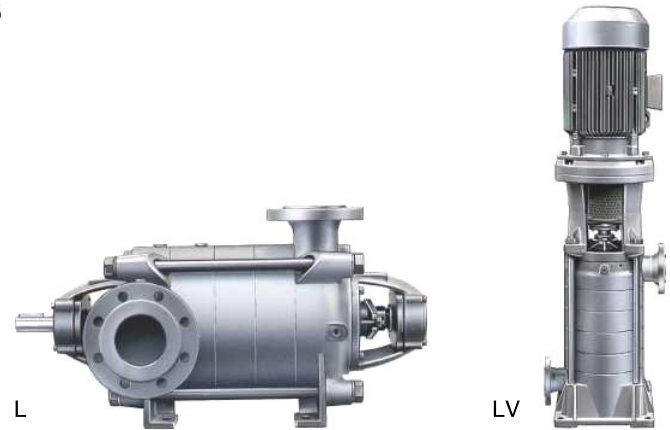


# High-Pressure Centrifugal Pumps SERIES L/LV



## Application

For handling fluids which do not contain any abrasive particles nor chemically attack the pump materials.

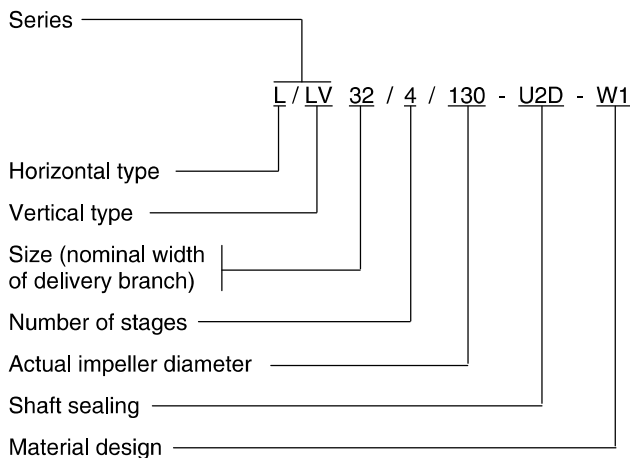
## Main fields of application

In water supply, booster, fire-fighting, irrigation plants, in cooling and heating systems, for boiler feed and handling of condensate.

Moreover, for application fields of the most varied kind in all industrial branches.

## Abbreviation

Example:



## Design and series construction

L: horizontal, two or multi-stage high-pressure centrifugal pump of the segmental-type of construction

LV: vertical, two or multi-stage high-pressure centrifugal pump of the segmental-type of construction

Replaceable impellers and diffusers as well as shaft sleeves and shaft protection sleeves.

The casing parts sealed by O-rings are held together by external casing tie bolts.

Axial thrust compensation by single-wheel balancing.

Any residual forces are absorbed by the bearings arranged in the bearing casings and motor brackets respectively.

With series L, the pump feet are cast to the suction and delivery casing. Thus, the pipeline forces are directly passed into the base plate and foundation.

Vertical and horizontal pumps of the same size have identical hydraulic capacities.

## Branch positions/flanges

L: Suction branch: horizontally to the right as seen from the driving side  
 Delivery branch: vertically upwards  
 Other branch positions on request.

LV: Delivery branch set off by 180° against the suction branch. The arrangement of the delivery branch, set off by 90° each is possible. Arrangement on top of each other with 3 and more stages only.

Flanges: Suction flange PN 16 according to DIN - EN 1092-2  
 Delivery flange PN 40 according to DIN - EN 1092-2

## Shaft sealing

Stuffing box uncooled: **Type U1**

Packing rings on graphite PTFE basis (asbestos-free).

Mechanical seal balanced, uncooled:

**Type U2D/U2.2D/U2.6D**

Dependent on sense of rotation (suction side = clockwise; delivery side = counter-clockwise), maintenance-free.

For the mechanical seals, the following material designs are provided:

| Abbreviation   | Material design             |  | Material key<br>DIN EN 12 756 |
|----------------|-----------------------------|--|-------------------------------|
| U2.2D<br>U 2 D | Rotating seal ring          | Hard carbon, synthetic resin impregnated | B                             |
|                | Stationary seal ring        | Oxide ceramics                           | V                             |
|                | O-rings                     | EP rubber                                | E                             |
|                | Spring                      | CrNiMo steel                             | G                             |
|                | Other structural components | CrNiMo steel                             | G                             |
| U2.6D          | Rotating seal ring          | Hard carbon, synthetic resin impregnated | B                             |
|                | Stationary seal ring        | Silicon carbide                          | Q                             |
|                | O-rings                     | EP rubber                                | E                             |
|                | Spring                      | CrNiMo steel                             | G                             |
|                | Other structural components | CrNiMo steel                             | G                             |

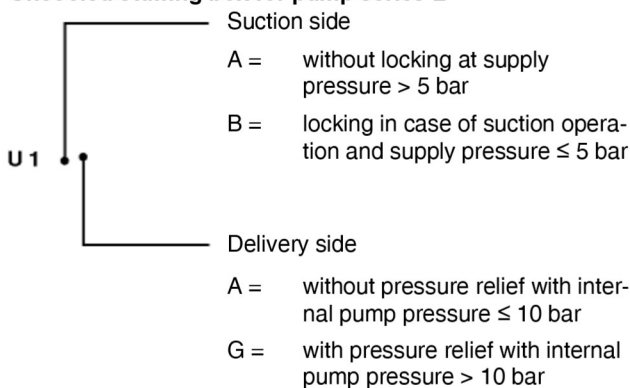
Allocation of the shaft sealing types to the pump sizes:

| Pump size      | Shaft sealing         |      |      |      |                          |
|----------------|-----------------------|------|------|------|--------------------------|
|                | Stuffing box uncooled |      |      |      | Mechanical seal balanced |
| L 25           | U1BA                  | U1BG | U1AA | U1AG | U2.2D                    |
| L 32<br>L 40   |                       |      |      |      | U 2D                     |
| L 50<br>L 65   |                       |      |      |      | U2.6D                    |
| LV 25          | -                     | -    | -    | -    | U2.2D                    |
| LV 32<br>LV 40 | -                     | -    | -    | -    | U 2 D                    |
| LV 50<br>LV 65 | U1A                   | U1G  | -    | -    | U2.6D                    |

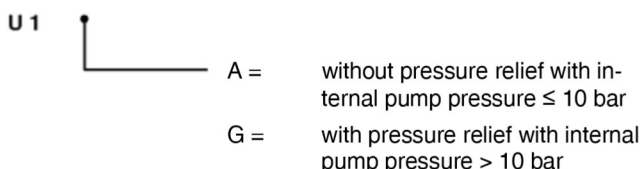
The suction and/or supply conditions and the internal pump pressure determine the selection of the stuffing boxes. Identification letters are allocated to the stuffing box U1.

Explanations of the identification letters for stuffing boxes:

**Uncooled stuffing box for pump series L**



**Uncooled stuffing box for pump series LV 50 and 65**



**Locking** of the type with stuffing box by means of locking bore and locking notch and/or lantern ring.

**Pressure relief** of type with stuffing box by means of return line form the delivery side to the first stage and/or suction side.

**Flushing** of type with mechanical seal by means of by-pass line.

**Shaft sleeves/shaft protection sleeves**

For the type with stuffing box or mechanical seal within the area of the shaft sealings, replaceable shaft sleeves and/or protective shaft sleeves.

**Upper temperature and pressure limits/speed as a function of the shaft sealing type**

Applicable to all material types.

| Pump series, Pump size | Abbreviation of the shaft sealing type | Temperature<br>①<br>[°C] | max. admissible                           |                                 | Speed<br>[1/min] |
|------------------------|--|--------------------------|---|---------------------------------|------------------|
|                        |  |                          | Supply pressure<br>[bar]                  | Internal pump pressure<br>[bar] |                  |
| L                      | U 1 BA                                 | 125                      | 5   | 10                              | 3500             |
|                        | U 1 BG                                 |                          |   | 25                              |                  |
|                        | U 1 AA                                 | 140                      | 10  | 10                              |                  |
|                        | U 1 AG                                 |                          |   | 25                              |                  |
| L and LV               | U2.2D<br>U 2 D<br>U2.6D                | 140                      | 16  | 25                              |                  |
| LV 50 and 65           | U 1 A<br>U 1 G                         | 125                      | 10<br>less delivery pressure of 1st stage | 10                              |                  |
|                        |  |                          |   | 25                              |                  |

① The admissible temperatures apply to water. In case of other fluids to be pumped, the temperature limits may change.

For the max. admissible numbers of stages as a function of speed, please refer to the individual characteristics.

**Notice:**

The series L and LV are approved for a max. admissible internal pressure level of 31 bar (supply and delivery pressure at Q = 0 m³/h).

Maximum internal pump pressure may not exceed 25 bar at the operating point.

Pressure surges greater than 20% of the internal pressure at the operating point are not permitted.

**Bearing and lubrication**

For all sizes L:  
Suction and delivery side one each grooved ball bearing C3 DIN 625 grease-lubricated.

For all sizes LV:  
Suction side one sliding bearing, lubricated by the fluid to be pumped. Delivery side grooved ball bearing C3 DIN 625, grease-lubricated.

**Shaft coupling and coupling guard**

Shaft coupling according to DIN 740. A coupling guard as a protection against accidental contact according to EN 809 is also supplied.

For the L sizes only as soon as the scope of supply includes pump, base plate and shaft coupling.

**Base plate**

L: of steel (channel)  
LV: Base plates are not required.

Assembly dimensions are available in our selection programme ALL2CAD.

**Drive**

L: Serial, suction side or delivery side (at extra charge) by surface-cooled three-phase squirrel-cage induction motors, IM B3 type of construction, enclosure IP 55, class F insulation, according to IEC standard. Performances and main dimensions according to DIN 42 673.

LV: Motors as under L, however, IMV1 type of construction with performances and main dimensions according to DIN 42677.

