

# **Durco® Mark 3™ ISO Mechanically Sealed Chemical Process Pumps**

ISO 2858/5199



# The premier name in ISO chemical process pumps

The Durco Mark 3 ISO chemical process pump provides outstanding hydraulic performance, unrivaled reliability and low total cost of ownership. Conforming to ISO 2858 and ISO 5199 design criteria, the Durco Mark 3 ISO pump incorporates many proven reliability and performance-enhancing features.

- Renewable, high-efficiency performance over the life of the pump with the reverse vane impeller
- Optimal, predictable seal chamber pressure that is re-established after every impeller setting
- Maximal mechanical seal life due to an ideal seal environment created by the SealSentry™ seal chamber
- Two-piece bearing bracket reduces inventory cost and facilitates retrofit for ISO 2858 compliant pumps
- Robust shaft and bearing designs that minimize shaft deflection and extend mechanical seal and bearing lives
- Fast and accurate impeller setting with the industry's most innovative external impeller adjustment mechanism
- In-shop reverse vane impeller adjustment with the only pump that takes full advantage of the back pullout design

## Global design, unmatched performance

Durco Mark 3 ISO chemical process pumps are available in many designs that can be configured to meet precise application requirements.

- Long coupled
- Close coupled
- Unitized self-priming
- Recessed impeller
- Centerline mounted
- Vertical sump

## Operating parameters

- Flows to 1400 m<sup>3</sup>/h (6160 US gpm)
- Heads to 220 m (720 ft)
- Pressures to 25 bar (365 psi)
- Temperatures from -80°C to 400°C (-110°F to 752°F)
- Discharge sizes from 20 to 200 mm (0.75 to 8 in)

## Three hydraulics

- A hydraulics: extended flow
- B hydraulics: ISO 2858 for reverse vane and open impeller
- C hydraulics: ISO 2858 for closed impeller



## Available materials of construction

- Cast iron
- Ductile Iron
- Carbon steel
- 304 and 316 stainless steels
- Duplex and super duplex stainless steels
- Alloy 20
- Nickel and nickel-based alloys such as Alloy C-276 and Alloy B-2
- Reactive alloys such as titanium, palladium stabilized titanium and zirconium

## Standards compliance

Durco Mark 3 ISO pumps conform to ISO 2858 and ISO 5199 design criteria and are CE marked. Compliance with the following directives is also available:

- ATEX II 2G T1 –T5 (2014/34/EU)
- Food grade (1935/2004/EC)
- Drinking water (98/83/EC)
- CUTR

## Typical applications

- Acid transfer
- Brine
- Chemical processing
- Corrosive services
- Food and beverage processing
- Hydrocarbon processing
- Petrochemical processing
- Pharmaceuticals
- Polymers
- Pulp and paper
- Seawater
- Slurries
- Solvents
- Steel and primary metals
- Water and wastewater treatment

## Designed for demanding applications

High-pressure components, a generous corrosion allowance, and a wide range of materials of construction are just some of the features and options that ensure Durco Mark 3 ISO pumps perform reliably under demanding conditions.

- ISO 2858 and extended flow hydraulics
- Standard (16 bar; 232 psi) or high-pressure (25 bar; 363 psi) casing
- Advanced SealSentry seal chambers
  - Self-flushing, -venting and -draining designs with flow modifiers extend mechanical seal life
  - Accommodate a wide variety of seal types
  - Standard high-pressure (25 bar; 363 psi)
- 3 mm (0.12 in) corrosion allowance
- Corrosion- and erosion-resistant wet end materials
- Available centerline mounted casing
- Available drain, gauge and recirculation connections

## Configurations

We know you have many different types of applications in your plant. That's why we offer the Durco Mark 3 ISO pump in four mechanically sealed configurations. All use the same energy-efficient hydraulics that deliver high performance and reliability with low energy costs. Available in a variety of materials of construction and with single, double or cartridge seals to suit application requirements.

### Long coupled

The workhorse of chemical plants and other industries around the world, this proven model is ideal for handling aggressive liquids. Its back pullout design minimizes downtime by enabling removal of the rotating element without disturbing the casing, piping or motor. 45 sizes available.

#### Operating parameters

|              |                                   |
|--------------|-----------------------------------|
| Flows to:    | 1400 m <sup>3</sup> /h (6160 gpm) |
| Heads to:    | 220 m (720 ft)                    |
| Pressure to: | 25 bar (365 psi)                  |
| Temperature: | -80°C to 400°C (110°F to 752°F)   |

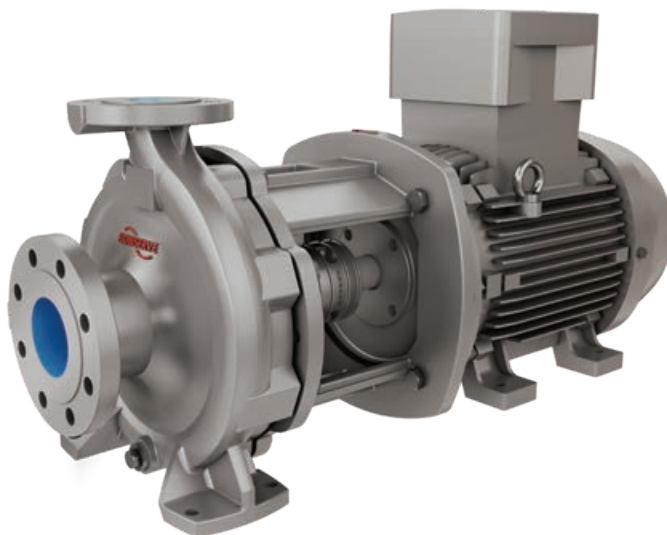


### Close coupled

Durco Mark 3 ISO close coupled pumps provide a compact arrangement ideal for installations where space is at a premium. They are fitted with readily available standard electric motors, so you can choose an enclosure to suit the application. 37 sizes available.

#### Operating parameters

|              |                                  |
|--------------|----------------------------------|
| Flows to:    | 570 m <sup>3</sup> /h (2500 gpm) |
| Heads to:    | 100 m (330 ft)                   |
| Pressure to: | 25 bar (365 psi)                 |
| Temperature: | -20°C to 160°C (-5°F to 320°F)   |



## Self-primer

Costing less to buy, install and maintain than submersible pumps, Durco Mark 3 ISO unitized self-priming pumps are designed to draw liquid from sources below ground level or with no positive pressure to naturally prime the pump. 7 sizes available.

### Operating parameters

Flows to: 100 m<sup>3</sup>/h (440 gpm)  
Heads to: 100 m (330 ft)  
Pressure to: 25 bar (365 psi)  
Temperature: -80°C to 400°C (110°F to 752°F)

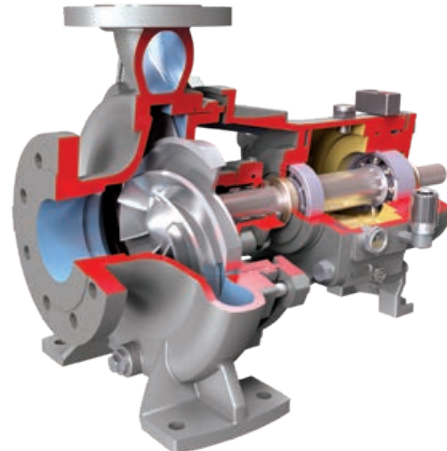


## Recessed impeller

Combining a wide clearance casing with a vortex action that ensures less than 20% of the process fluid contacts the impeller, the recessed impeller pump is well-suited for applications with larger particles, stringy or fibrous slurries, or friable solids that require low shear pumping. 10 sizes available.

### Operating parameters

Flows to: 750 m<sup>3</sup>/h (3300 US gpm)  
Heads to: 100 m (330 ft)  
Pressure to: 25 bar (365 psi)  
Temperature: -80°C to 400°C (110°F to 752°F)



## Vertical sump

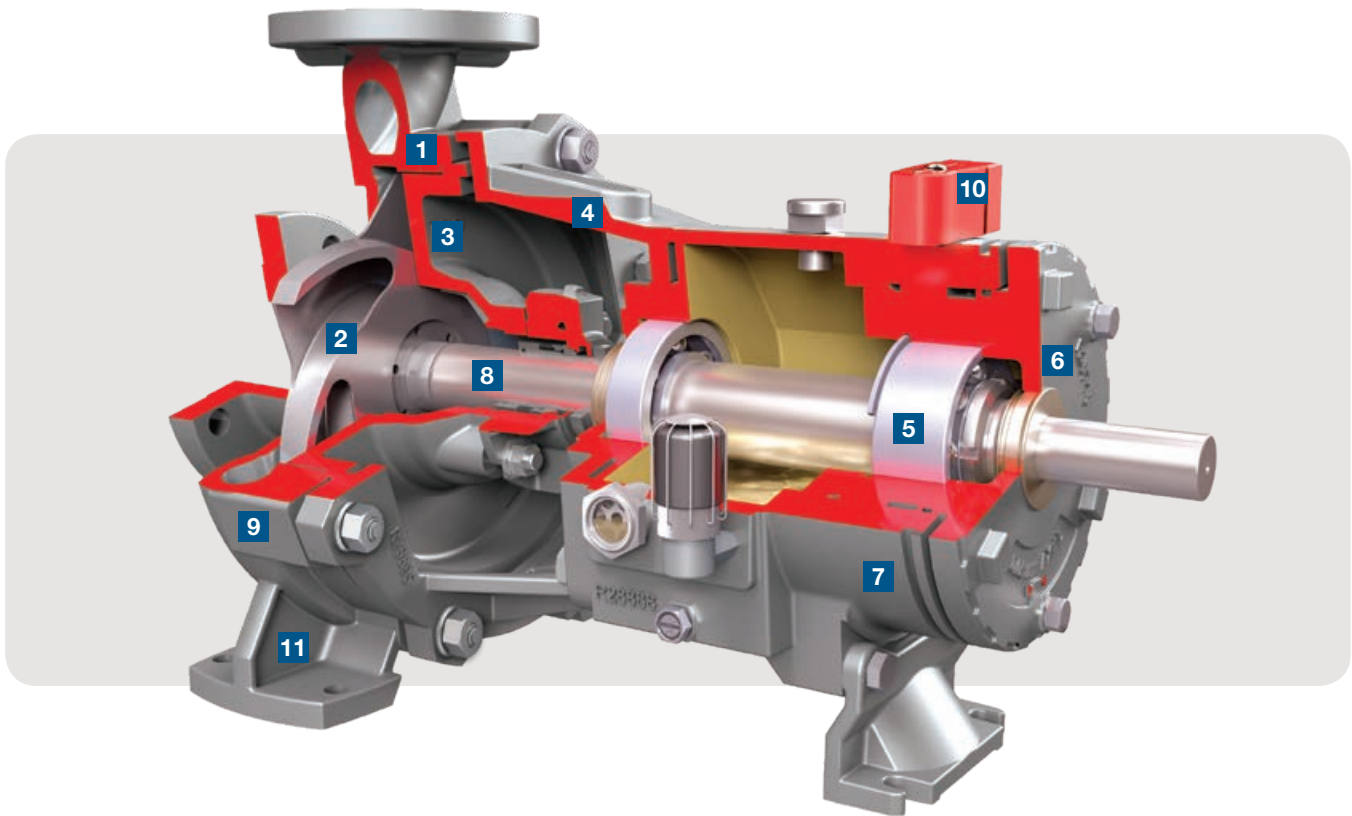
With column lengths up to 10 m (32 ft), Durco Mark 3 ISO vertical sump pumps can be customized to meet a wide range of needs. For oil and gas installations, they are offered with many ISO 13709/API 610 compliant features. 40 sizes available.

### Operating parameters

Flows to: 1400 m<sup>3</sup>/h (6160 gpm)  
Heads to: 250 m (820 ft)  
Pressure to: 25 bar (365 psi)  
Temperature: -40°C to 400°C (-40°F to 752°F)



## Long coupled design



### 1 — Volute casing

- Standard PN 16 and PN 25 flanges per ISO 1092
- Drilling per ASME 150 and 300 flanges per ISO 1759 (ASME B16.5)
- Drain and recirculation connections
- Optional casing designs
  - Jacketed — for applications in which the pumped fluid must be heated or cooled to maintain optimal fluid viscosity.
  - Centerline mounted — for applications in which loads caused by thermal expansion need to be reduced. A and B hydraulics only.
  - Recessed impeller — for low-shear pumping of friable solids and trouble-free pumping of stringy or fibrous slurries. A hydraulics only.
  - High-pressure — A and B hydraulics only.

### 2 — Impeller

- Available hydraulics to ISO 2858 and extended flows
- Available impeller types
  - Reverse vane
  - Open
  - Closed with balancing holes
- Impeller locking
  - Standard screw of open, reverse vane and recessed impeller
  - Key drive for open and closed impeller
  - Alternate anti-rotating locking
- External micrometer adjustment of open and reverse vane impellers with calibrated bearing carrier

### 3 — SealSentry seal chambers

- SealSentry seal chambers with flow modifiers extend seal life by expelling solids and preventing gas accumulation at the seal faces.
- Conical and cylindrical bore seal chamber designs accommodate a wide variety of seal types.

## 4 — Adapter

- Robust and structurally optimized design
- Ensures maximum compatibility and interchangeability with power end

## 5 — Ball bearing

Available with oil, greased and life-greased lubrication. Heavy-duty bearing with increased oil change rate as an option. Large oil sump.

Grease lubricated:

- Standard lifetime L10h > 17 500 h
- Temperature from -40°C to 180°C (-40°F to 356°F)
- Mineral, synthetic or food grade

Oil lubricated:

- Lifetime to L10h > 50 000 h
- Different oil seal options
- Oil splash bath, mineral or synthetic

## 6 — Bearing Gard™

- Standard equipment on all long coupled Mark 3 ISO pumps
- Static sealing technology prevents contamination during shutdown
- Transitions to non-contacting operation at startup
- Alternative bearing isolators available

## 7 — Power ends and interchangeability

- Two-piece design with metal-to-metal fit for maximum interchangeability and low maintenance cost
- Non-conduction bearing isolator for efficient operation and optimum bearing environment
- Ductile cast iron construction
- Stainless steel power end as an option for low ambient conditions

## 8 — Shaft

- Stiff solid shaft ensures less than 0.05 mm (0.002 in) shaft deflection at the seal face.
- Provides a low  $L^3/D^4$  shaft stiffness ratio to maximize mechanical seal life.
- Available in a wide range of corrosion-resistant materials, including:
  - 316 stainless steel
  - Duplex stainless steel
  - Alloy C-276
  - Alloy B-2
  - Alloy 20

## 9 — Heating and cooling options

- Water: 20°C (68°F); 16 bar (232 psi)
- Steam: 200°C (392°F); 13.3 bar (192 psi)
- Heating oil: 350°C (662°F); 6 bar (87 psi)

*\*The above figures may be subject to derating, dependent upon the material used for the jacket fabrication.*

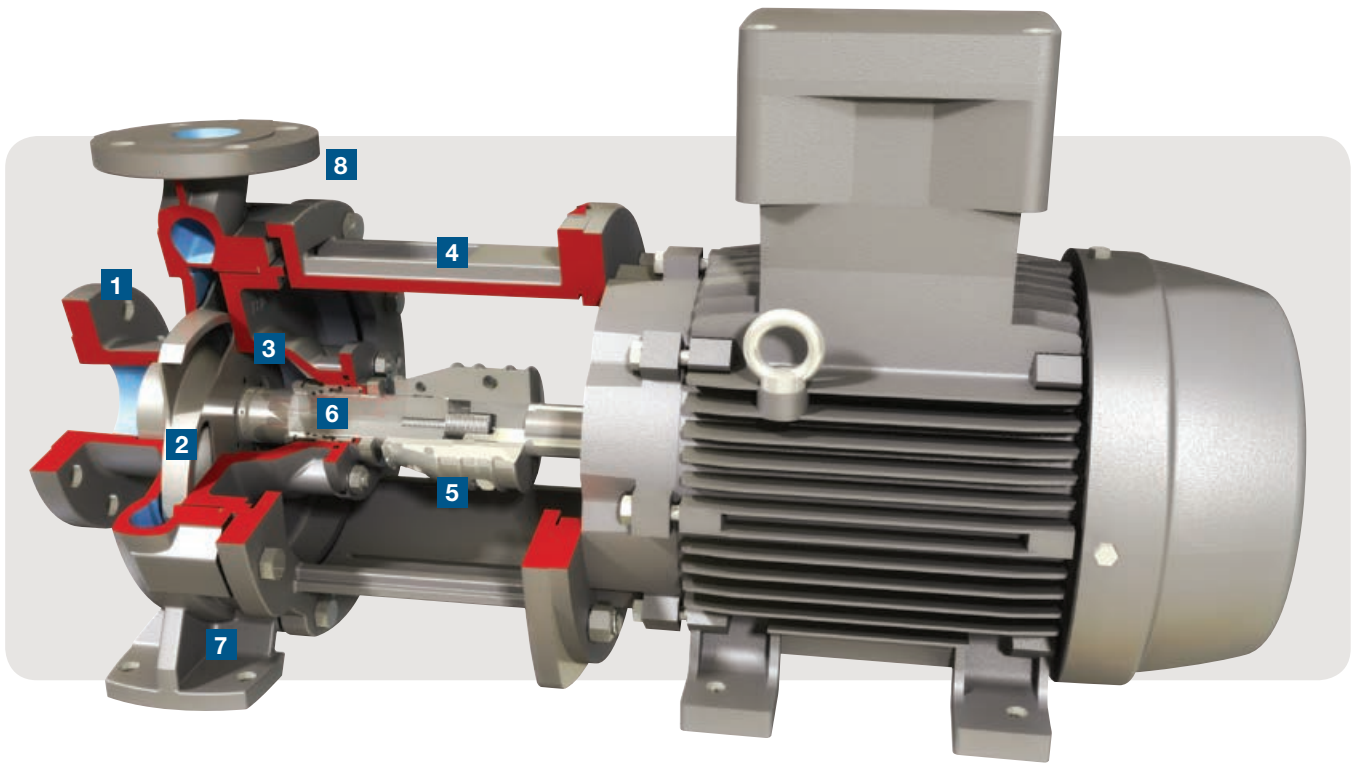
## 10 — Monitoring system

- Available IPS Detect™ online condition monitor, a light fault device that enables plant personnel to quickly see which assets are in need of attention.
- Cast bosses make installing additional IPS performance monitoring products quick and easy.

## 11 — Painting

Offered with a range of paint systems, including those compliant with the ISO 12944 requirement of “long-term protection — up to 15 years to first maintenance”

## Close coupled design



### 1 — Volute casing

- Standard PN 16 and PN 25 flanges per ISO 1092
- Drilling per ASME 150 and 300 flanges per ISO 1759 (ASME B16.5)
- Jackets for heating and cooling
- Drain and recirculation connections
- A and B hydraulics only

### 2 — Impeller

- Available hydraulics to ISO 2858 and extended flows
- Available impeller types
  - Reverse vane
  - Open
- Screwed impeller standard

### 3 — SealSentry seal chamber

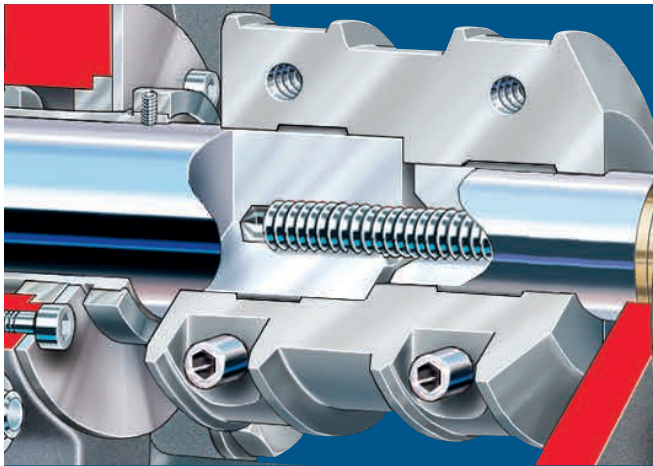
- SealSentry seal chambers with flow modifiers extend seal life by expelling solids and preventing gas accumulation at the seal faces.
- Conical and cylindrical bore seal chamber designs accommodate a wide variety of seal types.

### 4 — Adapter

- Adapters designed to interface directly with standard motors
- No bearing housing for minimized maintenance
- Permits use of readily available standard electric motors
- Provides a thermal barrier between the pump and motor
- Reduces installation cost by eliminating pump to motor alignment
- Incorporates a muff coupling, which serves as an additional deflector between the mechanical seal and motor

### 5 — Closed couple

- Close coupling eliminates influence of the baseplate and foundation on alignment.
- Muff coupling helps in setting the impeller face clearance; notches at 30-degree increments around the circumference
- Radiating surfaces dissipate heat and extend motor bearing and mechanical seal lives.



*Investment cast (WEB) muff coupling*

### 6 — Shaft

- Stiff solid shaft ensures less than 0.05 mm (0.002 in) shaft deflection at the seal face.
- Provides a low  $L^3/D^4$  shaft stiffness ratio to maximize mechanical seal life.
- Available in a wide range of corrosion-resistant materials, including:
  - 316 stainless steel
  - Duplex stainless steel
  - Alloy 20
  - Alloy C-276
  - Alloy B-2

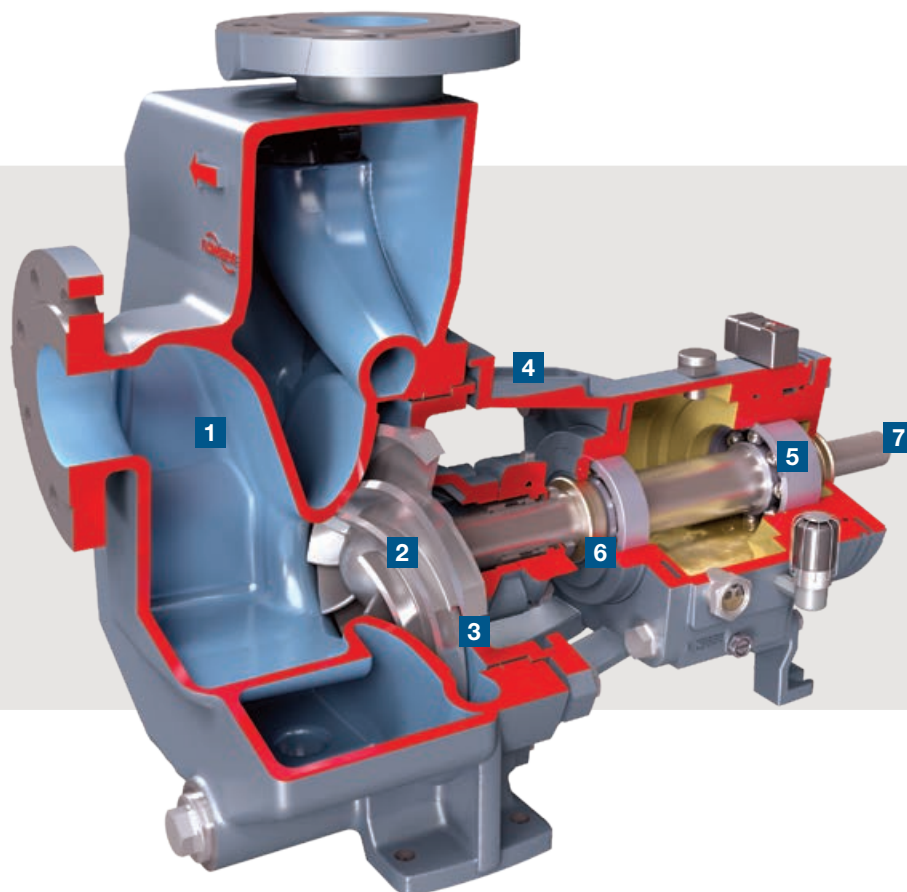
### 7 — Painting

Offered with a range of paint systems, including those compliant with the ISO 12944 requirement of “long-term protection—up to 15 years to first maintenance”

### 8 — Monitoring system

- Available IPS Detect online condition monitor, a light fault device that enables plant personnel to quickly see which assets are in need of attention.
- Cast bosses make installing additional IPS performance monitoring products quick and easy.

## Self-primer



### 1 — Unitized, self-priming volute

- Unitized casing has priming chamber, air separator and volute in one integral unit; eliminates the need for internal valves and external priming devices
- Standard PN 16 and PN 25 flanges per ISO 1092
- Drilling per ASME 150 and 300 flanges per ISO 1759 (ASME B16.5)
- Drain and recirculation connections

### 2 — Impeller

- A hydraulics (extended flow) only
- Open impeller
- Impeller locking
  - Screwed impeller standard
  - Keyed impeller optional
- External micrometer adjustment of open impellers with calibrated bearing carrier

### 3 — SealSentry seal chamber

- SealSentry seal chambers with flow modifiers extend seal life by expelling solids and preventing gas accumulation at the seal faces.
- Conical and cylindrical bore seal chamber designs accommodate a wide variety of seal types.

## 4 — Adapter

- Robust and structurally optimized design
- Ensures maximum compatibility and interchangeability with power end

## 5 — Ball bearing

Available with oil, greased and life-greased lubrication. Heavy-duty bearing with increased oil change rate as an option. Large oil sump.

Grease lubricated:

- Standard lifetime L10h > 17 500 h
- Temperature from -40°C to 180°C (-40°F to 356°F)
- Mineral, synthetic or food grade

Oil lubricated:

- Standard lifetime L10h > 50 000 h
- Different oil seal options
- Oil splash bath, mineral or synthetic

## 6 — Bearing Gard

- Standard equipment on all long coupled Mark 3 ISO pumps
- Static sealing technology prevents contamination during shutdown
- Transitions to non-contacting operation at startup
- Alternative bearing isolators available

## 7 — Power ends and interchangeability

Long coupled power end:

- Two-piece design with metal-to-metal fit for maximum interchangeability and low maintenance cost
- Non-conduction bearing isolator for efficient operation and optimum bearing environment
- Ductile cast iron construction
- Stainless steel power end as an option for low ambient conditions

Close coupled power end:

- Minimum footprint for application with limited space
- Adapters design to interface directly with standard motors
- No bearing housing for minimized maintenance

## 8 — Shaft

- Stiff solid shaft ensures less than 0.05 mm (0.002 in) shaft deflection at the seal face.
- Provides a low  $L^3/D^4$  shaft stiffness ratio to maximize mechanical seal life
- Available in a wide range of corrosion-resistant materials, including:
  - 316 stainless steel
  - Duplex stainless steel
  - Alloy 20
  - Alloy C-276
  - Alloy B-2

## 9 — Heating and cooling options

- Water: 20°C (68°F); 16 bar (232 psi)
- Steam: 200°C (392°F); 13.3 bar (192 psi)
- Heating oil: 350°C (662°F); 6 bar (87 psi)

## 10 — Painting

Offered with a range of paint systems, including those compliant with the ISO 12944 requirement of “long-term protection — up to 15 years to first maintenance”

# Impellers



## Reverse vane impeller

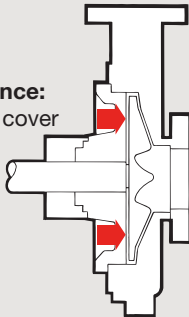
- Low NPSHR
- Low, unidirectional thrust loads
- Hydraulic balance holes
- Will pass large solids
- Low, predictable seal chamber pressure
- One setting to control performance, efficiency, thrust and seal chamber pressure
- Optional locked impeller

### Operating performance

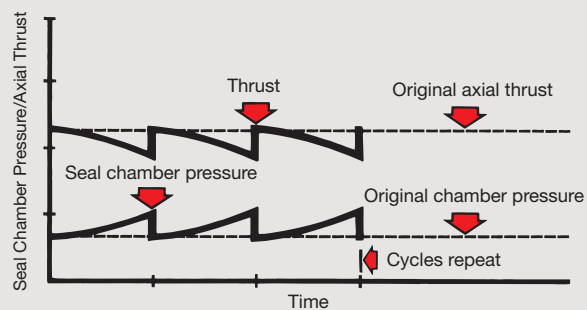
- ISO 2858 and extended flow
- Solid handling capability
  - Max solid size 28 mm (1.1 in)
  - Max soft solid 35%
  - Max hard solid 10%

### Reverse vane impeller adjustment

Only one tolerance:  
impeller vane to cover



### Reverse vane: repeatable performance



## Closed impeller

- Low NPSHR
- Low, unidirectional thrust loads
- Hydraulic balance holes
- One setting to control performance, efficiency, thrust and seal chamber pressure
- Locked impeller as a standard

### Operating performance

- ISO 2858
- Solid handling capability
  - Max solid size 0.3 mm (0.01 in)
  - Max soft solid 2%
  - Max hard solid 2%
  - Max paper stock 1%



## Front vane open impeller

- Optional
- Recommended where there are fibrous, stringy materials in the liquid
- Back vanes control axial thrust and seal chamber pressure
- Clearance adjusted between impeller and case
- Optional locked impeller

### Operating performance

- ISO 2858 and extended flow
- Solid handling capability
  - Max solid size 25 mm (1.0 in)
  - Max soft solid 35%
  - Max hard solid 10%
  - Max paper stock 10%

## Recessed impeller pump

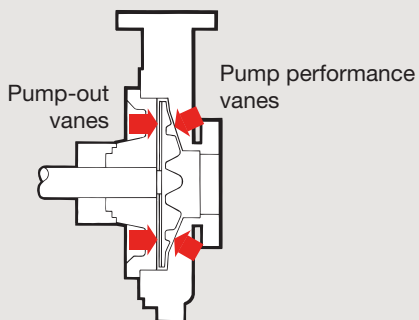
When used in the recessed impeller pump configuration, which has a wide clearance casing, the open impeller is able to handle solids up to 46 mm (1.8 in).

