

# Side Channel Pumps

## Self-priming, vertical type



DRV 0201 . . . 0401

### Technical data

|                        |  |
|------------------------|--|
| Capacity:              | from 0,04 up to 2 m <sup>3</sup> /h                    |
| Delivery Head:         | from 1,5 up to 27 m                                    |
| Speed:                 | 1450 rpm (max 1800 rpm) or<br>2900 rpm (max. 3600 rpm) |
| Temperature:           | max. 100° C  |
| Casing pressure:       | PN 6   |
| Shaft sealing:         | stuffing box or<br>standard mechanical seal            |
| Flange connections:    | female British standard pipe thread (BSP)              |
| Direction of rotation: | clockwise<br>(when seen from the drive end)            |



### Application

The Sterling SIHI DRV pump is a self-priming side channel pump capable of handling gas along with the medium and operates at a low noise level. The DRV pumps are used when clear or turbid liquids with an aggressive nature, in varied concentration and temperature ranges and without any abrasive particles, are to be handled reliably and trouble free.

The performance curve steepness admits a precise regulation of the pressure with a small change in capacity.

Their applications cover the private, professional and industrial fields. For example:

- Domestic plants and agriculture for feeding spring well fountains and for garden and lawn cultivation.
- Trade and industry for handling coolants, for sampling and chlorination processes in waterworks, for running bottle washing machines or for circulating buffer water in big centrifugal pumps.
- Chemical and pharmaceutical industry for laboratory techniques or in the food industry.

### Design

Single stage, vertical side channel pump with an open vane wheel impeller. The program comprises 3 sizes.

Because of the vertical arrangement of the unit, the floor space requirements are low. If the pipelines are of sufficient stability, the units of this series can even be suspended in the piping system without any foot support .

### Construction

#### Casing pressure

Maximum 6 bar from 0 °C up to 100 °C.

#### Please observe

Technical rules and safety regulations:  
Casing pressure = inlet pressure + delivery head at minimum pump capacity.

#### Position of branches

Horizontal suction and delivery branch on opposite sides of the pump.

#### Flanges

The flanges are suited with female BSP thread (inches).

#### Bearings

Two grease lubricated ball bearings according to DIN 625 (design B) or two liquid surrounded sleeve bearings (design F). The first grease filling is done in the factory.

#### Direction of rotation

Clockwise, when looking at the pump from the drive end.

#### Shaft sealing

The shaft can be sealed by of a stuffing box or a standard mechanical seal.

# Material design DRV

| Pos  | Components             | Material design            |                          |                          |
|------|------------------------|----------------------------|--------------------------|--------------------------|
|      |                        | 0A                         | 0B                       | 4B                       |
| 1010 | Stool resp. upper part | EN-GJL-250                 |                          | G-X6 CrNiMo 18 10        |
| 1610 | Cover                  |                            |                          | X 6 CrNiMoTi 17 12 2     |
| 1140 | Casing                 |                            |                          | G-X6 CrNiMo 18 10        |
| 1810 | Foot                   | -                          |                          | EN-GJL-250 coated        |
| 2100 | Shaft                  | X 20 Cr 13                 |                          | X 5 CrNiMo 17 12 2       |
| 2350 | Vane wheel impeller    | special brass, die-pressed | G-X 3 CrNiMoCuN 26 6 3 3 | G-X 3 CrNiMoCuN 26 6 3 3 |
| 3300 | Bearing bracket        | -                          |                          | EN-GJL-250 coated        |
| 0241 | Bearing bush           | EK 2203                    |                          | -                        |

### Casing seal

The casing is sealed with a liquid sealing compound for material design 0A, 0B (Cast iron).  
 The casing is sealed with soft Teflon for material design 4B (Stainless steel).

### Drive / coupling

By electric motor,  
 construction type DRV in Cast iron (0A, 0B): B14 of V18  
 construction type DRV in Stainless steel (4B): V1 of B5

