

## DESIGN ENVELOPE 4280 END SUCTION | 0308-002.0 | SUBMITTAL

File No: 100.3540  
Date: APRIL 18, 2016  
Supersedes: NEW  
Date: NEW

Job: \_\_\_\_\_ Representative: \_\_\_\_\_

Order No: \_\_\_\_\_ Date: \_\_\_\_\_

Engineer: \_\_\_\_\_ Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor: \_\_\_\_\_ Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

### PUMP DESIGN DATA

No. of pumps: \_\_\_\_\_ Tag: \_\_\_\_\_  
Capacity: \_\_\_\_\_ USgpm (L/s) Head: \_\_\_\_\_ ft (m)  
Liquid: \_\_\_\_\_ Viscosity: \_\_\_\_\_  
Temperature: \_\_\_\_\_ °F (°C) Specific gravity: \_\_\_\_\_  
Suction: 4" (100mm) Flanged  
Discharge: 3" (75mm) Flanged  
OSHDP Seismic Certification **OSP-0422-10**  
UL STD 778 & CSA STD C22.2 NO.108 certified

### MOTOR DESIGN DATA

HP: 2 RPM: 1200 Frame size: 184JM  
Enclosure: TEFC Volts: \_\_\_\_\_ Hertz: 60 Hz  
Phase: 3 Efficiency: NEMA premium 12.12

### MAXIMUM PUMP OPERATING CONDITIONS

#### ANSI 125

175 psig at 150°F (12 bars at 65°C)  
140 psig at 250°F (10 bars at 121°C)

#### ANSI 250

300 psig at 150°F (20 bars at 65°C)  
250 psig at 250°F (17 bars at 121°C)

- Tolerance of  $\pm 0.125"$  ( $\pm 3$  mm) should be used
- For exact installation, data please write factory for certified dimensions

### MECHANICAL SEAL DATA

Seal type: 2A Stationary seat: Silicone carbide  
Secondary seal: EPDM Rotating hardware: Stainless steel  
Spring: Stainless steel

### CONTROLS DATA

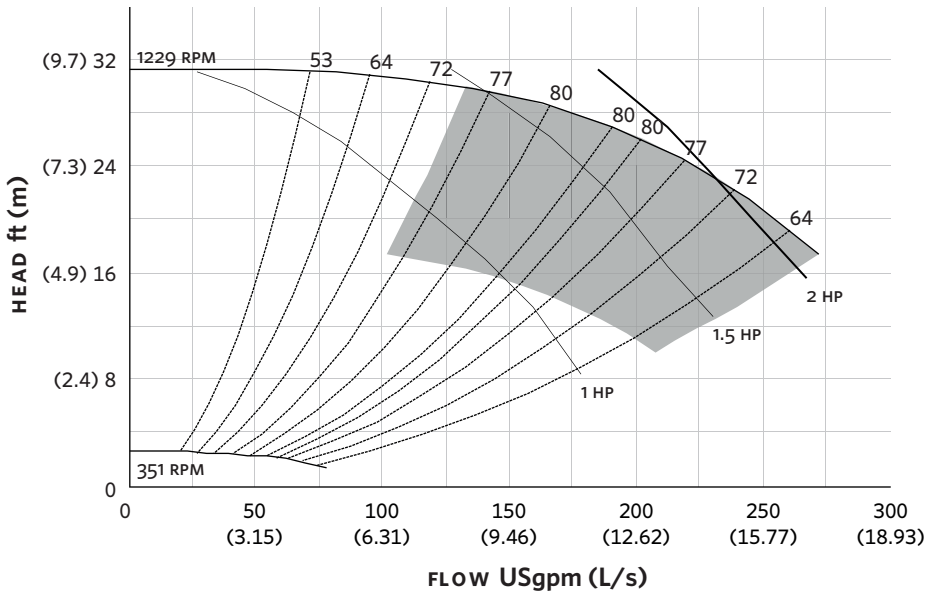
Sensorless control: Standard  
Minimum system pressure to be maintained: \_\_\_\_\_ ft (m)\*  
Protocol (standard):  Modbus RTU  BACnet™ MS/TP  
 Johnson® N2  Siemens® FLN  
Protocol (optional):  LonWorks®  
Enclosure:  Indoor - UL TYPE 12  
Fused disconnect switch:   
EMI/RFI control: Integrated filter designed to meet EN61800-3  
Harmonic suppression: Dual DC-link reactors (equivalent: 5% AC line reactor) supporting IEEE 519-1992 requirements\*\*  
Cooling: Fan-cooled through back channel  
Ambient temperature: -10°C to +45°C up to 1000 meters above sea level (-14°F to +113°F, 3300 ft)  
Analog I/O: Two current or voltage inputs, one current output  
Digital I/O: Six programmable inputs (two can be configured as outputs)  
Pulse inputs: Two programmable  
Relay outputs: Two programmable  
Communication port: 1-RS485, 1-USB

