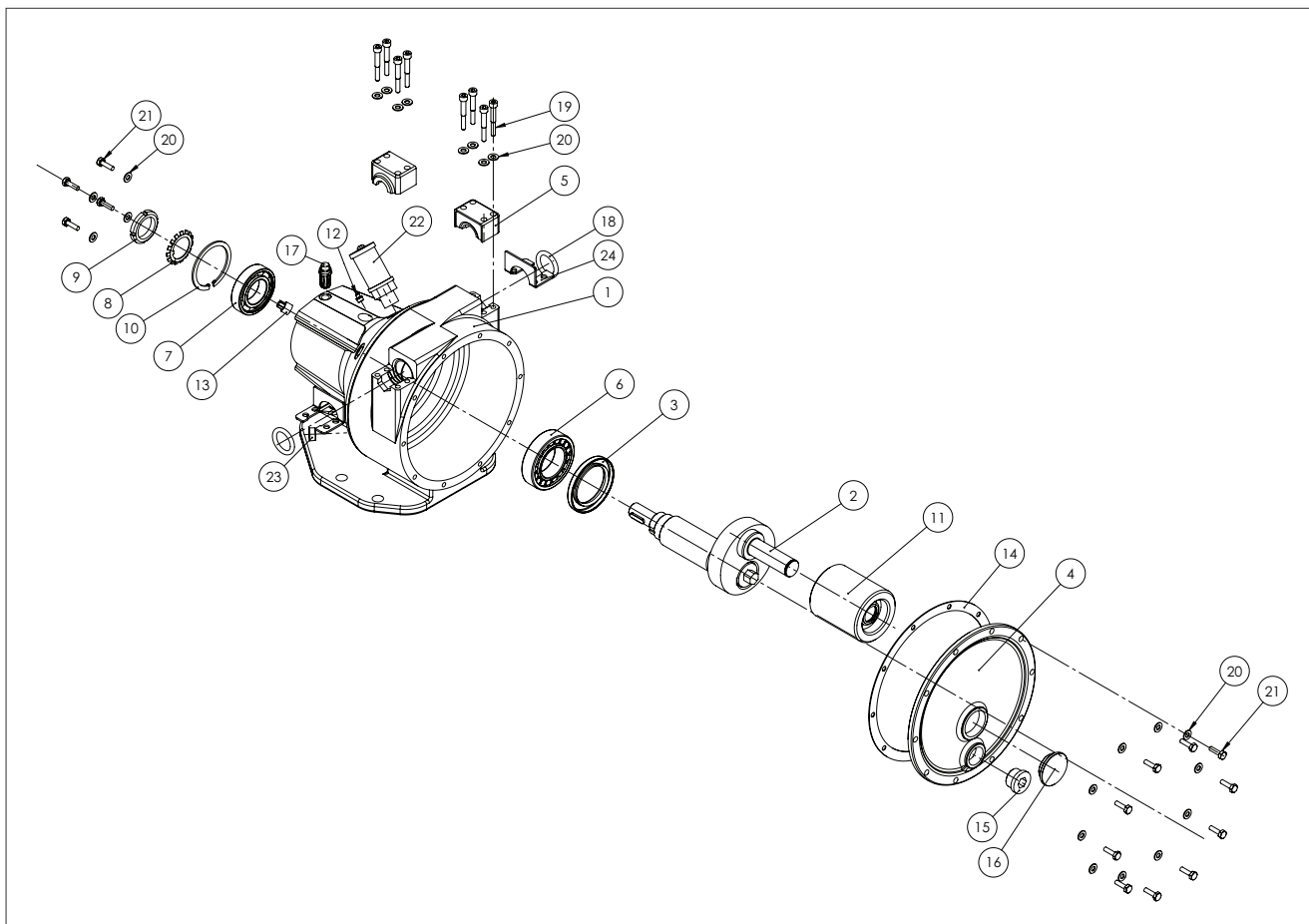
## Exploded view of complete LPP-D pump



| ITEM NO. | DESCRIPTION    | QTY. |
|----------|----------------|------|
| 1        | PUMP HEAD      | 1    |
| 2        | COUPLING       | 1    |
| 3        | ADAPTER FLANGE | 1    |
| 4        | GEAR MOTOR     | 1    |
| 5        | HOSE INSERT    | 2    |
| 6        | HOSE           | 1    |
| 7        | SCREW          | 4    |
| 8        | WASHER         | 4    |

All exploded parts are modular and order specific. Adapter parts vary depending on the selected gear motor.