- Vortex pumping action:
  - Minimizes shear, abrasion and clogging
  - Maintains integrity of solids
- Applications: solids, slurries, corrosive/erosive liquids, waste streams, shear-sensitive liquids

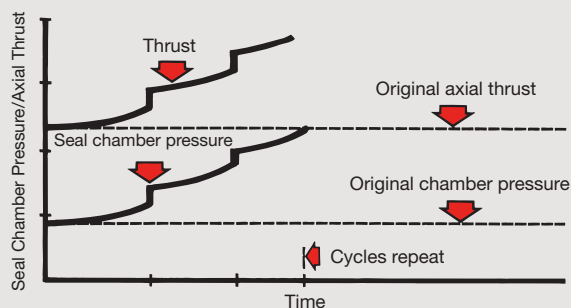
### Operating performance

- Solid handling capability
  - Max solid size 46 mm (1.81 in)
  - Max soft solid 35%
  - Max hard solid 10%
  - Max paper stock 3%

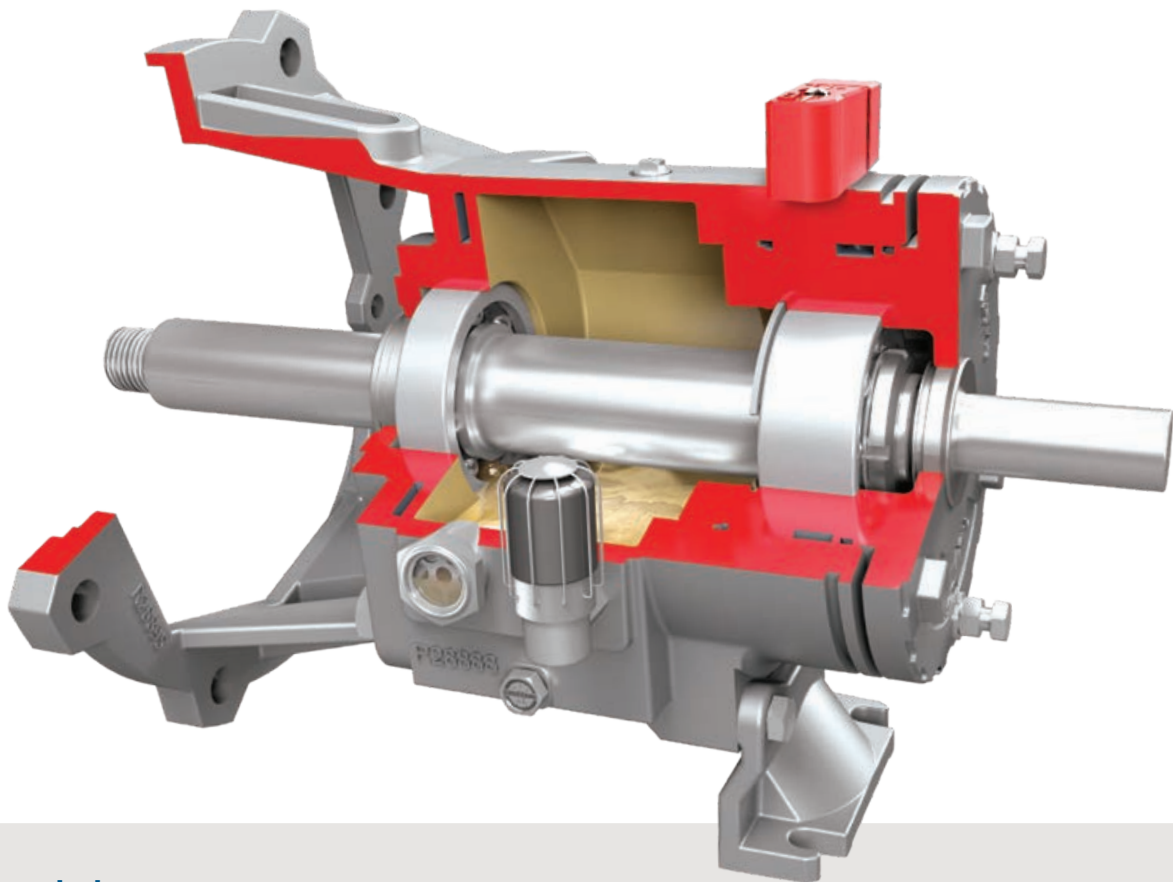
### Front vane impeller adjustment



### Open style: diminished performance

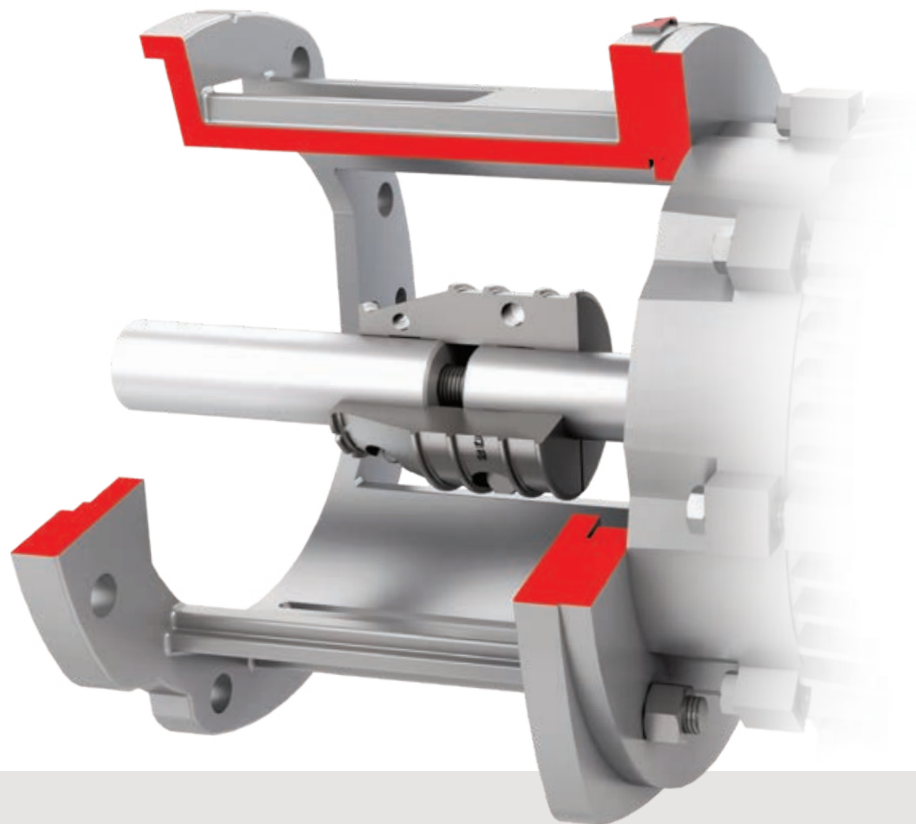


## Power ends



### Long coupled

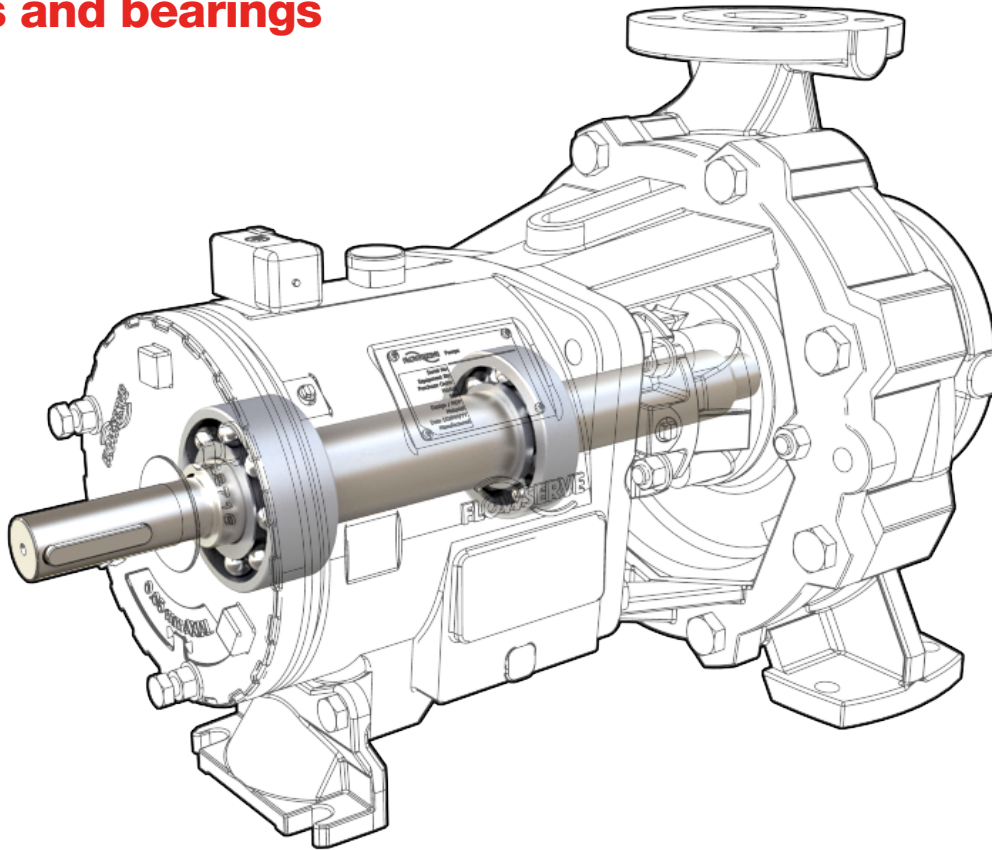
- Conforms with ISO 2858 and ISO 5199
- Clean environment assembly available as optional 3A design
- Two-piece bearing housing and adapter design with metal-to-metal fit
  - Ductile cast iron standard
  - Stainless steel available
- Standard double-row, angular contact ball bearings outboard; single-row ball bearings inboard
  - Available duplex, single-row angular contact ball bearings outboard; roller bearings inboard
  - Guaranteed L10h bearing life of 17 500 hours; optional L10h bearing life of 50 000+ hours
- External micrometer impeller adjustment mechanism
- Flowserve IPS Beacon 2 condition monitor available
- Large oil sump with multiple oil or grease lubrication options
- Flowserve Bearing Gard bearing isolators; Inpro/Seal® VBXX isolators optional
- Magnetic drain plug
- Large 25 mm (1 in) sight glass
- Top-mounted vent and oil filler
- Rigid foot design



### Close coupled

- Conforms with ISO 5199
- Compact footprint
- Sturdy design does not require a baseplate
- Adapters interface directly with standard electric motors
- Ductile cast iron construction
- No bearing housing

## Shafts and bearings



### Solid shaft design

- Less than 0.05 mm (0.002 in) shaft deflection at the seal face
- Low  $L^3/D^4$  shaft stiffness ratios
- Sleeved shaft available

#### Durco Mark 3 ISO shaft stiffness ratio ( $L^3/D^4$ )

| Frame Size | $L^3/D^4$ (Solid Shaft) |                       |                 |
|------------|-------------------------|-----------------------|-----------------|
|            | Open Impeller           | Reverse Vane Impeller | Closed Impeller |
| 1          | 3.5                     | 3.06                  | 4.74            |
| 2          | 1.8                     | 1.64                  | 2.40            |
| 3          | 0.94                    | 0.85                  | 1.07            |
| 4          | 1.07                    | 0.92                  | -               |

### Shaft materials

- 316 stainless steel
- Duplex stainless steel
- Super duplex stainless steel
- Alloy 20
- Alloy C-276
- Alloy B-2

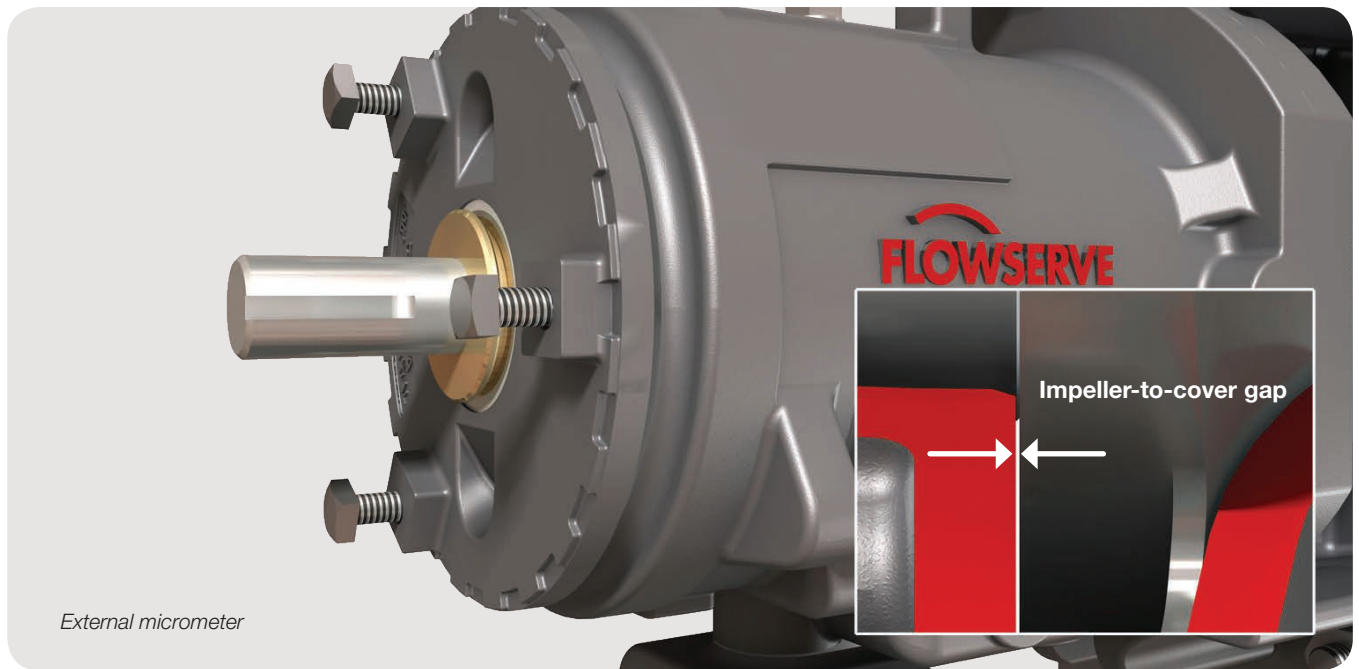
### Robust bearing system

- Standard double-row, angular contact ball outboard and single-row ball inboard bearings
  - Guaranteed L10h bearing life of 17 500 hours
- Optional duplex, double-row angular contact ball outboard and roller inboard
  - Optional L10h bearing life of 50 000+ hours

### Lubrication options

- Oil splash bath—mineral or synthetic
- Grease—mineral, synthetic or food grade
- Oil mist (pure or purge)
- Nitrogen purge over oil sump

## Micrometer impeller adjustment



### External micrometer reduces maintenance time and costs\*

- Available on Mark 3 ISO A and B hydraulics only
- Superior to jackscrews, it accurately sets reverse vane impeller clearance in 20 seconds, in the shop or the field.



**Step 1:** Loosen the setscrews. Using a wrench, rotate the bearing carrier counterclockwise until the reverse vane impeller lightly touches the rear cover plate.



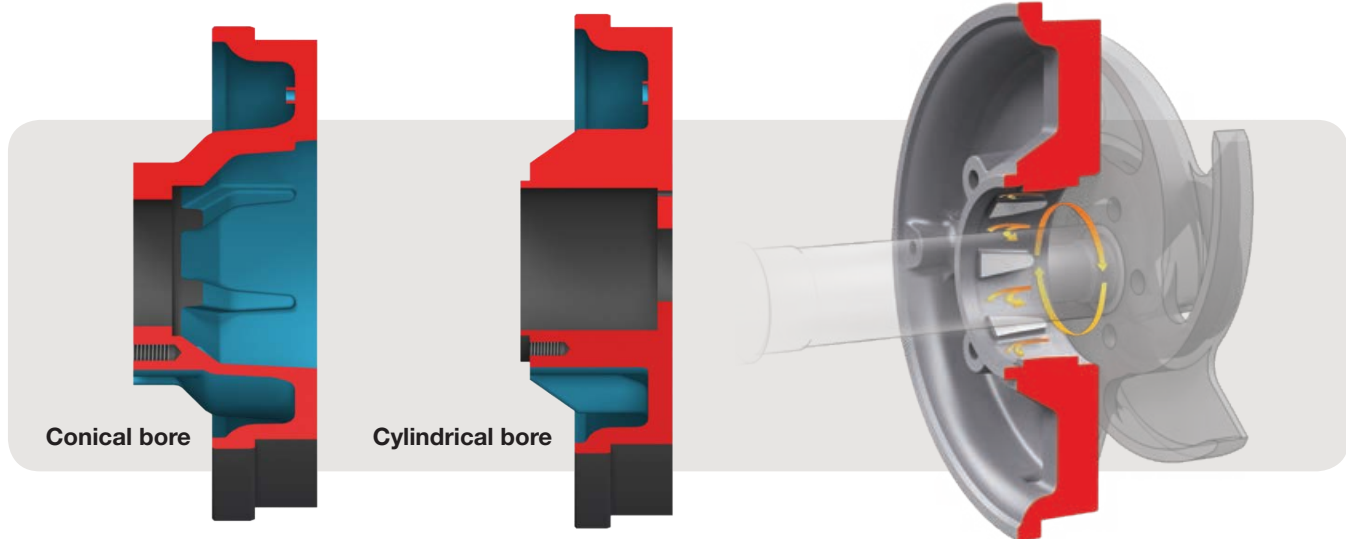
**Step 2:** Select the impeller setting. Each notch on the carrier ring represents exactly 0.10 mm (0.004 in) of clearance. For an impeller setting of 0.5 mm (0.020 in), count five notches counterclockwise.



**Step 3:** Move the carrier clockwise the selected number of notches. Tighten the setscrews and check the impeller clearance with the feeler gauge.

\* Applicable for reverse vane impellers. Consult user instructions for pumps fitted with front vane open-style impellers.

## SealSentry seal chambers



### Advanced seal chamber technology

An integral part of the rear cover, Durco SealSentry seal chambers extend seal life, improve pump reliability, and reduce the total cost of pump ownership:

- Provide optimal seal chamber environment
- Extend mechanical seal life
  - Self-flushing
  - Self-venting
  - Self-draining
- Reduce maintenance and repair costs
- Permit use of less expensive seals and flush plans; plans 11, 31, 32, 52, 53, etc. can be eliminated
- Provide a safer environment for personnel

### Conical bore seal chambers with flow modifiers – A and B hydraulics

Conical bore SealSentry seal chambers are preferred for most applications. These seal chambers feature flow modifiers to redirect flow and solids out of the seal chamber.

Available in several bore sizes and gland bolt circles, conical designs are ideal for:

- Single internal cartridge seals
- Dual internal/external cartridge seals
- Single internal component seals with flexible mounted seats
- Dual internal “true” tandem design cartridge seals
- Single seals with all seat mounting configurations

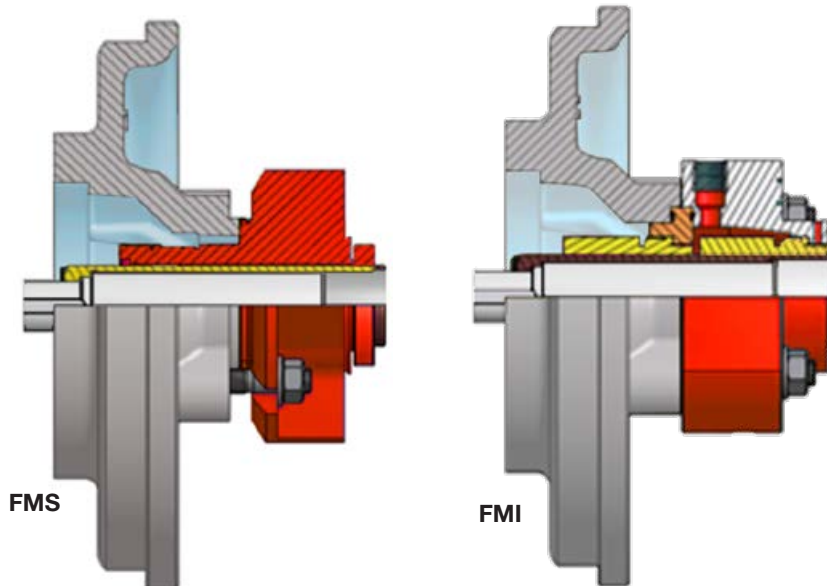
### Cylindrical bore seal chambers – A and B hydraulics

With oversized and standard bores available, cylindrical bore seal chambers are ideal for seals with large and small gland bolt and gasket circles. Cylindrical designs may be used with:

- Dual internal component seals that isolate the seal chamber from the process with external barrier fluid
- Single seals with throttle bushing and flush to boost pressure over the flash point
- Packing arrangements and conventional seals with small gland bolt and gasket circles

### Flow modifiers extend seal life

- Flow modifiers redirect flow from circumferential to axial.
- Balanced flow with low-pressure drop in the chamber helps keep solids in suspension, minimizing erosion.
- The mechanical seal creates a centrifuging action away from its parts.
- Solids and slurry merge into the returning flow path and are flushed out of the seal chamber.



### FMS and FMI covers with flow modifiers – C hydraulics

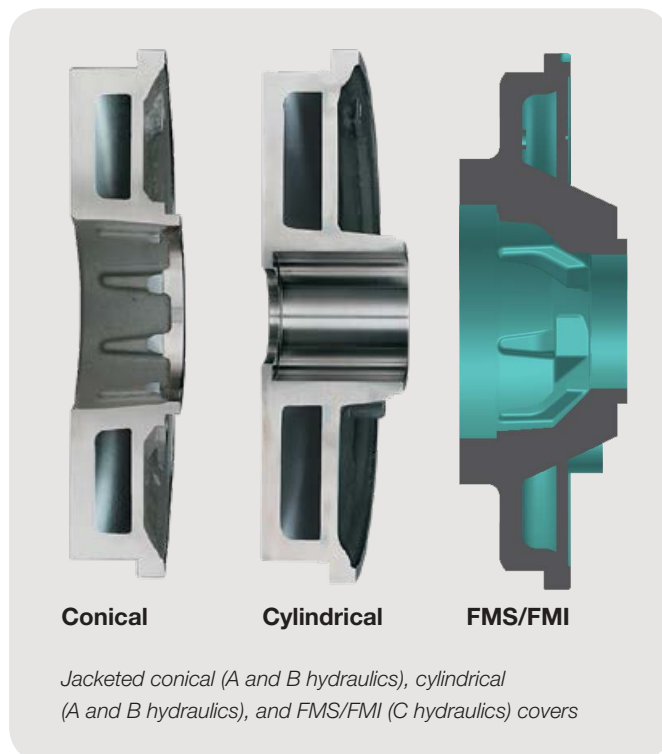
Because pumps with C hydraulics employ closed impellers with wear rings, Flowserve engineers designed covers to address their specific performance requirements. Like standard conical covers, FMS and FMI covers have a conical seal chamber with flow modifiers.

**FMS** — Ideal for use with single and double cartridge seals, as well as single component seal arrangements.

**FMI** — The seal mounting face of the FMI cover is designed for use with dual internal component seals in tandem arrangement.

### Jacketed rear covers available

Jacketed versions of Durco rear covers with SealSentry seal chambers are available. Flowserve engineers will help you select the right jacketed cover for your application.



# Sealing system

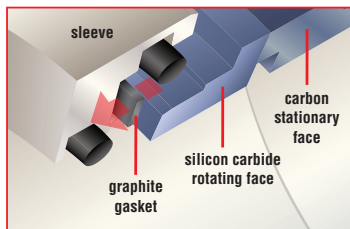
## Seal option

- Single internal cartridge seals
- Dual internal/external cartridge seals
- Single internal component seals with flexible mounted seats
- Dual internal “true” tandem design cartridge seal
- Single seals with all seat mounting configuration
- Dual internal component seals using external barrier fluid
- Single seals with throttle bushing and flushes to boost pressure over the flash point



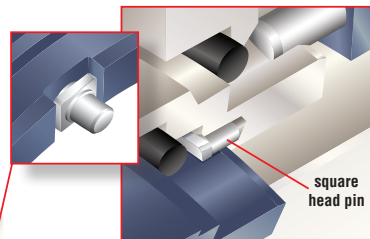
### Tolerate dry running events with our exclusive thermal management technology

Thermally conductive and mechanically compliant graphite material dramatically improves heat transfer between the silicon carbide rotating seal face and the sleeve. The sleeve acts as a heat sink, lowering seal face operating temperatures and transforming cavitating and dry running bad actors into highly reliable installations.

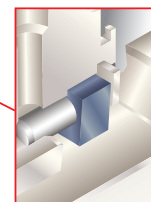
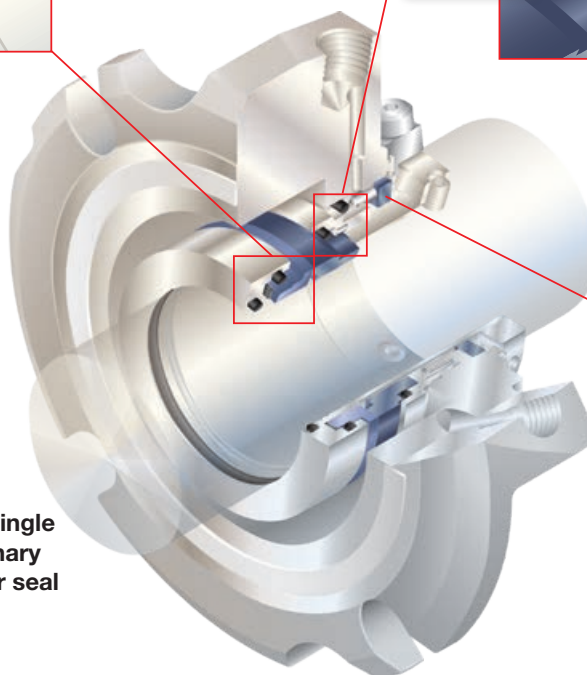


### Robust drive mechanisms deliver high torque loads with low seal face stress

Square-head drive pins self-align with the seal faces to distribute torque loads evenly over an area instead of a high-stress point load, reducing seal face fractures. The torque-carrying capability of the ISC2 seal is three times that of similar competitor seals.



### ISC2 single stationary pusher seal



### Safe containment is provided by an uncompromising throttle bushing

A substantial fixed carbon bushing on the atmospheric side of single seals provides an added measure of safety and reliability in the unlikely event of a seal failure. Process leakage is directed to the drain for safe handling and disposal.

## Protect your employees, protect your environment

ISC2 seals do more to provide a safe work environment and protect the natural environment than any other standard cartridge seal. Single seals have capable throttle bushings to protect against leaks. Pressurized dual seals provide zero process emissions. The outboard seal of dual seals can handle full operating conditions if the inboard seal were to fail. All seal faces are dual balanced for normal and reverse pressure operation.

ISC2 seals work hard to eliminate the possible causes of leakage. Our thermal management technology for dry running tolerance, robust seal face drive mechanisms, high-efficiency barrier circulation, rigid setting devices and high-quality materials all contribute to improve seal life, even with multiple service conditions, off-design operation, and frequent starts and stops. ISC2 seals are capable of sustaining years of uninterrupted, long-term operation.