\*If minimum maintained system pressure is not known: Default to 40% of design head

\*\*The Ivs 102 drive is a low harmonic drive via built-in DC line reactors. This does not guaranty performance to any system wide harmonic specification or the costs to meet a system wide specification. If supplied with the system electrical details, Armstrong will run a computer simulation of the system wide harmonics. If system harmonic levels are exceeded Armstrong can also recommend additional harmonic mitigation and the costs for such mitigation.

| FLUID TYPE     | ALL GLYCOLS > 30% WT CONC |                   | ALL OTHER NON-POTABLE FLUIDS |                        | POTABLE (DRINKING) WATER |                   |
|----------------|---------------------------|-------------------|------------------------------|------------------------|--------------------------|-------------------|
|                | up to 200°F / 93°C        | over 200°F / 93°C | up to 200°F / 93°C           | over 200°F / 93°C      | up to 200°F / 93°C       | over 200°F / 93°C |
| Temperature    | up to 200°F / 93°C        | over 200°F / 93°C | up to 200°F / 93°C           | over 200°F / 93°C      | up to 200°F / 93°C       | over 200°F / 93°C |
| Rotating face  | Silicone carbide          |                   | Resin bonded carbon          | Antimony loaded carbon | Resin bonded carbon      |                   |
| Seat elastomer | EPDM (L-cup)              | EPDM (O-ring)     | EPDM (L-cup)                 | EPDM (O-ring)          | EPDM (L-cup)             | EPDM (O-ring)     |
| Material code  | SCSc L EPSS 2A            | SCSc O EPSS 2A    | C-SC L EPSS 2A               | ACSc O EPSS 2A         | C-SC L EPSS 2A           | C-SC O EPSS 2A    |

**EXTENDED SPEED**



Performance curves are for reference only.  
Confirm current performance data with Armstrong ACE Online selection software.

**DIMENSION DATA**

**INDOOR**  
(UL TYPE 12/ODP)

- Frame size: 184JM
- Size: 4×3×8
- HP: 2
- RPM: 1200
- A: 9.08 (231)
- B: 7.09 (180)
- C MAX: 21.09 (536)
- D1: 6.63 (168)
- D2: 4.50 (114)
- 2E: 7.50 (191)
- F: 5.50 (140)
- H: 0.47 (12)
- HD: 6.89 (175)
- HI: 21.65 (550)
- HV: 13.67 (347)
- N: 6.30 (160)
- NAN1: 6.00 (152)
- X: 11.00 (279)
- Y: 4.00 (102)
- Casing foot hole: 0.63 (16)
- Weight: 325 (147.4)

Dimensions - inch (mm)  
Weight - lbs (kg)

**INDOOR**

- TORONTO  
+1 416 755 2291
- BUFFALO  
+1 716 693 8813
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+44 (0) 8444 145 145
- MANCHESTER  
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