

DESIGN ENVELOPE 4380 VIL | 1.25×1.25×5 (32-125) | 1205-003.0 | SUBMITTAL

File No: 101.5717
 Date: MARCH 25, 2021
 Supersedes: 101.5717
 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: _____ USgpm (L/s) Head: _____ ft (m)
 Liquid: _____ Viscosity: _____
 Temperature: _____ °F (°C) Specific gravity: _____
 Suction: 1.25" (32 mm) Discharge: 1.25" (32 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 BMS. 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: 3
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 - UL TYPE 12
 Outdoor - UL TYPE 4X
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.

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



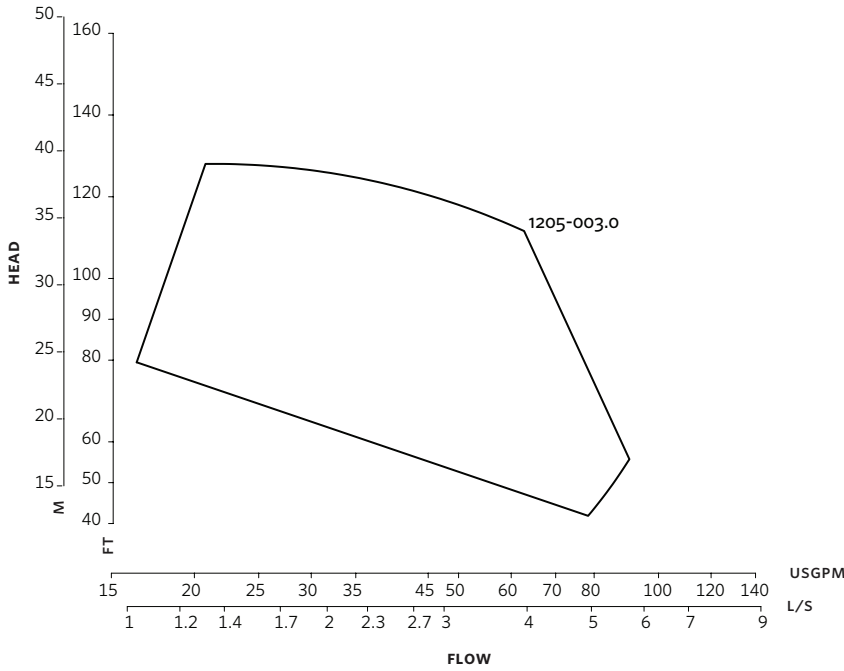
Online service for sustained pump performance and enhanced reliability.