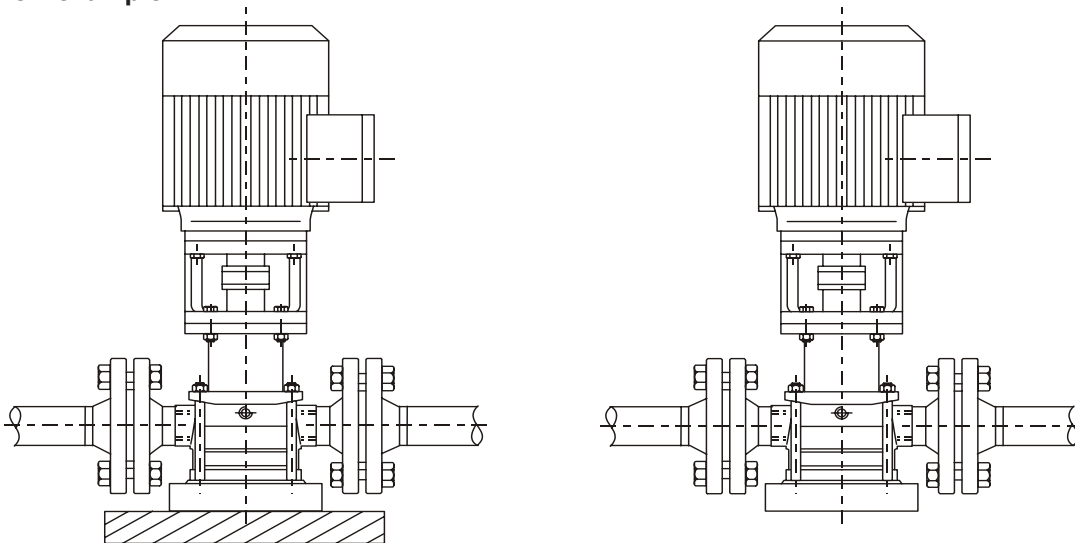
Alternating current is possible for material design 0A, 0B up to 0.25 kW.

Pump and motor are connected with each other by a sleeve type coupling for material design 0A, 0B.  
 Pump and motor are connected with each other by a flexible coupling for material design 4B.

### General comments

We refer to the series AKV for vertical side channel pumps offering higher performances.  
 The technical documentation for this pump series will be readily supplied on request.