### Industry's most durable metal bellows are bigger and better

Edge-welded metal bellows of Alloy C-276 metallurgy are well-suited for a wide range of chemical environments in seal sizes to 95 mm (3.750 in). Rotating bellows have a self-cleaning effect and are the preferred solution for highly corrosive services where avoiding seal face hang-up is especially critical.

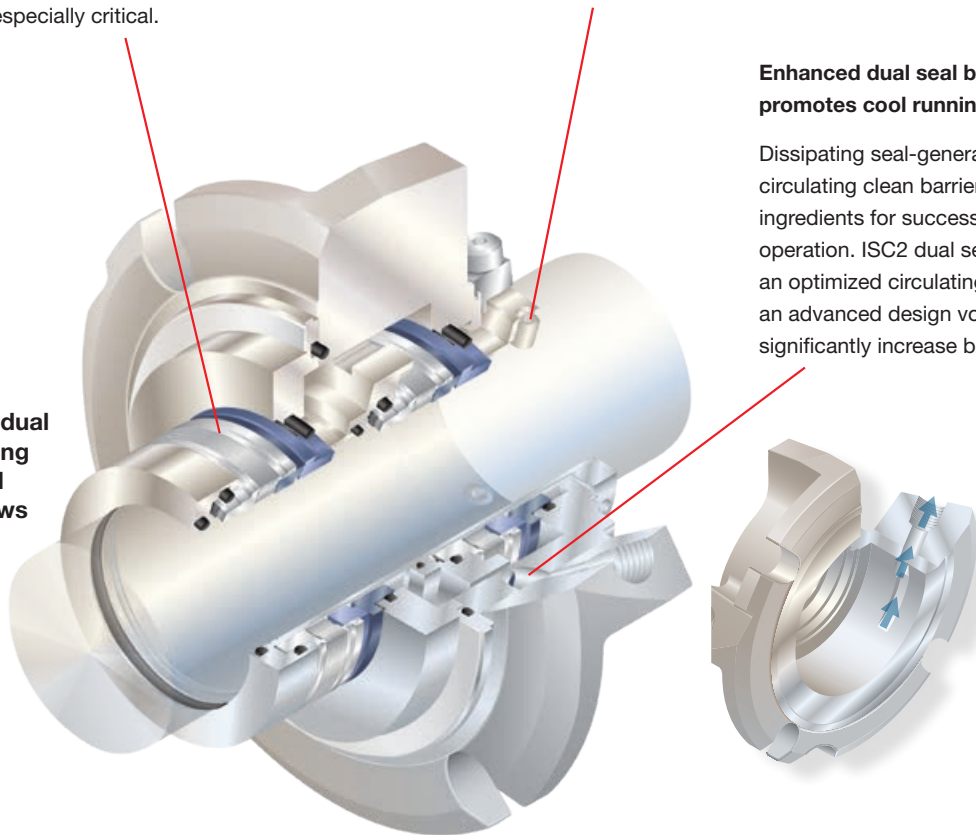
### Hard set screws bite harder for better holding power

Drive collar set screws of 17-4 H900 stainless steel securely engage the shaft or pump sleeve and lock the cartridge sleeve in place. Opportunity for galling the shaft or drive collar is greatly reduced in case the seal ever needs to be removed.

### Enhanced dual seal barrier circulation promotes cool running

Dissipating seal-generated heat and circulating clean barrier fluid are essential ingredients for successful dual seal operation. ISC2 dual seals incorporate an optimized circulating feature, including an advanced design volute groove, to significantly increase barrier fluid flow.

**ISC2 dual rotating metal bellows seal**



# Baseplates

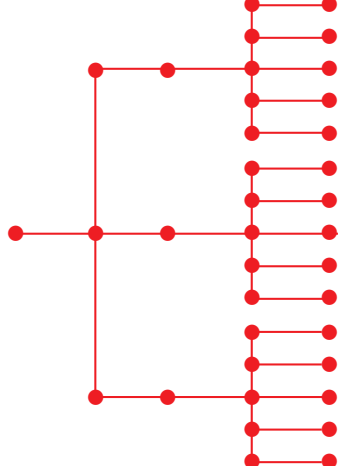
Flowserve offers four pre-engineered baseplate designs to improve pump performance while reducing costs. This provides versatility in choosing the baseplate that best meets a user's application needs and operating budget. Reducing internal stress and vibration extends the life of pump and motor packages.

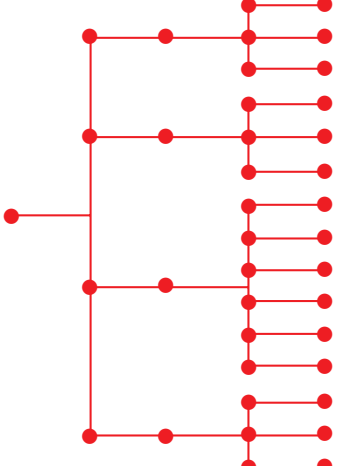
| Baseplate                                                                                                             | Folded Steel                                                                      | Polybase                                                                           | Reinforced                                                                          | Cast Iron                                                                           |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                                                                                                       |  |  |  |  |
| <b>Number of sizes</b> —The right size baseplate for the pump/motor combination eliminates overhand and trip hazards. | 9                                                                                 | 6                                                                                  | 16                                                                                  | 8                                                                                   |
| <b>ISO3661 compliance</b> —Standards compliance for easy installation                                                 | Yes                                                                               | Yes                                                                                | No                                                                                  | Yes                                                                                 |
| <b>Grouting required</b> —Improved vibration response and stiffness for minimized MTBF                                | Yes                                                                               | No                                                                                 | Optional                                                                            | Yes                                                                                 |
| <b>Rigidity</b> —Torsional stress handling from high nozzle load applications                                         | Medium                                                                            | Very high                                                                          | Very high                                                                           | High                                                                                |
| <b>Chemical resistance</b> —Minimizing MTBF                                                                           | No                                                                                | Yes                                                                                | No                                                                                  | No                                                                                  |
| <b>Integrated drain pan/port</b> —Employee safety                                                                     | Optional                                                                          | Yes                                                                                | Optional                                                                            | No                                                                                  |
| <b>Integrated lifting eye</b> —Minimizing downtime and employee safety                                                | No                                                                                | No                                                                                 | Yes                                                                                 | No                                                                                  |
| <b>Stilt mounting</b> —Easy site modification with low installation costs                                             | Optional                                                                          | Optional                                                                           | No                                                                                  | No                                                                                  |

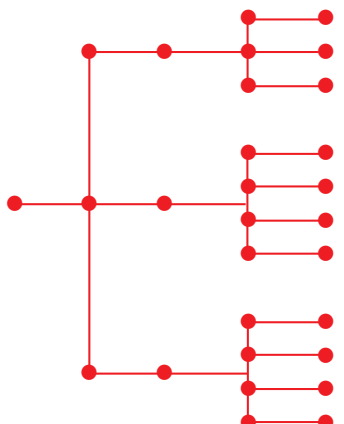
# Nomenclature

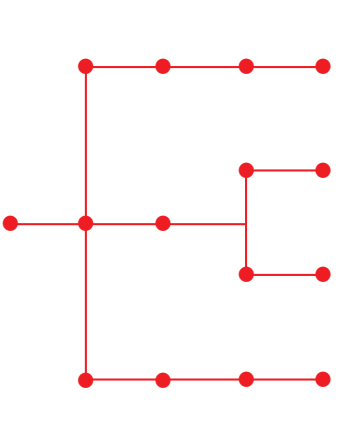
| Example:                                                                                                                                                                                                 | Frame size | Series   | Suction size in mm | Discharge size in mm | Special configuration | Impeller nominal diameter in mm | Hydraulic | Impeller type |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|--------------------|----------------------|-----------------------|---------------------------------|-----------|---------------|
| <b>1K100-65-N160A-OP</b>                                                                                                                                                                                 | <b>1</b>   | <b>K</b> | <b>100</b>         | <b>65</b>            | <b>N</b>              | <b>160</b>                      | <b>A</b>  | <b>OP</b>     |
| 1 = Frame 1<br>2 = Frame 2<br>3 = Frame 3<br>4 = Frame 4<br>C = Close coupled                                                                                                                            |            |          |                    |                      |                       |                                 |           |               |
| Durco Mark 3 family                                                                                                                                                                                      |            |          |                    |                      |                       |                                 |           |               |
| 32, 40, 50, 65, 80, 100, 125, 150, 200, 250                                                                                                                                                              |            |          |                    |                      |                       |                                 |           |               |
| 20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200                                                                                                                                                           |            |          |                    |                      |                       |                                 |           |               |
| Blank or no letter = 16 bar casing<br>P = Self-priming casing<br>R = Recessed impeller, low-shear design<br>N = Centerline mounted 25 bar high-pressure casing<br>H = 25 bar high-pressure, foot mounted |            |          |                    |                      |                       |                                 |           |               |
| 125, 160, 200, 250, 315, 400                                                                                                                                                                             |            |          |                    |                      |                       |                                 |           |               |
| A = Extended flow hydraulic<br>B = Standard ISO 2858 A and B hydraulic<br>C = Standard ISO 2858 C hydraulic                                                                                              |            |          |                    |                      |                       |                                 |           |               |
| RV = Reverse vane impeller<br>OP = Open impeller<br>CL = Closed impeller                                                                                                                                 |            |          |                    |                      |                       |                                 |           |               |

# Parts interchangeability – A and B hydraulics

| Frame 1                                                                                           |                                                                                           |                                                                                                |                                                                                                                 |                                                                                          |                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  BEARING HOUSING |  ADAPTER |  SEAL CHAMBER |  REVERSE VANE OR OPEN IMPELLER |  CASING | PUMP SIZE                                                                                                                                                                                                                      |
|                 |                                                                                           |                                                                                                |                                                                                                                 |                                                                                          | 1K40-25-125<br>1K50-32-125<br>1K65-40-125<br>1K80-50-125<br>1K100-80-125<br>1K32-20-160<br>1K40-25-160<br>1K50-32-160<br>1K65-40-160<br>1K80-50-160<br>1K32-20-200<br>1K40-25-200<br>1K50-32-200<br>1K65-40-200<br>1K80-50-200 |

| Frame 2                                                                                           |                                                                                           |                                                                                                |                                                                                                                  |                                                                                            |                                                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  BEARING HOUSING |  ADAPTER |  SEAL CHAMBER |  REVERSE VANE OR OPEN IMPELLER |  CASING | PUMP SIZE                                                                                                                                                                                                                               |
|                |                                                                                           |                                                                                                |                                                                                                                  |                                                                                            | 2K100-65-160<br>2K125-80-160<br>2K125-100-160<br>2K100-65-200<br>2K125-80-200<br>2K125-100-200<br>2K40-25-250<br>2K50-32-250<br>2K65-40-250<br>2K80-50-250<br>2K100-65-250<br>2K125-80-250<br>2K50-32-315<br>2K65-40-315<br>2K80-50-315 |

| Frame 3                                                                                             |                                                                                             |                                                                                                  |                                                                                                                   |                                                                                            |                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  BEARING HOUSING |  ADAPTER |  SEAL CHAMBER |  REVERSE VANE OR OPEN IMPELLER |  CASING | PUMP SIZE                                                                                                                                                                           |
|                  |                                                                                             |                                                                                                  |                                                                                                                   |                                                                                            | 3K125-100-250<br>3K150-125-250<br>3K200-150-250<br>3K100-65-315<br>3K125-80-315<br>3K125-100-315<br>3K150-125-315<br>3K100-65-400<br>3K125-80-400<br>3K125-100-400<br>3K150-125-400 |

| Frame 4                                                                                             |                                                                                             |                                                                                                  |                                                                                                                    |                                                                                              |                                                                  |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------------|
|  BEARING HOUSING |  ADAPTER |  SEAL CHAMBER |  REVERSE VANE OR OPEN IMPELLER |  CASING | PUMP SIZE                                                        |
|                 |                                                                                             |                                                                                                  |                                                                                                                    |                                                                                              | 4K200-150-315<br>4K200-150-400<br>4K250-200-400<br>4K200-150-500 |

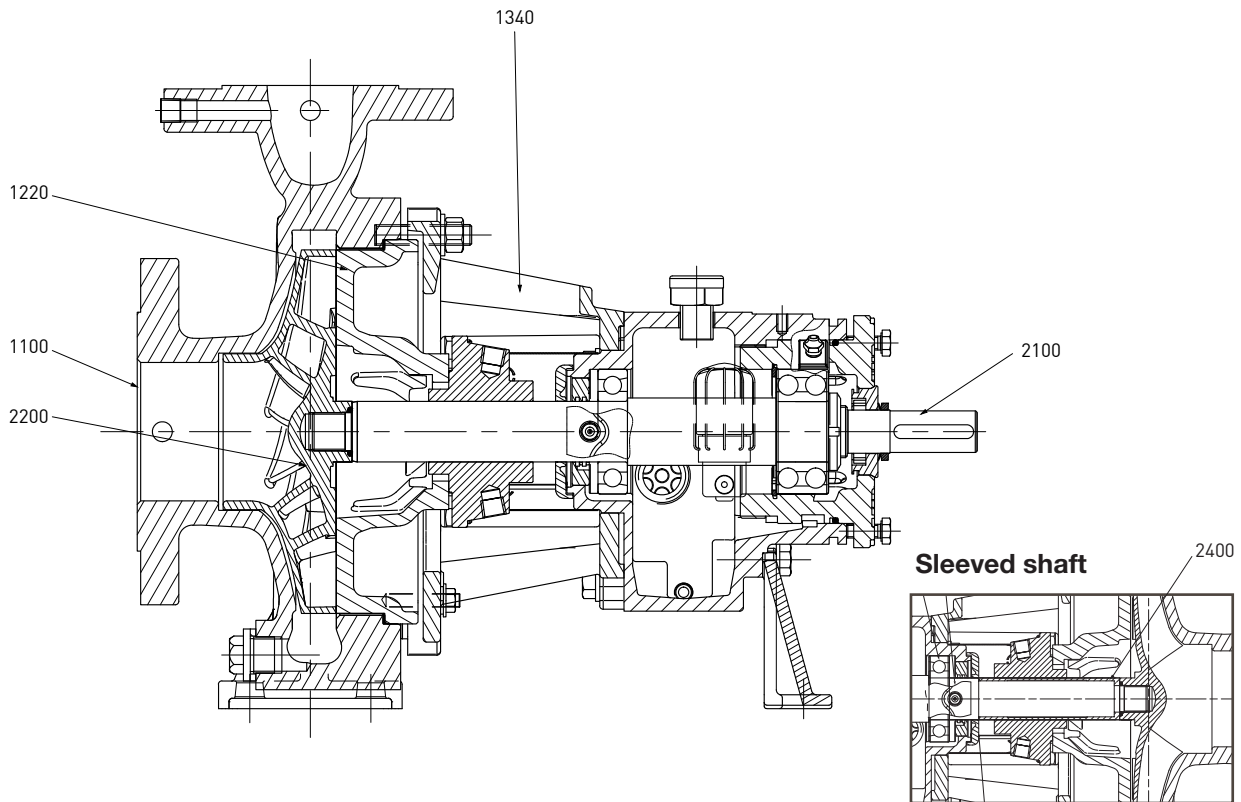
- Notes:**
- 1. Standard and high-output hydraulics available.
  - 2. Reverse vane impellers are not available on all sizes.
  - 3. Please request more detailed information if required.

# Parts interchangeability – C hydraulics

| Frame 1         |         |       |                 |        |              |
|-----------------|---------|-------|-----------------|--------|--------------|
| BEARING HOUSING | ADAPTER | COVER | CLOSED IMPELLER | CASING | PUMP SIZE    |
|                 |         |       |                 |        | 1K40-2 5-125 |
|                 |         |       |                 |        | 1K50-32-125  |
|                 |         |       |                 |        | 1K65-40 125  |
|                 |         |       |                 |        | 1K80-50-125  |
|                 |         |       |                 |        | 1K100-65-125 |
|                 |         |       |                 |        | 1K40-25-160  |
|                 |         |       |                 |        | 1K50-32-160  |
|                 |         |       |                 |        | 1K65-40-160  |
|                 |         |       |                 |        | 1K80-50-160  |
|                 |         |       |                 |        | 1K40-25-200  |
|                 |         |       |                 |        | 1K50-32-200  |
|                 |         |       |                 |        | 1K65-40-200  |
|                 |         |       |                 |        | 1K80-50-200  |
|                 |         |       |                 |        |              |
|                 |         |       |                 |        |              |
|                 |         |       |                 |        |              |

| Frames 2 and 3  |         |       |                 |        |               |
|-----------------|---------|-------|-----------------|--------|---------------|
| BEARING HOUSING | ADAPTER | COVER | CLOSED IMPELLER | CASING | PUMP SIZE     |
|                 |         |       |                 |        | 2K100-65-160  |
|                 |         |       |                 |        | 2K125-80-160  |
|                 |         |       |                 |        | 2K100-65-200  |
|                 |         |       |                 |        | 2K125-80-200  |
|                 |         |       |                 |        | 2K125-100-200 |
|                 |         |       |                 |        | 2K50-32-250   |
|                 |         |       |                 |        | 2K65-40-250   |
|                 |         |       |                 |        | 2K80-50-250   |
|                 |         |       |                 |        | 2K100-65-250  |
|                 |         |       |                 |        | 2K128-80-250  |
|                 |         |       |                 |        | 2K 65-40-315  |
|                 |         |       |                 |        | 2K80-50-315   |
|                 |         |       |                 |        |               |
|                 |         |       |                 |        | 3K125-100-250 |
|                 |         |       |                 |        | 3K150-125-250 |
|                 |         |       |                 |        | 3K200-150-250 |
|                 |         |       |                 |        | 3K100-65-315  |
|                 |         |       |                 |        | 3K125-80-315  |
|                 |         |       |                 |        | 3K125-100-315 |
|                 |         |       |                 |        | 3K150-125-315 |
|                 |         |       |                 |        | 3K125-80-400  |
|                 |         |       |                 |        | 3K125-100-400 |
|                 |         |       |                 |        | 3K150-125-400 |
|                 |         |       |                 |        |               |
|                 |         |       |                 |        |               |

# Materials of construction



## Materials of construction

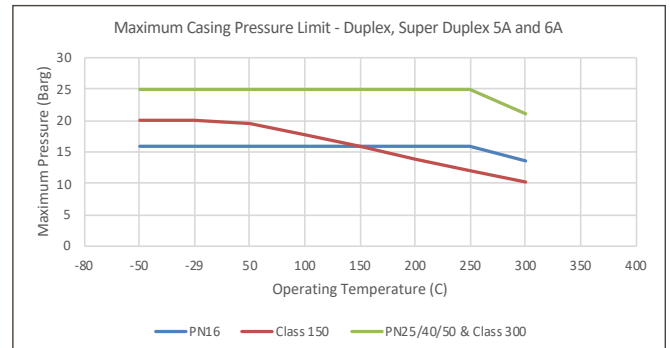
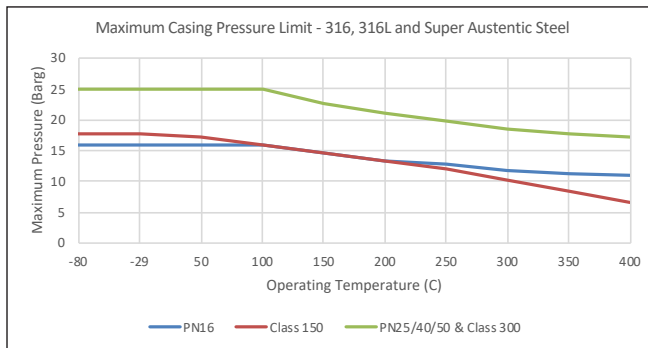
| Item | Part                    | Build               |                  |                  |                      |                     |                      |                     |                            |                |              |          |
|------|-------------------------|---------------------|------------------|------------------|----------------------|---------------------|----------------------|---------------------|----------------------------|----------------|--------------|----------|
|      |                         | Ductile Iron        | Ductile NiResist | WCB Carbon Steel | 316L Stainless Steel | 316 Stainless Steel | 304L Stainless Steel | 304 Stainless Steel | Austenitic Stainless Steel | CD4MCuN Duplex | Super Duplex | Alloy 20 |
| 1100 | Casing                  | Ductile iron        | Ductile NiResist | WCB carbon steel | 316L stainless steel | 316 stainless steel | 304L stainless steel | 304 stainless steel | Austenitic stainless steel | CD4MCuN duplex | Super duplex | Alloy 20 |
| 1220 | Cover                   |                     |                  |                  |                      |                     |                      |                     |                            |                |              |          |
| 1340 | Adapter                 | Ductile Iron        |                  |                  |                      |                     |                      |                     |                            |                |              |          |
| 2100 | Shaft (Solid)           | 316 stainless steel |                  |                  |                      |                     |                      |                     |                            | CD4MCuN duplex | Super duplex | Alloy 20 |
|      | Shaft (Sleeved)         | WCB carbon steel    |                  |                  |                      |                     |                      |                     |                            |                |              |          |
| 2400 | Shaft Sleeve            | 316 stainless steel |                  |                  | CD4MCuN duplex       |                     | 316 stainless steel  |                     |                            | CD4MCuN duplex | Super duplex | Alloy 20 |
| 2200 | Impeller (Open)         | CD4MCuN duplex      |                  |                  |                      |                     |                      |                     |                            |                |              |          |
|      | Impeller (Reverse Vane) | 316 stainless steel |                  |                  |                      |                     |                      |                     | CD4MCuN duplex             |                |              |          |
|      | Impeller (Closed)       | Cast iron           | N/A              |                  | 316 stainless steel  |                     | N/A                  |                     |                            | CD4MCuN duplex | N/A          |          |

**Note:** These special materials also available:  
 Chlorimet 2 (Alloy B-2), Chlorimet 3 (Alloy C-276), Alloy C22,  
 Nickel, Titanium, Titanium-Pb, Zirconium

## Operating limits

| Limit                           | Configuration                   |             | Frame Size |      |      |       |
|---------------------------------|---------------------------------|-------------|------------|------|------|-------|
|                                 |                                 |             | 1          | 2    | 3    | 4     |
| Maximum speed (rpm)             | "A" hydraulic - extended        |             | 4700       | 3600 | 3600 | 1800  |
|                                 | "B" hydraulic - ISO 2858        |             | 3600       | 3600 | 3600 | 1800  |
|                                 | "C" hydraulic - closed impeller |             | 3600       | 3600 | 3000 | N/A   |
| Maximum power (kW per 1000 rpm) | Steel shaft                     | Screw drive | 11         | 27   | 55   | 88    |
|                                 |                                 | Key drive   | 6.3        | 22.5 | 38   | 100   |
|                                 | Carbon steel shaft              | Screw drive | 14.6       | 35.9 | 73.2 | 117   |
|                                 |                                 | Key drive   | 8.4        | 29.9 | 50.5 | 133   |
|                                 | Duplex shaft                    | Screw drive | 16.2       | 39.7 | 80.9 | 129.4 |
|                                 |                                 | Key drive   | 9.3        | 33.1 | 55.9 | 147   |

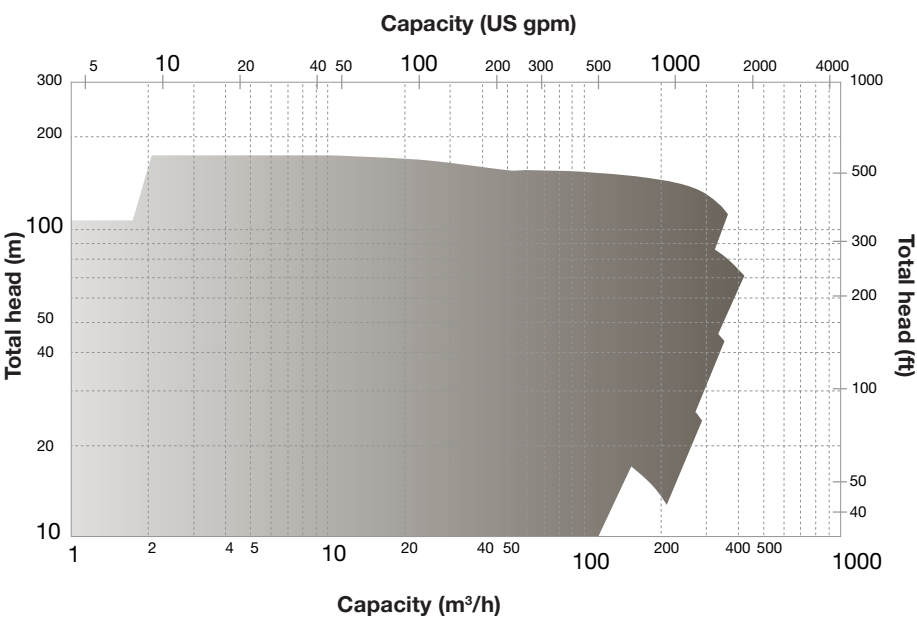
## Casing pressure



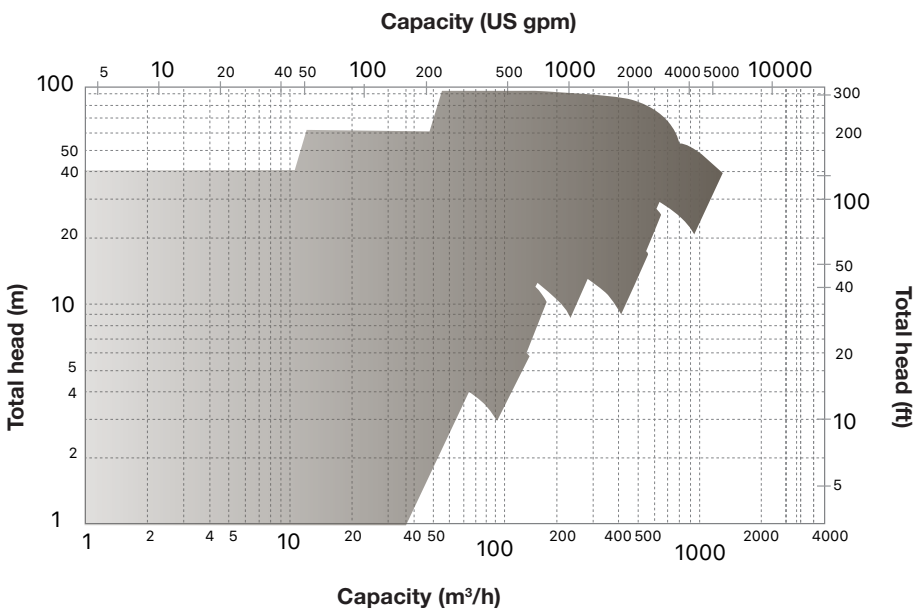
**Note:** This is an example for two material options. For more information, ask your local sales representative.