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

DIMENSION DATA

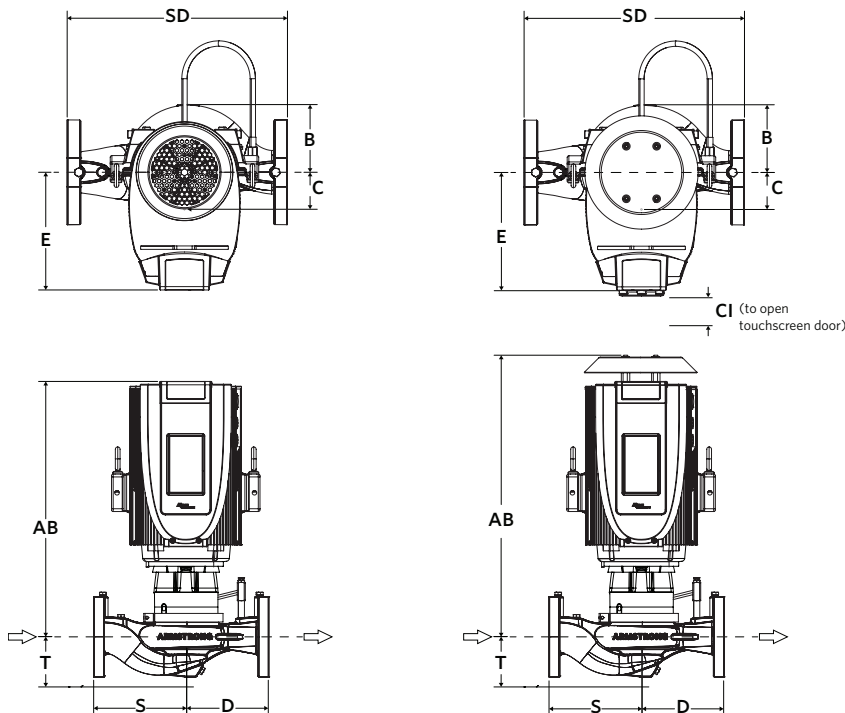
	INDOOR (UL TYPE 12/TEFC)	OUTDOOR (UL TYPE 4X/TEFC)
Size:	1.25×1.25×5	1.25×1.25×5
HP:	3	3
RPM:	3600	3600
Frame:	90	90
AB:	18.27 (464)	20.48 (520)
B:	3.51 (89)	3.51 (89)
C:	3.20 (81)	3.20 (81)
CI:	-	5.00 (127)
D:	5.26 (134)	5.26 (134)
E:	8.20 (208)	8.62 (219)
S:	5.76 (146)	5.76 (146)
SD:	11.02 (280)	11.02 (280)
T:	3.00 (76)	3.00 (76)
Weight:	97 (44.0)	97 (44.0)

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

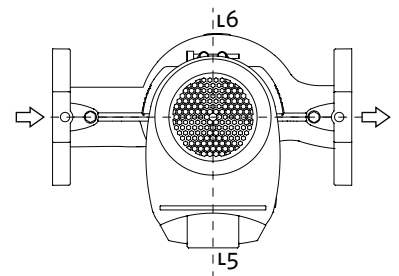
- Tolerance of ±0.125" (±3 mm) should be used
- For exact installation, data please write factory for certified dimensions

INDOOR

OUTDOOR



CONTROL ORIENTATIONS



TORONTO

23 BERTRAND AVENUE
TORONTO, ONTARIO
CANADA, M1L 2P3
+1 416 755 2291

BUFFALO

93 EAST AVENUE
NORTH TONAWANDA, NEW YORK
U.S.A., 14120-6594
+1 716 693 8813

DROITWICH SPA

POINTON WAY,
STONEBRIDGE CROSS BUSINESS PARK
DROITWICH SPA, WORCESTERSHIRE
UNITED KINGDOM, WR9 0LW
+44 8444 145 145

MANCHESTER

WOLVERTON STREET
MANCHESTER
UNITED KINGDOM, M11 2ET
+44 8444 145 145

BANGALORE

#59, FIRST FLOOR, 3RD MAIN
MARGOSA ROAD, MALLESWARAM
BANGALORE, INDIA, 560 003
+91 80 4906 3555

SHANGHAI

UNIT 903, 888 NORTH SICHUAN RD.
HONGKOU DISTRICT, SHANGHAI
CHINA, 200085
+86 21 5237 0909

SÃO PAULO

RUA JOSÉ SEMIÃO RODRIGUES AGOSTINHO,
1370 GALPÃO 6 EMBU DAS ARTES
SAO PAULO, BRAZIL
+55 11 4785 1330

LYON

93 RUE DE LA VILLETTE
LYON, 69003 FRANCE
+33 4 26 83 78 74

DUBAI

JAFZA VIEW 19, OFFICE 402
P.O.BOX 18226 JAFZA,
DUBAI - UNITED ARAB EMIRATES
+971 4 887 6775

MANNHEIM

DYNAMOSTRASSE 13
68165 MANNHEIM
GERMANY
+49 621 3999 9858

JIMBOLIA

STR CALEA MOTILOR NR 2C
PO: 305400, JIMBOLIA
ROMANIA
+40 256 360 030

ARMSTRONG FLUID TECHNOLOGY
ESTABLISHED 1934

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