

# DESIGN ENVELOPE 4280 END SUCTION | SINGLE PHASE | 0410S005.0 | SUBMITTAL

File No: 100.3642  
 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: 5" (125mm) Tapped holes  
 Discharge: 4" (100mm) Flanged  
**OSHDP Seismic Certification osp-0422-10**  
**UL STD 778 & CSA STD C22.2 NO.108 certified**

## MOTOR DESIGN DATA

HP: 5 RPM: 1200 Frame size: 215JP  
 Enclosure: TEFC Volts: 208 Freq: 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 ±0.125" (±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

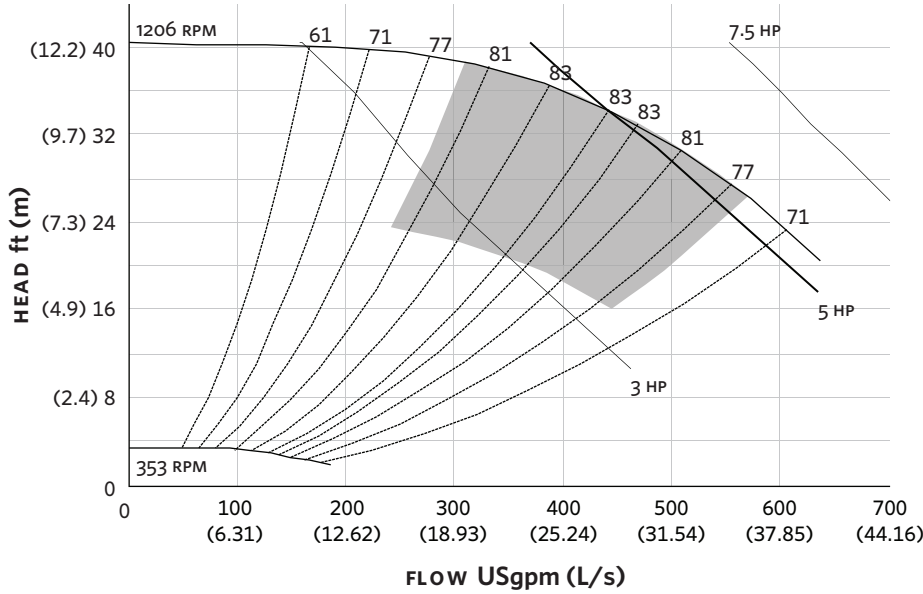
## CONTROLS DATA

**Power supply:** Volts: 200-240VAC  
 Freq: 50/60Hz Phase: 1  
**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  
**Disconnect switch:**  Non-fused  
**EMI/RFI control:** 1-phase IVS102 units do not meet the EN61800-3 directive  
**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
<b>Temperature</b>	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
<b>Rotating face</b>	Silicone carbide		Resin bonded carbon	Antimony loaded carbon	Resin bonded carbon	
<b>Seat elastomer</b>	EPDM (L-cup)	EPDM (O-ring)	EPDM (L-cup)	EPDM (O-ring)	EPDM (L-cup)	EPDM (O-ring)
<b>Material code</b>	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: 215JP
- Size: 5×4×10
- HP: 5
- RPM: 1200
- A: 10.27 (261)
- B: 8.98 (228)
- C MAX: 27.65 (702)
- D1: 10.00 (254)
- D2: 5.25 (133)
- 2E: 8.50 (216)
- F: 7.00 (178)
- H: 0.47 (12)
- HD: 7.68 (195)
- HI: 28.37 (721)
- HV: 16.98 (431)
- N: 11.13 (283)
- NaN1: 9.75 (248)
- X: 12.50 (318)
- Y: 4.00 (102)
- Casing foot hole: 0.63 (16)
- Weight: 496 (225)

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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