**Connections**

The following connections are always provided for series L:

- FF1 Fluid to be pumped, filling
- FD1 Fluid to be pumped, draining (suction casing)
- FD3 Fluid to be pumped, draining (delivery casing)
- LO1 Leakage, outlet (suction side)
- LO3 Leakage, outlet (delivery side)
- PM1 Pressure measurement (suction casing)
- PM2 Pressure measurement (delivery casing)
- FV3 Venting (pump)
- FV1 Venting (mechanical seal suction side)
- FV4 Venting (mechanical seal delivery side)

The following connections are always provided for series LV :

- LO Leakage, outlet (with stuffing box)
- PM2 Pressure measurement delivery casing)
- FV1 Venting (mechanical seal)

**Werkstoffe**

| Denomination            | Part No.   |            | Material design |                         |                         |
|-------------------------|------------|------------|-----------------|-------------------------|-------------------------|
|                         | L          | LV         | W1              | W2                      | W3                      |
| Suction casing          | 106.01     | 106.01     | EN-GJL-250      | EN-GJL-250              | G-CuAl 10 Ni (CC 333 G) |
| Delivery casing         | 107.01     | 107.01     | EN- GJL -250    | EN-GJL-250              | G-CuAl 10 Ni (CC 333 G) |
| Stage casing            | 108.01/.02 | 108.01/.02 | EN- GJL -250    | EN-GJL-250              | G-CuAl 10 Ni (CC 333 G) |
| Impeller                | 230.01     | 230.01     | EN- GJL -200    | G-CuAl 10 Ni (CC 333 G) | G-CuAl 10 Ni (CC 333 G) |
| Diffuser L, LV 40, 50,  | 171.01     | 171.01     | EN- GJL -200    | G-CuAl 10 Ni (CC 333 G) | G-CuAl 10 Ni (CC 333 G) |
| Diffuser L, LV 25, 32   | 171.01     | 171.01     | Ryton R4 ①      | Ryton R4 ①              | Ryton R4 ①              |
| Shaft                   | 210.01     | 210.01     | 1.4021          | 1.4021                  | 1.4571                  |
| Journal bearing lantern | -          | 342.01     | EN- GJL -250    | EN-GJL-250              | EN-GJL-250              |
| Bearing casing          | 350.01/.02 | -          | EN- GJL -250    | EN-GJL-250              | EN-GJL-250              |
| Gland                   | 452.01/.02 | 452.02     | EN- GJL -250    | EN-GJL-250              | G-CuAl 10 Ni (CC 333 G) |
| Bearing cover           | 360.01/.02 | 360.02     | EN- GJL -250    | EN-GJL-250              | EN-GJL-250              |
| Shaft sleeve            | 523.01/.02 | 523.02     | 1.4021          | 1.4021                  | 1.4571                  |
| Spacer sleeve           | 520.01     | -          | EN- GJL -250    | EN-GJL-250              | 2.1052                  |
| Shaft sleeve            | 524.01/.02 | 524.02     | 1.4021          | 1.4021                  | 1.4571                  |
| Seal cover              | 471.01/.02 | 471.02     | EN- GJL -250    | EN-GJL-250              | G-CuAl 10 Ni (CC 333 G) |
| Bearing bush            | -          | 545.01     | 2.1182          | 2.1182                  | 2.1182                  |

① Polyphenylene sulfide, a technical thermoplast with a glass fibre portion of 40%

**Table combination of components**

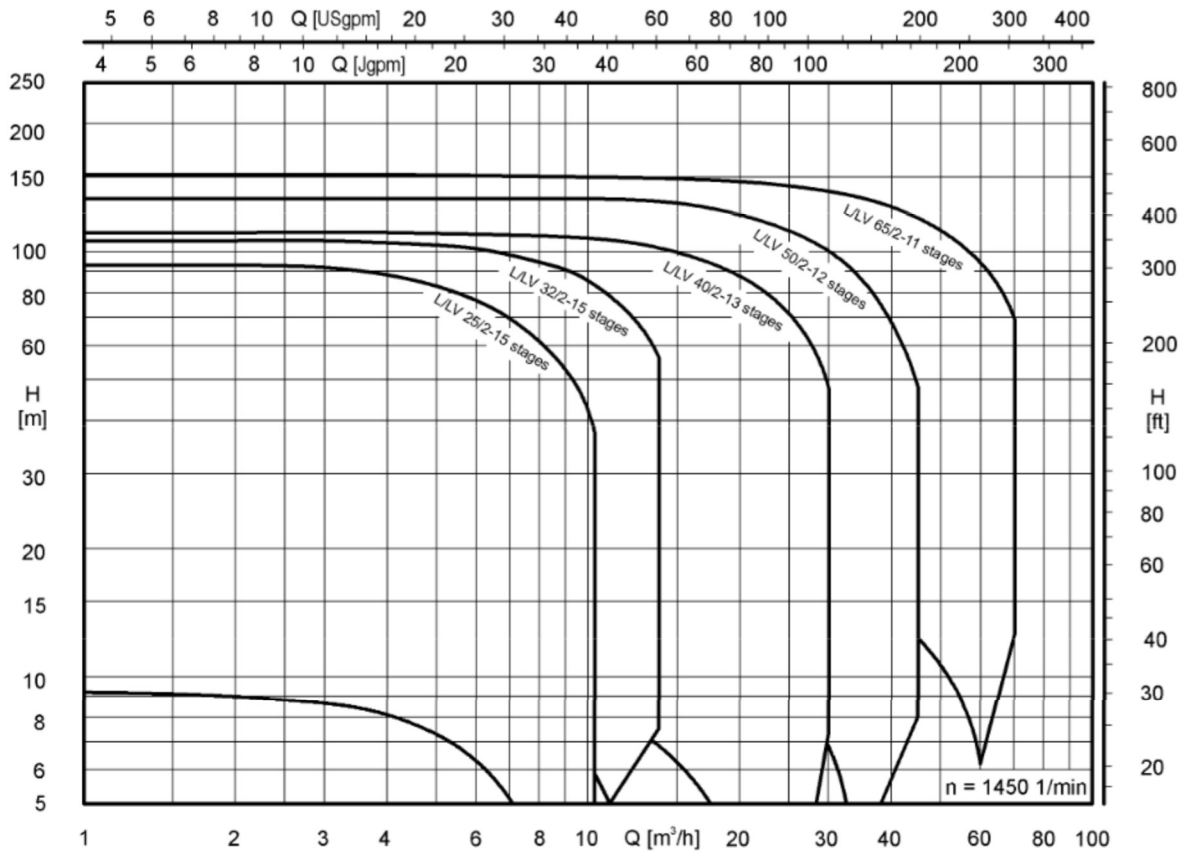
The table below shows the combination possibilities of structural parts and/or components of the sizes and series.

| Series                       | L  |    |    |    |    | LV |    |    |    |    |
|------------------------------|----|----|----|----|----|----|----|----|----|----|
|                              | 25 | 32 | 40 | 50 | 65 | 25 | 32 | 40 | 50 | 65 |
| Suction casing               | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
| Delivery casing              | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
| Stage casing                 | 1  | 2  | 3  | 4  | 5  | 1  | 2  | 3  | 4  | 5  |
| Impeller                     | 1  | 2  | 3  | 4  | 5  | 1  | 2  | 3  | 4  | 5  |
| Diffuser                     | 1  | 2  | 3  | 4  | 5  | 1  | 2  | 3  | 4  | 5  |
| Journal bearing lantern      | -  | -  | -  | -  | -  | 1  | 2  | 3  | 4  | 4  |
| Bearing cover                | 1  | 2  | 2  | 3  | 3  | 1  | 2  | 2  | 3  | 3  |
| Shaft                        | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 |
| Connecting screws            | 1  | 2  | 3  | 4  | 5  | 1  | 2  | 3  | 4  | 5  |
| Mechanical seal cover        | 1  | 2  | 2  | 3  | 3  | 1  | 2  | 2  | 3  | 3  |
| Shaft sleeve                 | 1  | 2  | 2  | 3  | 3  | 1  | 2  | 2  | 3  | 3  |
| Gland                        | 1  | 2  | 2  | 3  | 3  | -  | -  | -  | 3  | 3  |
| Protective shaft sleeve      | 1  | 2  | 2  | 3  | 3  | -  | -  | -  | 3  | 3  |
| Bearing casing, driving side | 1  | 2  | 2  | 3  | 3  | -  | -  | -  | -  | -  |
| Bearing casing, end side     | 1  | 2  | 2  | 3  | 3  | -  | -  | -  | -  | -  |

Within a horizontal column, parts with identical numbers are interchangeable.

