

## ➤ Radially-split, multistage, barrel pumps

### CP radially-split, multistage barrel pump ISO 13709 / API 610 type BB5

#### Features and benefits

- Opposed impellers balance axial thrust, with no lube system needed on smaller pumps
- Axially split inner case means rotor balance is not disturbed when installed in the pump
- Dual volute inner case balances radial loads for longer service life
- Twistlock barrel closure reduces maintenance time on lower temperature services
- Cartridge design on larger pumps can speed up pump repair time
- Volute inner case with lower erosion wear on abrasive services

#### Key characteristics

Capacities	up to 1'000 m <sup>3</sup> /h / 4'400 USgpm
Heads	up to 7'000 m / 23'000 ft.
Pressures	up to 425 bar / 6'250 psi
Temperatures	up to 425°C / 800°F

#### Applications

- Water injection
- Offshore crude oil shipping
- Refinery charge
- Boiler feedwater
- Nuclear safety services



### GSG diffuser style barrel pump ISO 13709 / API 610 type BB5

#### Features and benefits

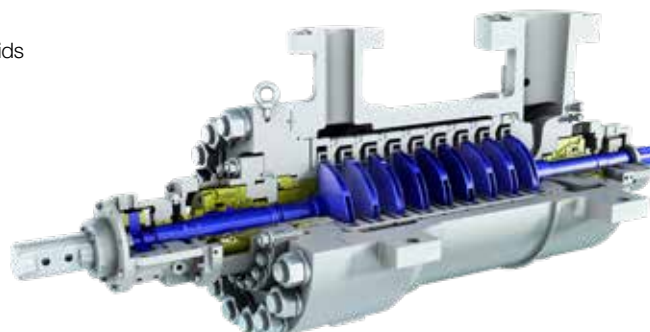
- Low-pressure, high-pressure, twistlock, and high-temperature designs suit many applications
- Direct drive options up to 6 MW
- Back-to-back rotor stack allows up to 16 stages on low-density fluids
- Multiple sizes cover a broad hydraulic range

#### Key characteristics

Capacities	up to 900 m <sup>3</sup> /h / 4'600 USgpm
Heads	up to 2'600 m / 10'000 ft.
Pressures	up to 300 bar / 4'500 psi
Temperatures	up to 425°C / 800°F

#### Applications

- Onshore or offshore water injection
- Offshore crude oil shipping
- Refinery charge
- Boiler feedwater



### GSG-BFP diffuser style barrel pump

#### Features and benefits

- Maximum safety due to double casing design, pipework connections remain undisturbed during disassembly
- High strength barrel material to accept occasional thermal shock
- Full cartridge pull out for rapid change over
- Design features to eliminate the need for pre-warming in most installations except on larger sizes
- Long operating life regardless of the operating mode

#### Key characteristics

Capacities	up to 700 m <sup>3</sup> /h / 3'080 USgpm
Heads	up to 2'500 m / 8'200 ft.
Pressures	up to 282 bar / 4'090 psi
Temperatures	up to 210°C / 410°F

#### Applications

- Feedwater pump
- Nuclear safety services



### GVG diffuser style barrel pump

#### Features and benefits

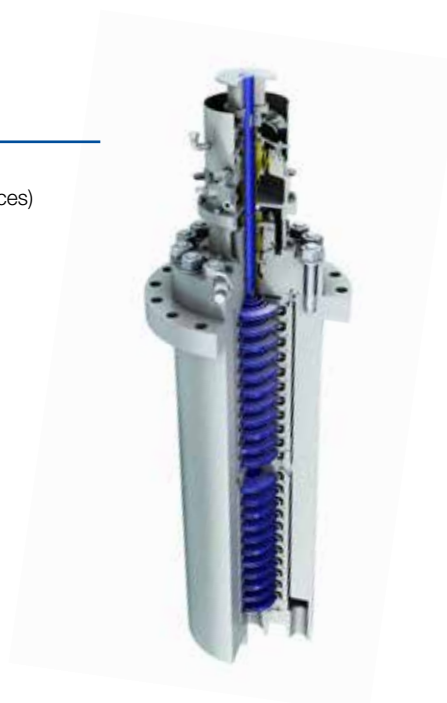
- Low thrust bearing loads due to opposed impellers (even with worn clearances)
- Excellent rotordynamic behavior because of center bushing
- Forged barrel in chromium steel/austenitic stainless steel
- Full cartridge design to reduce downtime during maintenance
- Double suction impeller at first stage (optional)

#### Key characteristics

Capacities	up to 65 m <sup>3</sup> /h / 285 USgpm
Heads	up to 1'900 m / 6'230 ft.
Pressures	up to 200 bar / 2'900 psi
Temperatures	up to 100°C / 212°F

#### Applications

- Control rod drive pump
- High pressure charging pump
- Make up water pump
- Safety related services for NPP



### HPT high pressure barrel pump

#### Features and benefits

- Maximum safety due to double casing design; pipework connections remain undisturbed during disassembly
- High strength barrel material to accept thermal shock
- Full cartridge pull out for rapid changeover
- Design features to eliminate the need for pre-warming in most installations
- Long operating life regardless of the operating mode

#### Key characteristics

Capacities	up to 4'000 m <sup>3</sup> /h / 17'600 USgpm
Heads	up to 4'200 m / 13'800 ft.
Pressures	up to 545 bar / 7'905 psi
Temperatures	up to 220°C / 430°F

#### Applications

- Boiler feedwater



### HPcp high pressure, radially-split, multistage barrel pump ISO 13709 / API 610 type BB5

#### Features and benefits

- Inline or back-to-back rotor stack designs for rotordynamic stability
- Forged carbon steel, duplex SS, HIP's and overlaid barrel construction
- Twistlock or bolted barrel closure with Superbolts™
- Sleeve, pocketed, or tilt pad bearings
- Grouted, ungrouted and offshore 3- or 4-point support baseplates

#### Key characteristics

Capacities	up to 4'000 m <sup>3</sup> /h / 20'000 USgpm
Heads	up to 10'200 m / 33'500 ft.
Pressures	up to 1'100 bar / 16'000 psi
Temperatures	up to 200°C / 400°F

#### Applications

- Ultra high pressure water injection
- Offshore crude oil shipping
- Remote pipeline services
- High pressure waterflood

