

DESIGN ENVELOPE 4280 END SUCTION | 40-80 (1.5x1.25x3) | 3280-001.1 | SUBMITTAL

File No: 103.5703IEC
Date: MARCH 25, 2021
Supersedes: 103.5703IEC
Date: SEPTEMBER 5, 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: 40 mm (1.5") Discharge: 30 mm (1.25")
MEI ≥ 0.70

MATERIALS OF CONSTRUCTION

- PN 16**
CONSTRUCTION: LPDESF
E-coated ductile iron A536 Gr 65-45-12, stainless fitted
- PN 25**
CONSTRUCTION: HPDESF
E-coated ductile iron A536 Gr 120-90-2, stainless fitted

MAXIMUM PUMP OPERATING CONDITIONS

- PN 16**
16 bar at 49°C (232 psig at 120°F)
7 bar at 150°C (100 psig at 300°F)
- PN 25**
25 bar at 65°C (362 psig at 149°F)
21 bar at 150°C (304 psig at 300°F)

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

kW: 1.1
RPM: 4500
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
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 93°C / 200°F	over 93°C / 200°F	up to 93°C / 200°F	over 93°C / 200°F	up to 93°C / 200°F	over 93°C / 200°F
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 _____ 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

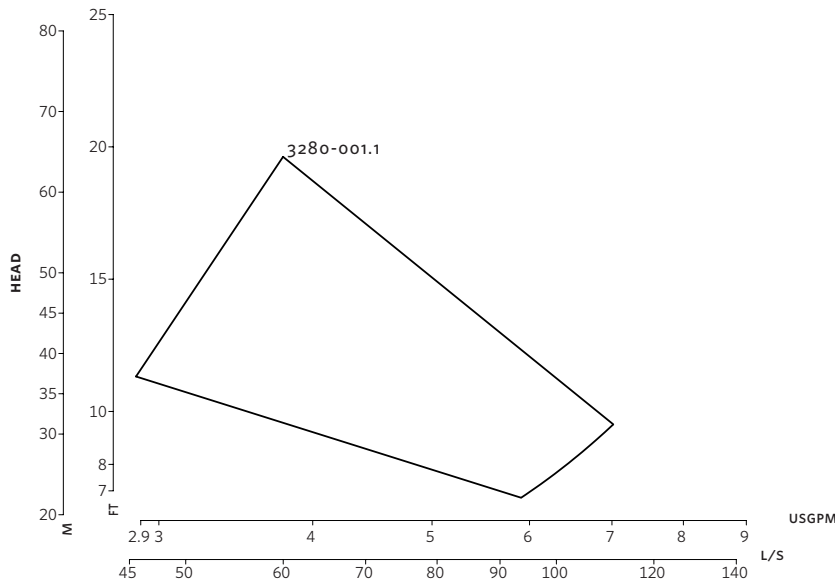


Online service for sustained pump performance and enhanced reliability.

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)



DIMENSION DATA

STANDARD

Size:	1.5×1.25×3
κW:	1.1
RPM:	3600
HA:	294 (11.58)
HD:	190 (7.50)
HI:	438 (17.24)
HV:	208 (8.52)
X:	115 (4.53)
Y:	97 (3.81)
Free & operating height:	95 (3.75)
Weight:	30.0 (66)

SPRING DATA

Rated Capacity per spring	kgs (lbs): 25.0 (54)
Rated Deflection	mm (inch): 30 (1.20)
Mount Constant	kg/mm (lbs/in): 0.8 (45)

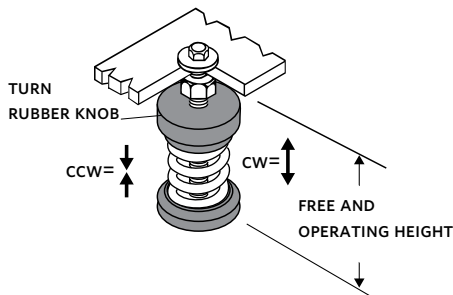
SEISMIC MOUNT OPTION

2E:	16 (8.50)
F:	102 (4.00)
G:	114 (4.50)
H:	12 (0.50)
HA:	273 (10.75)
HD:	222 (8.75)
N:	138 (5.43)
Free & operating height:	127 (5.00)
Max. horizontal static G rating:	6.7

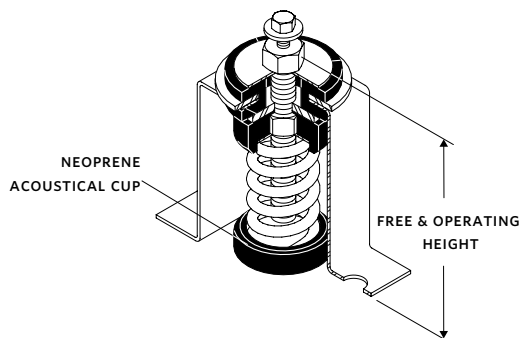
Performance curves are for reference only.