# Coverage charts — A hydraulics 50 Hz (extended flow)

n = 2900 rpm

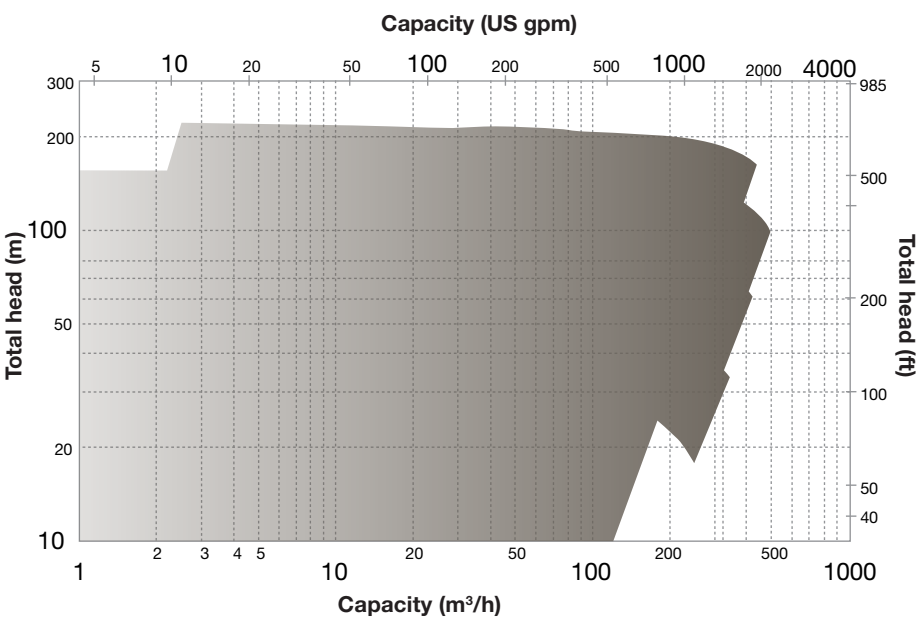


n = 1450 rpm

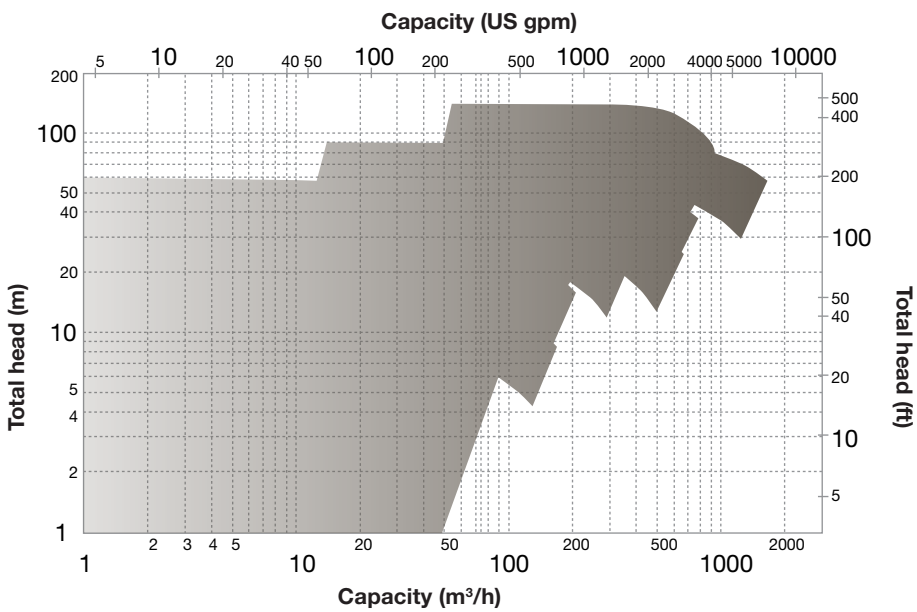


# Coverage charts — A hydraulics 60 Hz (extended flow)

n = 3500 rpm

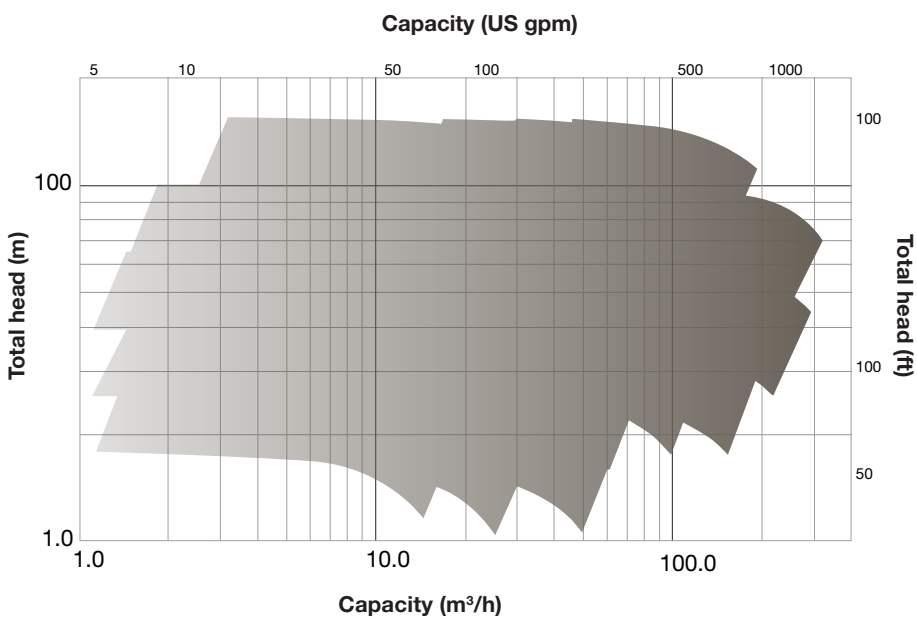


n = 1750 rpm

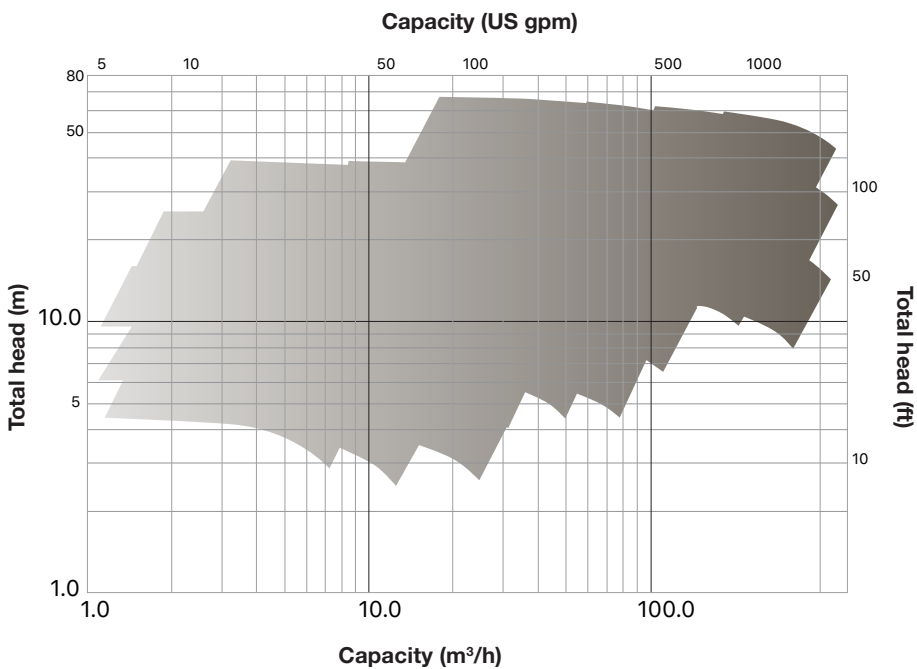


# Coverage charts — B hydraulics 50 Hz ISO 2858

n = 2900 rpm

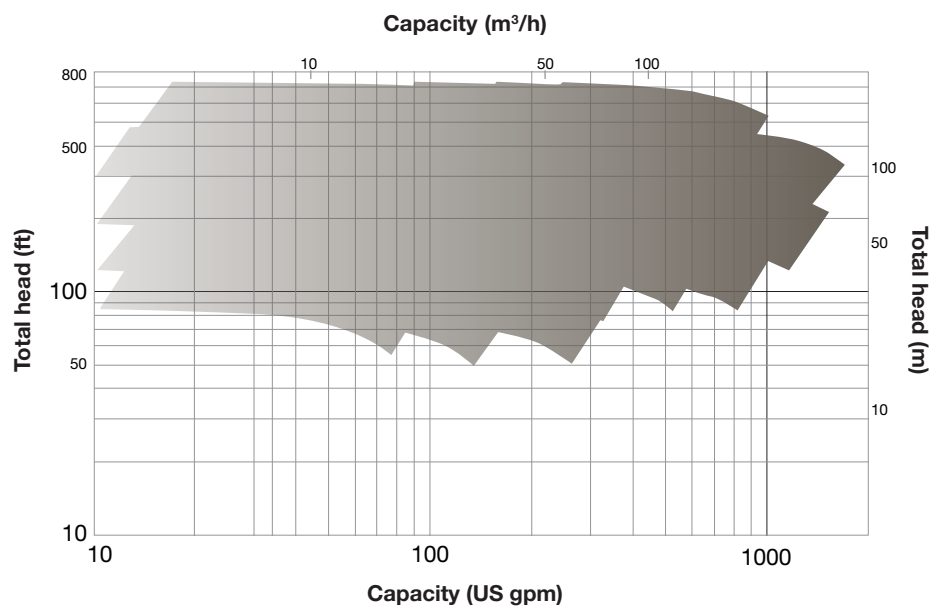


n = 1450 rpm

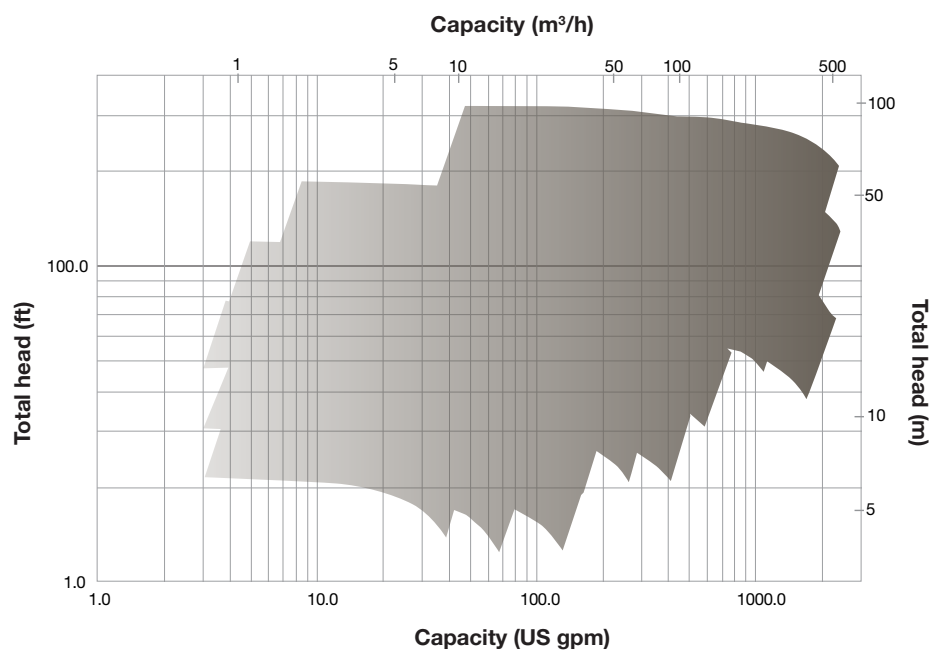


# Coverage charts — B hydraulics 60 Hz ISO 2858

n = 3500 rpm

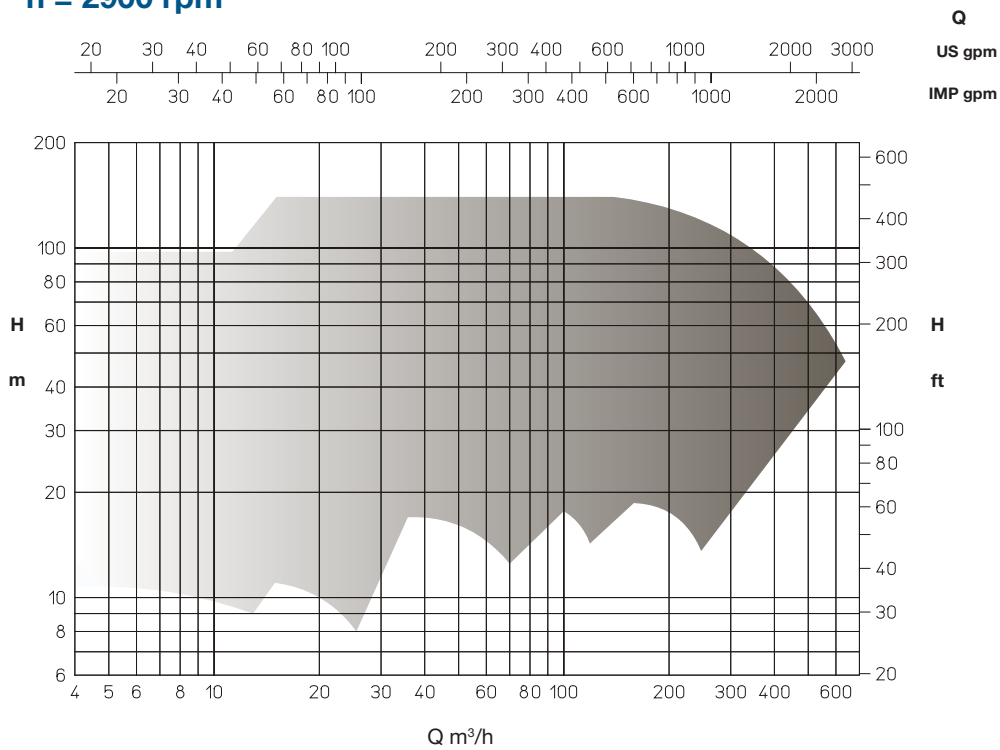


n = 1750 rpm

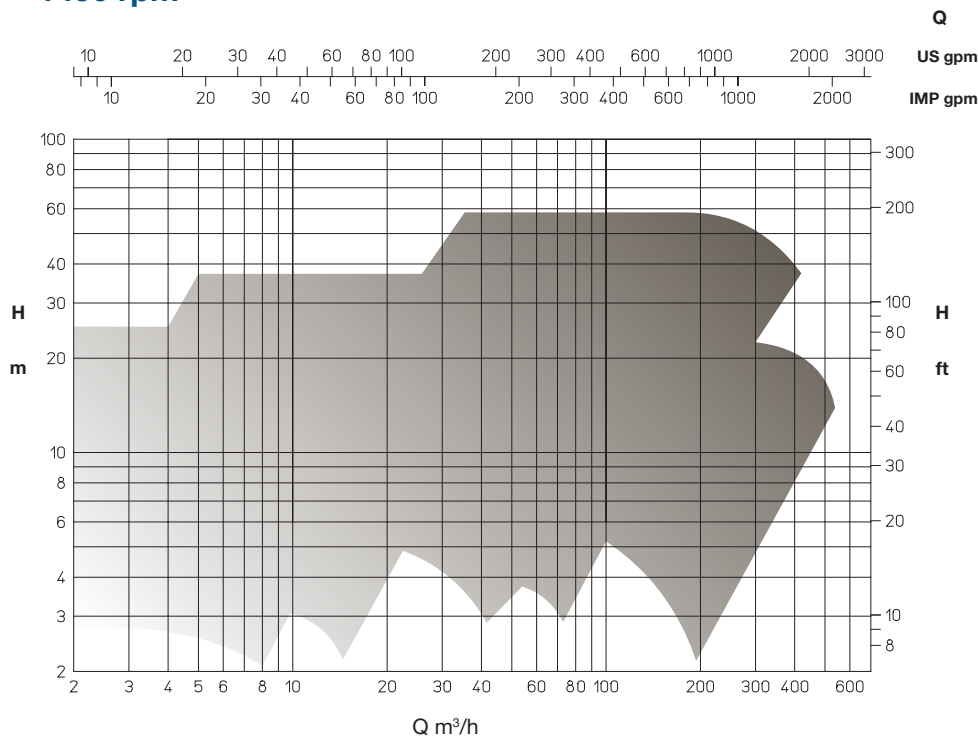


# Coverage charts — C-hydraulics 50 Hz ISO 2858

n = 2900 rpm

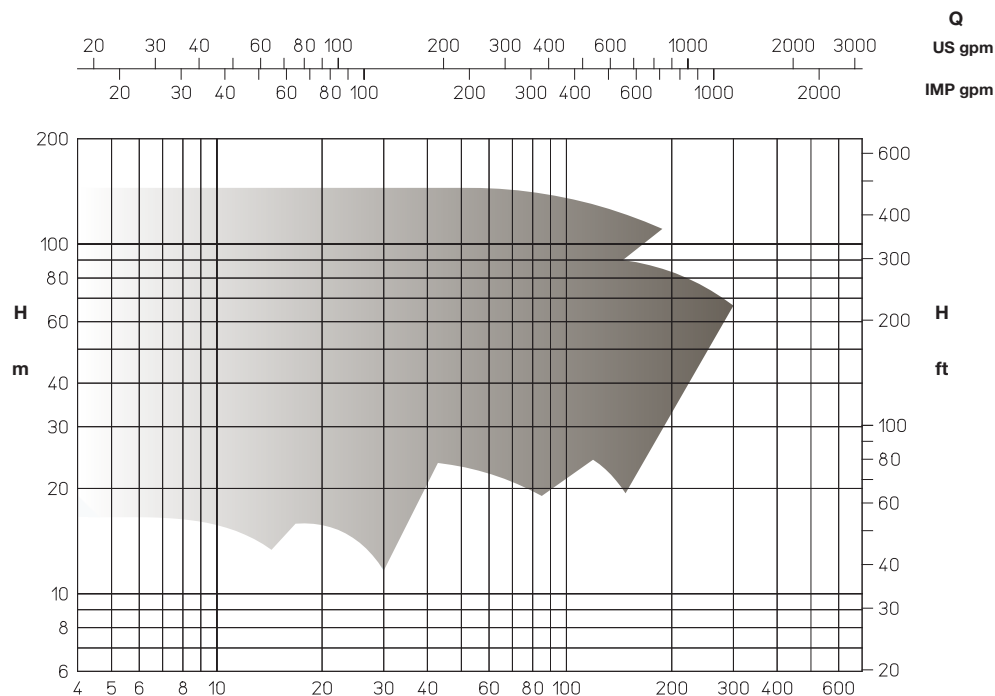


n = 1450 rpm

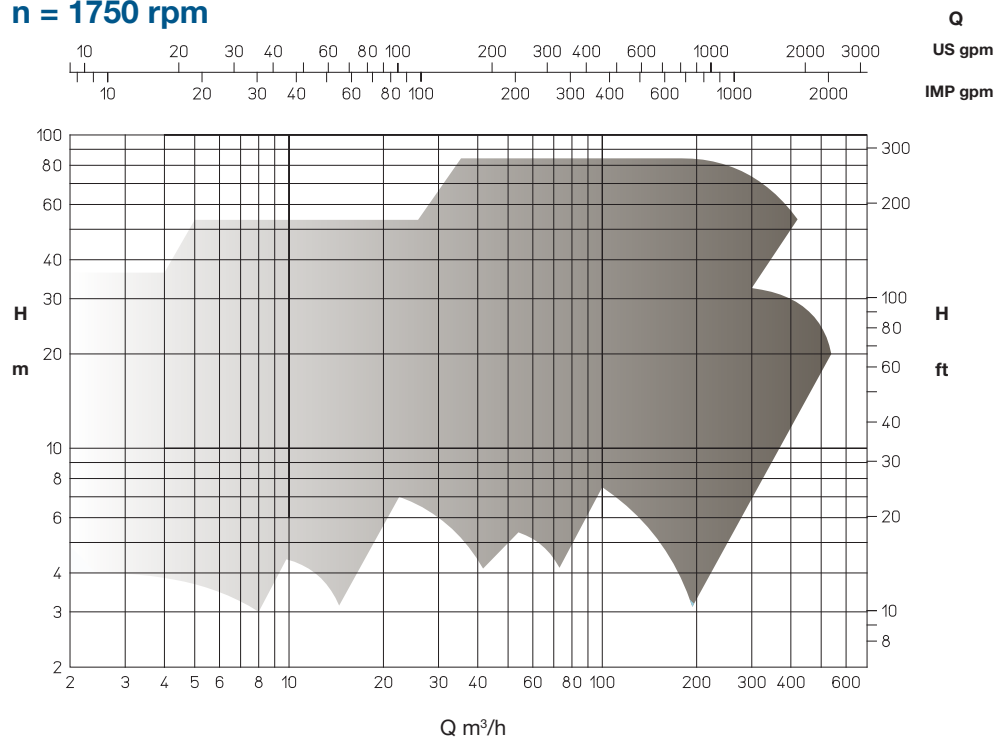


# Coverage charts — C hydraulics 60 Hz ISO 2858

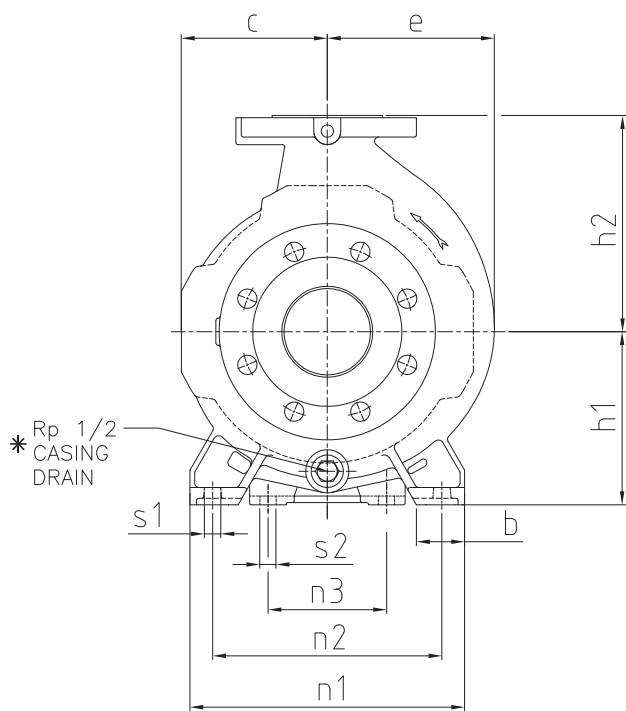
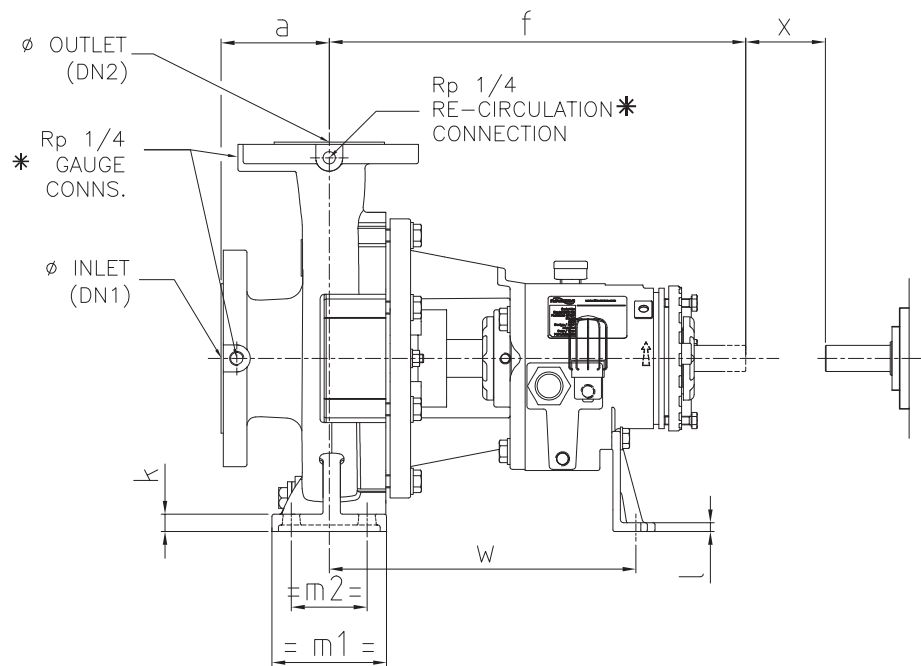
**n = 3500 rpm**



**n = 1750 rpm**



# Dimensions — long coupled pump



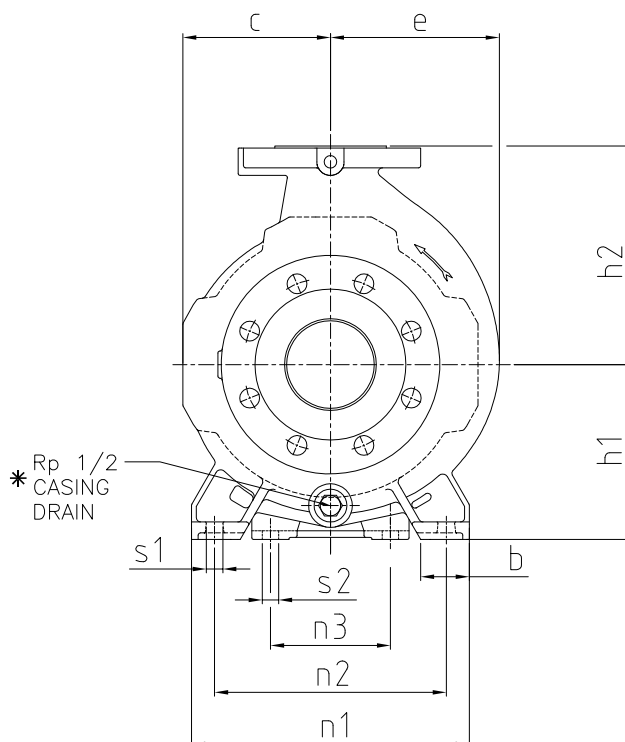
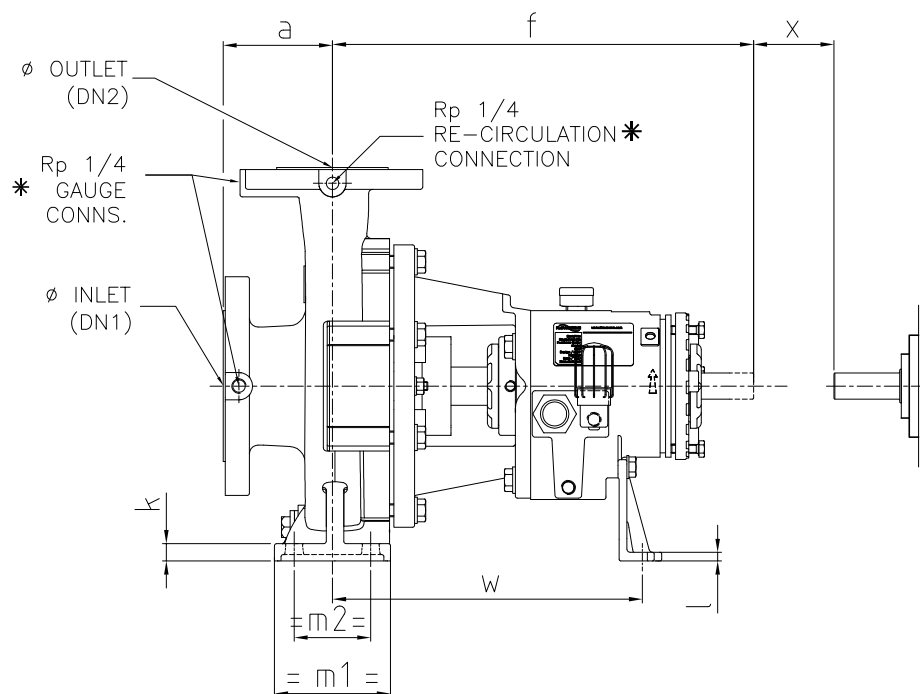
\* IF SPECIFIED  
FOR DETAILS OF FLANGES AND SHAFT END REFER TO DRG No. B631/072 SHEET 2  
FOR DETAILS OF FLANGED CASING DRAIN ARRGT. REFER TO DRG No. B631/072 SHEET 3