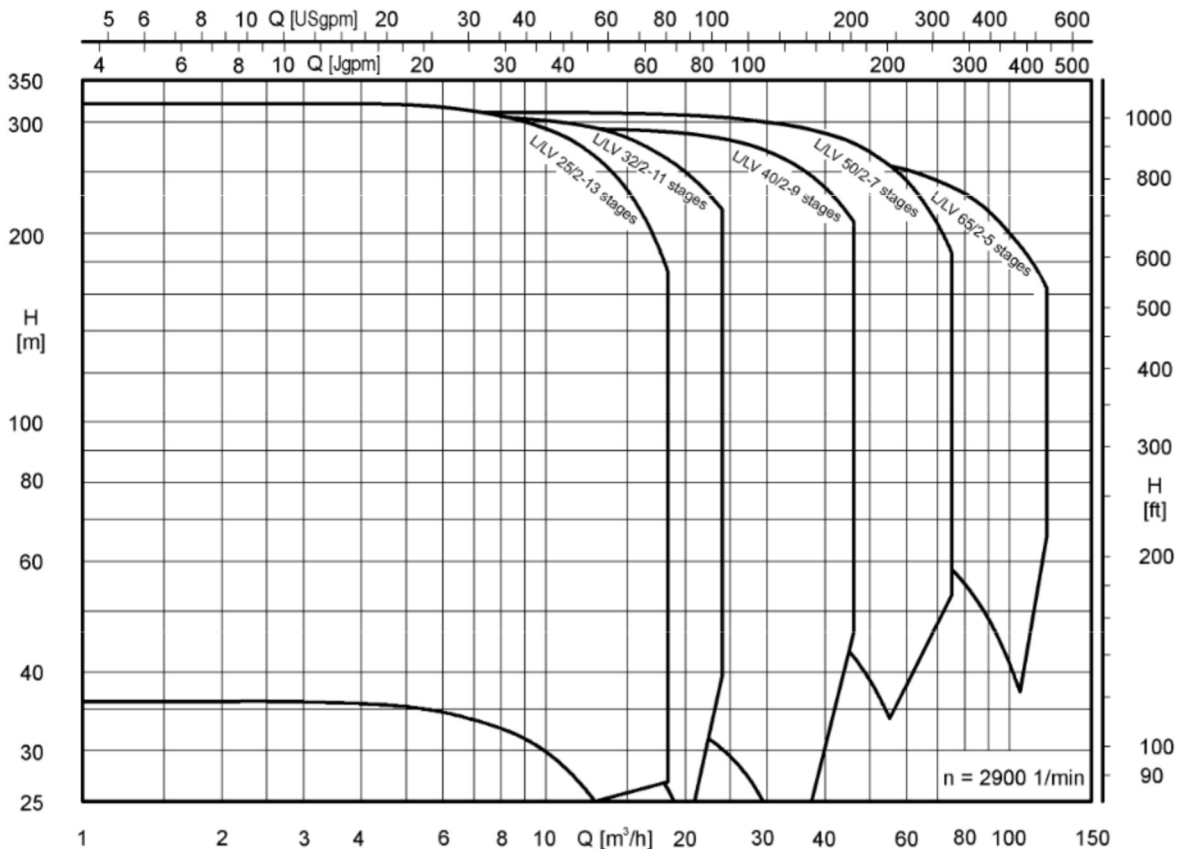
Performance graph

1450 1/min



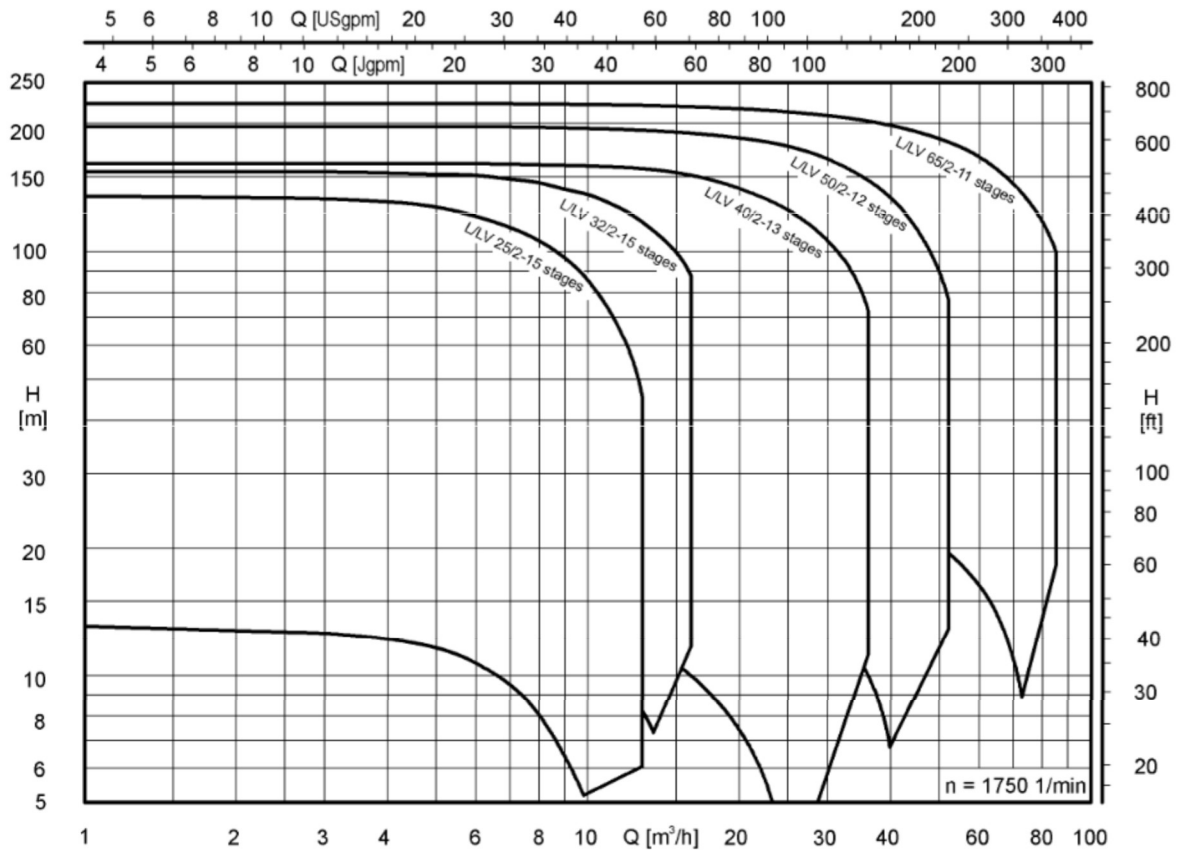
Performance graph

2900 1/min

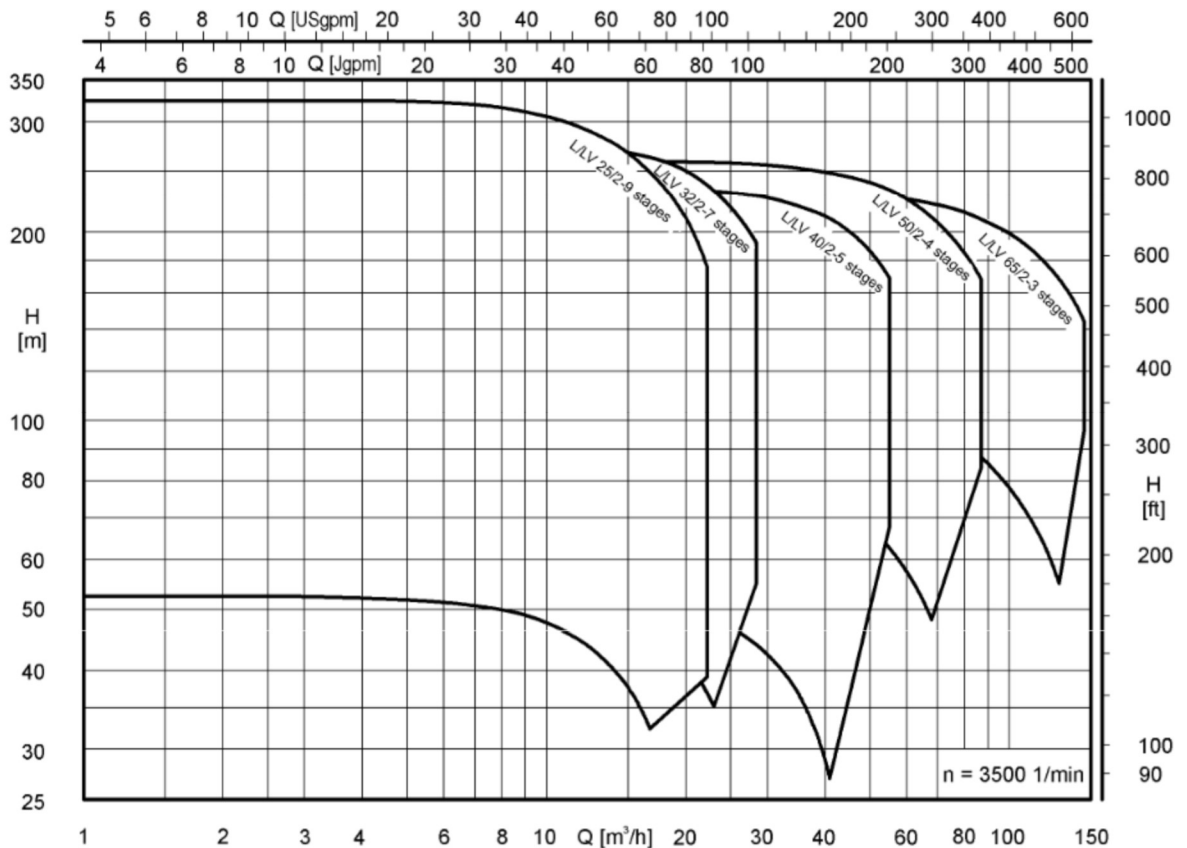


For exact performance data, please refer to the individual characteristics.  
 Maximum internal pump pressure may not exceed 25 bar at the operating point.

Performance graph  
1750 1/min



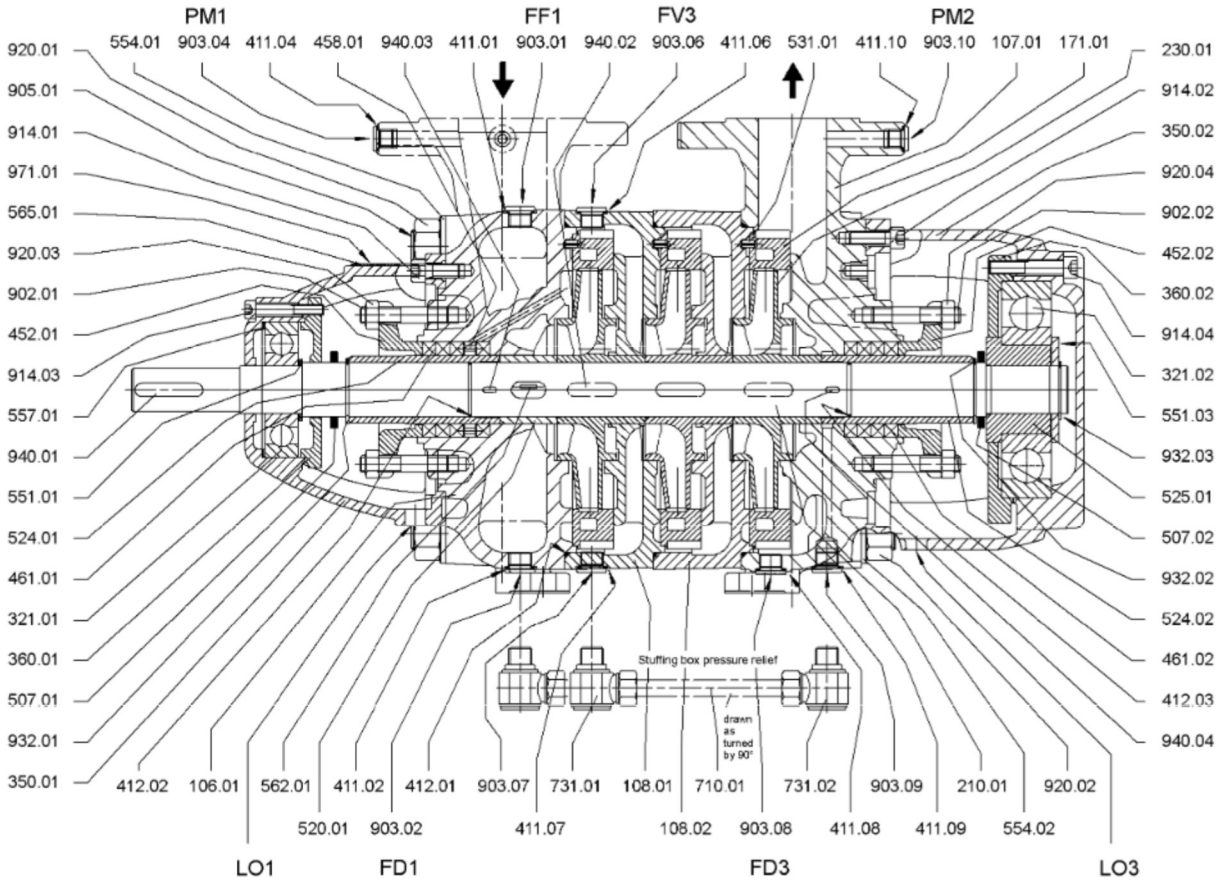
Performance graph  
3500 1/min



For exact performance data, please refer to the individual characteristics.  
Maximum internal pump pressure may not exceed 25 bar at the operating point.

