

## DESIGN ENVELOPE 4300 VIL SINGLE PHASE | 0306-007.5 | SUBMITTAL

File No: 100.4285  
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: 3" (75mm) Discharge: 3" (75mm)

### MOTOR DESIGN DATA

HP: 7.5 RPM: 2900 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

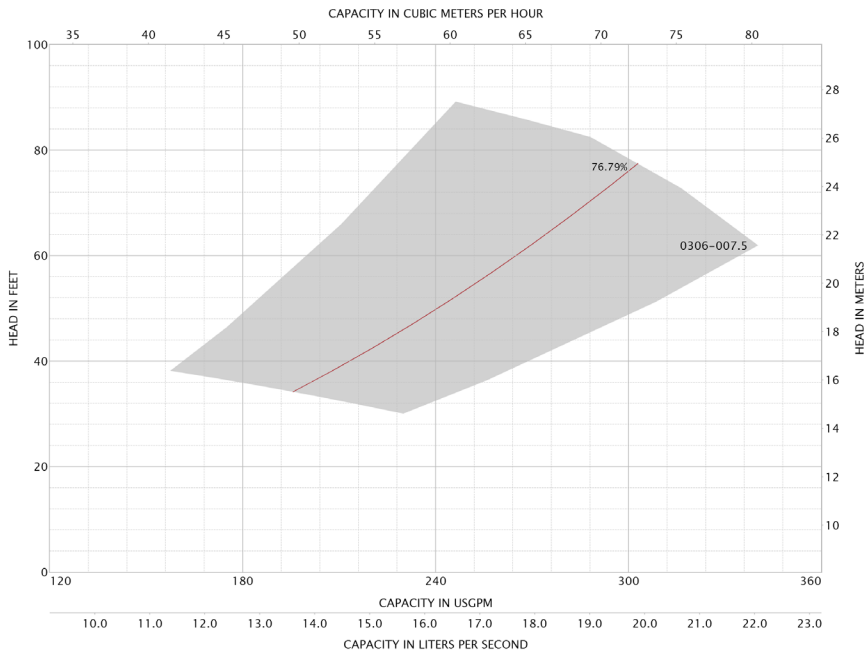
Digital I/O: Six programmable inputs (two can be configured as outputs)

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.

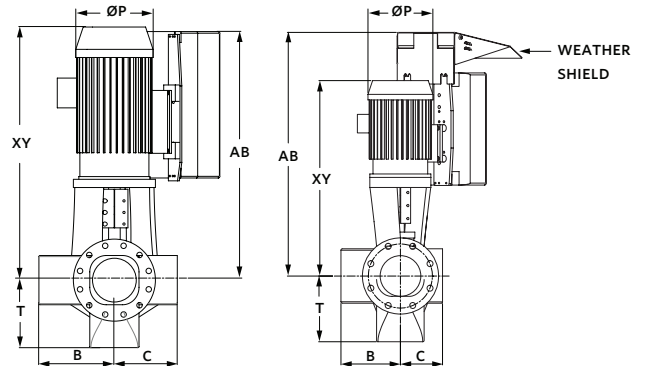
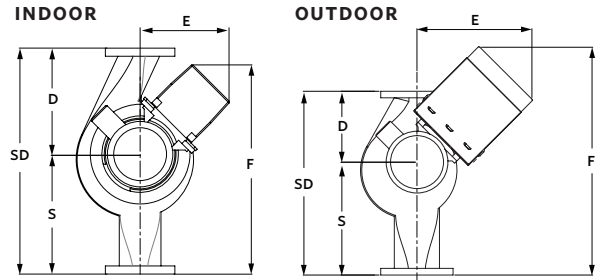
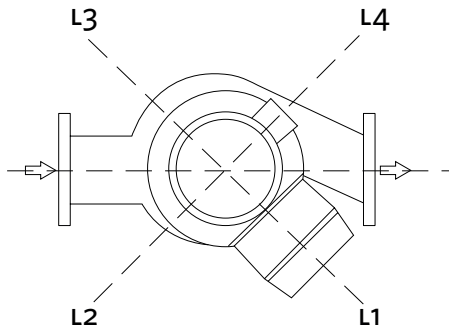


**DIMENSION DATA**

|                    | INDOOR<br>(UL TYPE 12/ODP) | OUTDOOR<br>(UL TYPE 4X/TEFC) |
|--------------------|----------------------------|------------------------------|
| <b>Frame size:</b> | 182                        | 213                          |
| <b>Size:</b>       | 3×3×6                      | 3×3×6                        |
| <b>HP:</b>         | 7.5                        | 7.5                          |
| <b>RPM:</b>        | 2900                       | 2900                         |
| <b>AB:</b>         | 29.23(742)                 | 37.76 (959)                  |
| <b>B:</b>          | 5.80(147)                  | 5.80(147)                    |
| <b>C:</b>          | 4.65(118)                  | 4.65(118)                    |
| <b>D:</b>          | 8.25(210)                  | 8.25(210)                    |
| <b>E:</b>          | 14.42(366)                 | 18.43(468)                   |
| <b>F:</b>          | 14.42(366)                 | 18.43(468)                   |
| <b>P:</b>          | 10.38(264)                 | 11.25(286)                   |
| <b>S:</b>          | 9.75(248)                  | 9.75(248)                    |
| <b>SD:</b>         | 18.00(457)                 | 18.00(457)                   |
| <b>T:</b>          | 6.06(154)                  | 6.06(154)                    |
| <b>XY:</b>         | 26.54(674)                 | 29.16(741)                   |
| <b>Weight:</b>     | 260(117.9)                 | -                            |

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

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



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