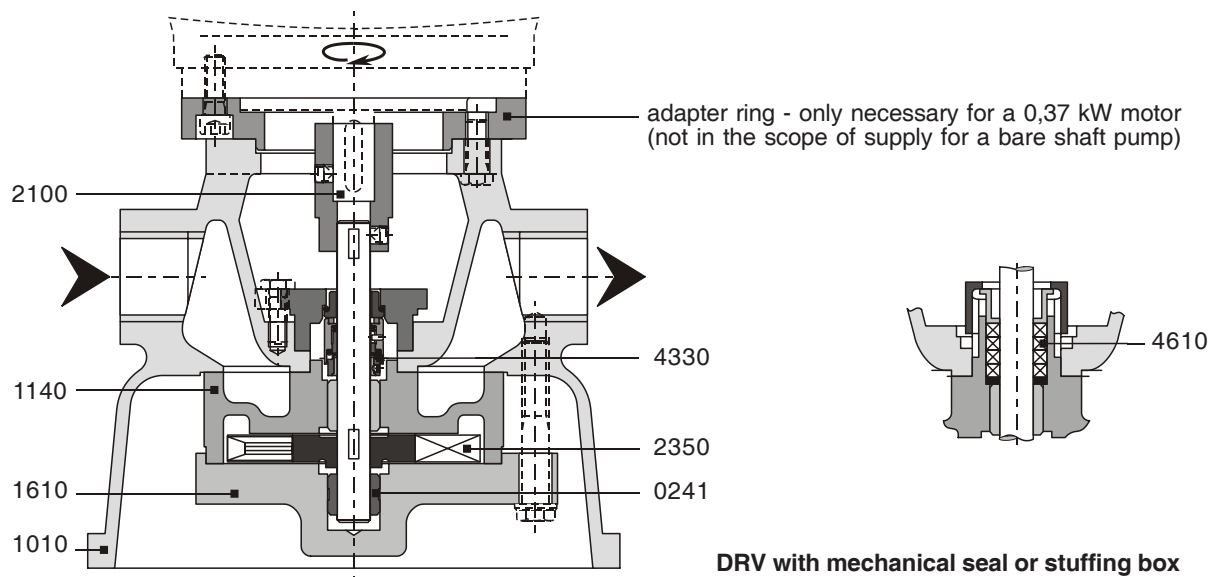
### Installation example



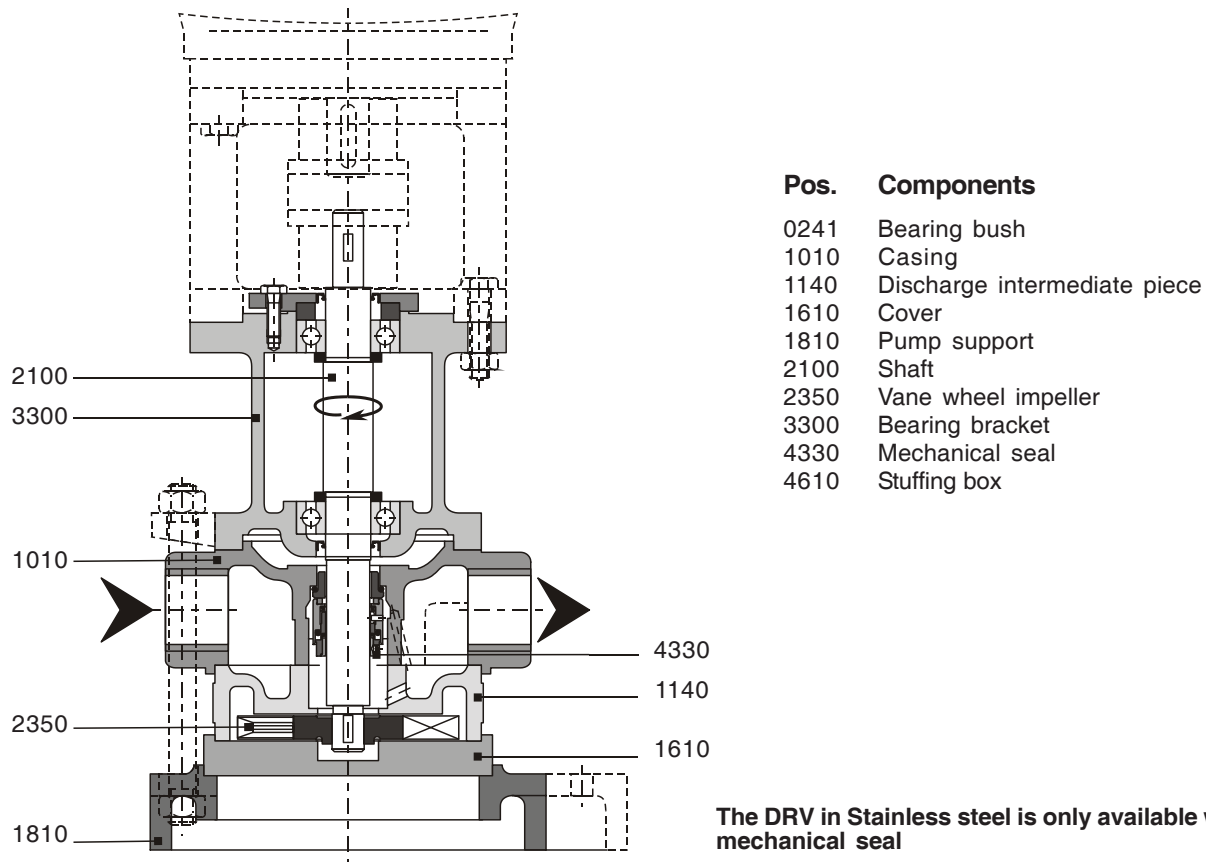
When the pipe lines are of sufficient stability, the DRV pump can also be suspended in the piping system without any foot support