Sectional drawing, Series L, with list of components

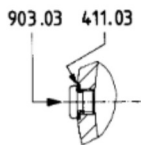
Design with stuffing box



Sizes L 25, L32, L 40, L 50 and L 65

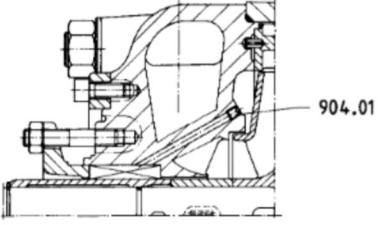
with uncooled stuffing box, **type U1BA**, suction side with locking device, delivery side without pressure relief (supply pressure ≤ 5 bar, internal pump pressure ≤ 10 bar)

with uncooled stuffing box, **type U1BG**, suction side with locking device, delivery side with pressure relief (supply pressure ≤ 5 bar, internal pump pressure > 10 bar, max. 25 bar)



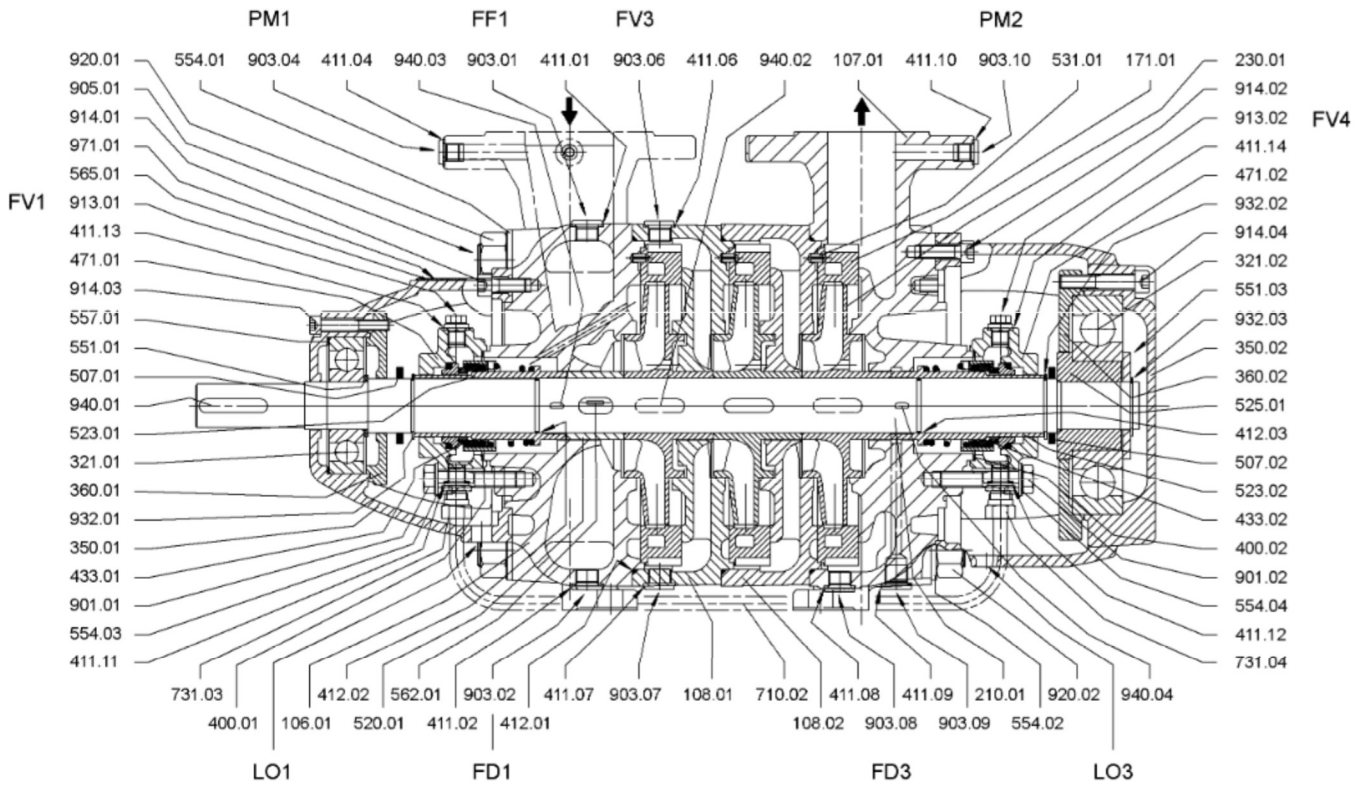
Connection stuffing box pressure relief in suction casing

| Connections | Denomination  |
|-------------|---|
| FF1         | Fluid to be pumped, filling                                   |
| FD1 / FD3   | Fluid to be pumped, draining (suction casing/delivery casing) |
| LO1/ LO3    | Leakage, outlet (suction side/delivery side)                  |
| PM1 / PM2   | Pressure measurement (suction casing/delivery casing)         |
| FV3         | Venting (pump)  |



**Series L 25, L 32, L 40, L 50 and L 65**  
 with uncooled stuffing box,  
**type U1AA**,  
 suction side without locking device,  
 delivery side without pressure relief  
 (supply pressure > 5 bar,  
 internal pump pressure ≤ 10 bar)  
 with uncooled stuffing box,  
**type U1AG**,  
 suction side without locking device,  
 delivery side with pressure relief  
 supply pressure > 5 bar,  
 internal pump pressure > 10 bar)

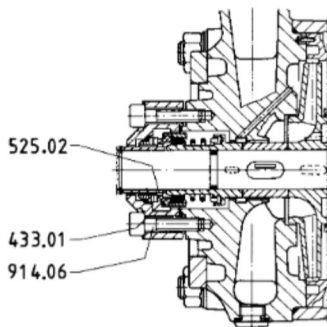
Design with mechanical seal



Sizes L 50 and L 65

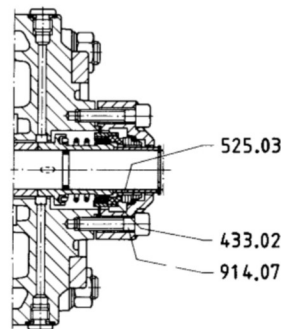
with mechanical seal, balanced, uncooled, **type U2.6D (suction side = clockwise; delivery side = counter-clockwise)** with flushing (supply pressure max. 16 bar, internal pump pressure max. 25 bar)

| Connections | Denomination  |
|-------------|---|
| FF1         | Fluid to be pumped, filling                                   |
| FD1 / FD3   | Fluid to be pumped, draining (suction casing/delivery casing) |
| LO1 / LO3   | Leakage, outlet (suction side/delivery side)                  |
| PM1 / PM2   | Pressure measurement (suction casing/delivery casing)         |
| FV3         | Venting (pump)  |
| FV1 / FV4   | Venting mechanical seal suction side/delivery side            |



Sizes L 25, L 32, L 40 (suction side)

with mechanical seal balanced, uncooled, **type U2D / U2.2D (suction side = clockwise)**, with flushing (supply pressure max. 16 bar, internal pump pressure max. 25 bar)



Sizes L 25, L 32, L 40 (delivery side)

with mechanical seal balanced, uncooled, **type U2D / U2.2D (delivery side = counter-clockwise)**, with flushing (supply pressure max. 16 bar, internal pump pressure max. 25 bar)

| Denomination            | Part No. | Denomination          | Part No. |
|-------------------------|----------|-----------------------|----------|
| Suction casing          | 106.01   | Washer                | 554.01   |
| Delivery casing         | 107.01   | Washer                | 554.02   |
| Stage casing            | 108.01   | Washer                | 554.03   |
| Stage casing            | 108.02   | Washer                | 554.04   |
| Diffuser                | 171.01   | Compensating disk     | 557.01   |
| Shaft                   | 210.01   | Cylindrical pin       | 562.01   |
| Impeller                | 230.01   | Blind rivet           | 565.01   |
| Radial ball bearing     | 321.01   | Pipe                  | 710.01   |
| Radial ball bearing     | 321.02   | Pipe                  | 710.02 ① |
| Bearing casing          | 350.01   | Pipe union            | 731.01 ④ |
| Bearing casing          | 350.02   | Pipe union            | 731.02 ④ |
| Bearing cover           | 360.01   | Pipe union            | 731.03 ① |
| Bearing cover           | 360.02   | Pipe union            | 731.04 ① |
| Gasket                  | 400.02   | Hexagonal screw       | 901.01   |
| Gasket                  | 400.02   | Hexagonal screw       | 901.02   |
| Joint ring              | 411.01   | Stud bolt             | 902.01   |
| Joint ring              | 411.02   | Stud bolt             | 902.02   |
| Joint ring              | 411.03   | Screwed plug          | 903.01   |
| Joint ring              | 411.04   | Screwed plug          | 903.02   |
| Joint ring              | 411.06   | Screwed plug          | 903.03 ⑤ |
| Joint ring              | 411.07   | Screwed plug          | 903.04   |
| Joint ring              | 411.08   | Screwed plug          | 903.06   |
| Joint ring              | 411.09   | Screwed plug          | 903.07 ⑤ |
| Joint ring              | 411.10   | Screwed plug          | 903.08   |
| Joint ring              | 411.11 ① | Screwed plug          | 903.09 ⑤ |
| Joint ring              | 411.12 ① | Screwed plug          | 903.10   |
| Joint ring              | 411.13 ① | Grub screw            | 904.01 ⑥ |
| Joint ring              | 411.14 ① | Connecting screw      | 905.01   |
| O-ring seal             | 412.01   | Venting screw         | 913.01   |
| O-ring seal             | 412.02   | Venting screw         | 913.02   |
| O-ring seal             | 412.03   | Socket-head cap screw | 914.01   |
| Mechanical seal         |          | Socket-head cap screw | 914.02   |
| (clockwise)             | 433.01   | Socket-head cap screw | 914.03   |
| Mechanical seal         |          | Socket-head cap screw | 914.04   |
| (counter-clockwise)     | 433.02   | Socket-head cap screw | 914.06 ② |
| Gland                   | 452.01   | Socket-head cap screw | 914.07 ② |
| Gland                   | 452.02   | Hexagonal nut         | 920.01   |
| Lantern ring            | 458.01 ③ | Hexagonal nut         | 920.02   |
| Packing ring            | 461.01   | Hexagonal nut         | 920.03   |
| Packing ring            | 461.02   | Hexagonal nut         | 920.04   |
| Joint cover             | 471.01   | Circlip               | 932.01   |
| Joint cover             | 471.02   | Circlip               | 932.02   |
| Deflector               | 507.01   | Circlip               | 932.03   |
| Deflector               | 507.02   | Key                   | 940.01   |
| Sleeve                  | 520.01   | Key                   | 940.02   |
| Shaft sleeve            | 523.01   | Key                   | 940.03   |
| Shaft sleeve            | 523.02   | Key                   | 940.04   |
| Protective shaft sleeve | 524.01   | Name plate            | 971.01   |
| Protective shaft sleeve | 524.02   |                       |          |
| Spacer sleeve           | 525.01 ② |                       |          |
| Spacer sleeve           | 525.02   |                       |          |
| Spacer sleeve           | 525.03   |                       |          |
| Clamping sleeve         | 531.01   |                       |          |
| Distance washer         | 551.01   |                       |          |
| Distance washer         | 551.03   |                       |          |

