

## DESIGN ENVELOPE 4200H | END SUCTION BASE MOUNTED | SINGLE PHASE | 1508-002.0 | SUBMITTAL

File No: 100,3428  
Date: APRIL 18, 2016  
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) Flanged

Discharge: 1.5" (40mm) Flanged

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

### MOTOR DESIGN DATA

HP: 2 RPM: 1800 Frame size: 145TC

Enclosure: TEFC Volts: 208 Freq: 60 Hz

Phase: 3 Efficiency: NEMA premium 12.12

### MAXIMUM PUMP OPERATING CONDITIONS

#### ANSI 125

175 psig at 140°F (12 bars at 60°C)

100 psig at 300°F (7 bars at 149°C)

#### ANSI 250

375 psig at 100°F (26 bars at 38°C)

275 psig at 300°F (19 bars at 149°C)

- Tolerance of ±0.125" (±3 mm) should be used
- For exact installation, data please write factory for certified dimensions
- Pump equipped with casing drain plug and ¼" NPT suction and discharge gauge ports

### OPTIONAL EQUIPMENT

### CONTROLS DATA

**Power supply:** Volts: 200-240VAC  
Freq: 50/60Hz Phase: 1

**Sensorless control:** Standard

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

**Protocol (standard):**  Modbus RTU  BACnet™ MS/TP  
 Johnson® N2  Siemens® FLN

**Protocol (optional):**  LonWorks®

**Enclosure:**  Indoor – UL TYPE 12

**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.

### MECHANICAL SEAL DATA

**Seal type:** AB2

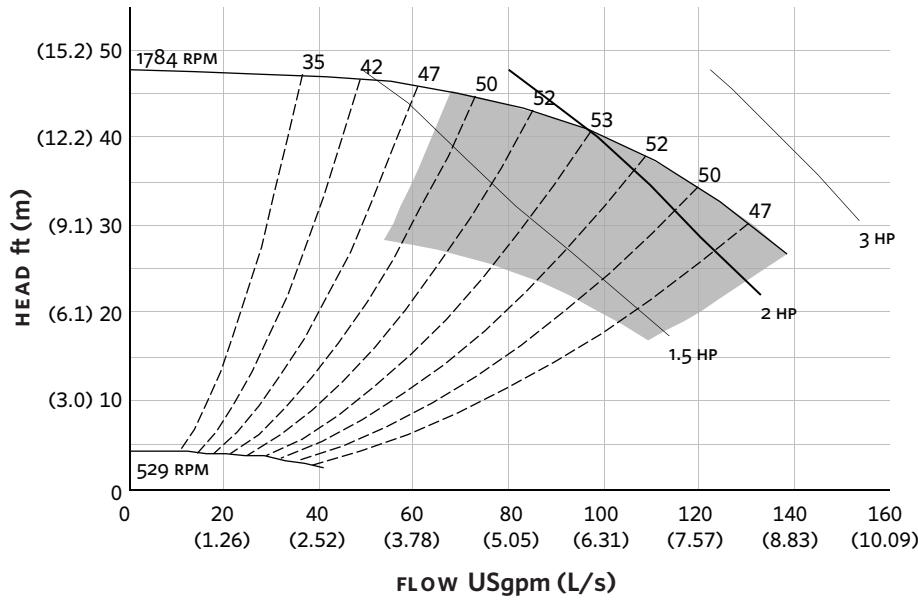
**Stationary seat:** Sintered silicon carbide

**Secondary seal:** Viton

**Rotating hardware:** Stainless steel

**Spring:** Stainless steel

**EXTENDED SPEED**



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

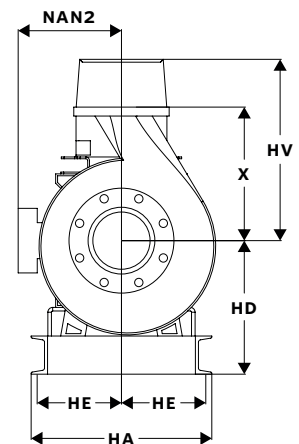
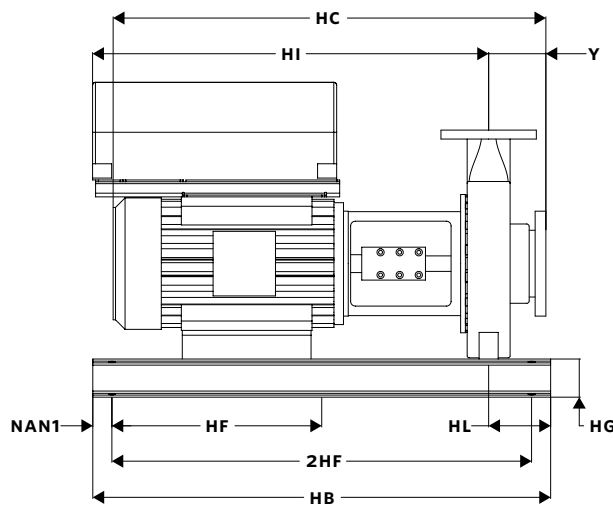
**DIMENSION DATA**

**INDOOR**  
(UL TYPE 12/ODP)

- Frame size:** 145TC
- Size:** 3×1.5×8
- HP:** 2
- RPM:** 1800
- HA:** 14.00 (355)
- HB:** 30.00 (762)
- HC:** 26.57 (675)
- HD:** 9.25 (235)
- HE:** 6.37 (162)
- HF:** 13.00 (330)
- 2HF:** 26.00 (660)
- HG:** 3.00 (76)
- HI:** 26.91 (683)
- HL:** 4.50 (114)
- HV:** 15.53 (395)
- NAN1:** 2.00 (51)
- NAN2:** 5.90 (150)
- x:** 8.50 (216)
- y:** 4.00 (102)
- Weight:** 343 (155.8)

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

**INDOOR**



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