

## DESIGN ENVELOPE 4300 VIL | 32-125 (1.25x1.25x5) | 3212-001.5 | SUBMITTAL

File No: 101.5407IEC  
Date: MARCH 25, 2021  
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Date: SEPTEMBER 30, 2019

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

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

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

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

### PUMP DESIGN DATA

No. of pumps: \_\_\_\_\_ Tag: \_\_\_\_\_

Capacity: \_\_\_\_\_ L/s (USgpm) Head: \_\_\_\_\_ m (ft)

Liquid: \_\_\_\_\_ Viscosity: \_\_\_\_\_

Temperature: \_\_\_\_\_ °C (°F) Specific gravity: \_\_\_\_\_

Suction: 32 mm (1.25") Discharge: 32 mm (1.25")

MEI ≥ 0.70

### MATERIALS OF CONSTRUCTION

PN 16

CONSTRUCTION: LPDEBF

E-coated ductile iron A 536 Gr 565-45-12, bronze fitted

### MAXIMUM PUMP OPERATING CONDITIONS

PN 16

16 bars at 49°C (232 psig at 120°F)

7 bars at 150°C (100 psig at 300°F)

### MECHANICAL SEAL DESIGN DATA

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

Armstrong seal reference number

c1 (a)  Others: \_\_\_\_\_

### FLOW READOUT ACCURACY

The Design Envelope model selected will provide flow reading on the controls local keypad & digitally for the BMS. The model readout will be factory tested to ensure ±5% accuracy.

### DEPM MOTOR AND CONTROL DATA

**kW:** 1.5

**RPM:** 3600

**Motor enclosure:** TEFC

**Volts:** \_\_\_\_\_

**Phase:** 3

**Efficiency:** IE5

**Orientation:**  L5 (default)  L6

**Protocol (standard):**  BACnet™ MS/TP

BACnet™ TCP/IP

Modbus RTU

**Control enclosure:**  Indoor - IP 55

Outdoor - IP 66

**Fused disconnect switch:** Consult factory

**EMI/RFI control:** Integrated filter designed to meet EN61800-3

**Harmonic suppression:** Equivalent: 5% AC line reactor - Supporting IEEE 519-1992 requirements\*\*

**Cooling:** Fan-cooled, surface cooling

**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 inputs, one output. Output can be configured for voltage or current

**Digital i/o:** Two inputs, two outputs. Outputs can be configured as inputs

**Relay outputs:** Two programmable

**Communication port:** 1-RS485

\*\* 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.

## OPTIONS

### SENSORLESS BUNDLE (STANDARD)



Operation of pump without a remote sensor. Includes:

- Sensorless control
- Flow readout
- Constant flow
- Constant pressure

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

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

### PARALLEL SENSORLESS



Operation of multiple pumps without a remote sensor

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

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

### ENERGY PERFORMANCE BUNDLE



Provides energy savings on oversized systems by adjusting pump parameters to on-site conditions. Includes:

- **Auto-flow balancing** - Automatically determines control curve between design flow at on-site system head, and minimum (zero-head) flow for energy savings
- **Maximum flow control** - Limits flow rate to pre-set maximum for potential energy savings

Maximum flow rate \_\_\_\_\_ L/s (gpm)

\*Only available if sensorless bundle is enabled  
\*Available in single pump operation only

### PROTECTION BUNDLE



Protects other flow sensitive equipment by setting limits of pump operation. Includes:

- **Minimum flow control** - Attempts to maintain flow rate to pre-set minimum to protect equipment in system
- **Bypass valve control** - Actuates a bypass valve to protect flow sensitive equipment if pre-set minimum flow rate is reached

Minimum flow rate \_\_\_\_\_ L/s (gpm)

\*Only available if sensorless bundle is enabled

### DUAL SEASON SETUP



Pre-sets heating and cooling parameters for pumps in 2-pipe systems

#### Cooling

Duty point \_\_\_\_\_ L/s (gpm) at \_\_\_\_\_ m (ft)

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

#### Heating

Duty point \_\_\_\_\_ L/s (gpm) at \_\_\_\_\_ m (ft)