## Long coupled pump dimensions (see drawing on page 34)

All dimensions in mm, according to ISO 2858. A and B hydraulics to 16 bar (232 psi); C hydraulics to 25 bar (363 psi)

| Pump Designation |              |          |            | Casing and Impeller Availability |     |       |     |       | Pump Dimensions |     |                |                |       |       |       |       |       | Support Dimensions |     |                |                |                |                |                |     |           |       | Clearance Holes for Bolts |                |                | DBSE to ISO 2858 X |     |     |     |     |
|------------------|--------------|----------|------------|----------------------------------|-----|-------|-----|-------|-----------------|-----|----------------|----------------|-------|-------|-------|-------|-------|--------------------|-----|----------------|----------------|----------------|----------------|----------------|-----|-----------|-------|---------------------------|----------------|----------------|--------------------|-----|-----|-----|-----|
| Inlet (DN)       | Outlet (DN2) | Impeller | Frame Size | A HYD                            |     | B HYD |     | C HYD | a               | f   | h <sub>1</sub> | h <sub>2</sub> | A HYD | B HYD | C HYD | A HYD | B HYD | C HYD              | b   | m <sub>1</sub> | m <sub>2</sub> | n <sub>1</sub> | n <sub>2</sub> | n <sub>3</sub> | w   | A & B HYD | C HYD | t                         | s <sub>1</sub> | s <sub>2</sub> |                    |     |     |     |     |
|                  |              |          |            | OP                               | RV  | OP    | RV  | CL    |                 |     |                |                | c     | c     | c     | e     | e     | e                  |     |                |                |                |                |                |     | k         | k     |                           |                |                |                    |     |     |     |     |
| 40               | 25           | 125      | 1          | Yes                              | No  | No    | No  | Yes   | 80              | 385 | 112            | 140            | 88    | -     | 103   | 93    | -     | 103                | 45  | 106            | 70             | 180            | 140            | 285            | 12  | 14        | 8     | M12                       | 100            |                |                    |     |     |     |     |
| 50               | 32           | 125      |            | Yes                              | No  | Yes   | No  | Yes   |                 |     |                |                | 90    | 86    | 103   | 103   | 93    | 103                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 65               | 40           | 125      |            | Yes                              | No  | Yes   | Yes | Yes   |                 |     |                |                | 96    | 96    | 103   | 110   | 103   | 103                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 80               | 50           | 125      |            | Yes                              | No  | Yes   | Yes | Yes   |                 |     |                |                | 103   | 103   | 114   | 119   | 114   | 140                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 100              | 65           | 125      |            | No                               | No  | No    | No  | Yes   |                 |     |                |                | -     | -     | 110   | -     | -     | 142                |     |                |                |                |                |                |     |           |       |                           |                | 65             | 125                | 95  | 280 | 212 |     |
| 100              | 80           | 125      |            | Yes                              | No  | No    | No  | No    |                 |     |                |                | 121   | -     | -     | 140   | -     | -                  | 60  |                |                |                |                |                |     |           |       |                           |                | 270            |                    |     |     |     |     |
| 32               | 20           | 160      |            | Yes                              | No  | No    | No  | No    | 80              | 385 | 132            | 160            | 104   | -     | -     | 104   | -     | -                  | 45  | 106            | 70             | 230            | 190            | 285            | 16  | 14        | 8     | M12                       | 100            |                |                    |     |     |     |     |
| 40               | 25           | 160      |            | Yes                              | Yes | No    | No  | Yes   |                 |     |                |                | 104   | -     | 118   | 106   | -     | 118                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 50               | 32           | 160      |            | Yes                              | Yes | Yes   | No  | Yes   |                 |     |                |                | 104   | 108   | 118   | 112   | 108   | 118                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 65               | 40           | 160      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 104   | 104   | 118   | 120   | 113   | 125                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 80               | 50           | 160      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 107   | 108   | 120   | 133   | 129   | 139                |     |                |                |                |                |                |     |           |       |                           |                | 60             | 125                | 95  | 255 | 212 |     |
| 100              | 65           | 160      | Yes        | No                               | No  | Yes   | Yes | 160   | 200             | 133 | 121            | 130            | 147   | 140   | 159   | 270   |       |                    |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 125              | 80           | 160      | 2          | No                               | No  | No    | Yes | Yes   | 125             | 500 | 180            | 225            | -     | 138   | 142   | -     | 158   | 177                | 65  | 125            | 95             | 320            | 250            | 370            | 19  | -         | 10    | M16                       | 140            |                |                    |     |     |     |     |
| 125              | 100          | 160      |            | Yes                              | No  | No    | No  | No    |                 |     |                |                | 200   | 280   | 139   | -     | -     | 188                | -   |                |                | -              | 75             |                | 160 | 120       | 350   |                           |                | 280            |                    |     |     |     |     |
| 32               | 20           | 200      | 1          | Yes                              | No  | No    | No  | No    | 80              | 385 | 160            | 180            | 133   | -     | -     | 133   | -     | -                  | 45  | 106            | 70             | 230            | 190            | 285            | 16  | 14        | 8     | M12                       | 100            |                |                    |     |     |     |     |
| 40               | 25           | 200      |            | Yes                              | No  | No    | No  | Yes   |                 |     |                |                | 133   | -     | 138   | 133   | -     | 138                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 50               | 32           | 200      |            | Yes                              | Yes | Yes   | No  | Yes   |                 |     |                |                | 133   | 128   | 138   | 133   | 128   | 138                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 65               | 40           | 200      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 133   | 130   | 138   | 140   | 130   | 142                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 80               | 50           | 200      | 2          | Yes                              | Yes | Yes   | Yes | Yes   | 100             | 500 | 180            | 225            | 140   | 135   | 139   | 156   | 155   | 156                | 60  | 125            | 95             | 255            | 212            | 370            | 16  | 16        | 10    | M12                       | 140            |                |                    |     |     |     |     |
| 100              | 65           | 200      |            | Yes                              | Yes | No    | Yes | Yes   |                 |     |                |                | 225   | 136   | 137   | 46    | 166   | 165                |     |                |                | 172            | 60             |                |     |           |       |                           |                | 125            | 95                 | 310 | 250 |     |     |
| 125              | 80           | 200      |            | No                               | No  | Yes   | Yes | Yes   |                 |     |                |                | 250   | -     | 138   | 155   | -     | 171                |     |                |                | 186            | 75             |                |     |           |       |                           |                |                |                    | 350 | 280 |     |     |
| 125              | 100          | 200      |            | Yes                              | No  | Yes   | Yes | Yes   |                 |     |                |                | 200   | 280   | 151   | 143   | 166   | 194                |     |                |                | 185            | 207            |                |     |           |       |                           |                | 75             | 160                | 120 | 350 | 280 |     |
| 40               | 25           | 250      | 2          | Yes                              | No  | Yes   | No  | Yes   | 100             | 500 | 180            | 225            | 166   | -     | -     | 166   | -     | -                  | 60  | 125            | 95             | 310            | 250            | 370            | 16  | 14        | 10    | M12                       | 100            |                |                    |     |     |     |     |
| 50               | 32           | 250      |            | Yes                              | No  | Yes   | No  | Yes   |                 |     |                |                | 166   | 161   | 165   | 166   | 161   | 165                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 65               | 40           | 250      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 166   | 161   | 165   | 166   | 161   | 165                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 80               | 50           | 250      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 166   | 165   | 165   | 172   | 165   | 178                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 100              | 65           | 250      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 167   | 161   | 171   | 195   | 175   | 192                |     |                |                |                |                |                |     |           |       |                           |                | 75             | 160                | 120 | 350 | 280 |     |
| 125              | 80           | 250      |            | No                               | No  | Yes   | Yes | Yes   |                 |     |                |                | -     | 170   | 182   | -     | 199   | 208                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     | 390 | 315 |     |
| 125              | 100          | 250      | 3          | Yes                              | Yes | Yes   | Yes | Yes   | 140             | 530 | 225            | 280            | 167   | 175   | 188   | 223   | 209   | 221                | 95  | 200            | 150            | 350            | 280            | 370            | 19  | 16        | 10    | M16                       | 140            |                |                    |     |     |     |     |
| 150              | 125          | 250      |            | Yes                              | No  | Yes   | Yes | Yes   |                 |     |                |                | 250   | 355   | 179   | 178   | 205   | 235                |     |                |                | 230            | 255            |                |     |           |       |                           |                | 390            | 315                |     |     |     |     |
| 200              | 150          | 250      |            | Yes                              | No  | Yes   | Yes | Yes   |                 |     |                |                | 280   | 375   | 192   | 188   | 215   | 272                |     |                |                | 262            | 272            |                |     |           |       |                           |                | 95             | 200                | 150 | 540 | 450 | 140 |
| 50               | 32           | 315      | 2          | Yes                              | No  | No    | No  | No    | 125             | 500 | 200            | 250            | 198   | -     | -     | 196   | -     | -                  | 60  | 125            | 95             | 335            | 280            | 370            | 16  | 14        | 10    | M12                       | 100            |                |                    |     |     |     |     |
| 65               | 40           | 315      |            | Yes                              | No  | Yes   | Yes | Yes   |                 |     |                |                | 198   | 197   | 200   | 202   | 197   | 200                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 80               | 50           | 315      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 198   | 200   | 200   | 207   | 200   | 211                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 100              | 65           | 315      | 3          | Yes                              | Yes | Yes   | Yes | Yes   | 140             | 530 | 225            | 280            | 198   | 200   | 204   | 213   | 212   | 219                | 75  | 160            | 120            | 390            | 400            | 370            | 19  | 19        | 10    | M16                       | 140            |                |                    |     |     |     |     |
| 125              | 80           | 315      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 198   | 200   | 204   | 213   | 212   | 219                | 79  |                |                | 398            |                |                |     |           |       |                           |                | 315            |                    |     |     |     |     |
| 125              | 100          | 315      |            | No                               | No  | Yes   | Yes | Yes   |                 |     |                |                | 207   | 201   | 209   | 245   | 224   | 233                | 80  |                |                | 400            |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 150              | 125          | 315      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 212   | 208   | 227   | 262   | 249   | 262                | 95  |                |                | 200            |                |                |     |           |       |                           |                | 150            | 490                | 400 |     |     |     |
| 200              | 150          | 315      | 4          | Yes                              | No  | Yes   | Yes | No    | 160             | 670 | 315            | 400            | 220   | 216   | -     | 288   | 275   | -                  | 95  | 200            | 150            | 540            | 450            | 140            | 500 | 20        | -     | 12                        | M20            | M16            | 180                |     |     |     |     |
| 100              | 65           | 400      | 3          | Yes                              | Yes | No    | No  | No    | 125             | 530 | 280            | 355            | 260   | -     | -     | 263   | -     | -                  | 75  | 160            | 120            | 355            | 400            | 110            | 370 | 19        | 16    | 10                        | M16            | M12            | 140                |     |     |     |     |
| 125              | 80           | 400      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 260   | 264   | 248   | 283   | 264   | 266                |     |                |                |                |                |                |     |           |       |                           |                |                |                    |     |     |     |     |
| 125              | 100          | 400      |            | No                               | No  | Yes   | Yes | Yes   |                 |     |                |                | -     | 260   | 261   | -     | 272   | 282                |     |                |                |                |                |                |     |           |       |                           |                |                |                    | 94  | 200 | 150 | 500 |
| 15               | 125          | 400      |            | Yes                              | Yes | Yes   | Yes | Yes   |                 |     |                |                | 400   | 400   | 262   | 260   | 265   | 305                |     |                |                |                |                |                |     |           |       |                           |                |                |                    | 295 | 294 | 95  | 200 |
| 200              | 150          | 400      | Yes        | Yes                              | Yes | Yes   | No  | 160   | 670             | 355 | 500            | 277            | 264   | -     | 356   | 303   | -     | 95                 | 200 | 150            | 540            | 450            | 140            | 500            | 24  | -         | 12    | M20                       | M16            | 180            |                    |     |     |     |     |
| 250              | 200          | 400      | Yes        | No                               | No  | No    | No  | 180   |                 |     |                | 400            | 290   | -     | -     | 385   | -     |                    |     |                | -              | 95             | 200            | 150            | 540 | 450       | 140   | 500                       | 24             | -              | 12                 | M20 | M16 |     |     |
| 200              | 150          | 500      | Yes        | No                               | No  | No    | No  | 180   |                 |     |                | 400            | 380   | -     | -     | 445   | -     |                    |     |                | -              |                |                |                | 95  | 200       | 150   | 540                       | 450            | 140            | 500                | 24  | -   | 12  | M20 |

Dimensions — long coupled, high-pressure pump



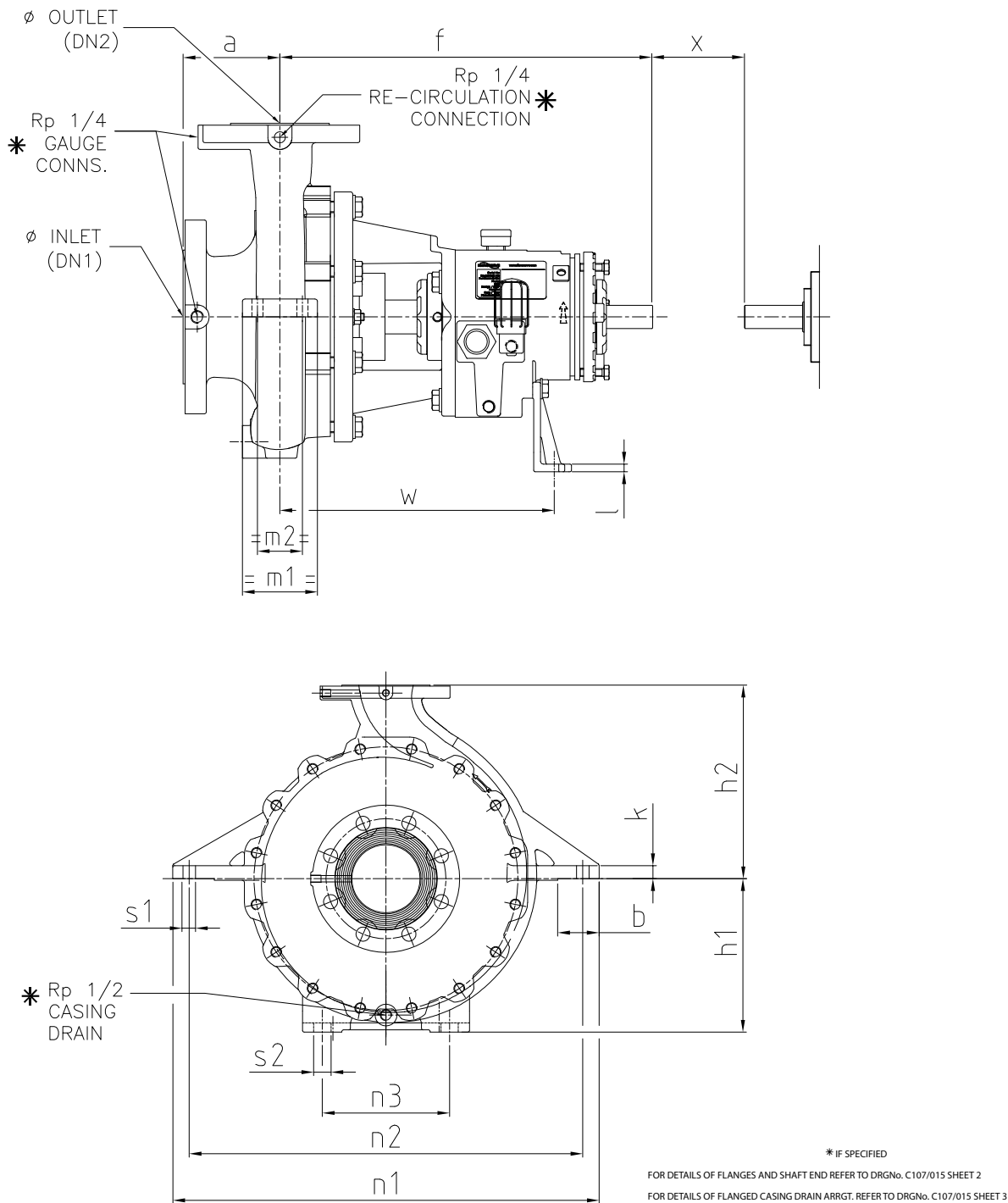
\* IF SPECIFIED  
FOR DETAILS OF FLANGES & SHAFT END REFER TO DRGNo. B631/073 SHEET 2  
FOR DETAILS OF FLANGED CASING DRAIN ARRGT, REFER TO DRGNo. B631/073 SHEET 3

## Long coupled, high-pressure pump dimensions (see drawing on page 36)

All dimensions in mm, according to ISO 2858. A and B hydraulics to 25 bar (363 psi)

| Pump Designation |              |          |                | Casing and Impeller Availability |                |       |     | Pump Dimensions |       |     |                |       |       |                |                |       |       |       |       |                |                |                |                | Support Dimensions |     |           |     |                |                |     |     |     |     | Clearance Holes for Bolts |     | DBSE to ISO 2858 X |     |     |     |
|------------------|--------------|----------|----------------|----------------------------------|----------------|-------|-----|-----------------|-------|-----|----------------|-------|-------|----------------|----------------|-------|-------|-------|-------|----------------|----------------|----------------|----------------|--------------------|-----|-----------|-----|----------------|----------------|-----|-----|-----|-----|---------------------------|-----|--------------------|-----|-----|-----|
| Inlet (DN)       | Outlet (DN2) | Impeller | Frame Size     | A HYD                            |                | B HYD |     | A HYD           | B HYD | f   | h <sub>1</sub> | A HYD | B HYD | A HYD          | B HYD          | A HYD | B HYD | A HYD | B HYD | m <sub>1</sub> | m <sub>2</sub> | n <sub>1</sub> | n <sub>2</sub> | n <sub>3</sub>     | w   | A & B HYD | t   | s <sub>1</sub> | s <sub>2</sub> |     |     |     |     |                           |     |                    |     |     |     |
|                  |              |          |                | OP                               | RV             | OP    | RV  |                 |       |     |                | a     | a     | h <sub>2</sub> | h <sub>2</sub> | c     | c     | e     | e     |                |                | b              | b              | k                  |     |           |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 40               | 25           | 125      | 1              | Yes                              | No             | No    | No  |                 | -     | 385 | 112            | 140   | -     | 98             | -              | 98    | -     | 45    | -     | 106            | 70             | 180            | 140            | 110                | 285 | 12        | 8   | M12            | M12            | 100 |     |     |     |                           |     |                    |     |     |     |
| 50               | 32           | 125      |                | Yes                              | No             | Yes   | No  | 80              | 80    |     |                | 140   | 140   | 90             | 86             | 101   | 94    | 45    | 45    |                |                | 200            | 160            |                    |     | 12        |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 65               | 40           | 125      |                | Yes                              | No             | Yes   | Yes | 80              | 80    |     |                | 155   | 140   | 99             | 96             | 111   | 104   | 45    | 45    |                |                | 230            | 190            |                    |     | 12        |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 80               | 50           | 125      |                | Yes                              | No             | Yes   | Yes | 100             | 100   |     |                | 132   | 165   | 160            | 108            | 103   | 120   | 115   | 45    |                |                | 45             | 230            |                    |     | 190       |     |                |                |     | 12  |     |     |                           |     |                    |     |     |     |
| 32               | 20           | 160      | 1              | No                               | No             | No    | No  |                 | -     | 385 | 132            | 160   | -     | 104            | -              | 104   | -     | 45    | -     | 106            | 70             | 230            | 190            | 110                | 285 | 16        | 8   | M12            | M12            | 100 |     |     |     |                           |     |                    |     |     |     |
| 40               | 25           | 160      |                | Yes                              | No             | No    | No  | 80              | -     |     |                |       | 104   | -              | 106            | -     | 45    | -     |       |                |                |                |                |                    |     |           |     |                |                |     | 16  |     |     |                           |     |                    |     |     |     |
| 50               | 32           | 160      |                | Yes                              | No             | Yes   | No  | 80              | 80    |     |                | 160   | 104   | 108            | 113            | 108   | 45    | 45    |       |                |                |                | 16             |                    |     |           |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 65               | 40           | 160      |                | Yes                              | No             | Yes   | Yes | 80              | 80    |     |                |       | 104   | 104            | 122            | 114   | 45    | 45    |       |                |                |                | 16             |                    |     |           |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 80               | 50           | 160      | 2              | Yes                              | No             | Yes   | Yes | 100             | 100   | 500 | 160            | 180   | 180   | 108            | 108            | 133   | 130   | 45    | 45    | 125            | 95             | 255            | 212            | 110                | 370 | 16        | 10  | M12            | M12            | 140 |     |     |     |                           |     |                    |     |     |     |
| 100              | 65           | 160      |                | Yes                              | No             | No    | Yes | 115             | -     |     |                | 210   | 200   | 133            | 121            | 148   | 142   | 60    | 60    |                |                | 270            |                |                    |     | 16        |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 125              | 80           | 160      |                | Yes                              | No             | No    | Yes | -               | 125   |     |                | 180   | -     | 225            | -              | 138   | -     | 160   | -     |                |                | 75             | 320            |                    |     | 250       |     |                |                |     | -   |     |     |                           |     |                    |     |     |     |
| 32               | 20           | 200      |                | 1                                | Yes            | No    | No  | No              |       |     |                | -     | 385   | 160            | 180            | -     | 133   | -     | 133   |                |                | -              | 45             | -                  | 106 | 70        |     | 230            | 190            | 285 | 110 | 16  | 8   | M12                       | M12 | 100                |     |     |     |
| 40               | 25           | 200      | Yes            |                                  | No             | Yes   | No  | 80              | -     |     |                | -     |       |                |                | 133   | -     | 133   | -     |                |                | 45             | -              |                    |     |           |     |                |                |     |     |     |     |                           |     |                    | 16  |     |     |
| 50               | 32           | 200      | Yes            |                                  | No             | Yes   | No  | 80              | 80    |     |                | 180   |       |                | 133            | 128   | 133   | 128   | 45    |                |                | 45             | 255            | 212                |     |           |     | 16             |                |     |     |     |     |                           |     |                    |     |     |     |
| 65               | 40           | 200      | Yes            |                                  | No             | Yes   | Yes | 100             | 100   |     |                | 180   |       |                | 133            | 132   | 142   | 132   | 45    |                |                | 45             | 254            | 212                |     |           |     | 16             |                |     |     |     |     |                           |     |                    |     |     |     |
| 80               | 50           | 200      | 2              | Yes                              | No             | Yes   | Yes | 100             | 100   | 500 | 180            | 210   | 200   | 136            | 135            | 158   | 156   | 44.5  | 44.5  | 125            | 95             | 254            | 212            | 110                | 370 | 16        | 10  | M12            | M12            | 140 |     |     |     |                           |     |                    |     |     |     |
| 100              | 65           | 200      |                | Yes                              | No             | No    | Yes | -               | -     |     |                | 210   | 200   | 136            | 135            | 158   | 156   | 44.5  | 44.5  |                |                |                |                |                    |     | 16        |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 125              | 80           | 200      |                | No                               | No             | Yes   | Yes | -               | -     |     |                | 180   | -     | 250            | -              | 139   | -     | 174   | -     |                |                | 75             | 350            |                    |     | 280       |     |                |                |     | -   |     |     |                           |     |                    |     |     |     |
| 125              | 100          | 200      |                | Yes                              | No             | Yes   | Yes | 125             | -     |     |                | 200   | 280   | 280            | 152            | 145   | 195   | 187   | 75    |                |                | 75             | 350            | 280                | 16  |           |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 40               | 25           | 250      | 2              | Yes                              | No             | No    | No  |                 | -     |     |                | 500   | 180   | 225            | -              | 166   | -     | 166   | -     |                |                | 60             | 125            | 95                 | 310 | 350       |     | 110            | 370            | 16  | 10  | M12 | M12 | 100                       |     |                    |     |     |     |
| 50               | 32           | 250      |                | Yes                              | No             | No    | No  | 100             | -     |     |                |       |       |                |                | 166   | -     | 166   | -     |                |                | 60             |                |                    |     |           |     |                |                |     |     |     |     |                           |     | 16                 |     |     |     |
| 65               | 40           | 250      |                | Yes                              | No             | No    | No  | 100             | -     |     |                |       |       | 166            | -              | 166   | -     | 60    |       |                |                |                |                |                    | 16  |           |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 80               | 50           | 250      |                | Yes                              | No             | No    | No  | 125             | -     | 166 | -              |       |       | 174            | -              | 60    |       |       | 16    |                |                |                |                |                    |     |           |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 100              | 65           | 250      | 3              | Yes                              | No             | No    | No  |                 | -     | 530 | 200            | 200   | 250   | -              | 169            | -     | 196   | -     | 75    | -              | 160            | 120            | 350            | 280                | 110 | 370       | 16  | 10             | M16            | M16 | 140 |     |     |                           |     |                    |     |     |     |
| 125              | 100          | 250      |                | Yes                              | No             | No    | No  | 140             | -     |     |                | 225   | 290   | -              | 183            | -     | 226   | -     | 75    | -              |                |                | 390            | 315                |     |           | 19  |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 150              | 125          | 250      |                | Yes                              | No             | No    | No  | 140             | -     |     |                | 355   | -     | 182            | -              | 237   | -     | 75    | -     | 390            |                |                | 315            | 19                 |     |           |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 50               | 32           | 315      |                | 2                                | As Std. 16 bar | No    | No  | No              |       |     |                | -     | 500   | 200            | 250            | -     | 198   | -     | 198   | -              |                |                | 60             | 125                |     |           | 95  |                | 335            | 280 | 110 | 370 | 16  | 10                        | M12 | M12                | 100 |     |     |
| 65               | 40           | 315      | As Std. 16 bar |                                  | No             | No    | No  | 125             | -     |     |                | -     |       |                |                |       | 202   | -     | 60    |                |                |                |                |                    |     |           |     |                |                |     |     |     | 16  |                           |     |                    |     |     |     |
| 80               | 50           | 315      | Yes            |                                  | No             | No    | No  |                 | -     |     |                | 200   |       |                | -              | 209   | -     | 60    |       |                |                |                | 16             |                    |     |           |     |                |                |     |     |     |     |                           |     |                    |     |     |     |
| 100              | 65           | 315      | Yes            |                                  | No             | No    | No  |                 | -     |     |                | 200   |       |                | -              | 215   | -     | 75    | -     |                |                |                |                |                    |     |           |     |                | 19             |     |     |     |     |                           |     |                    |     |     |     |
| 125              | 80           | 315      | 3              | Yes                              | No             | No    | No  |                 | -     |     |                | 530   | 250   | 315            | -              | 209   | -     | 247   | -     | 79             |                |                | -              | 160                |     |           | 120 |                | 398            | 315 | 110 | 500 | 24  | 12                        | M20 | M16                | 180 |     |     |
| 200              | 150          | 315      |                | Yes India                        | No             | No    | No  | 160             | -     | 670 | 315            |       |       |                |                | 415   | -     | 223   | -     | 289            | -              | 95             | -              |                    | 540 | 450       |     | 140            | 500            | 20  |     |     |     |                           |     |                    |     |     |     |
| 150              | 125          | 400      |                | Yes India                        | No             | No    | No  | 140             | -     | 530 | 315            |       |       | 415            | -              | 265   | -     | 308   | -     | 95             | -              | 490            | 400            |                    | 110 | 370       |     | 24             | 10             | 20  |     |     | M12 |                           |     |                    |     | M16 | 180 |
| 200              | 150          | 400      |                | Yes                              | No             | No    | No  | 160             | -     | 670 |                |       |       | 465            | -              | 276   | -     | 255   | -     | 95             | -              | 540            | 450            |                    | 140 | 500       |     | 24             | 12             |     |     |     |     |                           |     |                    |     |     |     |