① only with mechanical seal type U2D/U2.2D/U2.6D

② only with mechanical seal type U2D/U2.2D

③ with sizes L 50 and L 65

④ only with stuffing box pressure relief

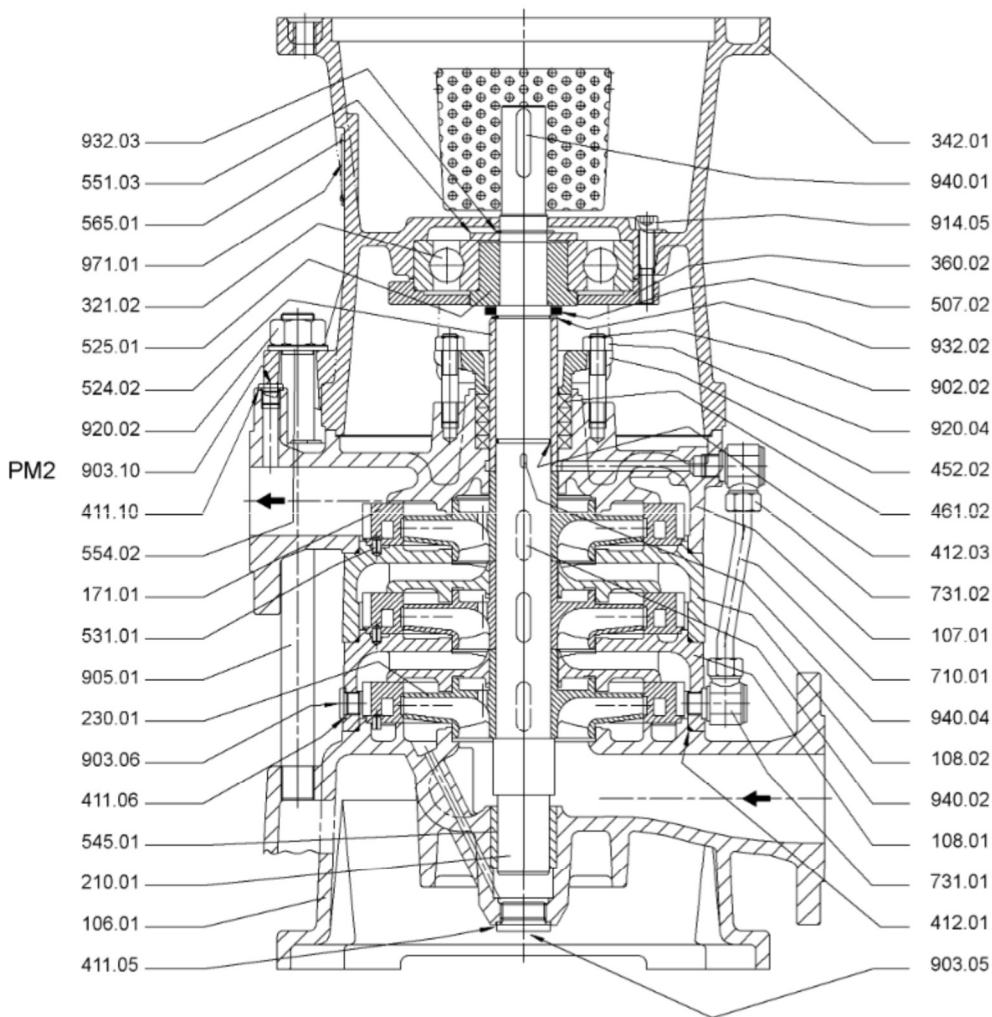
⑤ not provided in case of stuffing box pressure relief

⑥ only for type without locking



Sectional drawing, Series LV, with list of components

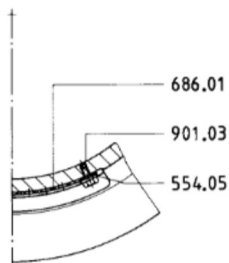
Design with stuffing box



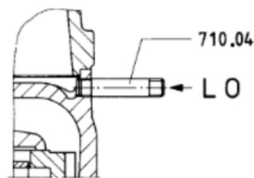
Sizes LV 50 and LV 65

with uncooled stuffing **type U1A**, delivery side without pressure relief  
 (max. supply pressure 10 bar, less delivery pressure of one stage; internal pump pressure ≤ 10 bar)

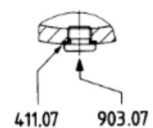
with uncooled stuffing box, **type U1G**, delivery side with pressure relief  
 (max. supply pressure 10 bar, less delivery pressure of one stage; internal pump pressure > 10 bar, max. 25 bar)



Fixing of guard sheet to the support bearing lantern  
 Protection against accidental contact acc. to DIN EN 809

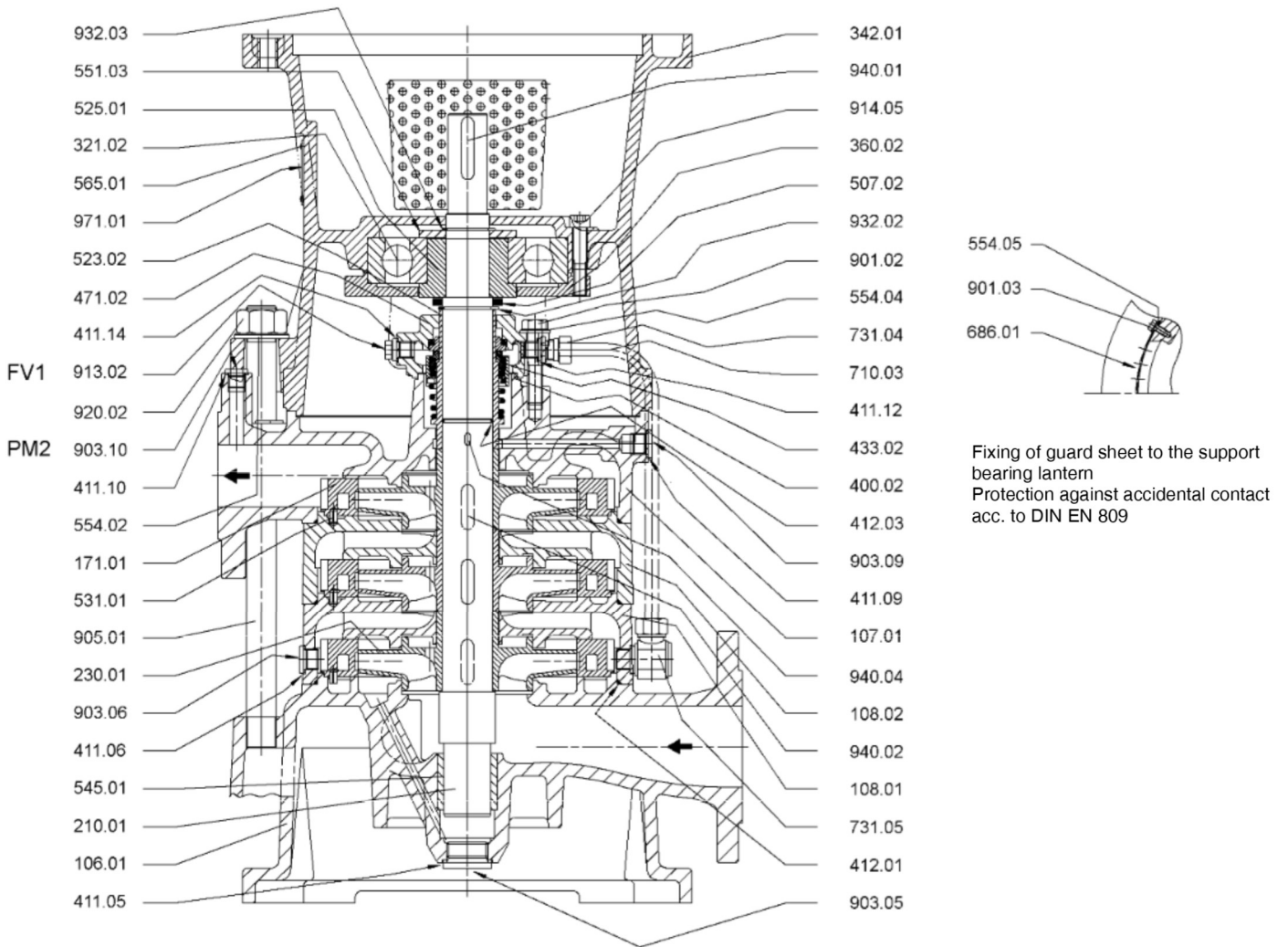


Leakage drain in delivery casing



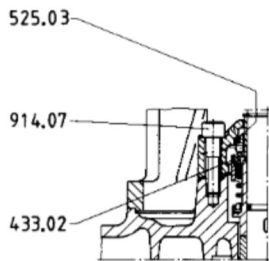
Connection stuffing box pressure relief 1st stage

Design mechanical seal



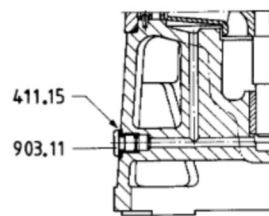
Sizes LV 50 und LV 65

with mechanical seal, balanced, uncooled, **type U2.6D (counter-clockwise)**, with flushing (max. supply pressure 16 bar, internal pump pressure max. 25 bar)