## Exploded view of LPP-D pump head



| ITEM NO. | DESCRIPTION              | QTY |
|----------|--------------------------|-----|
| 1        | BODY                     | 1   |
| 2        | CRANKSHAFT               | 1   |
| 3        | RADIAL SHAFT SEAL        | 1   |
| 4        | FRONT COVER              | 1   |
| 5        | HOSE BRACKET             | 2   |
| 6        | ROLLER BEARING           | 1   |
| 7        | DEEP GROOVE BALL BEARING | 1   |
| 8        | LOCK PLATE               | 1   |
| 9        | SHAFT NUT                | 1   |
| 10       | RETAINING RING           | 1   |
| 11       | ROTOR ASSEMBLY           | 1   |
| 12       | GREASE NIPPLE            | 1   |
| 13       | PLUG                     | 1   |
| 14       | FRONT COVER SEAL         | 1   |
| 15       | HEX SOCKET PLUG          | 1   |
| 16       | OIL EYE                  | 1   |
| 17       | SILENCER                 | 1   |
| 18       | O-RING                   | 2   |
| 19       | HEX SOCKET SCREW         | 8   |
| 20       | WASHER                   | 22  |
| 21       | HEXAGON SCREW            | 14  |
| 22       | BREATHER                 | 1   |
| 23       | HEX SOCKET PLUG          | 1   |
| 24       | STICKER SEAL             | 2   |

Standard 7,5 bar construction. For high pressure & ATEX pumps, please consult Valmet Flow Control Oy.

## Technical specifications

### Sizes:

DN 15, 20, 25 / ½", ¾", 1"

### Connections:

- G½" male threads (LPP-D15 / LPP-D½)
- G¾" male threads (LPP-D20 / LPP-D¾)
- G1" male threads (LPP-D25 / LPP-D1)

### Temperature range:

Maximum fluid temperature for hoses:

|       |                |
|-------|----------------|
| NR:   | 75 °C / 167 °F |
| EPDM: | 95 °C / 203 °F |
| NBR:  | 80 °C / 176 °F |
| NBRF: | 70 °C / 157 °F |
| CSM:  | 90 °C / 194 °F |

Minimum & maximum ambient operating temperature:

0 to 46 °C / 0 to 115 °F

### Construction materials:

|                |                                                                                                                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Body:          | Cast aluminium                                                                                                                                                                                                        |
| Rotor:         | Carbon steel / polyurethane                                                                                                                                                                                           |
| Hose inserts:  | AISI 316 stainless steel / polypropylene / nylon                                                                                                                                                                      |
| Hose material: | <ul style="list-style-type: none"> <li>• EPDM = Ethylene propylene</li> <li>• NR = Natural rubber</li> <li>• NBR = Nitrile</li> <li>• NBRF = Nitrile (FDA)</li> <li>• CSM (Chlorosulphonated Polyethylene)</li> </ul> |

### Drive unit

- Gear motor
- Gear unit
- Bare shaft

### Auxiliaries

- Hose leak detector
- Revolution detector
- Forced cooling fan
- Pressure transmitter
- Frequency inverter

## Comparison of Flowrox Technology

Flowrox rolling technology is capable of operating in continuous duty with its maximum pressure and maximum flow in the same point. This is where the conventional pump compromises either on pressure or flow.

Compared to Flowrox pumps, conventional hose pumps can only reach less than half of the flow in continuous duty.

What is more, Flowrox pumps can perform even with high temperature media up to 95°C / 203 °F.