# **Dimensions — long coupled, centerline mounted, high-pressure pump**

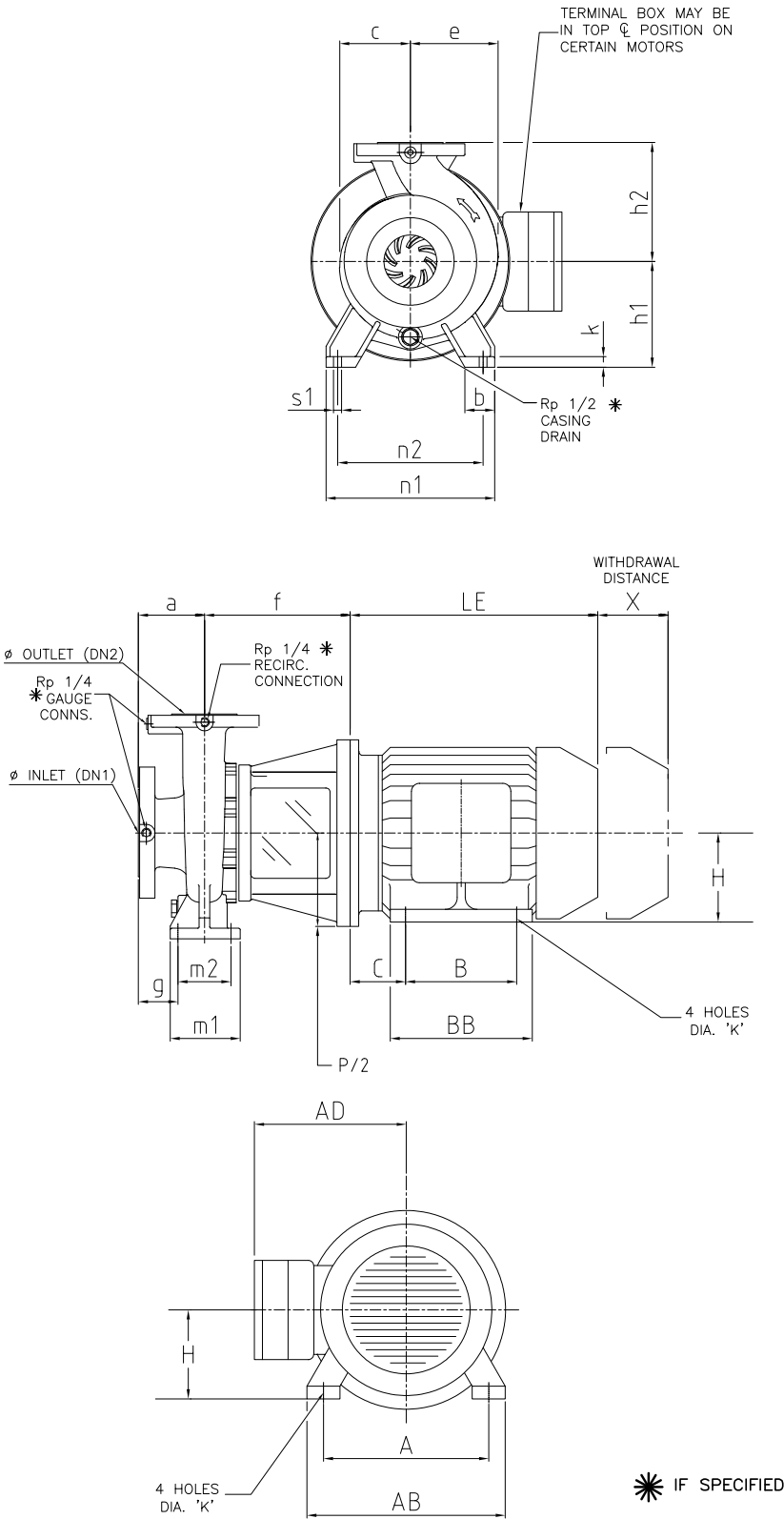


## Long coupled, centerline-mounted, high-pressure pump dimensions (see drawing on page 38)

All dimensions in mm

| Pump Designation |              |          |            | Casing and Impeller Availability |     |       |     | Pump Dimensions |       |     |                |                |                | Support Dimensions |       |                |                |                |                |                |                |                |     |           |     | Clearance Holes for Bolts |                |     | DBSE to ISO 2858 X |
|------------------|--------------|----------|------------|----------------------------------|-----|-------|-----|-----------------|-------|-----|----------------|----------------|----------------|--------------------|-------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----|-----------|-----|---------------------------|----------------|-----|--------------------|
| Inlet (DN)       | Outlet (DN2) | Impeller | Frame Size | A HYD                            |     | B HYD |     | A HYD           | B HYD | f   | h <sub>1</sub> | A HYD          | B HYD          | A HYD              | B HYD | A HYD          | B HYD          | A HYD          | B HYD          | n <sub>1</sub> | n <sub>2</sub> | n <sub>3</sub> | w   | A & B HYD | l   | s <sub>1</sub>            | s <sub>2</sub> |     |                    |
|                  |              |          |            | OP                               | RV  | OP    | RV  | a               | a     |     |                | h <sub>2</sub> | h <sub>2</sub> | b                  | b     | m <sub>1</sub> | m <sub>1</sub> | m <sub>2</sub> | m <sub>2</sub> |                |                |                |     | k         |     |                           |                |     |                    |
| 40               | 25           | 125      | 1          | Yes                              | No  | No    | No  | 80              | -     | 385 | 112            | 140            | -              | 48                 | -     | 84             | -              | 48             | -              | 314            | 278            | 110            | 285 | 12        | 8   | M12                       | M12            | 100 |                    |
| 50               | 32           | 125      |            | Yes                              | No  | No    | No  |                 | -     |     |                | 140            | -              | 48                 | -     | 84             | -              | 48             | -              | 314            | 278            | 110            | 285 | 12        | 8   | M12                       | M12            | 100 |                    |
| 65               | 40           | 125      |            | Yes                              | No  | No    | No  |                 | -     |     |                | 155            | -              | 48                 | -     | 84             | -              | 48             | -              | 334            | 298            | 110            | 285 | 12        | 8   | M12                       | M12            | 100 |                    |
| 80               | 50           | 125      |            | Yes                              | No  | No    | No  | 100             | -     |     | 132            | 165            | -              | 48                 | -     | 84             | -              | 48             | -              | 348            | 312            | 110            | 285 | 12        | 8   | M12                       | M12            | 100 |                    |
| 32               | 20           | 160      |            | Yes                              | No  | No    | No  | 80              | -     |     |                | 160            | -              | 48                 | -     | 84             | -              | 48             | -              | 314            | 278            | 110            | 285 | 16        | 8   | M12                       | M12            | 100 |                    |
| 40               | 25           | 160      |            | Yes                              | No  | No    | No  |                 | -     |     |                |                | -              | 48                 | -     | 84             | -              | 48             | -              | 314            | 278            | 110            | 285 | 16        | 8   | M12                       | M12            | 100 |                    |
| 50               | 32           | 160      |            | Yes                              | No  | No    | No  |                 | -     |     |                |                | -              | 48                 | -     | 84             | -              | 48             | -              | 334            | 298            | 110            | 285 | 16        | 8   | M12                       | M12            | 100 |                    |
| 65               | 40           | 160      |            | Yes                              | No  | No    | No  |                 | -     |     |                |                | -              | 48                 | -     | 84             | -              | 48             | -              | 348            | 312            | 110            | 285 | 16        | 8   | M12                       | M12            | 100 |                    |
| 80               | 50           | 160      |            | Yes                              | No  | No    | No  | 100             | -     |     |                | 160            | 180            | -                  | 48    | -              | 84             | -              | 48             | -              | 376            | 340            | 110 | 285       | 16  | 8                         | M12            | M12 | 100                |
| 100              | 65           | 160      | Yes        | No                               | No  | No    | 115 | -               | 500   | 210 | -              |                | 48             | -                  | 84    | -              | 48             | -              | 408            | 372            | 110            | 370            | 16  | 10        | M12 | M12                       | 100            |     |                    |
| 125              | 100          | 160      | 1          | Yes India                        | No  | No    | No  | 125             | -     | 500 | 200            | 295            | -              | 61                 | -     | 98             | -              | 54             | -              | 522            | 476            | 110            | 370 | 16        | 10  | M16                       | M12            | 140 |                    |
| 32               | 20           | 200      |            | Yes                              | No  | No    | No  | 80              | -     | 385 | 160            | 180            | -              | 48                 | -     | 84             | -              | 48             | -              | 376            | 340            | 110            | 285 | 16        | 8   | M12                       | M12            | 100 |                    |
| 40               | 25           | 200      |            | Yes                              | No  | No    | No  |                 | -     | 385 |                |                | -              | 48                 | -     | 84             | -              | 48             | -              | 376            | 340            | 110            | 285 | 16        | 8   | M12                       | M12            | 100 |                    |
| 50               | 32           | 200      |            | Yes                              | No  | No    | No  | -               | 385   | -   |                |                | 48             | -                  | 84    | -              | 48             | -              | 376            | 340            | 110            | 285            | 16  | 8         | M12 | M12                       | 100            |     |                    |
| 65               | 40           | 200      |            | Yes                              | No  | No    | No  | 100             | -     | 385 |                |                | -              | 48                 | -     | 84             | -              | 48             | -              | 390            | 354            | 110            | 285 | 16        | 8   | M12                       | M12            | 100 |                    |
| 80               | 50           | 200      |            | Yes                              | No  | No    | No  |                 | -     | 385 |                |                | 210            | -                  | 48    | -              | 84             | -              | 48             | -              | 428            | 392            | 110 | 285       | 16  | 10                        | M12            | M12 | 100                |
| 100              | 65           | 200      |            | 2                                | Yes | No    | No  | No              | 125   | -   | 500            | 180            | 235            | -                  | 48    | -              | 84             | -              | 48             | -              | 444            | 408            | 110 | 370       | 16  | 10                        | M12            | M12 | 140                |
| 125              | 100          | 200      | Yes        |                                  | No  | No    | No  | -               |       | 500 | 200            | 280            | -              | 61                 | -     | 98             | -              | 54             | -              | 522            | 476            | 110            | 370 | 16        | 10  | M16                       | M12            | 140 |                    |
| 40               | 25           | 250      | Yes        |                                  | No  | No    | No  | 100             | -     | 500 | 180            | 225            | -              | 48                 | -     | 84             | -              | 48             | -              | 444            | 408            | 110            | 370 | 16        | 10  | M12                       | M12            | 100 |                    |
| 50               | 32           | 250      | Yes        |                                  | No  | Yes   | No  |                 | 100   | 500 |                |                | 225            | 48                 | 48    | 84             | 100            | 48             | 60             | 444            | 408            | 110            | 370 | 16        | 10  | M12                       | M12            | 100 |                    |
| 65               | 40           | 250      | Yes        |                                  | No  | Yes   | Yes |                 | 100   | 500 |                |                | 225            | 48                 | 48    | 84             | 100            | 48             | 60             | 458            | 422            | 110            | 370 | 16        | 10  | M12                       | M12            | 100 |                    |
| 80               | 50           | 250      | Yes        |                                  | No  | Yes   | Yes |                 | 125   | 500 |                |                | 200            | 250                | 250   | 61             | 61             | 98             | 124            | 54             | 80             | 522            | 476 | 110       | 370 | 16                        | 10             | M16 | M12                |
| 100              | 65           | 250      | Yes        |                                  | No  | Yes   | Yes | 125             | 125   | 500 | 225            | -              | 280            | -                  | 61    | -              | 124            | -              | 80             | 586            | 540            | 110            | 370 | -         | 10  | M16                       | M12            | 140 |                    |
| 125              | 80           | 250      | Yes        |                                  | No  | Yes   | Yes |                 | -     | 125 | 500            | 225            | -              | 280                | -     | 61             | -              | 124            | -              | 80             | 586            | 540            | 110 | 370       | -   | 10                        | M16            | M12 | 140                |
| 125              | 100          | 250      | 3          | Yes India                        | No  | Yes   | Yes | 140             | 140   | 530 | 225            | 290            | 280            | 61                 | 61    | 98             | 124            | 54             | 80             | 586            | 540            | 110            | 370 | 19        | 10  | M16                       | M12            | 140 |                    |
| 150              | 125          | 250      |            | Yes                              | No  | Yes   | Yes |                 | 140   | 530 | 250            | 355            | 355            | 61                 | 61    | 98             | 124            | 54             | 80             | 604            | 558            | 110            | 370 | 19        | 10  | M16                       | M12            | 140 |                    |
| 200              | 150          | 250      |            | No                               | No  | Yes   | Yes | -               | 160   | 530 | 280            | -              | 375            | -                  | 76    | -              | 150            | -              | 100            | 712            | 652            | 110            | 370 | -         | 10  | M20                       | M12            | 180 |                    |
| 50               | 32           | 315      | 2          | Yes                              | No  | No    | No  | 125             | -     | 500 | 200            | 250            | -              | 48                 | -     | 84             | -              | 48             | -              | 522            | 486            | 110            | 370 | 16        | 10  | M12                       | M12            | 100 |                    |
| 65               | 40           | 315      |            | No                               | No  | Yes   | Yes |                 | 125   | 500 | 200            | -              | 250            | -                  | 48    | -              | 100            | -              | 60             | 522            | 486            | 110            | 370 | -         | 10  | M12                       | M12            | 100 |                    |
| 80               | 50           | 315      |            | Yes                              | No  | Yes   | Yes |                 | 125   | 500 | 225            | 290            | 280            | 48                 | 48    | 84             | 100            | 48             | 60             | 522            | 486            | 110            | 370 | 16        | 10  | M12                       | M12            | 100 |                    |
| 100              | 65           | 315      | 3          | Yes                              | No  | Yes   | Yes | 125             | 125   | 530 | 225            | 290            | 280            | 61                 | 61    | 98             | 124            | 54             | 80             | 560            | 514            | 110            | 370 | 19        | 10  | M16                       | M12            | 140 |                    |
| 125              | 80           | 315      |            | Yes                              | No  | Yes   | Yes |                 | 125   | 530 | 250            | 315            | 315            | 61                 | 61    | 98             | 124            | 54             | 80             | 624            | 578            | 110            | 370 | 24        | 10  | M16                       | M12            | 140 |                    |
| 125              | 100          | 315      |            | No                               | No  | Yes   | Yes | -               | 140   | 530 | 250            | -              | 315            | -                  | 61    | -              | 124            | -              | 80             | 604            | 558            | 110            | 370 | -         | 10  | M16                       | M12            | 140 |                    |
| 150              | 125          | 315      |            | No                               | No  | Yes   | Yes | -               | 140   | 530 | 280            | -              | 355            | -                  | 76    | -              | 150            | -              | 100            | 982            | 622            | 110            | 370 | -         | 10  | M12                       | M12            | 140 |                    |
| 200              | 150          | 315      | 4          | Yes India                        | No  | Yes   | Yes | 160             | 160   | 670 | 315            | 415            | 400            | 76                 | 76    | 136            | 150            | 76             | 100            | 752            | 692            | 140            | 500 | 20        | 12  | M20                       | M16            | 180 |                    |
| 125              | 80           | 400      | 4          | No                               | No  | Yes   | Yes | -               | 125   | 530 | 280            | -              | 355            | -                  | 61    | -              | 124            | -              | 80             | 704            | 658            | 110            | 370 | -         | 10  | M16                       | M12            | 140 |                    |
| 125              | 100          | 400      |            | No                               | No  | Yes   | Yes | -               | 140   | 530 | 280            | -              | 355            | -                  | 76    | -              | 150            | -              | 100            | 782            | 722            | 110            | 370 | -         | 10  | M20                       | M12            | 140 |                    |
| 150              | 125          | 400      |            | Yes                              | No  | Yes   | Yes | 140             | 140   | 530 | 315            | 415            | 400            | 76                 | 76    | 136            | 150            | 76             | 100            | 782            | 722            | 110            | 370 | 24        | 10  | M20                       | M12            | 140 |                    |
| 200              | 150          | 400      |            | Yes India                        | No  | Yes   | Yes | 160             | 160   | 670 | 315            | 465            | 450            | 76                 | 76    | 136            | 150            | 76             | 100            | 882            | 822            | 140            | 500 | 24        | 12  | M20                       | M16            | 180 |                    |
| 200              | 150          | 500      | 4          | Yes India                        | No  | No    | No  | 180             | -     | 670 | 400            | 515            | -              | 76                 | -     | 136            | -              | 76             | -              | 1000           | 940            | 140            | 500 | 24        | 12  | M20                       | M16            | 180 |                    |

# Dimensions — close coupled pump



## Close coupled pump dimensions (see drawing on page 40)

All dimensions in mm; A and B hydraulics

| Pump Designation |              |          | Motor Frame Size | Pump Dimensions |                |                |     |     |     |                |                |                |                |    |      |                |     | Motor Dimensions |        |     |        |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|------------------|--------------|----------|------------------|-----------------|----------------|----------------|-----|-----|-----|----------------|----------------|----------------|----------------|----|------|----------------|-----|------------------|--------|-----|--------|----------------|---|---|---|---|--------|--------|-----|-----|-----|----|----|-----|-----|
| Inlet (DN)       | Outlet (DN2) | Impeller |                  | a               | h <sub>1</sub> | h <sub>2</sub> | c   | e   | b   | m <sub>1</sub> | m <sub>2</sub> | n <sub>1</sub> | n <sub>2</sub> | k  | g    | s <sub>1</sub> | f   | P/2              | LE Max | X   | AD max | H              | A | B | C | K | AB max | BB max |     |     |     |    |    |     |     |
| 40               | 25           | 125      | 80               | 80              | 112            | 140            | 88  | 93  | 45  | 106            | 70             | 180            | 140            | 12 | 45   | 15             | 201 | 100              | 255    | 150 | 148    | NO FOOT FITTED |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 264    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 289    | 150 | 148    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 311    | 150 | 180    |                |   |   |   |   |        |        | 100 | 160 | 140 | 63 | 12 | 204 | 170 |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 329    | 150 | 197    |                |   |   |   |   |        |        | 112 | 190 | 140 | 70 | 12 | 229 | 190 |
| 50               | 32           | 125      | 80               | 80              | 112            | 140            | 90  | 103 | 45  | 106            | 70             | 180            | 140            | 12 | 45   | 15             | 201 | 100              | 255    | 150 | 148    | NO FOOT FITTED |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 264    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 289    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 311    | 150 | 180    |                |   |   |   |   |        |        | 100 | 160 | 140 | 63 | 12 | 204 | 170 |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 329    | 150 | 197    |                |   |   |   |   |        |        | 112 | 190 | 140 | 70 | 12 | 229 | 223 |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 232 | 150              | 290    | 150 | 218    |                |   |   |   |   |        |        | 132 | 216 | 140 | 89 | 12 | 261 | 223 |
| 65               | 40           | 125      | 80               | 80              | 112            | 140            | 96  | 110 | 45  | 106            | 70             | 200            | 160            | 12 | 45   | 15             | 201 | 100              | 255    | 150 | 148    | NO FOOT FITTED |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 264    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 289    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 311    | 150 | 180    |                |   |   |   |   |        |        | 100 | 160 | 140 | 63 | 12 | 204 | 170 |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 329    | 150 | 197    |                |   |   |   |   |        |        | 112 | 190 | 140 | 70 | 12 | 229 | 190 |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 232 | 150              | 390    | 150 | 218    |                |   |   |   |   |        |        | 132 | 216 | 140 | 89 | 12 | 261 | 223 |
| 80               | 40           | 125      | 80               | 100             | 132            | 160            | 103 | 119 | 45  | 106            | 70             | 230            | 190            | 12 | 65   | 15             | 201 | 100              | 255    | 150 | 148    | NO FOOT FITTED |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 264    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 289    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 311    | 150 | 180    |                |   |   |   |   |        |        | 100 | 160 | 140 | 63 | 12 | 204 | 170 |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 329    | 150 | 197    |                |   |   |   |   |        |        | 112 | 190 | 140 | 70 | 12 | 229 | 190 |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 232 | 150              | 390    | 150 | 218    |                |   |   |   |   |        |        | 132 | 216 | 140 | 89 | 12 | 261 | 223 |
| 100              | 80           | 125      | 80               | 100             | 160            | 180            | 121 | 140 | 60  | 125            | 95             | 270            | 212            | 16 | 52.5 | 15             | 201 | 100              | 255    | 150 | 148    | NO FOOT FITTED |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 264    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 289    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 311    | 150 | 180    |                |   |   |   |   |        |        | 100 | 160 | 140 | 63 | 12 | 204 | 170 |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 329    | 150 | 197    |                |   |   |   |   |        |        | 112 | 190 | 140 | 70 | 12 | 229 | 190 |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 232 | 150              | 390    | 150 | 218    |                |   |   |   |   |        |        | 132 | 216 | 140 | 89 | 12 | 261 | 223 |
| 32               | 20           | 160      | 80               | 80              | 132            | 160            | 104 | 104 | 45  | 106            | 70             | 230            | 190            | 16 | 45   | 15             | 201 | 100              | 255    | 150 | 148    | NO FOOT FITTED |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 264    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 289    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 311    | 150 | 180    |                |   |   |   |   |        |        | 100 | 160 | 140 | 63 | 12 | 204 | 170 |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 329    | 150 | 197    |                |   |   |   |   |        |        | 112 | 190 | 140 | 70 | 12 | 229 | 190 |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 232 | 150              | 390    | 150 | 218    |                |   |   |   |   |        |        | 132 | 216 | 140 | 89 | 12 | 261 | 223 |
| 40               | 25           | 160      | 80               | 80              | 132            | 160            | 104 | 106 | 45  | 106            | 70             | 230            | 190            | 16 | 45   | 15             | 201 | 100              | 255    | 150 | 148    | NO FOOT FITTED |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 264    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 289    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 311    | 150 | 180    |                |   |   |   |   |        |        | 100 | 160 | 140 | 63 | 12 | 204 | 170 |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 329    | 150 | 197    |                |   |   |   |   |        |        | 112 | 190 | 140 | 70 | 12 | 229 | 190 |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 232 | 150              | 390    | 150 | 218    |                |   |   |   |   |        |        | 132 | 216 | 140 | 89 | 12 | 261 | 223 |
| 50               | 32           | 160      | 80               | 80              | 132            | 160            | 104 | 112 | 45  | 106            | 70             | 230            | 190            | 16 | 45   | 15             | 201 | 100              | 255    | 150 | 148    | NO FOOT FITTED |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 264    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |      |                | 201 | 100              | 289    | 150 | 157    |                |   |   |   |   |        |        |     |     |     |    |    |     |     |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 311    | 150 | 180    |                |   |   |   |   |        |        | 100 | 160 | 140 | 63 | 12 | 204 | 170 |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 212 | 125              | 329    | 150 | 197    |                |   |   |   |   |        |        | 112 | 190 | 140 | 70 | 12 | 229 | 190 |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 232 | 150              | 390    | 150 | 218    |                |   |   |   |   |        |        | 132 | 216 | 140 | 89 | 12 | 261 | 223 |
|                  |              |          | 132M             |                 |                |                |     |     |     |                |                |                |                |    |      |                | 232 | 150              | 430    | 150 | 218    |                |   |   |   |   |        |        | 132 | 216 | 178 | 89 | 12 | 261 | 223 |
| 160M             | 268          | 175      | 505              | 150             | 265            | 160            | 254 | 210 | 108 | 15             | 320            | 334            |                |    |      |                |     |                  |        |     |        |                |   |   |   |   |        |        |     |     |     |    |    |     |     |

### Close coupled pump dimensions, *continued* (see drawing on page 40)

All dimensions in mm; A and B hydraulics

| Pump Designation |              |          | Motor Frame Size | Pump Dimensions |                |                |     |     |     |                |                |                |                |    |    |    |     |     |        | Motor Dimensions |        |                |     |     |     |     |        |        |     |    |    |
|------------------|--------------|----------|------------------|-----------------|----------------|----------------|-----|-----|-----|----------------|----------------|----------------|----------------|----|----|----|-----|-----|--------|------------------|--------|----------------|-----|-----|-----|-----|--------|--------|-----|----|----|
| Inlet (DN)       | Outlet (DN2) | Impeller |                  | a               | h <sub>1</sub> | h <sub>2</sub> | c   | e   | b   | m <sub>1</sub> | m <sub>2</sub> | n <sub>1</sub> | n <sub>2</sub> | k  | g  | s1 | f   | P/2 | LE Max | X                | AD max | H              | A   | B   | C   | K   | AB max | BB max |     |    |    |
| 65               | 40           | 160      | 80               | 80              | 132            | 160            | 101 | 120 | 45  | 106            | 70             | 230            | 190            | 16 | 45 | 15 | 201 | 100 | 255    | 150              | 148    | NO FOOT FITTED |     |     |     |     |        |        |     |    |    |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |    |    | 201 | 100 | 264    | 150              | 157    |                |     |     |     |     |        |        |     |    |    |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |    |    | 201 | 100 | 289    | 150              | 157    |                |     |     |     |     |        |        |     |    |    |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 212 | 125 | 311    | 150              | 180    | 100            | 160 | 140 | 63  | 12  | 204    | 170    |     |    |    |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 212 | 125 | 329    | 150              | 197    | 112            | 190 | 140 | 70  | 12  | 229    | 190    |     |    |    |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 232 | 150 | 390    | 150              | 218    | 132            | 216 | 140 | 89  | 12  | 261    | 223    |     |    |    |
|                  |              |          | 132M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 232 | 150 | 430    | 150              | 218    | 132            | 216 | 178 | 89  | 12  | 261    | 223    |     |    |    |
|                  |              |          | 160M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 262 | 175 | 505    | 150              | 265    | 180            | 254 | 210 | 108 | 15  | 320    | 334    |     |    |    |
| 80               | 50           | 160      | 80               | 100             | 160            | 180            | 107 | 133 | 45  | 106            | 70             | 255            | 212            | 16 | 65 | 15 | 201 | 100 | 255    | 150              | 148    | NO FOOT FITTED |     |     |     |     |        |        |     |    |    |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |    |    | 201 | 100 | 214    | 150              | 157    |                |     |     |     |     |        |        |     |    |    |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |    |    | 201 | 100 | 289    | 150              | 157    |                |     |     |     |     |        |        |     |    |    |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 212 | 125 | 311    | 150              | 180    | 100            | 180 | 140 | 63  | 12  | 204    | 170    |     |    |    |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 212 | 125 | 329    | 150              | 197    | 112            | 190 | 140 | 70  | 12  | 229    | 190    |     |    |    |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 232 | 150 | 390    | 150              | 218    | 132            | 216 | 140 | 89  | 12  | 261    | 223    |     |    |    |
|                  |              |          | 132M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 232 | 150 | 430    | 150              | 218    | 132            | 218 | 178 | 89  | 12  | 261    | 223    |     |    |    |
|                  |              |          | 160M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 505    | 150              | 265    | 160            | 254 | 210 | 108 | 15  | 320    | 334    |     |    |    |
|                  |              |          | 160L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 550    | 150              | 265    | 160            | 254 | 254 | 108 | 15  | 320    | 334    |     |    |    |
|                  |              |          | 180M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 585    | 150              | 278    | 180            | 279 | 241 | 121 | 15  | 356    | 394    |     |    |    |
|                  |              |          | 180L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 599    | 150              | 288    | 180            | 279 | 279 | 121 | 15  | 356    | 394    |     |    |    |
|                  |              |          | 32               |                 |                |                |     |     |     |                |                |                |                |    |    |    | 20  | 300 | 80     | 80               | 160    | 180            | 133 | 133 | 45  | 106 | 70     | 230    | 190 | 16 | 45 |
| 90S              | 201          | 100      |                  | 264             | 150            | 157            |     |     |     |                |                |                |                |    |    |    |     |     |        |                  |        |                |     |     |     |     |        |        |     |    |    |
| 90L              | 201          | 100      |                  | 289             | 150            | 157            |     |     |     |                |                |                |                |    |    |    |     |     |        |                  |        |                |     |     |     |     |        |        |     |    |    |
| 100L             | 212          | 125      |                  | 311             | 150            | 180            | 100 | 160 | 140 | 63             | 12             | 204            | 170            |    |    |    |     |     |        |                  |        |                |     |     |     |     |        |        |     |    |    |
| 112M             | 212          | 125      |                  | 329             | 150            | 107            | 112 | 190 | 140 | 70             | 12             | 229            | 190            |    |    |    |     |     |        |                  |        |                |     |     |     |     |        |        |     |    |    |
| 132S             | 232          | 150      |                  | 300             | 150            | 218            | 132 | 216 | 140 | 89             | 12             | 281            | 223            |    |    |    |     |     |        |                  |        |                |     |     |     |     |        |        |     |    |    |
| 132M             | 232          | 150      |                  | 430             | 150            | 218            | 132 | 216 | 178 | 89             | 12             | 261            | 223            |    |    |    |     |     |        |                  |        |                |     |     |     |     |        |        |     |    |    |
| 160M             | 268          | 175      |                  | 505             | 150            | 265            | 160 | 254 | 210 | 108            | 15             | 320            | 334            |    |    |    |     |     |        |                  |        |                |     |     |     |     |        |        |     |    |    |
| 40               | 25           | 200      | 80               | 80              | 160            | 180            | 133 | 133 | 45  | 106            | 70             | 230            | 190            | 16 | 45 | 15 |     | 100 | 255    | 150              | 148    | NO FOOT FITTED |     |     |     |     |        |        |     |    |    |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |    |    |     | 100 | 264    | 150              | 157    |                |     |     |     |     |        |        |     |    |    |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |    |    |     | 100 | 289    | 150              | 157    |                |     |     |     |     |        |        |     |    |    |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 212 | 125 | 311    | 150              | 180    | 100            | 160 | 140 | 63  | 12  | 204    | 170    |     |    |    |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 212 | 125 | 329    | 150              | 197    | 112            | 190 | 140 | 70  | 12  | 229    | 190    |     |    |    |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 232 | 150 | 390    | 150              | 218    | 132            | 216 | 140 | 89  | 12  | 281    | 223    |     |    |    |
|                  |              |          | 132M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 232 | 150 | 430    | 150              | 218    | 132            | 216 | 178 | 89  | 12  | 261    | 223    |     |    |    |
|                  |              |          | 160M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 505    | 150              | 265    | 160            | 254 | 210 | 108 | 15  | 320    | 334    |     |    |    |
|                  |              |          | 160L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 550    | 150              | 265    | 160            | 254 | 254 | 108 | 15  | 320    | 334    |     |    |    |
|                  |              |          | 180M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 585    | 150              | 278    | 180            | 270 | 241 | 121 | 15  | 356    | 394    |     |    |    |
| 50               | 32           | 200      | 80               | 80              | 160            | 180            | 133 | 133 | 45  | 106            | 70             | 230            | 190            | 16 | 45 | 15 | 201 | 100 | 255    | 150              | 148    | NO FOOT FITTED |     |     |     |     |        |        |     |    |    |
|                  |              |          | 90S              |                 |                |                |     |     |     |                |                |                |                |    |    |    | 201 | 100 | 264    | 150              | 157    |                |     |     |     |     |        |        |     |    |    |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |    |    | 201 | 100 | 289    | 150              | 157    |                |     |     |     |     |        |        |     |    |    |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 212 | 125 | 311    | 150              | 180    | 100            | 180 | 140 | 63  | 12  | 204    | 170    |     |    |    |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 212 | 125 | 329    | 150              | 197    | 112            | 190 | 140 | 70  | 12  | 229    | 190    |     |    |    |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 232 | 150 | 390    | 150              | 218    | 132            | 216 | 140 | 89  | 12  | 261    | 223    |     |    |    |
|                  |              |          | 132M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 232 | 150 | 430    | 150              | 218    | 132            | 216 | 178 | 89  | 12  | 261    | 223    |     |    |    |
|                  |              |          | 160M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 505    | 150              | 265    | 160            | 254 | 210 | 108 | 15  | 320    | 334    |     |    |    |
| 65               | 40           | 200      | 90S              | 100             | 160            | 180            | 133 | 140 | 45  | 106            | 70             | 255            | 212            | 16 | 65 | 15 | 201 | 100 | 264    | 150              | 157    | NO FOOT FITTED |     |     |     |     |        |        |     |    |    |
|                  |              |          | 90L              |                 |                |                |     |     |     |                |                |                |                |    |    |    | 201 | 100 | 289    | 150              | 157    |                |     |     |     |     |        |        |     |    |    |
|                  |              |          | 100L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 212 | 125 | 311    | 150              | 180    | 100            | 160 | 140 | 63  | 12  | 204    | 170    |     |    |    |
|                  |              |          | 112M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 212 | 125 | 329    | 150              | 107    | 112            | 190 | 140 | 70  | 12  | 229    | 190    |     |    |    |
|                  |              |          | 132S             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 232 | 150 | 390    | 150              | 218    | 132            | 216 | 140 | 89  | 12  | 261    | 223    |     |    |    |
|                  |              |          | 132M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 232 | 150 | 430    | 150              | 218    | 132            | 216 | 178 | 89  | 12  | 261    | 223    |     |    |    |
|                  |              |          | 160M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 505    | 150              | 285    | 160            | 254 | 210 | 108 | 15  | 320    | 334    |     |    |    |
|                  |              |          | 160L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 550    | 150              | 265    | 160            | 241 | 254 | 108 | 15  | 320    | 334    |     |    |    |
|                  |              |          | 180M             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 585    | 150              | 278    | 180            | 270 | 241 | 121 | 15  | 356    | 394    |     |    |    |
|                  |              |          | 180L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 175 | 599    | 150              | 288    | 180            | 279 | 279 | 121 | 15  | 356    | 394    |     |    |    |
|                  |              |          | 200L             |                 |                |                |     |     |     |                |                |                |                |    |    |    | 268 | 200 | 705    | 150              | 348    | 200            | 318 | 305 | 133 | 19  | 394    | 366    |     |    |    |