Sizes LV 25, LV 32, and LV 40

with mechanical seal balanced, uncooled **type U2D / U2.2D (counter-clockwise)**, with flushing (supply pressure max. 16 bar, internal pump pressure max. 25 bar)



Series LV 25, LV 32, and LV 40

Lube holes for sliding bearing  
Suction side with screw plugs

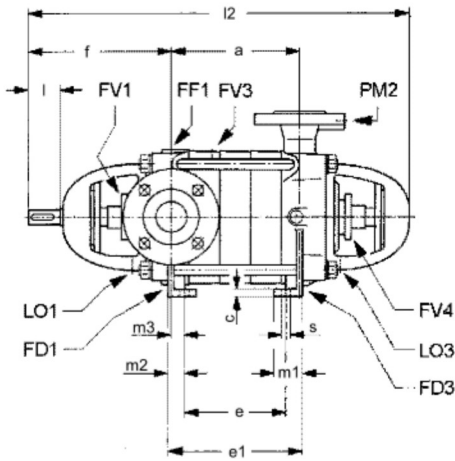
| Denomination                           | Part No. |
|--|----------|
| Suction casing                         | 106.01   |
| Delivery casing                        | 107.01   |
| Stage casing                           | 108.01   |
| Stage casing                           | 108.02   |
| Diffuser                               | 171.01   |
| Shaft                                  | 210.01   |
| Impeller                               | 230.01   |
| Radial ball bearing                    | 321.01   |
| Journal bearing lantern                | 342.01   |
| Gasket                                 | 360.02   |
| Joint ring                             | 400.01   |
| Joint ring                             | 411.05   |
| Joint ring                             | 411.06   |
| Joint ring                             | 411.07   |
| Joint ring                             | 411.09   |
| Joint ring                             | 411.10   |
| Joint ring                             | 411.12 ① |
| Joint ring                             | 411.14 ① |
| Joint ring                             | 411.15 ⑤ |
| O-ring seal                            | 412.01   |
| O-ring seal                            | 412.03   |
| Mechanical seal<br>(counter-clockwise) | 433.02   |
| Gland                                  | 452.02   |
| Packing ring                           | 461.02   |
| Joint cover                            | 471.02   |
| Deflector                              | 507.02   |
| Shaft sleeve                           | 523.02   |
| Protective shaft sleeve                | 524.02   |
| Spacer sleeve                          | 525.01 ② |
| Spacer sleeve                          | 525.03   |
| Clamping sleeve                        | 531.01   |
| Bearing bush                           | 545.01   |
| Distance washer                        | 551.03   |
| Washer                                 | 554.02   |
| Washer                                 | 554.04   |
| Washer                                 | 554.05   |
| Blind rivet                            | 565.01   |
| Guard plate                            | 686.01   |
| Pipe                                   | 710.01   |

| Denomination            | Part No. |
|-------------------------|----------|
| Pipe                    | 710.03 ① |
| Pipe                    | 710.04   |
| Pipe union              | 730.01 ⑥ |
| Pipe union              | 731.01 ③ |
| Pipe union              | 731.02 ④ |
| Pipe union              | 731.04 ① |
| Pipe union              | 731.05 ① |
| Hexagonal screw         | 901.02   |
| Hexagonal screw         | 901.03   |
| Stud bolt               | 902.02   |
| Screwed plug            | 903.05   |
| Screwed plug            | 903.06   |
| Screwed plug            | 903.07 ④ |
| Screwed plug            | 903.09 ④ |
| Screwed plug            | 903.10   |
| Screwed plug            | 903.11 ⑤ |
| Connecting screw        | 905.01   |
| Venting screw           | 913.02   |
| Socket-headed cap screw | 914.05   |
| Socket-headed cap screw | 914.07 ② |
| Hexagonal nut           | 920.02   |
| Hexagonal nut           | 920.04   |
| Circlip                 | 932.02   |
| Circlip                 | 932.03   |
| Key                     | 940.01   |
| Key                     | 940.02   |
| Key                     | 940.04   |
| Name plate              | 971.01   |

- ① only with mechanical seal type U2D/U2.2D/U2.6D
- ② only with mechanical seal type U2D/U2.2D
- ③ only with stuffing box pressure relief
- ④ not provided in case of stuffing box pressure relief
- ⑤ only for size LV 25, LV 32 and LV 40
- ⑥ only for size LV 65 - W3

| Connections | Denomination                           |
|-------------|--|
| LO          | Leakage, outlet (with stuffing box)    |
| PM2         | Pressure measurement (delivery casing) |
| FV1         | Venting (mechanical seal)              |

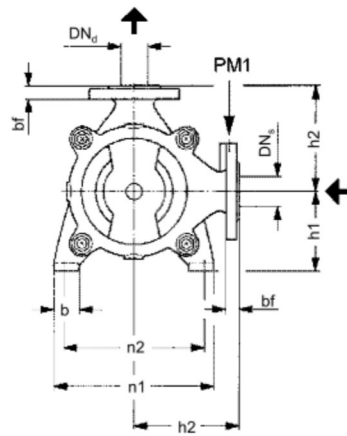
Pump dimensions, Series L



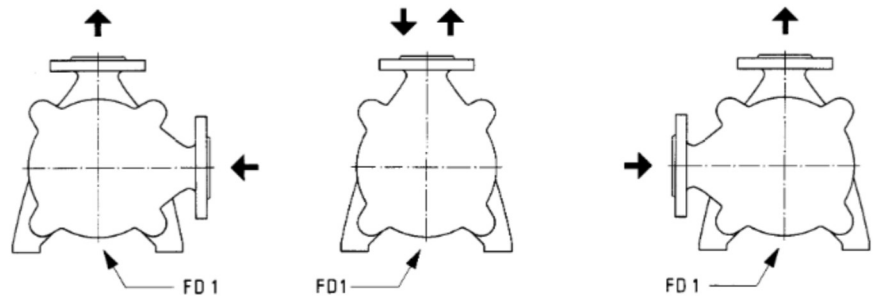
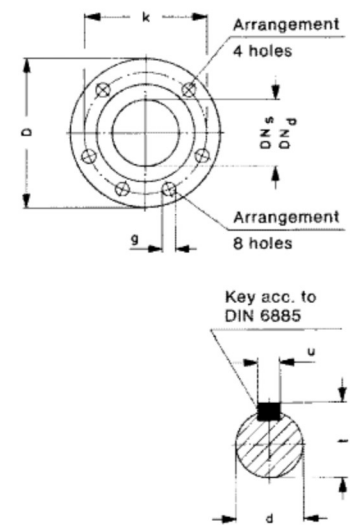
Sense of rotation: clockwise, as seen from as seen from the driving side

Dimensions in mm without commitment.

| Suction flange PN 16 acc. to EN 1092-2  |     |    |     |    |                 |
|---|-----|----|-----|----|-----------------|
| DN <sub>s</sub>                         | D   | bf | k   | g  | Number of holes |
| 32                                      | 140 | 18 | 100 | 19 | 4               |
| 40                                      | 150 | 18 | 110 | 19 | 4               |
| 50                                      | 165 | 20 | 125 | 19 | 4               |
| 65                                      | 185 | 20 | 145 | 19 | 4               |
| 80                                      | 200 | 22 | 160 | 19 | 8               |
| Delivery flange PN 40 acc. to EN 1092-2 |     |    |     |    |                 |
| DN <sub>d</sub>                         | D   | bf | k   | g  | Number of holes |
| 25                                      | 115 | 18 | 85  | 14 | 4               |
| 32                                      | 140 | 20 | 100 | 19 | 4               |
| 40                                      | 150 | 20 | 110 | 19 | 4               |
| 50                                      | 165 | 22 | 125 | 19 | 4               |
| 65                                      | 185 | 24 | 145 | 19 | 8               |



Possible suction branch positions (related to the delivery branch). All data as seen from the driving side



Suction branch 90° to the right standard type

Suction branch upwards (with L 25/L 32 and L 40 with 3 stage only)