## Sectional drawing and parts list DRV (typical)

### DRV in Cast iron (design F / 0A, 0B)



### DRV in Stainless steel (design B / 4B)



All possible design combinations can be found in the delivery program

# Performance graph DRV

## General conditions

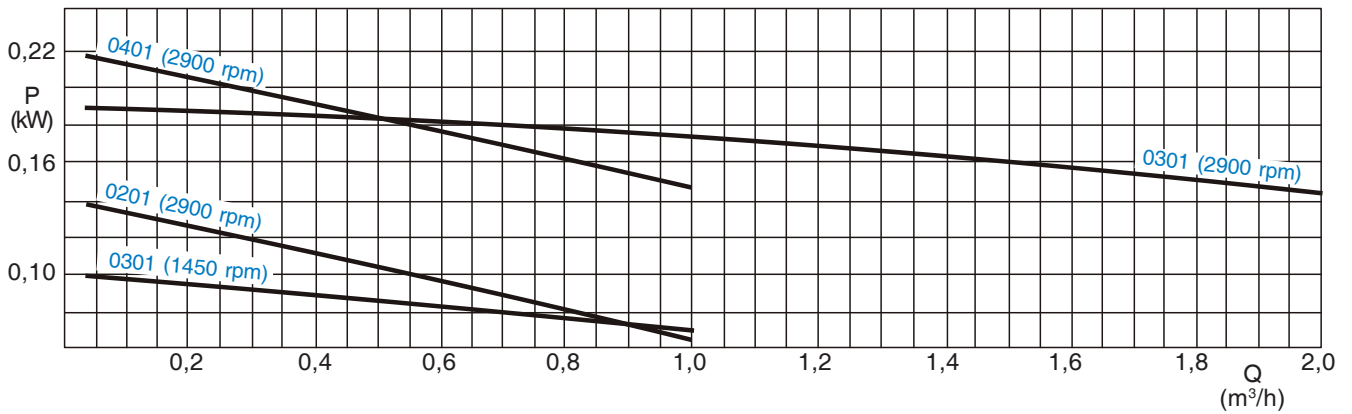
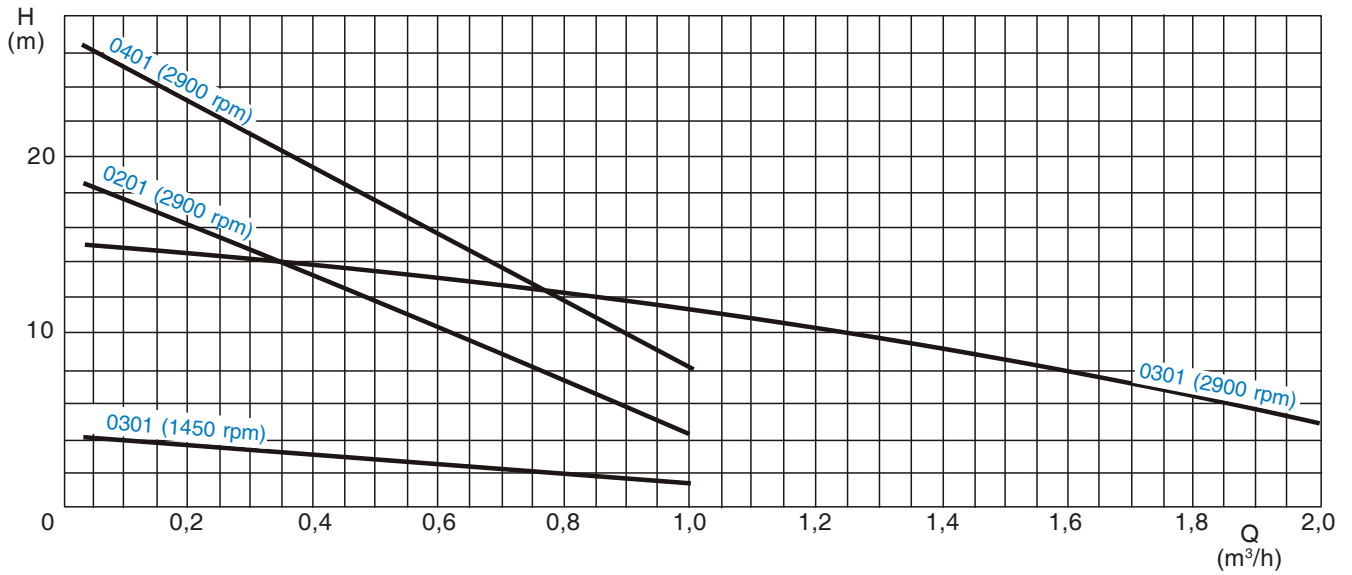
Liquid: Water  
 Density: 1 kg/dm<sup>3</sup>  
 Viscosity: 1 cSt  
 Temperature: 20 °C  
 Atmospheric pressure: 1013 mbar

## Characteristic tolerances

Capacity ± 10% - Delivery head ± 10% - Power + 10%  
 For designs with a mechanical seal or casing seal of soft Teflon, the tolerance for the delivery head is extended by 2% each.