Confirm current performance data with Armstrong ADEPT Quote or ADEPT Select selection software.

STANDARD



SEISMIC MOUNT OPTION



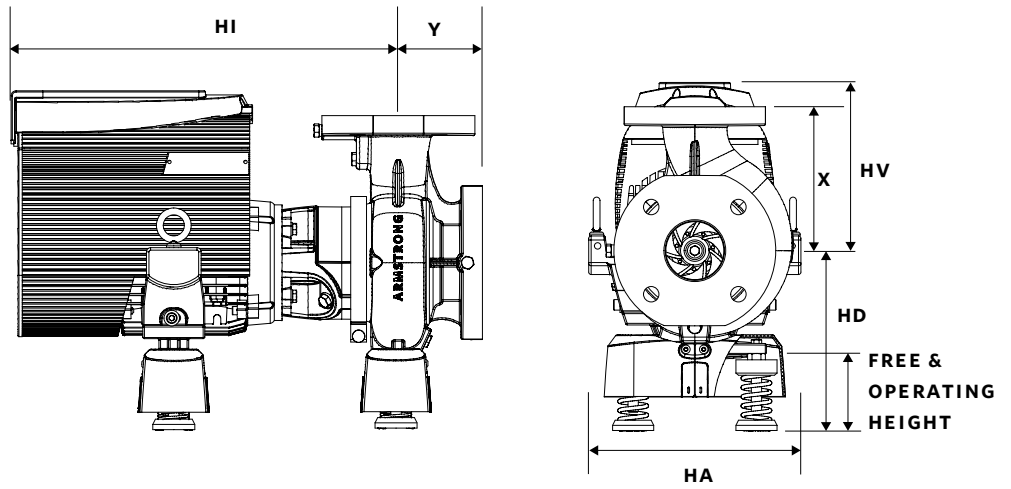
NOTE:

All springs have additional travel to solid equal to 50% of the rated deflection.

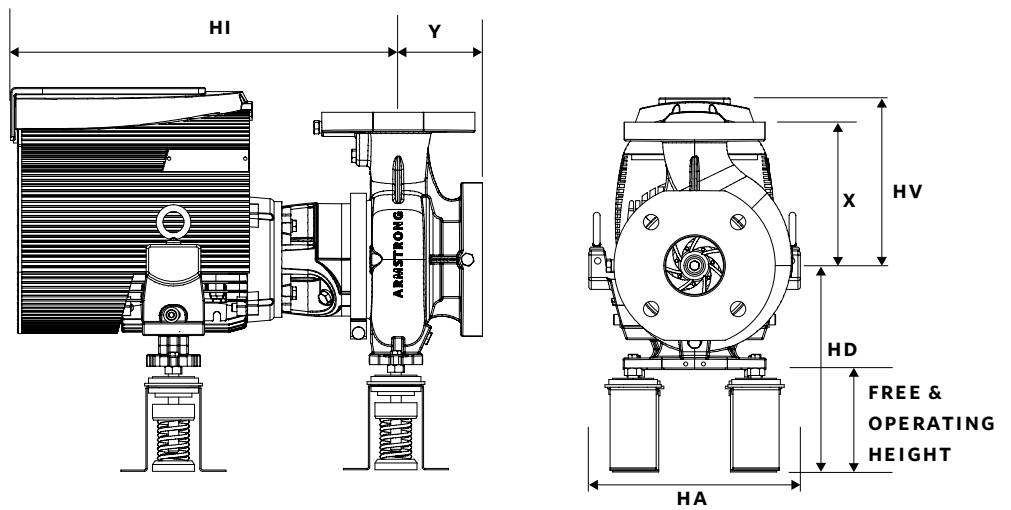
- Dimensions - mm (inch)
- Weight - kg (lbs)

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

STANDARD



SEISMIC MOUNT OPTION



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 (0) 21 5237 0909

SÃO PAULO
+55 11 4785 1330

LYON
+33 (0) 420 102 625

DUBAI
+971 4 887 6775

MANNHEIM
+49 (0) 621 3999 9858