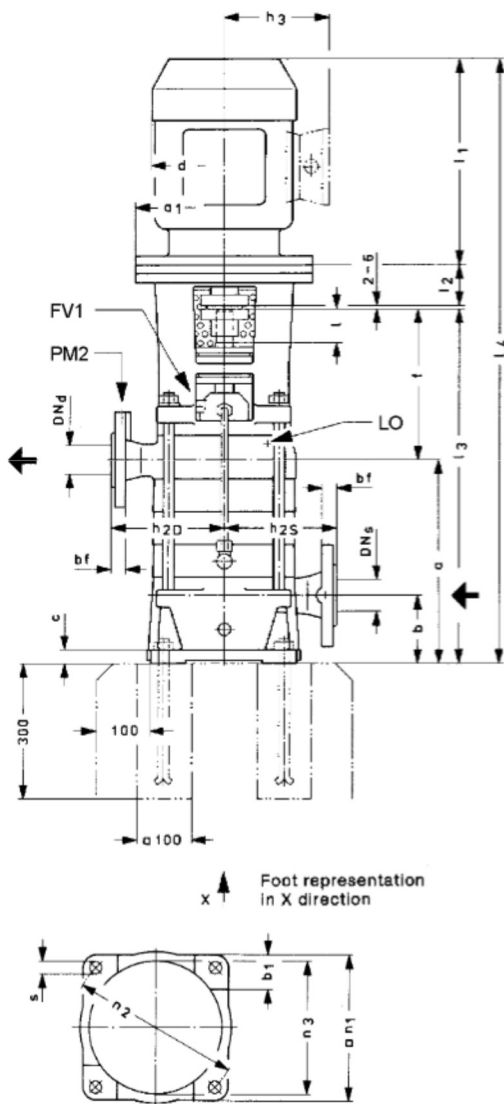
Suction branch 90° to the left

| Series and size | Suction flange DN <sub>s</sub> | Delivery flange DN <sub>d</sub> | Pump dimensions |                |                | Foot dimensions |     |                |                |                |                |                | Shaft end |     |     |      | Connections |                               |                               |                               |                               |         |                               |                               |                               |                               |                               |
|-----------------|--------------------------------|---------------------------------|-----------------|----------------|----------------|-----------------|-----|----------------|----------------|----------------|----------------|----------------|-----------|-----|-----|------|-------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|---------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
|                 |                                |                                 | f               | h <sub>1</sub> | h <sub>2</sub> | b               | c   | m <sub>1</sub> | m <sub>2</sub> | m <sub>3</sub> | n <sub>1</sub> | n <sub>2</sub> | s         | d   | l   | t    | u           | Filling                       | Draining                      | Leakage drain                 |                               | Venting |                               | Pressure gauge                |                               |                               |                               |
|                 |                                |                                 | FF1             | FD1            | FD3            | L01             | L03 | FV3            | FV4            | PM1            | PM2            | FF1            | FD1       | FD3 | L01 | L03  | FV3         | FV4                           | PM1                           | PM2                           |                               |         |                               |                               |                               |                               |                               |
| L 25            | 32                             | 25                              | 210             | 112            | 145            | 40              | 10  | 40             | 25             | 21             | 220            | 190            | M12       | 19  | 40  | 21,5 | 6           | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | G <sup>1</sup> / <sub>4</sub> | G <sup>3</sup> / <sub>8</sub> | Ø 15    | G <sup>1</sup> / <sub>4</sub> | G <sup>1</sup> / <sub>2</sub> | G <sup>1</sup> / <sub>4</sub> | G <sup>1</sup> / <sub>4</sub> |                               |
| L 32            | 40                             | 32                              | 215             | 120            | 160            | 40              | 12  | 40             | 25             | 21             | 250            | 220            | M12       | 24  | 50  | 27   | 8           | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | Ø 15    | G <sup>1</sup> / <sub>4</sub> | G <sup>1</sup> / <sub>2</sub> | G <sup>1</sup> / <sub>4</sub> | G <sup>1</sup> / <sub>4</sub> |                               |
| L 40            | 50                             | 40                              | 222             | 130            | 170            | 40              | 12  | 40             | 25             | 21             | 270            | 240            | M12       | 24  | 50  | 27   | 8           | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | Ø 15    | G <sup>1</sup> / <sub>4</sub> | G <sup>1</sup> / <sub>2</sub> | G <sup>1</sup> / <sub>4</sub> | G <sup>1</sup> / <sub>4</sub> |                               |
| L 50            | 65                             | 50                              | 274             | 150            | 200            | 55              | 15  | 55             | 35             | 30             | 310            | 260            | M16       | 32  | 80  | 35   | 10          | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | Ø 15    | Ø 15                          | G <sup>1</sup> / <sub>2</sub> | G <sup>1</sup> / <sub>2</sub> | G <sup>1</sup> / <sub>4</sub> | G <sup>1</sup> / <sub>4</sub> |
| L 65            | 80                             | 65                              | 280             | 170            | 220            | 55              | 15  | 55             | 35             | 30             | 350            | 300            | M16       | 32  | 80  | 35   | 10          | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | G <sup>3</sup> / <sub>8</sub> | Ø 15    | Ø 15                          | G <sup>1</sup> / <sub>2</sub> | G <sup>1</sup> / <sub>2</sub> | G <sup>1</sup> / <sub>4</sub> | G <sup>1</sup> / <sub>4</sub> |

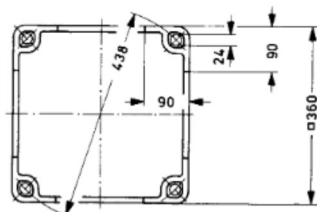
| Number of stages | Series |     |                |                |      |     |                |                |      |     |                |                |      |     |                |                |      |     |                |                |
|------------------|--------|-----|----------------|----------------|------|-----|----------------|----------------|------|-----|----------------|----------------|------|-----|----------------|----------------|------|-----|----------------|----------------|
|                  | L 25   |     |                |                | L 32 |     |                |                | L 40 |     |                |                | L 50 |     |                |                | L 65 |     |                |                |
|                  | a      | e   | e <sub>1</sub> | l <sub>2</sub> | a    | e   | e <sub>1</sub> | l <sub>2</sub> | a    | e   | e <sub>1</sub> | l <sub>2</sub> | a    | e   | e <sub>1</sub> | l <sub>2</sub> | a    | e   | e <sub>1</sub> | l <sub>2</sub> |
| 2                | 97     | 55  | 105            | 482            | 103  | 61  | 111            | 499            | 121  | 79  | 129            | 528            | 149  | 89  | 159            | 642            | 165  | 105 | 175            | 668            |
| 3                | 140    | 98  | 148            | 525            | 151  | 109 | 159            | 547            | 178  | 136 | 186            | 585            | 214  | 154 | 224            | 707            | 240  | 180 | 250            | 743            |
| 4                | 183    | 141 | 191            | 568            | 199  | 157 | 207            | 595            | 235  | 193 | 243            | 642            | 279  | 219 | 289            | 772            | 315  | 255 | 325            | 818            |
| 5                | 226    | 184 | 234            | 611            | 247  | 205 | 255            | 643            | 292  | 250 | 300            | 699            | 344  | 284 | 354            | 837            | 390  | 330 | 400            | 893            |
| 6                | 269    | 227 | 277            | 654            | 295  | 253 | 303            | 691            | 349  | 307 | 357            | 756            | 409  | 349 | 419            | 902            | 465  | 405 | 475            | 968            |
| 7                | 312    | 270 | 320            | 697            | 343  | 301 | 351            | 739            | 406  | 364 | 414            | 813            | 474  | 414 | 484            | 967            | 540  | 480 | 550            | 1043           |
| 8                | 355    | 313 | 363            | 740            | 391  | 349 | 399            | 787            | 463  | 421 | 471            | 870            | 539  | 479 | 549            | 1032           | 615  | 555 | 625            | 1118           |
| 9                | 398    | 356 | 406            | 783            | 439  | 397 | 447            | 835            | 520  | 478 | 528            | 927            | 604  | 544 | 614            | 1097           | 690  | 630 | 700            | 1193           |
| 10               | 441    | 399 | 449            | 826            | 487  | 445 | 495            | 883            | 577  | 535 | 585            | 984            | 669  | 609 | 679            | 1162           | 765  | 705 | 775            | 1268           |
| 11               | 484    | 442 | 492            | 869            | 535  | 493 | 543            | 931            | 634  | 592 | 642            | 1041           | 734  | 674 | 744            | 1227           | 840  | 780 | 850            | 1343           |
| 12               | 527    | 485 | 535            | 912            | 583  | 541 | 591            | 979            | 691  | 649 | 699            | 1098           | 799  | 739 | 809            | 1292           | -    | -   | -              | -              |
| 13               | 570    | 528 | 578            | 955            | 631  | 589 | 639            | 1027           | 748  | 706 | 756            | 1155           | -    | -   | -              | -              | -    | -   | -              | -              |
| 14               | 613    | 571 | 621            | 998            | 679  | 637 | 687            | 1075           | -    | -   | -              | -              | -    | -   | -              | -              | -    | -   | -              | -              |
| 15               | 656    | 614 | 664            | 1041           | 727  | 685 | 735            | 1123           | -    | -   | -              | -              | -    | -   | -              | -              | -    | -   | -              | -              |

Ⓞ for type with mechanical seal

**Pump dimensions and installation plan, series LV**  
 n = 1450/1750 1/min et 2900/3500 1/min



For sizes LV 25, LV 32 and LV 40



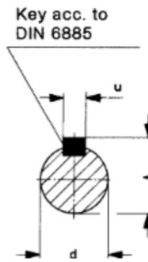
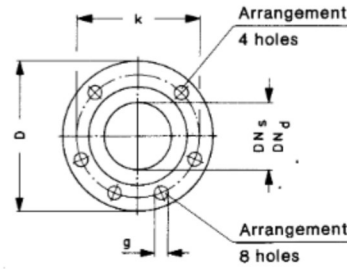
For sizes LV 50 and LV 65

**Possible driving motors and allocation to pump sizes**

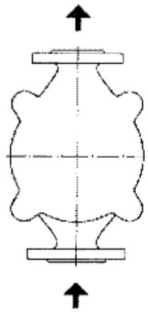
The motor dimensions as indicated are approximate values. Exact data depend on the motor make.

When using special motors, it must be noted that depending upon the enclosures, different performances are allocated to the individual sizes. The main dimensions are changed accordingly. In case of order, binding tables of motor dimensions are to be transmitted to us.

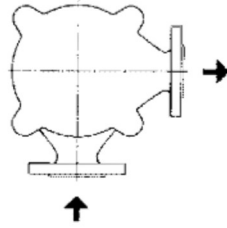
Sens de rotation:  
 Counter-clockwise as seen from the driving side



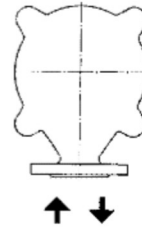
Possible delivery branch positions (related to the suction branch). All data as seen from the driving side



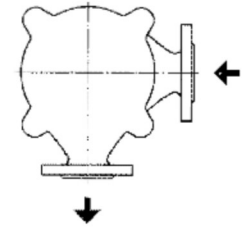
Delivery branch set off by 180° standard design



Delivery branch 90° to the right



Branches on top of each other 3 and more stages



Delivery branch 90° to the left

Dimensions in mm without commitment

| Series and size | Suction flange<br>DN <sub>s</sub> | Delivery flange<br>DN <sub>d</sub> | Pump dimensions |     |                                   |    | Foot dimensions |     |                        |                |                | Shaft end       |    |      |    | Connections |                     |                |                        |
|-----------------|-----------------------------------|------------------------------------|-----------------|-----|-----------------------------------|----|-----------------|-----|------------------------|----------------|----------------|-----------------|----|------|----|-------------|---------------------|----------------|------------------------|
|                 |                                   |                                    | b±3             | f   | h <sub>2D</sub>   h <sub>2S</sub> |    | b <sub>1</sub>  | c   | n <sub>1</sub><br>±4,5 | n <sub>2</sub> | n <sub>3</sub> | for screws<br>s | d  | l    | t  | u           | Leakage drain<br>LO | Venting<br>FV1 | Pressure gauge<br>PM 2 |
|                 |                                   |                                    |                 |     | ±2,5                              |    |                 |     |                        |                |                |                 |    |      |    |             |                     |                |                        |
| LV 25           | 32                                | 25                                 | 93              | 207 | 145                               | 46 | 18              | 193 | 222                    | 178            | M16            | 19              | 40 | 21,5 | 6  | -           | G½                  | G¼             |                        |
| LV 32           | 40                                | 32                                 | 100             | 223 | 160                               | 52 | 20              | 214 | 248                    | 200            | M16            | 24              | 50 | 27   | 8  | -           | G½                  | G¼             |                        |
| LV 40           | 50                                | 40                                 | 113             | 233 | 170                               | 54 | 22              | 234 | 274                    | 225            | M16            | 24              | 50 | 27   | 8  | -           | G½                  | G¼             |                        |
| LV 50           | 65                                | 50                                 | 125             | 290 | 200   220                         | -  | 28              | -   | -                      | -              | M20            | 32              | 80 | 35   | 10 | G¼          | G¼                  | G¼             |                        |
| LV 65           | 80                                | 65                                 | 125             | 290 | 220                               | -  | 28              | -   | -                      | -              | M20            | 32              | 80 | 35   | 10 | G¼          | G¼                  | G¼             |                        |