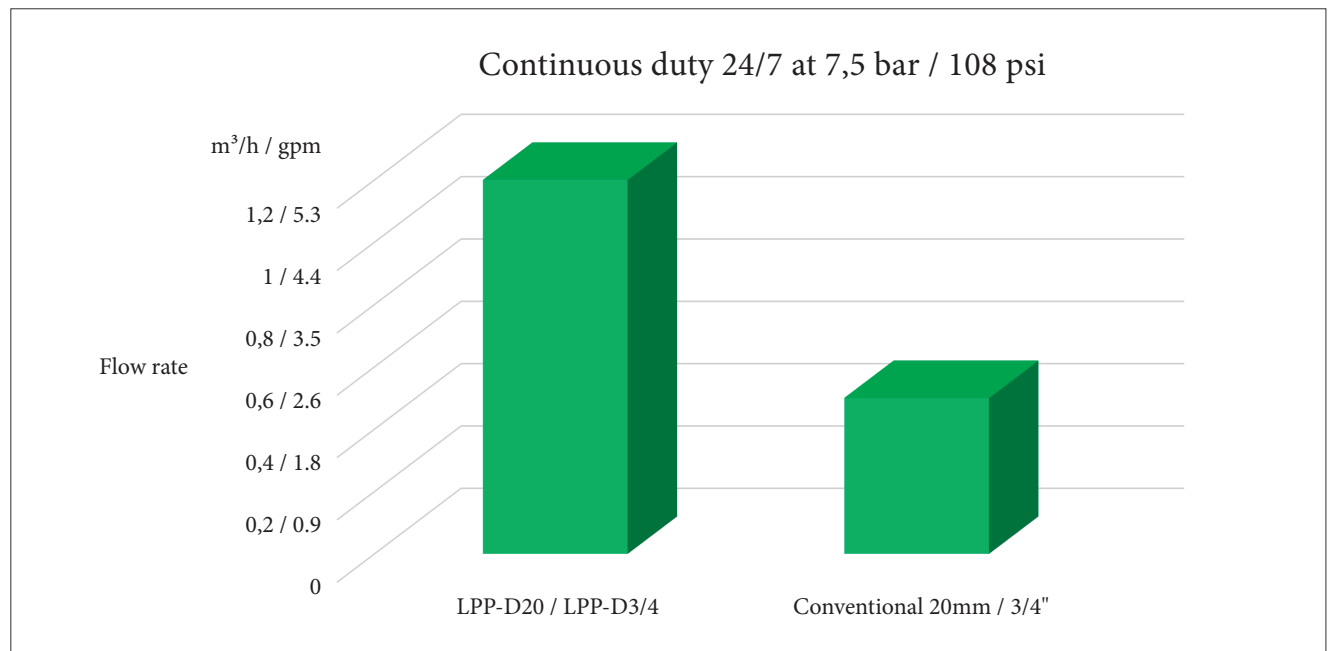
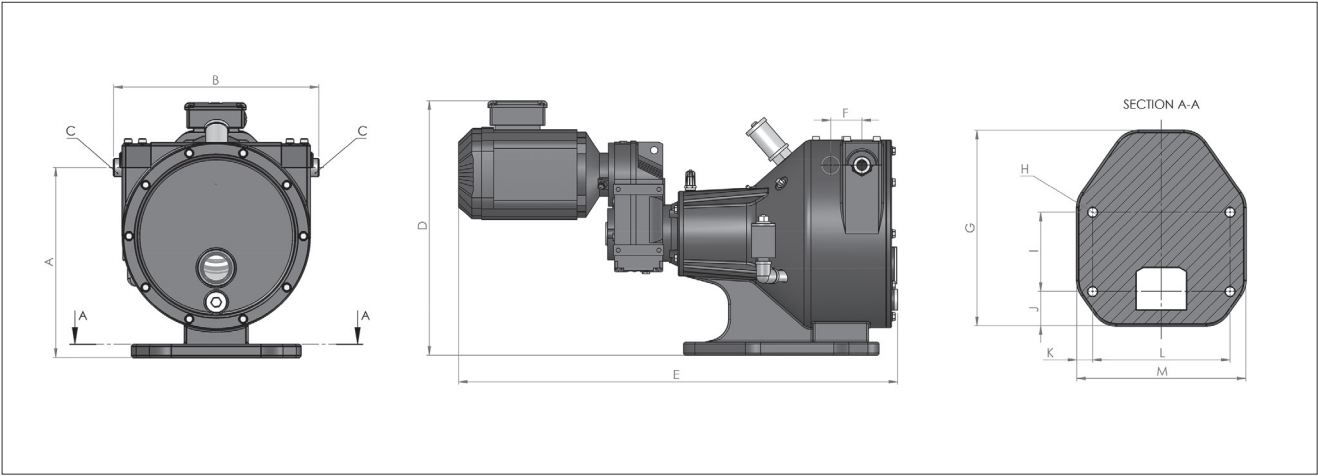


Image: Flowrox hose pump technology vs. conventional technology.

