

## DESIGN ENVELOPE 4300 VIL SINGLE PHASE | 0406-001.5 | SUBMITTAL

**File No:** 100.4291  
**Date:** OCTOBER 27, 2014  
**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) Discharge: 4" (100mm)

### MOTOR DESIGN DATA

HP: 1.5 RPM: 1450 Frame size: \_\_\_\_\_  
Enclosure: \_\_\_\_\_ Volts: 208 Freq: 60 Hz  
Phase: 3 Efficiency: NEMA premium

### MAXIMUM PUMP OPERATING CONDITIONS

#### ANSI 125

175 psig at 150°F (12 bars at 65°C)  
100 psig at 300°F (7 bars at 150°C)

#### ANSI 250

375 psig at 150°F (26 bars at 65°C)  
260 psig at 300°F (21 bars at 150°C)

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

### MECHANICAL SEAL DESIGN DATA

See file no. 43.50 for standard mechanical seal details as indicated below

Armstrong seal reference number

A1 (C)  Others: \_\_\_\_\_

### CONTROLS DATA

**Power supply:** Volts: 200-240VAC  
Freq: 50/60Hz Phase: 1

**Sensorless Control:** Standard

**Minimum system pressure to be maintained:** \_\_\_\_\_ ft (m)\*

**Orientation:**  L1 (default)  L2  L3  L4

**Protocol (standard):**  Modbus RTU  BACnet™ MS/TP  
 Johnson® N2  Siemens® FLN

**Protocol (optional):**  LonWorks®

**Enclosure:**  Indoor - UL TYPE 12  
 Outdoor - UL TYPE 4X with Weather Shield  
 Outdoor - UL TYPE 4X less Weather Shield

**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

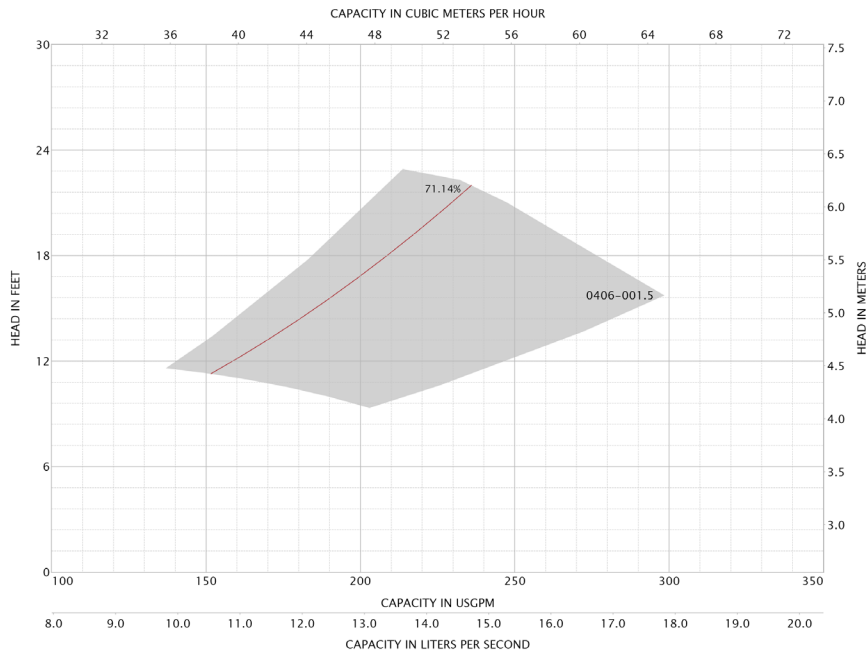
**Digital I/O:** Six programmable inputs (two can be configured as outputs)

**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.

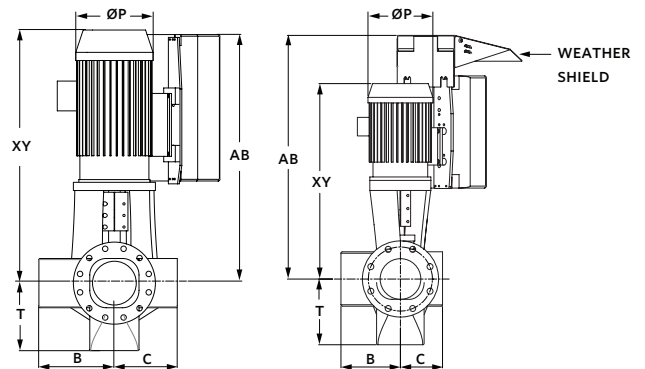
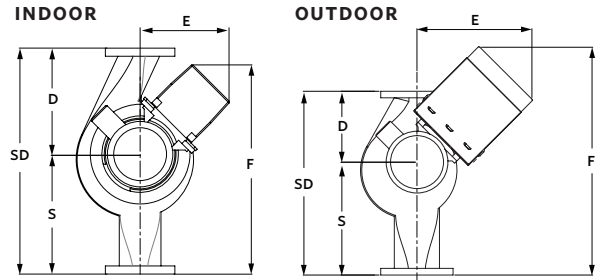
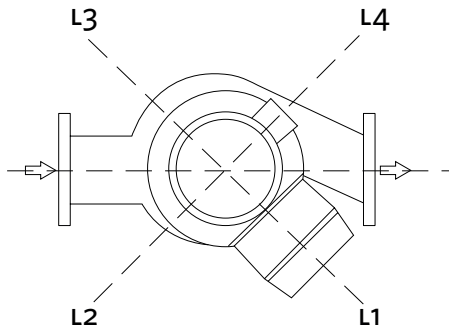


**DIMENSION DATA**

	INDOOR (UL TYPE 12/ODP)	OUTDOOR (UL TYPE 4X/TEFC)
<b>Frame size:</b>	143	143
<b>Size:</b>	4×4×6	4×4×6
<b>HP:</b>	1.5	1.5
<b>RPM:</b>	1450	1450
<b>AB:</b>	24.08(612)	30.21(767)
<b>B:</b>	6.88(175)	6.88(175)
<b>C:</b>	5.50(140)	5.50(140)
<b>D:</b>	10.00(254)	10.00(254)
<b>E:</b>	12.04(306)	17.19(437)
<b>F:</b>	12.04(306)	17.19(437)
<b>P:</b>	8.63(219)	7.28(185)
<b>S:</b>	12.00(305)	12.00(305)
<b>SD:</b>	22.00(559)	22.00(559)
<b>T:</b>	7.75(197)	7.75(197)
<b>XY:</b>	22.28(566)	20.78(528)
<b>Weight:</b>	259(117.5)	267(121.1)

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

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



**TORONTO**  
+1 416 755 2291

**BUFFALO**  
+1 716 693 8813

**BIRMINGHAM**  
+44 (0) 8444 145 145

**MANCHESTER**  
+44 (0) 8444 145 145

**BANGALORE**  
+91 (0) 80 4906 3555

**SHANGHAI**  
+86 21 3756 6696