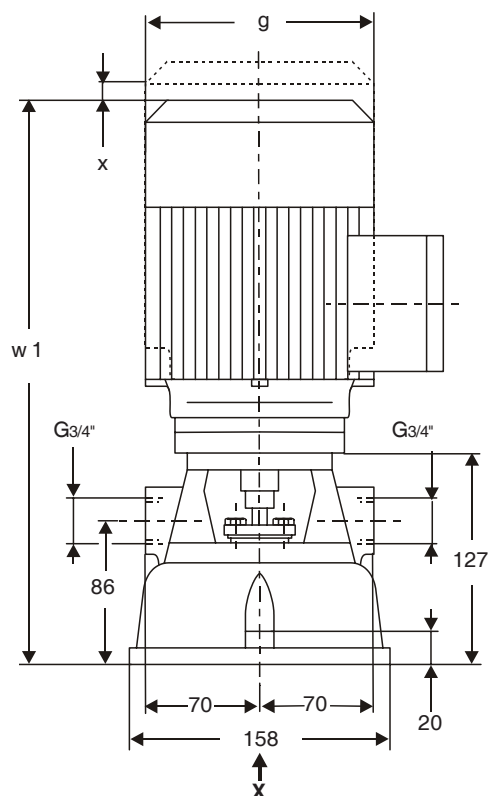
## Measuring tolerance

According to ISO 5198



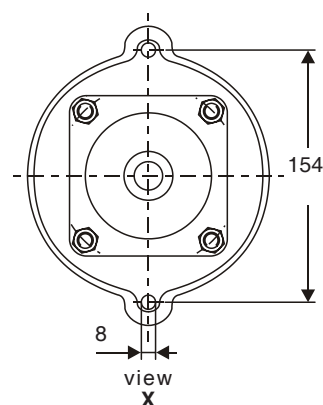
## Dimension chart and Pump set drawing

DRV 0201, 0301, 0401 in Cast iron (0A, 0B)

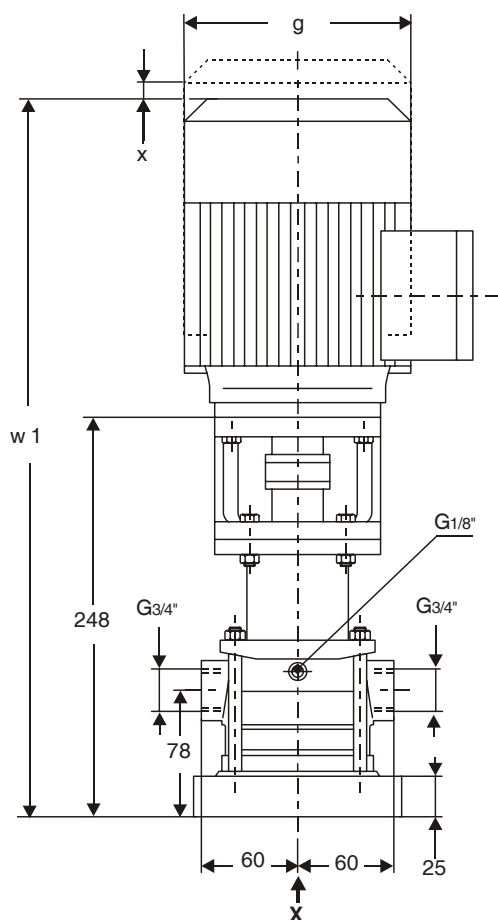


| Pump Size | Motor kW | Motor size | Speed rpm | Weight Pump | Weight set | x  | g*  | w1* |
|-----------|----------|------------|-----------|-------------|------------|----|-----|-----|
| 0301      | 0.12     | 63         | 1450      | 4.8         | 9          | 30 | 116 | 334 |
| 0201      | 0.37     | 71         | 2900      | 4.8         | 13         | 40 | 150 | 412 |
| 0301      |          |            |           |             |            |    |     |     |
| 0401      |          |            |           |             |            |    |     |     |

\* Dimensions  $W_1$  and  $g$  vary with the motor make.  
An adapter ring is supplied when using a 0.37 kW motor.

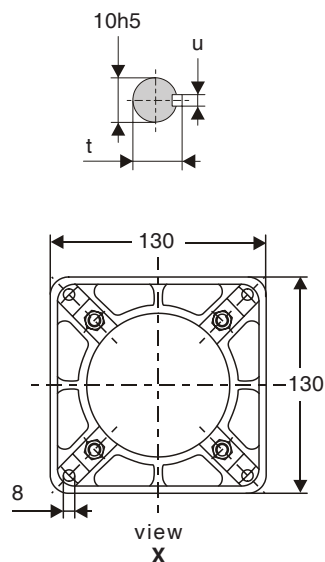


DRV 0201, 0301, 0401 in Stainless steel (4B)



| Pump Size | Motor kW | Motor size | Speed rpm | Weight pump | Weight set | x  | g*  | w1* |
|-----------|----------|------------|-----------|-------------|------------|----|-----|-----|
| 0301      | 0.12     | 63         | 1450      | 5           | 9          | 30 | 145 | 404 |
| 0201      | 0.37     | 71         | 2900      | 5           | 11         | 40 | 150 | 517 |
| 0301      |          |            |           |             |            |    |     |     |
| 0401      |          |            |           |             |            |    |     |     |

\* Dimensions  $W_1$  and  $g$  vary with the motor make.