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

\*Available in single pump operation only

## OPTIONAL SERVICES

### ON-SITE PUMP COMMISSIONING



### PUMP MANAGER



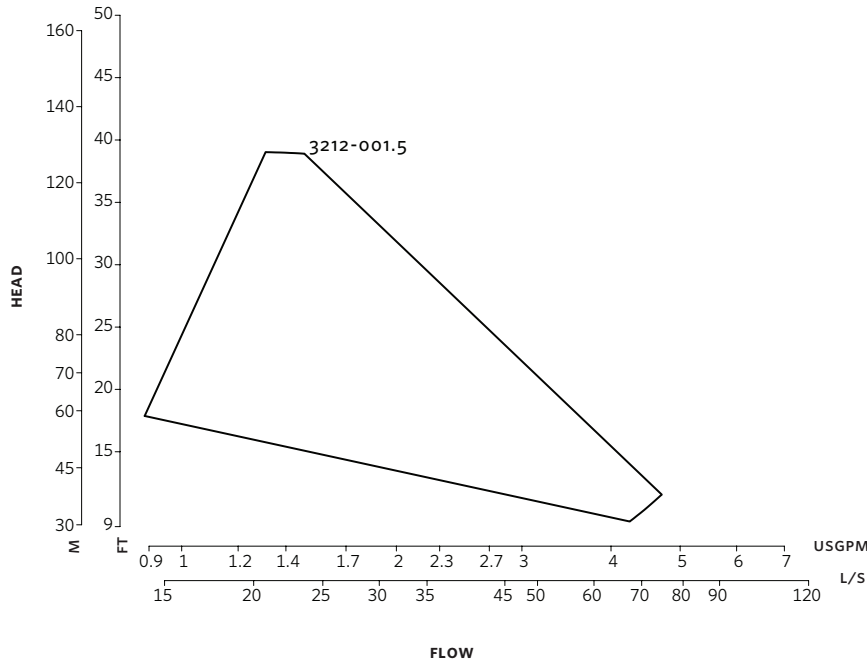
Online service for sustained pump performance and enhanced reliability.

Available in 3 or 5 year terms

\* Requires an internet connection to be provided by building

\* Includes an extended warranty for parts and labour (wearable parts excluded)

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**DIMENSION DATA**

	INDOOR (IP55/TEFC)	OUTDOOR (IP66/TEFC)
<b>Size:</b>	32-125	32-125
<b>kW:</b>	1.5	1.5
<b>RPM:</b>	3600	3600
<b>Frame:</b>	90S	90S
<b>AB:</b>	535 (21.05)	591 (23.27)
<b>B:</b>	89 (3.51)	89 (3.51)
<b>C:</b>	81 (3.20)	81 (3.20)
<b>CI:</b>	-	127 (5.00)
<b>D:</b>	132 (5.20)	132 (5.20)
<b>E:</b>	208 (8.20)	219 (8.62)
<b>S:</b>	148 (5.83)	148 (5.83)
<b>SD:</b>	280 (11.02)	280 (11.02)
<b>T:</b>	76 (3.00)	76 (3.00)
<b>Weight:</b>	34.0 (75)	34.0 (75)

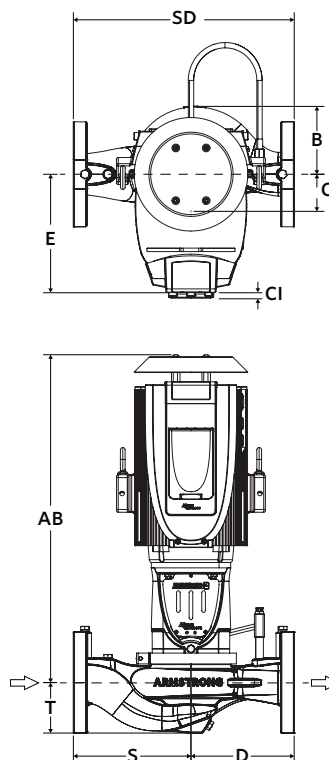
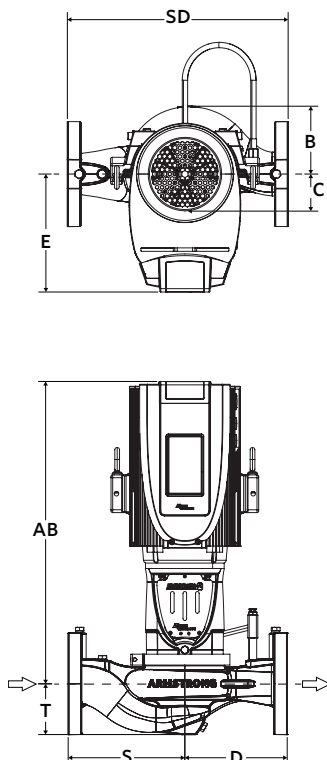
Performance curves are for reference only.  
Confirm current performance data with Armstrong ADEPT Quote or ADEPT Select selection software.

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

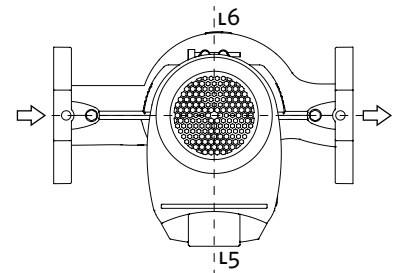
- Tolerance of  $\pm 3$  mm ( $\pm 0.125$ " ) should be used
- For exact installation, data please write factory for certified dimensions

**INDOOR**

**OUTDOOR**



**CONTROL ORIENTATIONS**



**TORONTO**

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ESTABLISHED 1934

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