## Close coupled pump dimensions, *continued* (see drawing on page 40)

All dimensions in mm; A and B hydraulics

| Pump Designation |              |          | Motor Frame Size | Pump Dimensions |                |                |     |     |    |                |                |                |                |    |      |    |     |     | Motor Dimensions |     |        |                |     |     |     |    |        |        |  |
|------------------|--------------|----------|------------------|-----------------|----------------|----------------|-----|-----|----|----------------|----------------|----------------|----------------|----|------|----|-----|-----|------------------|-----|--------|----------------|-----|-----|-----|----|--------|--------|--|
| Inlet (DN)       | Outlet (DN2) | Impeller |                  | a               | h <sub>1</sub> | h <sub>2</sub> | c   | e   | b  | m <sub>1</sub> | m <sub>2</sub> | n <sub>1</sub> | n <sub>2</sub> | k  | g    | s1 | f   | P/2 | LE Max           | X   | AD max | H              | A   | B   | C   | K  | AB max | BB max |  |
| 80               | 50           | 200      | 90L              | 100             | 160            | 200            | 140 | 156 | 45 | 106            | 70             | 255            | 212            | 16 | 65   | 15 | 201 | 100 | 289              | 150 | 157    | NO FOOT FITTED |     |     |     |    |        |        |  |
|                  |              |          | 100L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 212 | 125 | 311              | 150 | 1110   | 100            | 160 | 140 | 63  | 12 | 204    | 170    |  |
|                  |              |          | 112M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 212 | 125 | 329              | 150 | 197    | 112            | 190 | 140 | 70  | 12 | 229    | 190    |  |
|                  |              |          | 132S             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 232 | 150 | 390              | 150 | 218    | 132            | 216 | 140 | 89  | 12 | 261    | 223    |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 232 | 150 | 430              | 200 | 218    | 132            | 216 | 178 | 89  | 12 | 261    | 223    |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 268 | 175 | 505              | 150 | 265    | 160            | 254 | 210 | 108 | 12 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 268 | 175 | 550              | 150 | 265    | 160            | 254 | 254 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 268 | 175 | 585              | 150 | 278    | 180            | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 268 | 175 | 599              | 150 | 268    | 180            | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 268 | 200 | 705              | 150 | 346    | 200            | 318 | 305 | 133 | 19 | 394    | 365    |  |
| 100              | 65           | 160      | 90S              | 100             | 160            | 200            | 133 | 147 | 60 | 125            | 95             | 270            | 212            | 16 | 52.5 | 15 | 232 | 100 | 284              | 200 | 157    | NO FOOT FITTED |     |     |     |    |        |        |  |
|                  |              |          | 90L              |                 |                |                |     |     |    |                |                |                |                |    |      |    | 232 | 100 | 289              | 200 | 157    |                |     |     |     |    |        |        |  |
|                  |              |          | 100L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 242 | 125 | 311              | 200 | 1110   | 100            | 160 | 140 | 83  | 12 | 204    | 170    |  |
|                  |              |          | 112M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 242 | 125 | 329              | 200 | 1117   | 112            | 190 | 140 | 70  | 12 | 229    | 190    |  |
|                  |              |          | 132S             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 262 | 150 | 390              | 200 | 218    | 132            | 216 | 140 | 89  | 12 | 261    | 223    |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 262 | 150 | 430              | 200 | 218    | 132            | 216 | 178 | 89  | 12 | 261    | 223    |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 505              | 200 | 265    | 160            | 254 | 210 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 550              | 200 | 265    | 160            | 254 | 254 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 585              | 200 | 278    | 180            | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 599              | 200 | 286    | 180            | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 200 | 705              | 200 | 346    | 200            | 318 | 305 | 133 | 19 | 394    | 365    |  |
| 125              | 100          | 160      | 100L             | 125             | 200            | 280            | 139 | 188 | 75 | 160            | 120            | 350            | 280            | 16 | 65   | 19 | 242 | 125 | 311              | 200 | 1110   | 100            | 160 | 140 | 83  | 12 | 204    | 170    |  |
|                  |              |          | 112M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 242 | 125 | 329              | 200 | 197    | 112            | 190 | 140 | 70  | 12 | 229    | 190    |  |
|                  |              |          | 132S             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 262 | 150 | 390              | 200 | 218    | 132            | 216 | 140 | 89  | 12 | 261    | 223    |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 262 | 150 | 430              | 200 | 218    | 132            | 216 | 178 | 89  | 12 | 261    | 223    |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 505              | 200 | 265    | 160            | 254 | 210 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 550              | 200 | 265    | 160            | 254 | 254 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 585              | 200 | 278    | 180            | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 599              | 200 | 268    | 180            | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 200 | 705              | 200 | 346    | 200            | 318 | 305 | 133 | 19 | 394    | 365    |  |
| 100              | 65           | 200      | 100L             | 100             | 180            | 225            | 136 | 168 | 60 | 125            | 95             | 310            | 250            | 16 | 52.5 | 15 | 232 | 125 | 311              | 200 | 1110   | 100            | 160 | 140 | 63  | 12 | 204    | 170    |  |
|                  |              |          | 112M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 232 | 125 | 329              | 200 | 197    | 112            | 190 | 140 | 70  | 12 | 229    | 190    |  |
|                  |              |          | 132S             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 232 | 150 | 390              | 200 | 218    | 132            | 216 | 140 | 89  | 12 | 261    | 223    |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 232 | 150 | 430              | 200 | 218    | 132            | 216 | 178 | 89  | 12 | 261    | 223    |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 505              | 200 | 265    | 160            | 254 | 210 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 550              | 200 | 265    | 160            | 254 | 254 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 585              | 200 | 278    | 180            | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 599              | 200 | 268    | 180            | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 200 | 705              | 200 | 346    | 200            | 318 | 305 | 133 | 19 | 394    | 365    |  |
| 125              | 100          | 200      | 112M             | 125             | 200            | 280            | 151 | 194 | 75 | 160            | 120            | 350            | 280            | 16 | 65   | 19 | 232 | 125 | 329              | 200 | 197    | 112            | 190 | 140 | 70  | 12 | 229    | 190    |  |
|                  |              |          | 132S             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 232 | 150 | 390              | 200 | 218    | 132            | 216 | 140 | 89  | 12 | 261    | 223    |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 232 | 150 | 430              | 200 | 216    | 132            | 216 | 176 | 89  | 12 | 261    | 223    |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 505              | 200 | 265    | 160            | 254 | 210 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 550              | 200 | 265    | 160            | 254 | 254 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 585              | 200 | 278    | 180            | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175 | 599              | 200 | 268    | 180            | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 200 | 705              | 200 | 346    | 200            | 318 | 305 | 133 | 19 | 394    | 365    |  |

## Close coupled pump dimensions, *continued* (see drawing on page 40)

All dimensions in mm; A and B hydraulics

| Pump Designation |              |          | Motor Frame Size | Pump Dimensions |                |                |     |     |    |                |                |                |                |    |      |                |     |     |        | Motor Dimensions |        |     |     |     |     |    |        |        |  |  |  |
|------------------|--------------|----------|------------------|-----------------|----------------|----------------|-----|-----|----|----------------|----------------|----------------|----------------|----|------|----------------|-----|-----|--------|------------------|--------|-----|-----|-----|-----|----|--------|--------|--|--|--|
| Inlet (DN)       | Outlet (DN2) | Impeller |                  | a               | h <sub>1</sub> | h <sub>2</sub> | c   | e   | b  | m <sub>1</sub> | m <sub>2</sub> | n <sub>1</sub> | n <sub>2</sub> | k  | g    | s <sub>1</sub> | f   | P/2 | LE Max | X                | AD max | H   | A   | B   | C   | K  | AB max | BB max |  |  |  |
| 40               | 25           | 250      | 100L             | 100             | 180            | 225            | 166 | 166 | 60 | 125            | 95             | 310            | 250            | 16 | 52.5 | 15             | 246 | 125 | 311    | 200              | 180    | 100 | 160 | 140 | 63  | 12 | 204    | 170    |  |  |  |
|                  |              |          | 112M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 246 | 125 | 329    | 200              | 197    | 112 | 190 | 140 | 70  | 12 | 229    | 190    |  |  |  |
|                  |              |          | 132S             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 262 | 150 | 390    | 200              | 218    | 132 | 216 | 140 | 89  | 12 | 261    | 223    |  |  |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 262 | 150 | 430    | 200              | 218    | 132 | 216 | 178 | 89  | 12 | 261    | 223    |  |  |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 505    | 200              | 265    | 160 | 254 | 210 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 550    | 200              | 265    | 160 | 254 | 254 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 585    | 200              | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 599    | 200              | 286    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 200 | 705    | 200              | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |  |  |
| 50               | 32           | 250      | 100L             | 100             | 180            | 225            | 166 | 166 | 60 | 125            | 95             | 310            | 250            | 16 | 52.5 | 15             | 246 | 125 | 311    | 200              | 180    | 100 | 160 | 140 | 63  | 12 | 204    | 170    |  |  |  |
|                  |              |          | 112M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 246 | 125 | 329    | 200              | 197    | 112 | 190 | 140 | 70  | 12 | 229    | 190    |  |  |  |
|                  |              |          | 132S             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 262 | 150 | 390    | 200              | 218    | 132 | 216 | 140 | 89  | 12 | 261    | 223    |  |  |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 262 | 150 | 430    | 200              | 218    | 132 | 216 | 178 | 89  | 12 | 261    | 223    |  |  |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 505    | 200              | 265    | 160 | 254 | 210 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 550    | 200              | 265    | 160 | 254 | 254 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 585    | 200              | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 599    | 200              | 286    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 200 | 705    | 200              | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |  |  |
| 65               | 40           | 250      | 100L             | 100             | 180            | 225            | 166 | 166 | 60 | 125            | 95             | 310            | 250            | 16 | 52.5 | 15             | 246 | 125 | 311    | 200              | 180    | 100 | 160 | 140 | 63  | 12 | 204    | 170    |  |  |  |
|                  |              |          | 112M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 246 | 125 | 329    | 200              | 197    | 112 | 190 | 140 | 70  | 12 | 229    | 190    |  |  |  |
|                  |              |          | 132S             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 262 | 150 | 390    | 200              | 218    | 132 | 216 | 140 | 89  | 12 | 261    | 223    |  |  |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 262 | 150 | 430    | 200              | 218    | 132 | 216 | 178 | 89  | 12 | 261    | 223    |  |  |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 505    | 200              | 265    | 160 | 254 | 210 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 550    | 200              | 265    | 160 | 254 | 254 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 585    | 200              | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 599    | 200              | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 200 | 705    | 200              | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |  |  |
| 80               | 50           | 250      | 100L             | 125             | 180            | 225            | 166 | 172 | 60 | 125            | 95             | 310            | 250            | 16 | 77.5 | 15             | 246 | 125 | 311    | 200              | 180    | 100 | 160 | 140 | 63  | 12 | 204    | 170    |  |  |  |
|                  |              |          | 112M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 246 | 125 | 329    | 200              | 197    | 112 | 190 | 140 | 70  | 12 | 229    | 190    |  |  |  |
|                  |              |          | 132S             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 262 | 150 | 390    | 200              | 218    | 132 | 218 | 140 | 89  | 12 | 261    | 223    |  |  |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 262 | 150 | 430    | 200              | 218    | 132 | 218 | 178 | 89  | 12 | 261    | 223    |  |  |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 505    | 200              | 265    | 160 | 254 | 210 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 550    | 200              | 265    | 160 | 254 | 254 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 585    | 200              | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 599    | 200              | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 200 | 705    | 200              | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |  |  |
| 100              | 65           | 250      | 112M             | 125             | 200            | 250            | 167 | 195 | 75 | 160            | 120            | 350            | 280            | 16 | 65   | 19             | 246 | 125 | 329    | 200              | 197    | 112 | 190 | 140 | 70  | 12 | 229    | 190    |  |  |  |
|                  |              |          | 132S             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 262 | 150 | 390    | 200              | 218    | 132 | 218 | 140 | 89  | 12 | 261    | 223    |  |  |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 262 | 150 | 430    | 200              | 218    | 132 | 218 | 178 | 89  | 12 | 261    | 223    |  |  |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 505    | 200              | 265    | 160 | 254 | 210 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 550    | 200              | 265    | 160 | 254 | 254 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 585    | 200              | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 599    | 200              | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 200 | 705    | 200              | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |  |  |
| 125              | 100          | 250      | 160M             | 140             | 225            | 280            | 167 | 223 | 75 | 160            | 120            | 390            | 315            | 16 | 80   | 19             | 298 | 175 | 505    | 200              | 265    | 160 | 254 | 210 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 550    | 200              | 265    | 160 | 254 | 254 | 108 | 15 | 320    | 334    |  |  |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 585    | 200              | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 175 | 599    | 200              | 286    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |  |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |                | 298 | 200 | 705    | 200              | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |  |  |
|                  |              |          |                  |                 |                |                |     |     |    |                |                |                |                |    |      |                |     |     |        |                  |        |     |     |     |     |    |        |        |  |  |  |

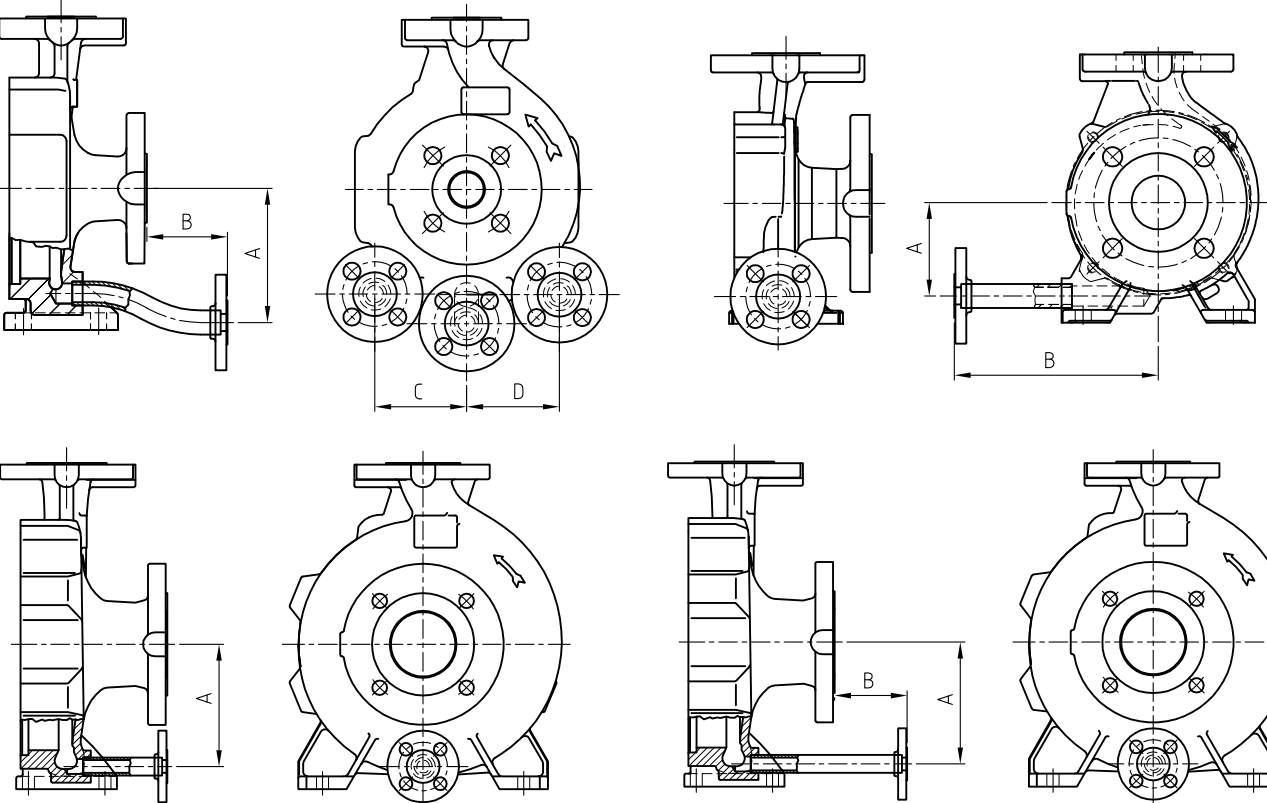
## Close coupled pump dimensions, *continued* (see drawing on page 40)

All dimensions in mm; A and B hydraulics

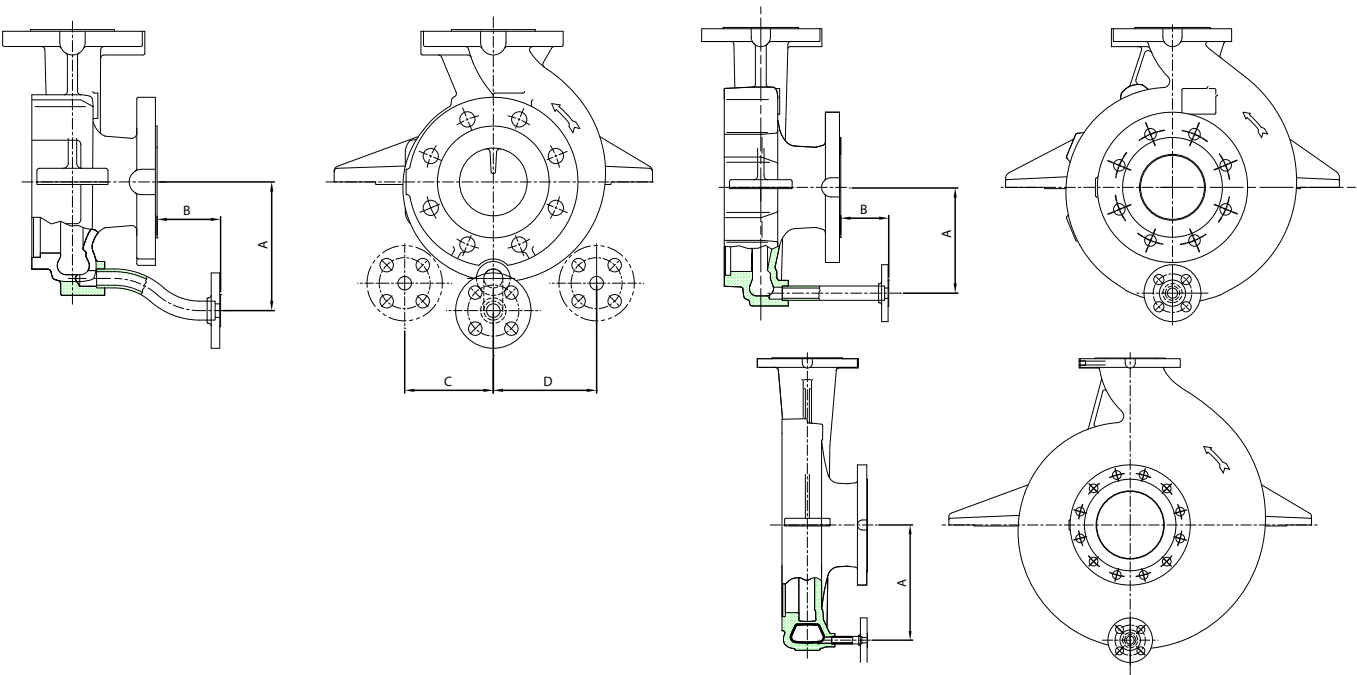
| Pump Designation |              |          | Motor Frame Size | Pump Dimensions |                |                |     |     |    |                |                |                |                |    |      |    |     | Motor Dimensions |        |     |        |     |     |     |     |    |        |        |  |
|------------------|--------------|----------|------------------|-----------------|----------------|----------------|-----|-----|----|----------------|----------------|----------------|----------------|----|------|----|-----|------------------|--------|-----|--------|-----|-----|-----|-----|----|--------|--------|--|
| Inlet (DN)       | Outlet (DN2) | Impeller |                  | a               | h <sub>1</sub> | h <sub>2</sub> | c   | e   | b  | m <sub>1</sub> | m <sub>2</sub> | n <sub>1</sub> | n <sub>2</sub> | k  | g    | s1 | f   | P/2              | LE Max | X   | AD max | H   | A   | B   | C   | K  | AB max | BB max |  |
| 150              | 125          | 250      | 160M             | 140             | 250            | 355            | 179 | 235 | 75 | 160            | 120            | 390            | 315            | 19 | 80   | 19 | 298 | 175              | 505    | 200 | 265    | 160 | 254 | 210 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 550    | 200 | 265    | 160 | 254 | 254 | 108 | 15 | 356    | 394    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 585    | 200 | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 599    | 200 | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 200              | 705    | 200 | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |
| 200              | 150          | 250      | 180L             | 160             | 280            | 375            | 192 | 272 | 95 | 200            | 150            | 490            | 400            | 20 | 85   | 22 | 298 | 175              | 599    | 200 | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 200              | 705    | 200 | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |
| 50               | 32           | 315      | 132S             | 125             | 200            | 250            | 198 | 198 | 60 | 125            | 95             | 335            | 280            | 16 | 77.5 | 15 | 282 | 150              | 390    | 200 | 218    | 132 | 216 | 140 | 89  | 12 | 281    | 223    |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 282 | 150              | 430    | 200 | 218    | 132 | 216 | 178 | 89  | 12 | 281    | 223    |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 505    | 200 | 285    | 180 | 254 | 210 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 550    | 200 | 285    | 180 | 254 | 254 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 585    | 200 | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 599    | 200 | 286    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          |                  |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 599    | 200 | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |
| 65               | 40           | 315      | 132S             | 125             | 200            | 250            | 198 | 202 | 60 | 125            | 95             | 335            | 280            | 16 | 77.5 | 15 | 262 | 150              | 390    | 200 | 218    | 132 | 216 | 140 | 89  | 12 | 281    | 223    |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 262 | 150              | 430    | 200 | 218    | 132 | 216 | 178 | 89  | 12 | 281    | 223    |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 505    | 200 | 265    | 160 | 254 | 210 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 550    | 200 | 265    | 160 | 254 | 254 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 585    | 200 | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 599    | 200 | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          |                  |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 599    | 200 | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |
| 80               | 50           | 315      | 132S             | 125             | 225            | 280            | 198 | 207 | 60 | 125            | 95             | 335            | 280            | 16 | 77.5 | 15 | 262 | 150              | 390    | 200 | 218    | 132 | 218 | 140 | 89  | 12 | 281    | 223    |  |
|                  |              |          | 132M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 262 | 150              | 390    | 200 | 218    | 132 | 216 | 140 | 89  | 12 | 281    | 223    |  |
|                  |              |          | 160M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 505    | 200 | 285    | 180 | 254 | 210 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 550    | 200 | 285    | 180 | 254 | 254 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 585    | 200 | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 599    | 200 | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 200              | 705    | 200 | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |
| 100              | 65           | 315      | 160M             | 125             | 225            | 280            | 198 | 213 | 75 | 160            | 120            | 390            | 315            | 19 | 65   | 19 | 298 | 175              | 505    | 200 | 265    | 180 | 254 | 210 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 550    | 200 | 265    | 180 | 254 | 254 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 585    | 200 | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 599    | 200 | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 200              | 705    | 200 | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |
| 125              | 80           | 315      | 160M             | 125             | 250            | 315            | 207 | 245 | 79 | 160            | 120            | 398            | 315            | 24 | 65   | 19 | 298 | 175              | 505    | 200 | 265    | 180 | 254 | 210 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 160L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 550    | 200 | 265    | 160 | 254 | 254 | 108 | 15 | 320    | 334    |  |
|                  |              |          | 180M             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 585    | 200 | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 599    | 200 | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 200              | 705    | 200 | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |
| 150              | 125          | 315      | 180M             | 140             | 280            | 355            | 212 | 262 | 95 | 200            | 150            | 490            | 400            | 20 | 65   | 22 | 298 | 175              | 585    | 200 | 278    | 180 | 279 | 241 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 180L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 175              | 599    | 200 | 288    | 180 | 279 | 279 | 121 | 15 | 356    | 394    |  |
|                  |              |          | 200L             |                 |                |                |     |     |    |                |                |                |                |    |      |    | 298 | 200              | 705    | 200 | 346    | 200 | 318 | 305 | 133 | 19 | 394    | 365    |  |

# Drain options

## Standard PN 16 and high-pressure designs



## Centerline mounted



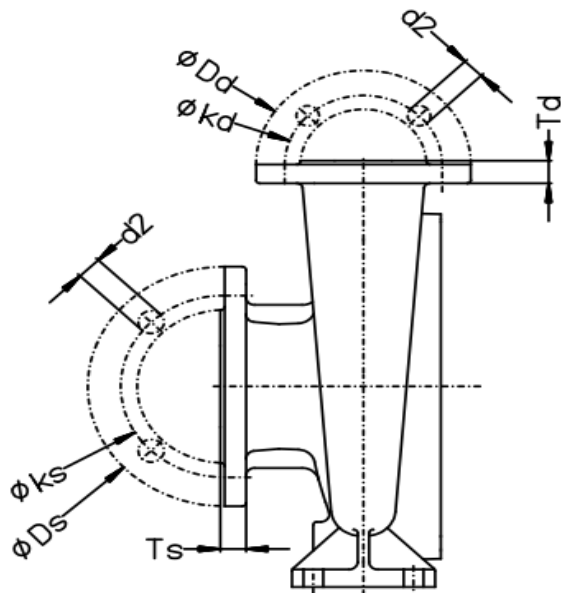
# Lubrication options

## Durco ISO lubrication options\*

| Version name  | Features                                                                           |
|---------------|------------------------------------------------------------------------------------|
| Mark 3 ISO O  | Oil, default                                                                       |
| Mark 3 ISO OC | Oil, with constant level oiler                                                     |
| Mark 3 ISO OP | Oil, increased housing protection                                                  |
| Mark 3 ISO 3A | Oil, maximized protection, minimized maintenance                                   |
| Mark 3 ISO OM | Pure oil mist two-point entry                                                      |
| Mark 3 ISO OS | Purge oil mist over oil sump two-point entry                                       |
| Mark 3 ISO ON | Nitrogen purge over oil sump; single connection in vent tapping with vent on a tee |
| Mark 3 ISO G  | Grease regreasable with grease nipples                                             |