## Notes

A large, empty rectangular box with a blue border, intended for handwritten notes.

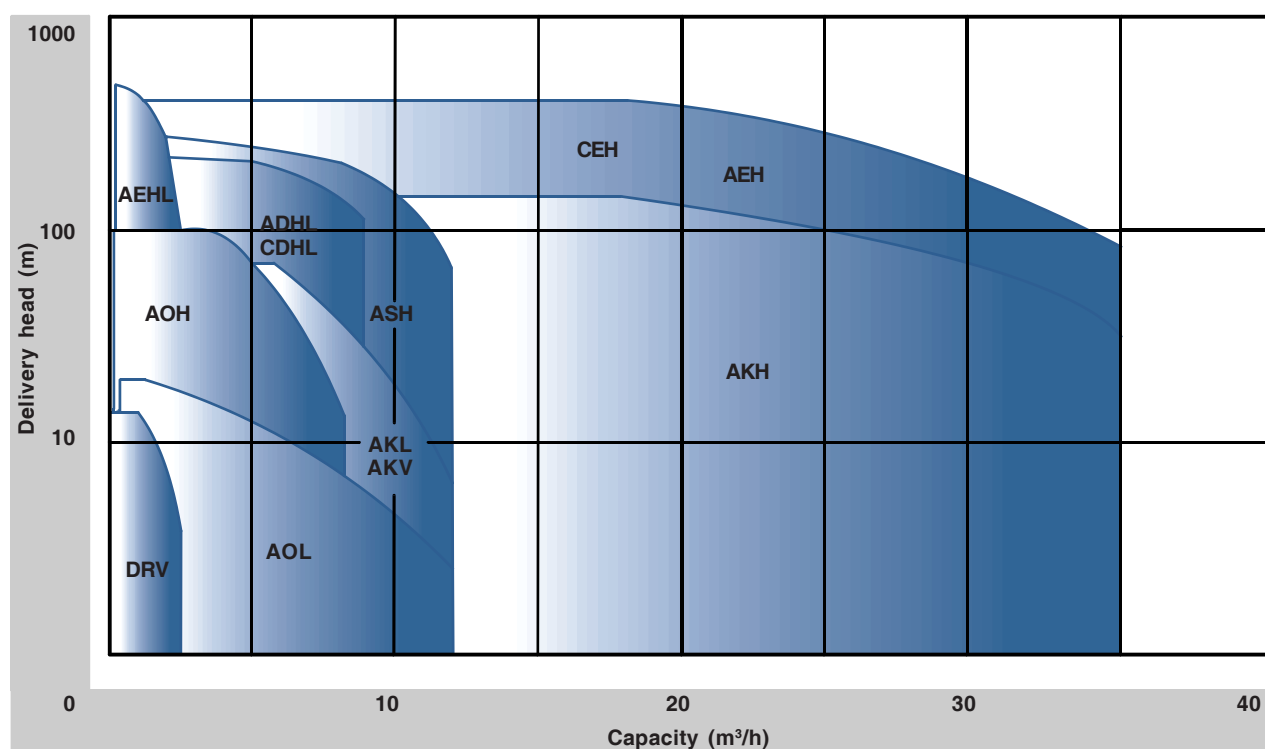
It is the policy of Sterling Fluid Systems to seek continually for ways to improve its products and the right is reserved to alter specifications at anytime without prior notice.

## Sterling SIHI Side Channel pumps

Sterling Fluid Systems offers an extensive Side Channel pump range under its brand name Sterling SIHI. Sterling Fluid Systems has more than 80 years of experience in manufacturing, installation and support of Side Channel pumps. The Sterling SIHI Side Channel pumps can be found in a wide application range for the:

- Chemical market
- Pharmaceutical industry
- Petrochemical industry
- Food industry
- Ship yards
- LPG industry
- and many more ...

### The Sterling SIHI Side Channel pump range



### The benefits of the Sterling SIHI Side Channel pumps

- Self priming
- Gas handling
- High-resistant materials
- Performance curve characteristics
- High efficiency
- Low NPSH<sub>R</sub> value
- Modular hydraulic system

**The Sterling SIHI Side Channel pumps comply with the highest demands of our customers and are the best solution for the handling of liquid under critical physical conditions.**

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