

# **WATSON-MARLOW BREDEL**



# **FEATURES**

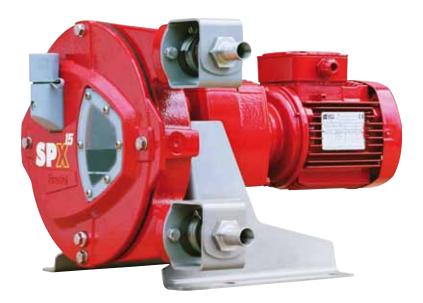
- Can run dry indefinitely without damage (no product in line)
- Highly suitable for handling abrasive, shear sensitive, viscous, high density products and corrosive liquids
- Smooth liquid passage without valves, dead corners or glands
- √ 100% positive flow (no slip)
- ✓ Accurate (+/- 1%) dosing (metering) capabilities
- Product pumped does not contact mechanical parts or seals
- ✓ Possibility of choice of high or low pressure rotor greatly enhances hose life
- ✓ Only wearing part is the hose
- Easy maintenance low cost, short downtime.
   Replacement of hose without dismantling pump
- ✓ Heavy duty bearings, greased for life

- ✓ Easily and completely cleanable
- ✓ Reversible rotation
- Suitable for high viscosities and densities
- ✓ No metal to metal contact
- √ 100% positive flow (no slip)
- ✓ Low noise level
- ✓ Safe use for explosive environments
- Designed to pump liquids containing particles (abrasion is no restriction)
- Permanent lubrication and cooling of pump element with specially compounded food grade lubricant

- ✓ Self priming to 95% vacuum (5 kPa.a)
- √ Two year comprehensive warranty
- Patented direct coupled design with rotor supporting integrated into the pump head and unique buffer zone to provide protective barrier between pump head and drive arrangement
- ✓ Ultra compact footprint with flanged helical gearing; no coupling or drive alignment required

# **SPX Hose Pumps**

Improve your process performance









Required motor power [kW] **Product** SPX20 0.50 temperature • Maximum flow: [°C] 820 L/h • Capacity: 40 0.152 L/rev 0.37 4 (5) 50 • Maximum discharge pressure: 750 kPa [7.5 bar] 0.25 60 • Inner diameter pump element: Ø 20 mm 0.18 70 3) • Lubricant required: 0.12 0.5 litres 80 • Minimum starting torque: 100 kPa = 1 bar85 Nm 1 6 Pump speed [rpm] 20 80 40 60 Capacity [L/h] 182 365 547 730

Continuous Duty

Intermittent Duty

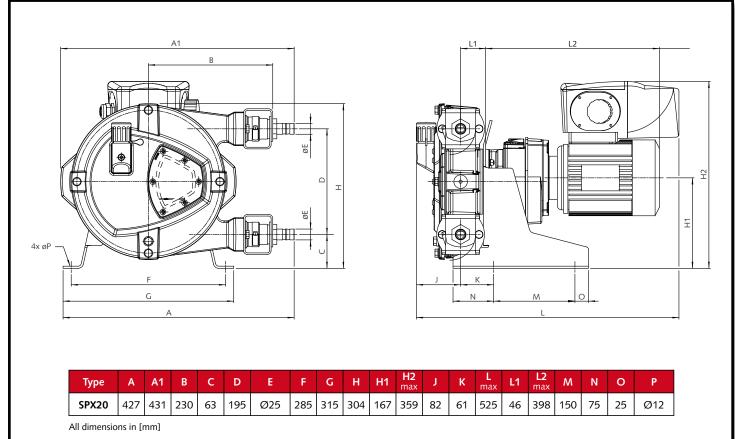
Maximum 2 hours operation followed by minimum 1 hour stop

# HOW TO USE THE CURVES

- 1. Flow required indicates pump speed
- 2. Calculated discharge pressure
- 3. Net motor power required
- 4. Product temperature
- 5. Calculated discharge pressure
- 6. Maximum recommended pump speed

**Note:** The area of continuous operation diminishes with increased product temperatures.

For product temperatures > 40 °C, the area of continuous operation reduces to the corresponding red temperature line.



#### **TECHNICAL SPECIFICATIONS**

Suction Pressure:

Supply: 230/400 V - 3 phases - 50 Hz

Operating Speeds: up to 67 rpm continuous; up to 90 rpm intermittent

Minimum starting torque: 85 Nm

Product Temperature Range\*: -10 °C up to 80 °C

Ambient Temperature Range\*\*: -20 °C up to 45 °C

Hose Lubricant Required: 0.5 litre
Flow Range: up to 820 L/hr

Discharge Pressure: high pressure rotor: up to 750 kPa [7.5 bar] low pressure rotor: 400 kPa [4bar]

9.5 metre. lift to 200 kPa [2 bar]

Available Hose Materials: NR/NBR

Available pump element nipple assembly: PTFE, PVDF, AISI 316

Available flanges:
ASA, DIN AISI 316, ASA AISI 316
Available inserts:
Optional High Level Hose Leak Sensor:
NO or NC: 1A max, 250V max, 50 VA max

## **MATERIALS OF CONSTRUCTION**

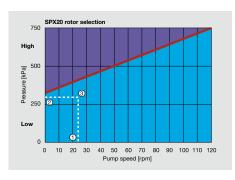
Pumphousing:Cast-ironRotor with Integral Shoes:Cast-ironBearing Hub:Not applicableCover:Cast-ironBrackets:AISI 316

Support Frame: Galvanized Steel or AISI 316

Fasteners:

Hose Clamps:
AISI 316
AISI 316
Shaft:
Alloy Steel
Seals:
NBR and EPDM
Pumphead Weight:
18,5 kg

- \* Please consult your Bredel representative for lower or higher temperature operation.
- \*\*Allowable ambient temperature is based on pump capabilities and may be further limited by gearbox ambient capabilities.



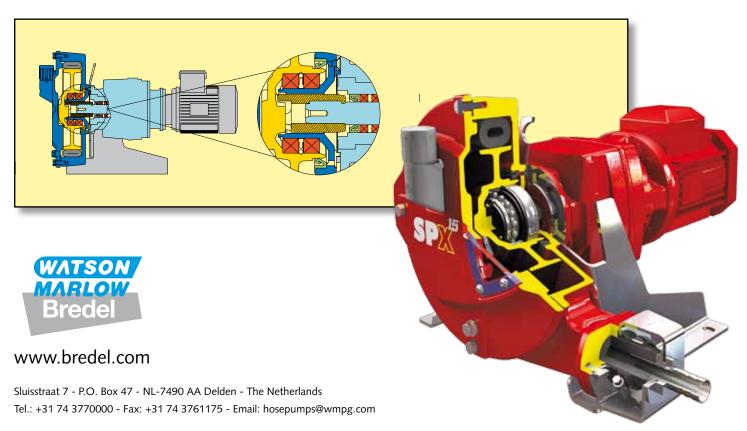
### **SELECTION OF ROTOR SIZE.**

Determine operating point (rpm/discharge pressure).

- 1 Required pump speed;
- 2 Calculated discharge pressure;
- 3 When operating below the red line the Low pressure rotor is used. When operating above the red line the High pressure rotor is used.

#### RFMARK

With a variable speed drive and operating in both areas, the High pressure rotor should be used.



# Watson-Marlow...Innovation in Full Flow

