

DESIGN ENVELOPE 4380 VIL | 1.5x1.5x3 (40-80) | 1503-001.0 | SUBMITTAL

File No: 101.5740
Date: NOVEMBER 08, 2021
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: 1.5" (40 mm) Discharge: 1.5" (40 mm)

UL STD 778 & CSA STD C22.2 NO.108 certified

Test report is supplied with each pump

MATERIALS OF CONSTRUCTION

ANSI 125
CONSTRUCTION: LPDEBF
E-coated ductile iron A 536 Gr 565-45-12, bronze fitted

MAXIMUM PUMP OPERATING CONDITIONS

ANSI 125
175 psig at 150°F (12 bar at 65°C)
140 psig at 250°F (10 bar at 121°C)

FLOW READOUT ACCURACY

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

MECHANICAL SEAL DESIGN DATA

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

DEPM MOTOR AND CONTROL DATA

HP: 1
RPM: 3600
Motor enclosure: TEFC
Volts /Phase: 200-240V/1ph 380-480V/3ph
For 200-240V/3ph or 575V/3ph,
see File #: 101.5501
Efficiency: IE5
Orientation: L5 (default) L6
Protocol (standard): BACnet™ MS/TP BACnet™ TCP/IP
 Modbus RTU
Control enclosure: Indoor - UL TYPE 12
 Outdoor - UL TYPE 12,
tested to TYPE 4X
Fused disconnect switch: See File 100.8131
EMI/RFI control: Integrated filter designed to meet
EN61800-3
Harmonic suppression: Equivalent: 5% AC line reactor - Sup-
porting IEEE 519-1992 requirements**
Cooling: Fan-cooled, surface cooling
Ambient temperature: -10°C to +40°C up to 1000 meters above
sea level (+14°F to +104°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.

FLUID TYPE	ALL GLYCOLS > 30% WT CONC		ALL OTHER NON-POTABLE FLUIDS		POTABLE (DRINKING) WATER	
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

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 _____ ft (m)

* 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 _____ ft (m)

* 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 _____ gpm (L/s)

*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 _____ gpm (L/s)

*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 _____ gpm (L/s) at _____ ft (m)

Minimum system pressure to be maintained _____ ft (m)

Heating

Duty point _____ gpm (L/s) at _____ ft (m)

Minimum system pressure to be maintained _____ ft (m)

*Available in single pump operation only

OPTIONAL SERVICES

ON-SITE PUMP COMMISSIONING



PUMP MANAGER



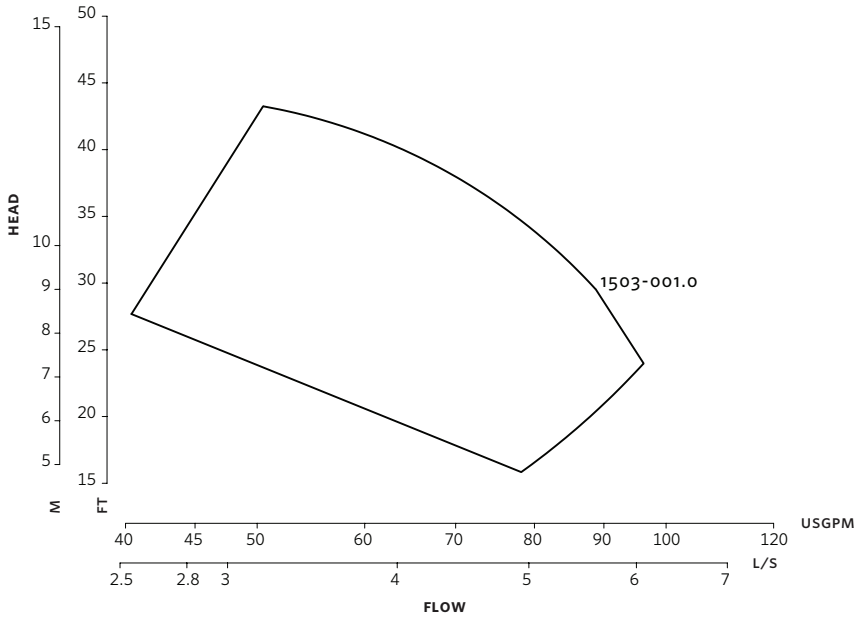
Online service for sustained pump performance and enhanced reliability.

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 (UL TYPE 12/TEFC)	OUTDOOR (UL TYPE 12, TESTED TO TYPE 4X)
Size:	1.5×1.5×3	1.5×1.5×3
HP:	1	1
RPM:	3600	3600
Frame:	71	71
AB:	13.17 (334)	14.30(363)
B:	3.09 (78)	3.09 (78)
C:	2.27 (58)	2.27 (58)
CI:	-	2.75 (70)
D:	4.59 (116)	4.59 (116)
E:	5.99 (152)	6.41 (163)
S:	5.37 (136)	5.37 (136)
SD:	9.96 (253)	9.96 (253)
T:	2.93 (74)	2.93 (74)
Weight:	45 (20.4)	45 (20.4)

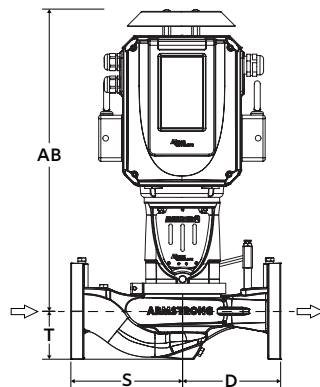
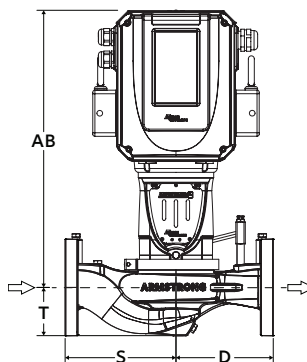
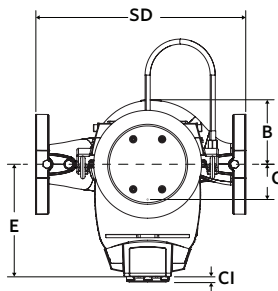
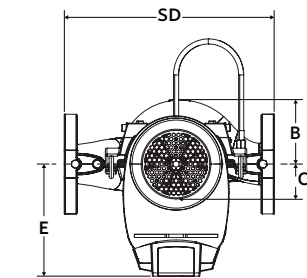
Performance curves are for reference only.
Confirm current performance data with Armstrong ADEPT Quote or ADEPT Select selection software.

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

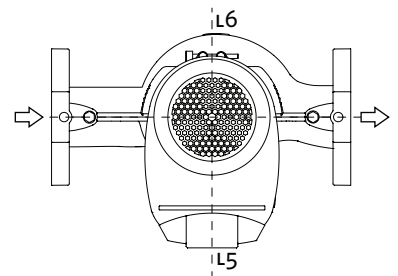
- Tolerance of ±0.125" (±3 mm) should be used
- For exact installation, data please write factory for certified dimensions

INDOOR

OUTDOOR



CONTROL ORIENTATIONS



TORONTO

23 BERTRAND AVENUE
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