Dimensions, LPP-D pumps



| PUMP MODEL                                  | A            | B            | C     | D            | E            | F          | G            | H              | I           | J          | K          | L            | M            |
|---------------------------------------------|--------------|--------------|-------|--------------|--------------|------------|--------------|----------------|-------------|------------|------------|--------------|--------------|
| LPP-D25 / LPP-D1<br>(GM: SEW FAF37, 1.5kW)  | 360 / 14.17" | 388 / 15.28" | G1"   | 482 / 18.98" | 831 / 32.7"  | 59 / 2.32" | 370 (14.57") | 4 X 19 (0.75") | 150 (5.91") | 65 (2.56") | 30 (1.18") | 260 (10.24") | 320 (12.6")  |
| LPP-D20 / LPP-D3/4<br>(GM: SEW FF27, 1.1kW) | 285 / 11.22" | 325 / 12.8"  | G3/4" | 414 / 16.31" | 853 / 33.58" | 50 / 1.97" | 320 / 12.58" | 4 X 19 (0.75") | 85 / 3.35"  | 65 / 2.56" | 26 / 1"    | 240 / 9.45"  | 291 / 11.46" |
| LPP-D15 / LPP-D½<br>(GM: SEW FF27, 1.1kW)   | 285 / 11.22" | 325 / 12.8"  | G1/2" | 414 / 16.31" | 853 / 33.58" | 50 / 1.97" | 320 / 12.58" | 4 X 19 (0.75") | 85 / 3.35"  | 65 / 2.56" | 26 / 1"    | 240 / 9.45"  | 291 / 11.46" |

Dimensions with the largest availabe motor size

## Pump Model Selection Guide

### Dosing Pumps LPP-D

| 1.    | 2.  | 3.   | 4. | 5. | 6. | 7. |
|-------|-----|------|----|----|----|----|
| LPP-D | 020 | B016 | B  | I0 | C  | A  |

| 1. sign | PUMP SERIES       |
|---------|-------------------|
| LPP-D   | Hose pump, dosing |

| 2. sign | BODY SIZE |
|---------|-----------|
| 015     | DN15      |
| 020     | DN20      |
| 025     | DN25      |

| 3. sign | PRESSURE RATING |
|---------|-----------------|
| B075    | 7,5 BAR         |
| B016    | 16 BAR          |

| 4. sign | HOSE INSERTS |
|---------|--------------|
| A       | G1/2"        |
| B       | G3/4"        |
| C       | G1"          |
| D       | 1/2" NPT     |
| E       | 3/4" NPT     |
| F       | 1" NPT       |

| 5. sign | HOSE INSERT MATERIAL |
|---------|----------------------|
| I0      | EN 1.4401 (AISI 316) |
| YY      | Other                |

| 6. sign | HOSE MATERIAL                        |
|---------|--------------------------------------|
| B       | EPDM Ethylene Propylene              |
| C       | NR Natural Rubber                    |
| D       | NBR Nitrile Rubber                   |
| E       | CSM (Chlorosulphonated Polyethylene) |
| J       | NBRF Nitrile Rubber (FDA)            |

| 7. sign | AUXILIARIES                       |
|---------|-----------------------------------|
| A       | Hose leak detector                |
| B       | Revolution detector               |
| C       | Pressure transmitter with display |
| D       | Pressure flange                   |
| E       | Hose leak detector CSA            |
| F       | Hose leak detector ATEX           |
| Y       | Other                             |

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[www.valmet.com/flowcontrol](http://www.valmet.com/flowcontrol)

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