Ⓐ for type with stuffing box

Ⓑ for type with mechanical seal

| Number of stages | Series |                |                    |       |                |                    |       |                |                    |       |                |                    |       |                |                    | Suction flange PN 16 acc. to EN 1092-2 |     |    |     |    |          |
|------------------|--------|----------------|--------------------|-------|----------------|--------------------|-------|----------------|--------------------|-------|----------------|--------------------|-------|----------------|--------------------|--|-----|----|-----|----|----------|
|                  | LV 25  |                |                    | LV 32 |                |                    | LV 40 |                |                    | LV 50 |                |                    | LV 65 |                |                    | DN <sub>s</sub>                        | D   | bf | k   | g  | Lochzahl |
|                  | a ±3   | l <sub>s</sub> | l <sub>d</sub>     | a ±3  | l <sub>s</sub> | l <sub>d</sub>     | a ±3  | l <sub>s</sub> | l <sub>d</sub>     | a ±3  | l <sub>s</sub> | l <sub>d</sub>     | a ±3  | l <sub>s</sub> | l <sub>d</sub>     |  |     |    |     |    |          |
| 2                | 190    | 397            |                    | 203   | 426            |                    | 234   | 467            |                    | 278   | 568            |                    | 305   | 595            |                    | 32                                     | 140 | 18 | 100 | 19 | 4        |
| 3                | 233    | 440            |                    | 251   | 474            |                    | 291   | 524            |                    | 343   | 633            |                    | 380   | 670            |                    | 40                                     | 150 | 18 | 110 | 19 | 4        |
| 4                | 276    | 483            |                    | 299   | 522            |                    | 346   | 579            |                    | 408   | 698            |                    | 455   | 745            |                    | 50                                     | 165 | 20 | 125 | 19 | 4        |
| 5                | 319    | 526            |                    | 347   | 570            |                    | 405   | 638            |                    | 473   | 763            |                    | 530   | 820            |                    | 65                                     | 185 | 20 | 145 | 19 | 4        |
| 6                | 362    | 569            | l <sub>44</sub> =  | 395   | 618            | l <sub>4</sub> =   | 462   | 695            | l <sub>4</sub> =   | 538   | 828            | l <sub>4</sub> =   | 605   | 895            | l <sub>4</sub> =   | 80                                     | 200 | 22 | 160 | 19 | 8        |
| 7                | 405    | 612            | l <sub>1+</sub>    | 443   | 666            | l <sub>1+</sub>    | 519   | 752            | l <sub>1+</sub>    | 603   | 893            | l <sub>1+</sub>    | 680   | 970            | l <sub>1+</sub>    |  |     |    |     |    |          |
| 8                | 448    | 655            | l <sub>2+</sub>    | 491   | 714            | l <sub>2+</sub>    | 576   | 809            | l <sub>2+</sub>    | 668   | 958            | l <sub>2+</sub>    | 755   | 1045           | l <sub>2+</sub>    |  |     |    |     |    |          |
| 9                | 491    | 698            | l <sub>3+</sub>    | 539   | 762            | l <sub>3+</sub>    | 633   | 866            | l <sub>3+</sub>    | 733   | 1023           | l <sub>3+</sub>    | 830   | 1120           | l <sub>3+</sub>    |  |     |    |     |    |          |
| 10               | 534    | 741            | Coupling clearance | 587   | 810            | Coupling clearance | 690   | 923            | Coupling clearance | 798   | 1088           | Coupling clearance | 905   | 1195           | Coupling clearance |  |     |    |     |    |          |
| 11               | 577    | 784            |                    | 635   | 858            |                    | 747   | 980            |                    | 863   | 1153           |                    | 980   | 1270           |                    |  |     |    |     |    |          |
| 12               | 620    | 827            |                    | 683   | 906            |                    | 804   | 1037           |                    | 928   | 1218           |                    | -     | -              |                    |  |     |    |     |    |          |
| 13               | 663    | 870            |                    | 731   | 954            |                    | 861   | 1094           |                    | -     | -              |                    | -     | -              |                    |  |     |    |     |    |          |
| 14               | 706    | 913            |                    | 779   | 1002           |                    | -     | -              |                    | -     | -              |                    | -     | -              |                    |  |     |    |     |    |          |
| 15               | 749    | 956            |                    | 827   | 1050           |                    | -     | -              |                    | -     | -              |                    | -     | -              |                    |  |     |    |     |    |          |

Possible driving motors

| Motor size | 1450/1750 1/min |      |                |     |                  |                  |                |
|------------|-----------------|------|----------------|-----|------------------|------------------|----------------|
|            | Pump size       | kW   | a <sub>1</sub> | ∅ d | ∅ h <sub>3</sub> | ∅ l <sub>1</sub> | l <sub>2</sub> |
| 80         | LV 25 to LV 32  | 0,55 | 200            | 162 | 124              | 234              | 40             |
|            | LV 25 to LV 40  | 0,75 |                |     |                  |                  |                |
| 90 S       | LV 25 to LV 50  | 1,1  | 200            | 181 | 130              | 282              | 50             |
| 90 L       |                 | 1,5  |                |     |                  |                  |                |
| 100 L      | LV 25 to LV 50  | 2,2  | 250            | 203 | 158              | 312              | 60             |
|            | LV 25 to LV 65  | 3    |                |     |                  |                  |                |
| 112 M      | LV 25 to LV 65  | 4    | 250            | 228 | 171              | 335              | 60             |
| 132 S      | LV 32 to LV 65  | 5,5  | 300            | 266 | 196              | 413              | 80             |
| 132 M      | LV 40 to LV 65  | 7,5  |                |     |                  |                  |                |
| 160 M      | LV 40 to LV 65  | 11   | 350            | 320 | 234              | 525              | 110            |
| 160 L      | LV 50 and LV 65 | 15   |                |     |                  |                  |                |
| 180 M      | LV 50 and LV 65 | 18,5 | 350            | 375 | 275              | 610              | 110            |
| 180 L      | LV 65           | 22   |                |     |                  |                  |                |
| 200 L      | LV 65           | 30   | 400            | 415 | 310              | 665              | 110            |

Ⓒ The dimensions depend on the motor make and slightly deviate.

| Motor size | 2900/3500 1/min |      |                |     |                  |                  |                |
|------------|-----------------|------|----------------|-----|------------------|------------------|----------------|
|            | Pump size       | kW   | a <sub>1</sub> | ∅ d | ∅ h <sub>3</sub> | ∅ l <sub>1</sub> | l <sub>2</sub> |
| 90 L       | LV 25           | 2,2  | 200            | 181 | 130              | 282              | 50             |
| 100 L      | LV 25 and LV 32 | 3    | 250            | 203 | 158              | 312              | 60             |
| 112 M      | LV 25 and LV 32 | 4    | 250            | 228 | 171              | 335              | 60             |
| 132 S      | LV 25 to LV 40  | 5,5  | 300            | 266 | 196              | 413              | 80             |
|            |                 | 7,5  |                |     |                  |                  |                |
| 160 M      | LV 25 to LV 40  | 11   | 350            | 320 | 234              | 525              | 110            |
|            |                 | 15   |                |     |                  |                  |                |
| 160 L      | LV 25 to LV 50  | 18,5 | 350            | 320 | 234              |                  | 110            |
| 180 M      | LV 25 to LV 65  | 22   | 350            | 375 | 275              | 610              | 110            |
| 200 L      | LV 32 to LV 65  | 30   | 400            | 415 | 310              | 665              | 110            |
|            |                 | 37   |                |     |                  |                  |                |
| 225 M      | LV 40 to LV 65  | 45   | 450            | 470 | 335              | 695              | 140            |
| 250 M      | LV 50 and LV 65 | 55   | 550            | 520 | 430              | 790              | 140            |
| 280 S      | LV 50 and LV 65 | 75   | 550            | 575 | 455              | 865              | 140            |
| 280 M      | LV 65           | 90   | 550            | 575 | 455              | 865              | 140            |

# ALLWEILER Solutions

## Successful in important branches

Decades of experience and branch-specific know-how ensure solutions that are practical and dependable. In addition to individual units with a motor or with a free shaft end, you can get complete systems and customer-specific cast parts from ALLWEILER GmbH. You are not just investing in machines with ALLWEILER GmbH. You are also profiting from decades of know-how about applications and processes in your branch.

You will find pumps and systems by ALLWEILER GmbH in the following sectors:

▶ **Marine and Offshore**

Made of particularly corrosion-resistant, saltwater-proof materials and in accordance with specific standards (shock testing, national marine, international classifications, etc.).

▶ **Power Generation**

Block and twin units for fuel and water injection in gas and steam turbines.  
For fuel supply, injection and lubricating oil delivery in power plants.

▶ **Water and Wastewater**

Pumps for water treatment; share of dry solids content up to 45 percent; macerators, which make it possible to pump delivery media that are high in fibre and solids.

▶ **Process Engineering and Chemical Industry (ATEX-conformity)**

Shaft bearing, shaft seal and material designs in accordance with the chemical characteristics of the delivery media. Magnetic coupling for hermetically sealed pumps.

▶ **Building Industry**

Special units for oil furnace and lift systems. oil submersible pumps for all types of hydraulic machines.

▶ **Food and Pharma**

Stainless steel pumps with CIP and SIP design, EHEDG and FDA certified. Especially for the careful delivery and proportioning of even sticky, paste-like and solids-rich media.

▶ **Tool Machinery**

Designed for large delivery amounts or a high delivery pressure; resistant to contaminants and foreign materials. Especially for cooling lubricant supply.

▶ **Pulp and Paper**

Pumps with extremely high availability (24 hours; 365 days) and many sizes, starting with small proportioning pumps and ranging to large Kaolin feeding pumps.

▶ **Heat Transfer**

In supply circuits, circulating systems and heating circuits for the delivery of hot water and heat-transfer oil up to 207 °C and 450 °C.

Subject to technical alterations.

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The stated performance data are to be understood only as an outline of performance data of our products. For exact limits of application please refer to the quotation and acceptance of order.

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