\* Available for all long coupled pumps

## Dimensions — flanges



<sup>1)</sup> Execution 1¼" for DN32 not possible

<sup>2)</sup> Execution 1" on suction side (DN40) with 4 x threads ½" – 13 UNC

## Casing outlet and inlet flange dimensions

All dimensions in mm

| Bore DN | Outside Diameter |           | Thickness       |           | Standard         | Bolting No. x Hole x PCD | Raised Face Diameter | Raised Face Height |
|---------|------------------|-----------|-----------------|-----------|------------------|--------------------------|----------------------|--------------------|
|         | Standard Casing  | HP Casing | Standard Casing | HP Casing |                  |                          |                      |                    |
| 20      | 105              | 120       | 24              | 24        | PN 16, 25 and 25 | 4 x 14 x 75              | 56                   | 2                  |
|         |                  |           | 24              | 24        | Class 150 (PN20) | 4 x 16 x 70              | 43                   | 2                  |
|         |                  |           | N/A             | 24        | Class 300 (PN50) | 4 x 18 x 82.5            | 43                   | 2                  |
| 25      | 115              | 125       | 21              | 21        | PN 16, 25 and 25 | 4 x 14 x 85              | 65                   | 2                  |
|         |                  |           | 21              | 21        | Class 150 (PN20) | 4 x 16 x 79.5            | 51                   | 2                  |
|         |                  |           | N/A             | 21        | Class 300 (PN50) | 4 x 18 x 89              | 51                   | 2                  |
| 32      | 140              | 140       | 18              | 19.5      | PN 16, 25 and 25 | 4 x 18 x 100             | 76                   | 2                  |
|         |                  |           | 18              | 19.5      | Class 150 (PN20) | 4 x 16 x 89              | 64                   | 2                  |
|         |                  |           | • •             | 19.5      | Class 300 (PN50) | 4 x 18 x 98.5            | 64                   | 2                  |
| 40      | 150              | 155       | 19              | 21        | PN 16, 25 and 25 | 4 x 18 x 110             | 84                   | 2                  |
|         |                  |           | 91              | 21        | Class 150 (PN20) | 4 x 16 x 98.5            | 73                   | 2                  |
|         |                  |           | • •             | 21        | Class 300 (PN50) | 4 x 22 x 114.5           | 73                   | 2                  |

## Casing outlet and inlet flange dimensions, *continued* (see drawing on page 48)

All dimensions in mm

| Bore DN | Outside Diameter |           | Thickness       |           | Standard                        | Bolting No. x Hole x PCD | Raised Face Diameter | Raised Face Height |
|---------|------------------|-----------|-----------------|-----------|---------------------------------|--------------------------|----------------------|--------------------|
|         | Standard Casing  | HP Casing | Standard Casing | HP Casing |                                 |                          |                      |                    |
| 50      | 165              | 165       | 20              | 25        | PN 16, 25 and 25                | 4 x 18 x 125             | 99                   | 2                  |
|         |                  |           | 20              | 25        | Class 150 (PN20)                | 4 x 18 x 120.5           | 92                   | 2                  |
|         |                  |           | • •             | 25        | Class 300 (PN50)                | 8 x 18 x 127             | 92                   | 2                  |
| 65      | 185              | 190       | 22              | N/A       | PN 16 (Iron)                    | 4 x 18 x 145             | 118                  | 2                  |
|         |                  |           | 22              | 25.5      | PN 16 (Steel),<br>PN 25 & PN 40 | 8 x 18 x 145             | 118                  | 2                  |
|         |                  |           | 22              | 25.5      | Class 150 (PN20)                | 4 x 18 x 139.5           | 105                  | 2                  |
|         |                  |           | • •             | 25.5      | Class 300 (PN50)                | 8 x 22 x 149.5           | 105                  | 2                  |
| 80      | 200              | 210       | 24              | 29        | PN 16, 25 and 25                | 8 x 18 x 160             | 132                  | 2                  |
|         |                  |           | 24              | 29        | Class 150 (PN20)                | 4 x 18 x 152.5           | 127                  | 2                  |
|         |                  |           | N/A             | 29        | Class 300 (PN50)                | 8 x 22 x 168.5           | 127                  | 2                  |
| 100     | 235              | 255       | 24              | 32        | PN 16                           | 8 x 18 x 180             | 156                  | 2                  |
|         |                  |           | 24              | 32        | PN 25 & 40 •                    | 8 x 22 x 190             | 156                  | 2                  |
|         |                  |           | 24              | 32        | Class 150 (PN20)                | 8 x 18 x 190.5           | 157                  | 2                  |
|         |                  |           | N/A             | 32        | Class 300 (PN50)                | 8 x 22 200               | 157                  | 2                  |
| 125     | 270              | 280       | 26              | 35        | PN 16                           | 8 x 18 x 210             | 184                  | 2                  |
|         |                  |           | 26              | 35        | PN 25 & 40 •                    | 8 x 26 x 220             | 184                  | 2                  |
|         |                  |           | 26              | 35        | Class 150 (PN20)                | 8 x 22 x 216             | 186                  | 2                  |
|         |                  |           | N/A             | 35        | Class 300 (PN50)                | 8 x 22 x 235             | 186                  | 2                  |
| 150     | 300              | 320       | 28              | 37        | PN 16                           | 8 x 22 x 240             | 211                  | 2                  |
|         |                  |           | 28              | 37        | PN 25 & 40 •                    | 8 x 26 x 250             | 211                  | 2                  |
|         |                  |           | 28              | 37        | Class 150 (PN20)                | 8 x 22 x 241.5           | 216                  | 2                  |
|         |                  |           | N/A             | 37        | Class 300 (PN50)                | 12 x 22 x 270            | 216                  | 2                  |
| 200     | 360              | 380       | 30              | 41.5      | PN 16                           | 12 x 22 x 295            | 266                  | 2                  |
|         |                  |           | 30              | 41.5      | PN 25                           | 12 x 26 x 310            | 274                  | 2                  |
|         |                  |           | 30              | 41.5      | Class 150 (PN20)                | 8 x 22 x 298.5           | 270                  | 2                  |
|         |                  |           | • • •           | 41.5      | Class 300 (PN50)                | 12 x 26 x 330            | 270                  | 2                  |
| 250     | 425              | 450       | 32              | 48        | PN 16                           | 12 x 26 x 355            | 319                  | 2                  |
|         |                  |           | 32              | 48        | PN 25                           | 12 x 30 x 370            | 330                  | 2                  |
|         |                  |           | 32              | 48        | Class 150 (PN20)                | 12 x 26 x 362            | 324                  | 2                  |
|         |                  |           | • • •           | 48        | Class 300 (PN50)                | 16 x 30 x 387.5          | 324                  | 2                  |

• Not available in ductile iron

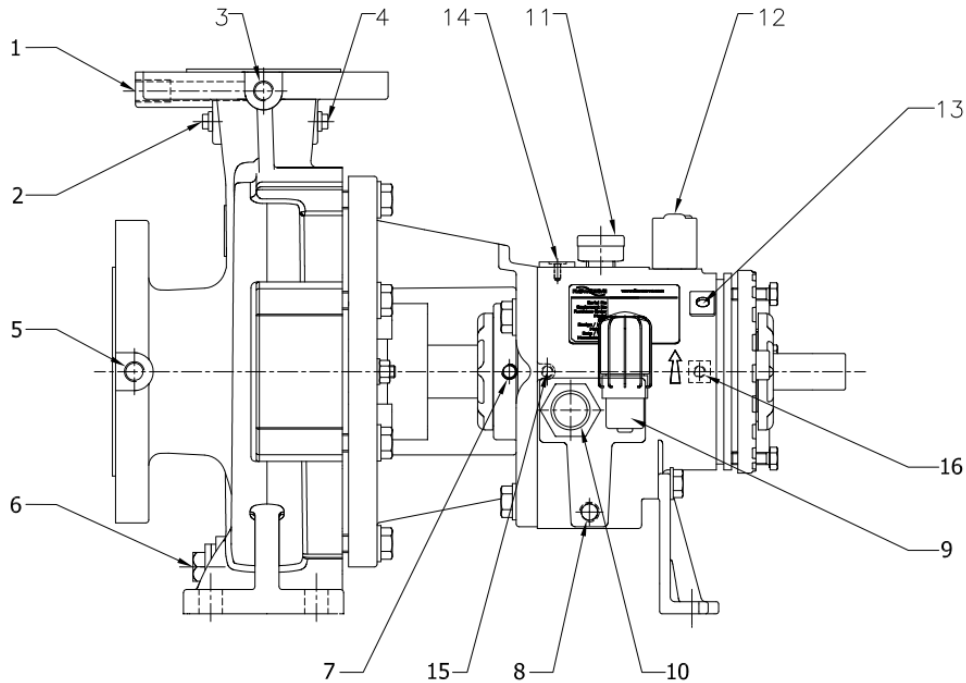
• • Class 300 (PN 50) not available except for sizes 2K50-32-315 and 2K65-40-315 in steel or alloys.

• • • Class 300 (PN 50) not available except for sizes 4K250-200-400 in steel or alloys.

The flange outside diameters and thicknesses in some cases differ from those of the flange standard.

This is permissible in accordance with VDMA 24297 and API 610.

## Dimensions — connections



### Dimensions of pump connections

| Position No. | Description               | Execution                                            | Connection         |                |
|--------------|---------------------------|------------------------------------------------------|--------------------|----------------|
|              |                           |                                                      | A & B - Hydraulics | C - Hydraulics |
| 1            | Pressure gauge            | By request                                           | Rp1/4              | N/A            |
| 2            | Pressure gauge            | By request                                           | N/A                | G1/4, G1/2*    |
| 3            | Recirculation             | By request                                           | Rp1/4              | N/A            |
| 4            | Recirculation             | By request                                           | N/A                | G1/4           |
| 5            | Vacuum and pressure gauge | By request                                           | Rp1/4              | G1/4, G1/2*    |
| 6            | Casing drain              | By request                                           | 1/2 in NPT         | G1/4, G3/8*    |
| 7            | Grease nipple             | Grease nipple or oil mist inlet to pump end bearing  | 1/8 in NPT         |                |
| 8            | Magnetic drain            | Bearing housing drain                                | 1/4 in NPT         |                |
| 9            | Constant level oiler      | Execution with oil level controller                  | 1/4 in NPT         |                |
| 10           | Oil level sight glass     | For oil level indication                             | 1 in NPT           |                |
| 11           | Oil filler/vent/breather  | For oil lubrication - vent                           | 1/2 in NPT         |                |
| 12           | IPS Beacon                | By request                                           | 1/4 in UNF         |                |
| 13           | Grease nipple             | Grease nipple or oil mist inlet to drive end bearing | 1/8 in NPT         |                |
| 14           | Vibration monitoring      | By request                                           | 1/4 in UNF         |                |
| 15           | Temperature monitoring    | By request (IB - inboard)                            | 1/4 in NPT         |                |
| 16           | Temperature monitoring    | By request (OB - outboard)                           | 1/4 in NPT         |                |

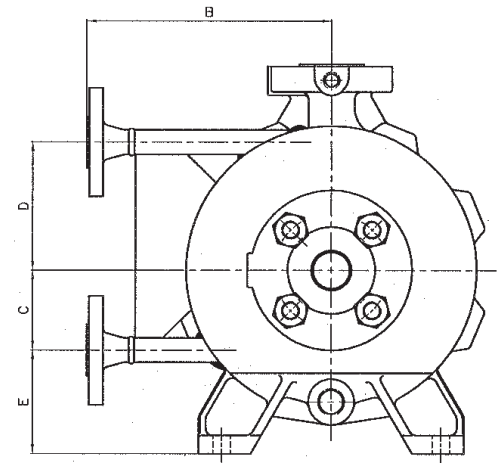
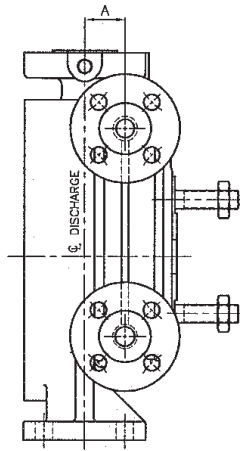
\* Depending on size      N/A - Not applicable

## Jacketed casings

### Flanged connections

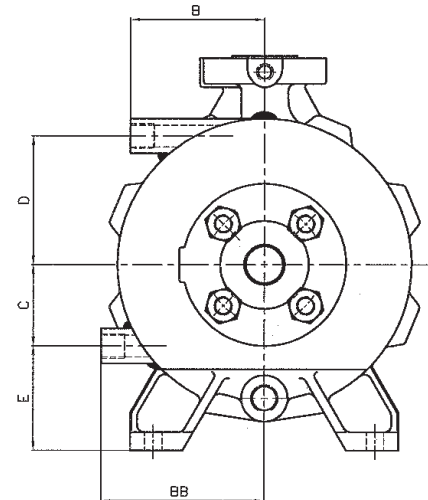
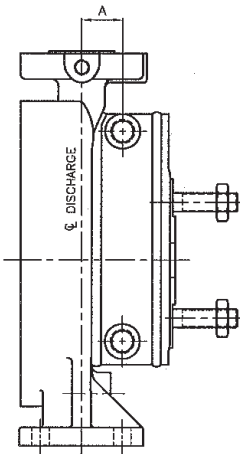
½ in N.B. schedule 40 pipe with weld neck flanges

- BS EN 1092-1 for PN 16 or PN 25 ratings
- BS EN 1759-1 for PN 20 or PN 50 ratings; flange ratings to be specified on order



### Bossed connections

30 mm O/D boss tapped Rp ½

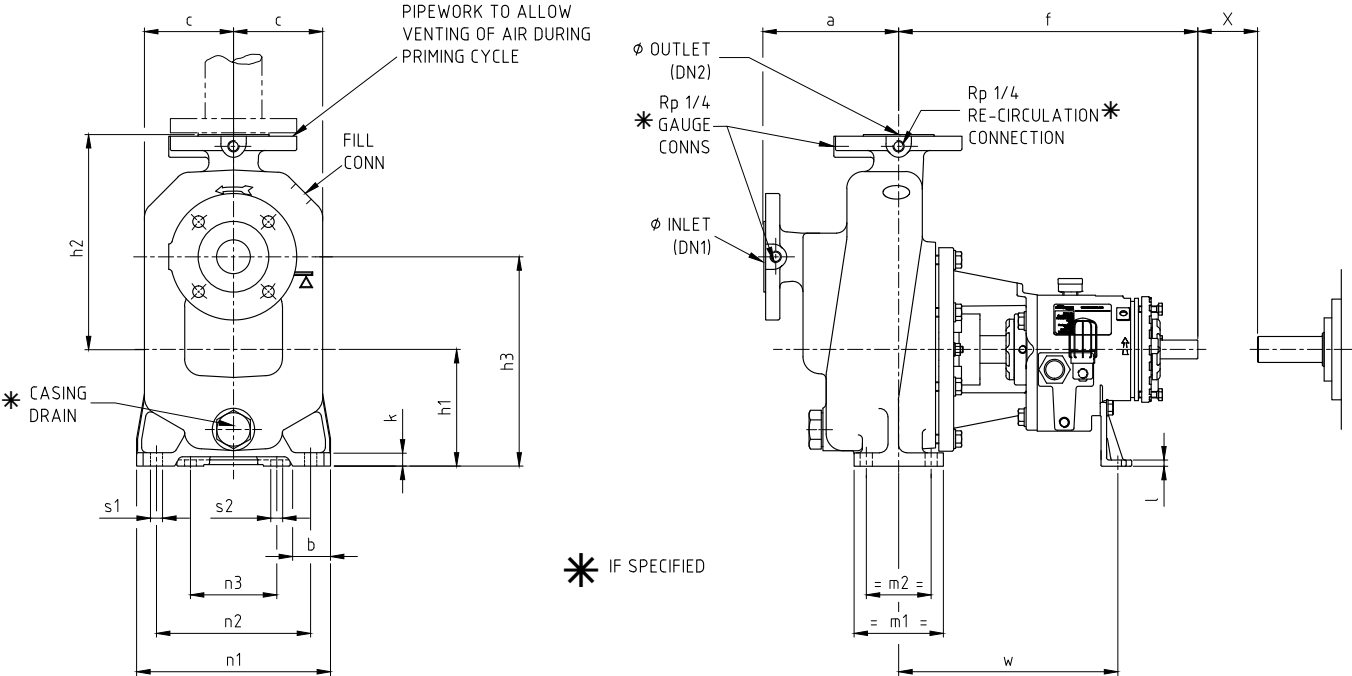


### Temperature and pressure ratings\*

| Heating/Cooling Medium | Operational Temperature | Operational Pressure |
|------------------------|-------------------------|----------------------|
| Water                  | 20°C (68°F)             | 16 barg (232 psi)    |
| Steam                  | 200°C (392°F)           | 13.3 barg (192 psi)  |
| Heating oil            | 350°C (662°F)           | 6 barg (87 psi)      |

\*The above figures may be subject to de-rating, dependent upon the material used for the jacket fabrication.

# Dimensions — self-priming pump



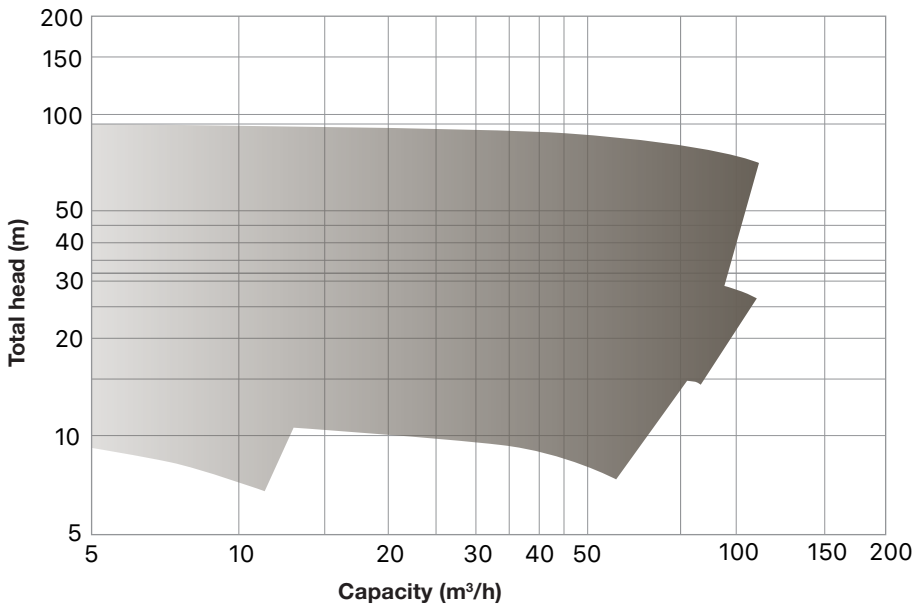
## Self-priming pump dimensions

All dimensions in mm

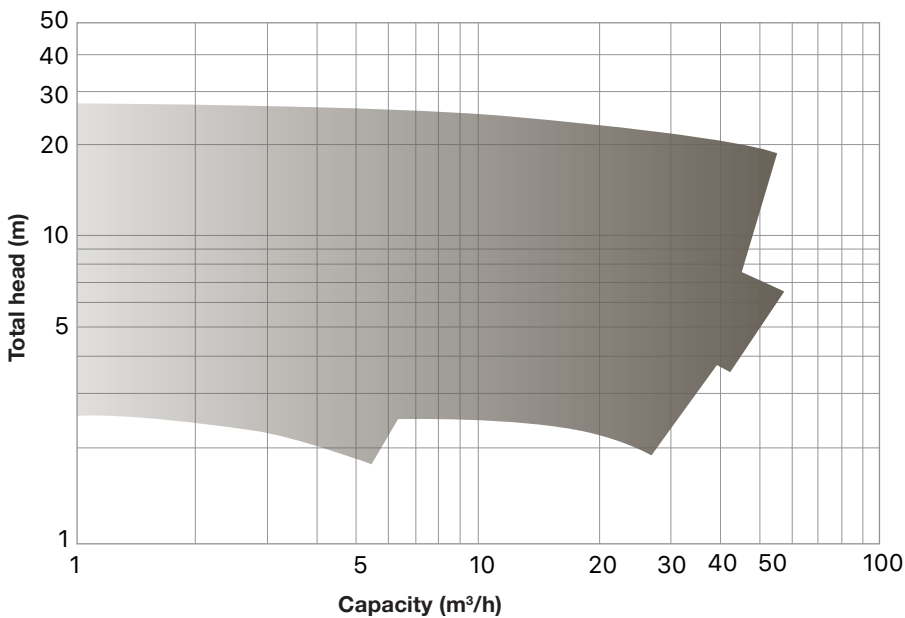
| Pump Designation |              |          |            | Pump Dimensions |     |                |                |                |     | Support Dimensions |                |                |     |                |     |     |    |    | Clearance Holes for Bolts |                | DBSE to ISO 2858 'X' |
|------------------|--------------|----------|------------|-----------------|-----|----------------|----------------|----------------|-----|--------------------|----------------|----------------|-----|----------------|-----|-----|----|----|---------------------------|----------------|----------------------|
| Inlet (DN)       | Outlet (DN2) | Impeller | Frame Size | a               | f   | h <sub>1</sub> | h <sub>2</sub> | h <sub>3</sub> | c   | b                  | m <sub>1</sub> | m <sub>2</sub> | n1  | n <sub>2</sub> | n3  | w   | k  | l  | s <sub>1</sub>            | s <sub>2</sub> |                      |
| 40               | 40           | 125      | 1          | 150             | 385 | 112            | 240            | 212            | 105 | 45                 | 106            | 70             | 186 | 140            | 110 | 285 | 12 | 8  | M12                       | M12            | 100                  |
| 80               | 80           | 125      | 1          | 200             | 385 | 132            | 310            | 252            | 136 | 45                 | 106            | 70             | 236 | 190            | 110 | 285 | 12 | 8  | M12                       | M12            | 100                  |
| 40               | 40           | 160      | 1          | 160             | 385 | 132            | 255            | 242            | 112 | 45                 | 106            | 70             | 230 | 190            | 110 | 285 | 16 | 8  | M12                       | M12            | 100                  |
| 80               | 80           | 160      | 1          | 210             | 385 | 160            | 310            | 290            | 137 | 45                 | 106            | 70             | 265 | 212            | 110 | 285 | 16 | 8  | M12                       | M12            | 100                  |
| 40               | 40           | 200      | 1          | 160             | 385 | 160            | 280            | 290            | 128 | 45                 | 106            | 70             | 230 | 190            | 110 | 285 | 16 | 8  | M12                       | M12            | 100                  |
| 65               | 65           | 200      | 1          | 220             | 385 | 160            | 350            | 290            | 160 | 45                 | 106            | 70             | 255 | 212            | 110 | 285 | 16 | 8  | M12                       | M12            | 100                  |
| 80               | 80           | 250      | 2          | 230             | 500 | 180            | 390            | 340            | 175 | 60                 | 125            | 95             | 310 | 250            | 110 | 370 | 16 | 10 | M12                       | M12            | 100                  |
| 100              | 100          | 250      | 3          | 250             | 660 | 280            | 355            | 460            | 270 | 95                 | 200            | 150            | 540 | 450            | 110 | 500 | 24 | 10 | M16                       | M12            | 140                  |
| 100              | 100          | 315      | 3          | 250             | 660 | 280            | 355            | 460            | 270 | 95                 | 200            | 150            | 540 | 450            | 110 | 500 | 24 | 10 | M16                       | M12            | 140                  |
| 150              | 150          | 315      | 3          | 345             | 660 | 280            | 360            | 490            | 302 | 95                 | 200            | 150            | 540 | 450            | 110 | 500 | 24 | 10 | M16                       | M12            | 140                  |

# Coverage charts — self-priming pump

n = 2900 rpm



n = 1450 rpm



## Self-priming pump — flange dimensions

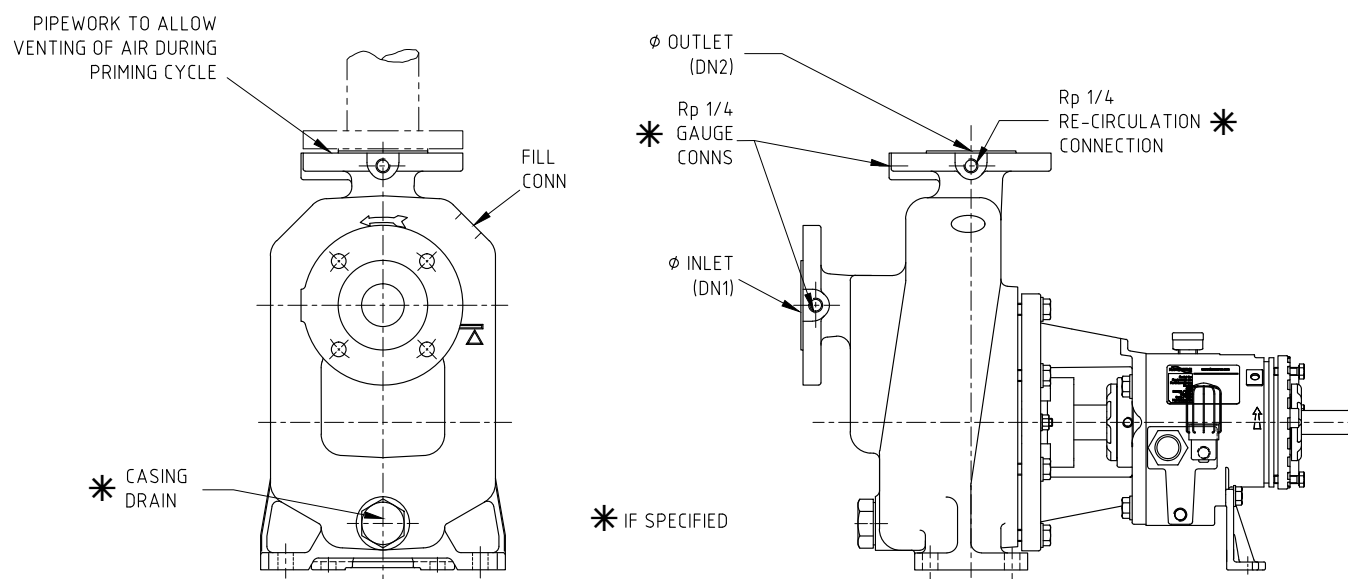
### Outlet and inlet flange dimensions-EN1092-1:2007 for PN flanges and ASME 818.5-2009 for NPS flanges

All dimensions in mm

| Bore DN | Outside Dia (D) | Thickness | Standard                 | Bolting No. x Hole X PCD | Raised Face Diameter | Raised Face Height |
|---------|-----------------|-----------|--------------------------|--------------------------|----------------------|--------------------|
| 40      | 150             | 19        | PN 16, 25 and 40         | 4 x 18 x 110             | 88                   | 3                  |
|         |                 | 19        | Class 150 (PN20)         | 4 x 16 x 98.5            | 73                   | 2                  |
| 65      | 185             | 22        | PN 16 (iron)             | 4 x 18 x 145             | 122                  | 3                  |
|         |                 | 22        | PN 16 (steel), 25 and 40 | 8 x 18 x 145             | 122                  | 3                  |
|         |                 | 22        | Class 150 (PN20)         | 4 x 19 x 139.5           | 105                  | 2                  |
| 80      | 200             | 24        | PN 16, 25 and 40         | 8 x 18 x 160             | 138                  | 3                  |
|         |                 | 24        | Class 150 (PN20)         | 4 x 19 x 152.5           | 127                  | 2                  |
| 100     | 235             | 24        | PN 16                    | 8 x 18 x 180             | 158                  | 3                  |
|         |                 | 24        | PN 25 and 40 *           | 8 x 22 x 190             | 162                  | 3                  |
|         |                 | 24        | Class 150 (PN20)         | 8 x 19 x 190.5           | 157.5                | 2                  |
| 150     | 300             | 28        | PN 16                    | 8 x 22 x 240             | 212                  | 3                  |
|         |                 | 28        | PN 25 and 40 *           | 8 x 26 x 250             | 218                  | 3                  |
|         |                 | 28        | Class 150 (PN20)         | 8 x 22 x 241.5           | 216                  | 2                  |

\* Not available in ductile iron

## Self-priming pump — connections



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