ARMSTRONG

# DESIGN ENVELOPE 4322 TANGO

## 65–125 (2.5×2.5×5) | 6512–001.5 | SUBMITTAL

**File No:** 102.5081IEC
**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: _____

Total system design flow: _____L/s (USgpm)

Head: _____ m (ft) Capacity split _____%

Flow per pump head: _____L/s (USgpm)

Parallel flow: _____L/s (USgpm)

Liquid: _____ Viscosity: _____

Temperature: _____ °C (°F) Specific gravity: _____

Suction: 65 mm (2.5") Discharge: 65 mm (2.5")

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 bars at 49°C (232 psig at 120°F)
7 bars at 150°C (100 psig at 300°F)

☐ **PN 25**
25 bars at 65°C (362 psig at 149°F)
21 bars at 150°C (304 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:** 3000
**Motor enclosure:** TEFC
**Volts /Phase:** ☐ 200-240V/1ph ☐ 380-480V/3ph
For 200-240V/3ph or 575V/3ph, see File #: 102.5017IEC
**Efficiency:** IE5
**Orientation:** Standard
**Protocol (standard):** ☐ BACnet™ MS/TP
☐ BACnet™ TCP/IP
☐ Modbus RTU
**Control enclosure:** ☐ Indoor – IP 55
☐ Outdoor – IP 66
**Fused disconnect switch:** See File 100.8131
**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 +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.

## 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.

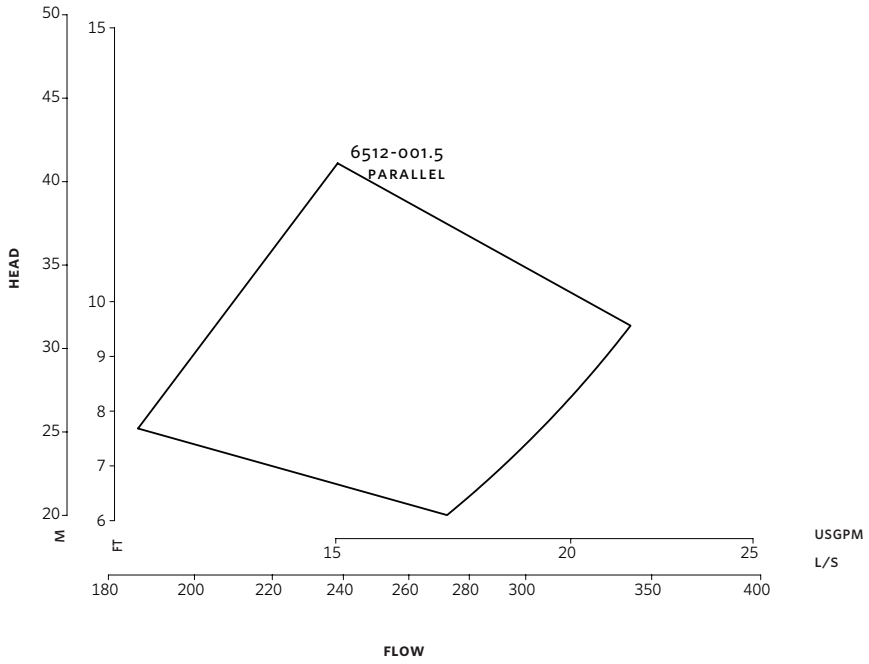
Available in 3 or 5 year terms

* Requires an internet connection to be provided by building
* Includes an extended warranty for parts and labour (wearable parts excluded)

**SUBMITTAL**
6512-001.5

Design Envelope
4322 Tango

**3**




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

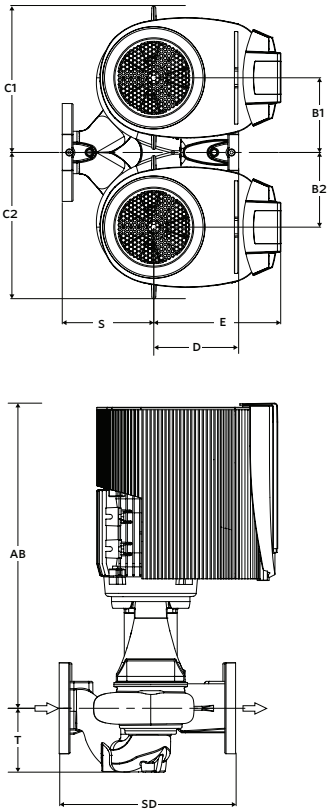
## DIMENSION DATA

| | INDOOR (IP55/TEFC) | OUTDOOR (IP66/TEFC) |
|---|---|---|
| **Size:** | 65–125 | 65–125 |
| **kW:** | 1.5 | 1.5 |
| **RPM:** | 3000 | 3000 |
| **Frame:** | 71 | 71 |
| **AB:** | 422 (16.61) | 451 (17.76) |
| **B1:** | 140 (5.50) | 140 (5.50) |
| **B2:** | 140 (5.50) | 140 (5.50) |
| **C1:** | 241 (9.50) | 241 (9.50) |
| **C2:** | 241 (9.50) | 241 (9.50) |
| **CI:** | – | 70 (2.75) |
| **D:** | 156 (6.15) | 156 (6.15) |
| **E:** | 152 (5.98) | 162 (6.38) |
| **S:** | 184 (7.24) | 184 (7.24) |
| **SD:** | 340 (13.39) | 340 (13.39) |
| **T:** | 130 (5.12) | 130 (5.12) |
| **Weight:** | 65.0 (143) | 65.0 (143) |

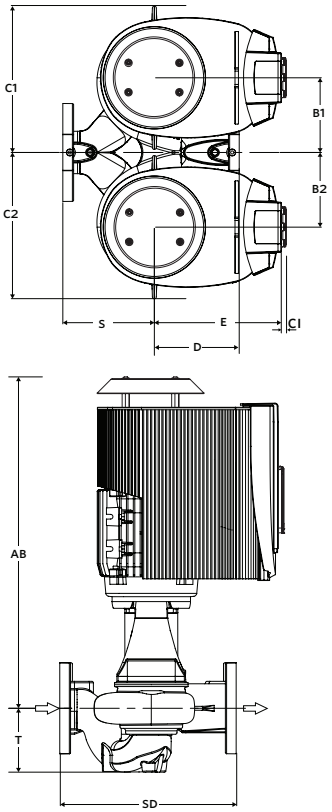
Dimensions – mm (inch)
Weight – kg (lbs)

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

**INDOOR**




**OUTDOOR**



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