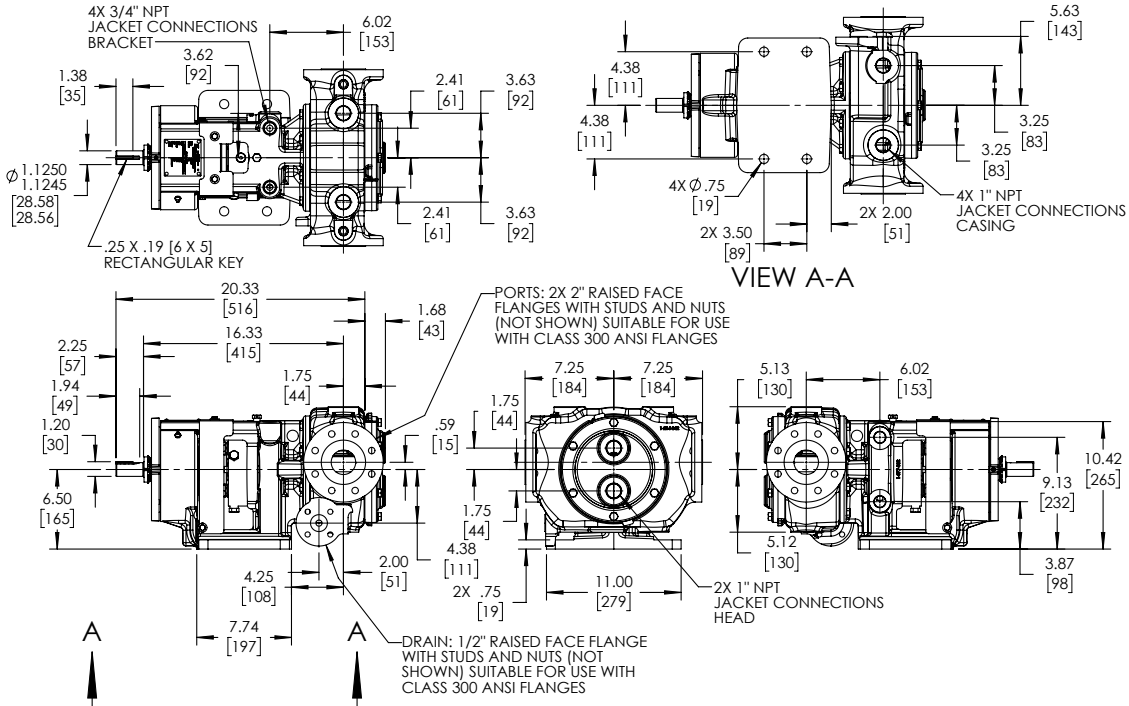


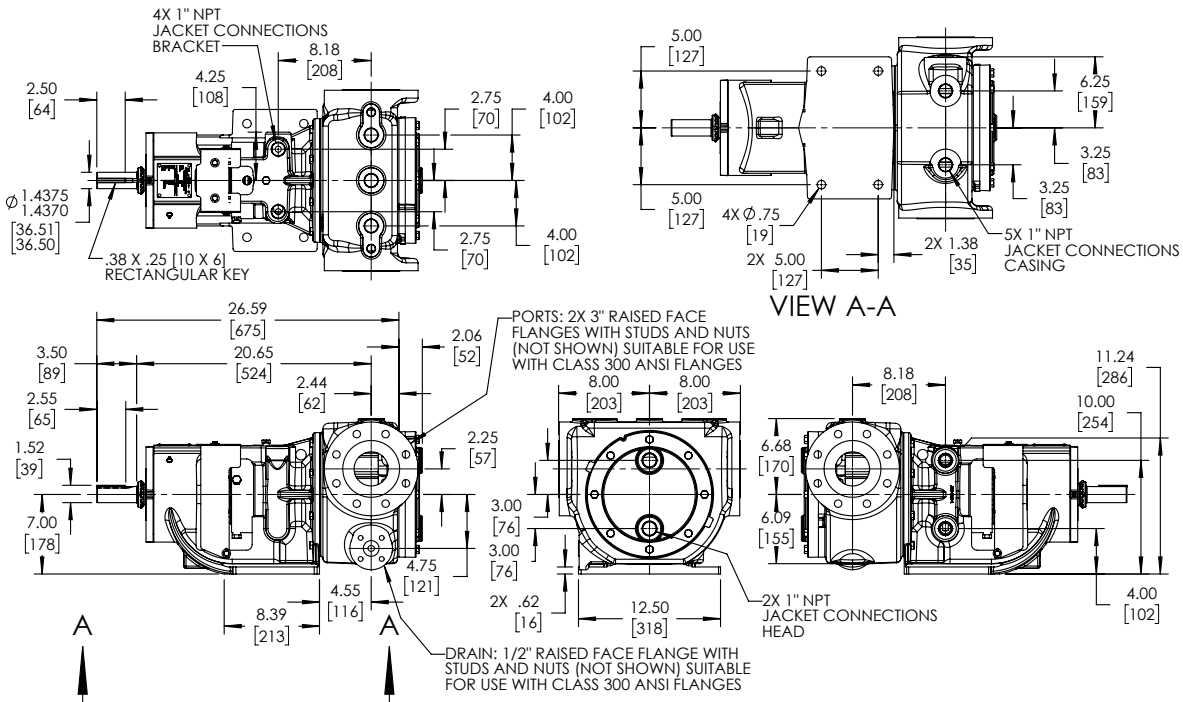
|         |        |
|---------|--------|
| Section | 1305   |
| Page    | 1305.6 |
| Issue   | B      |

**UNIVERSAL PRODUCT LINE:  
STEEL EXTERNALS — JACKETED PUMPS**  
SERIES 4223AX, 4323AX (Full Compliance with API 676 Standards)

**DIMENSIONS — KK4223AX**



**DIMENSIONS — LS4223AX**



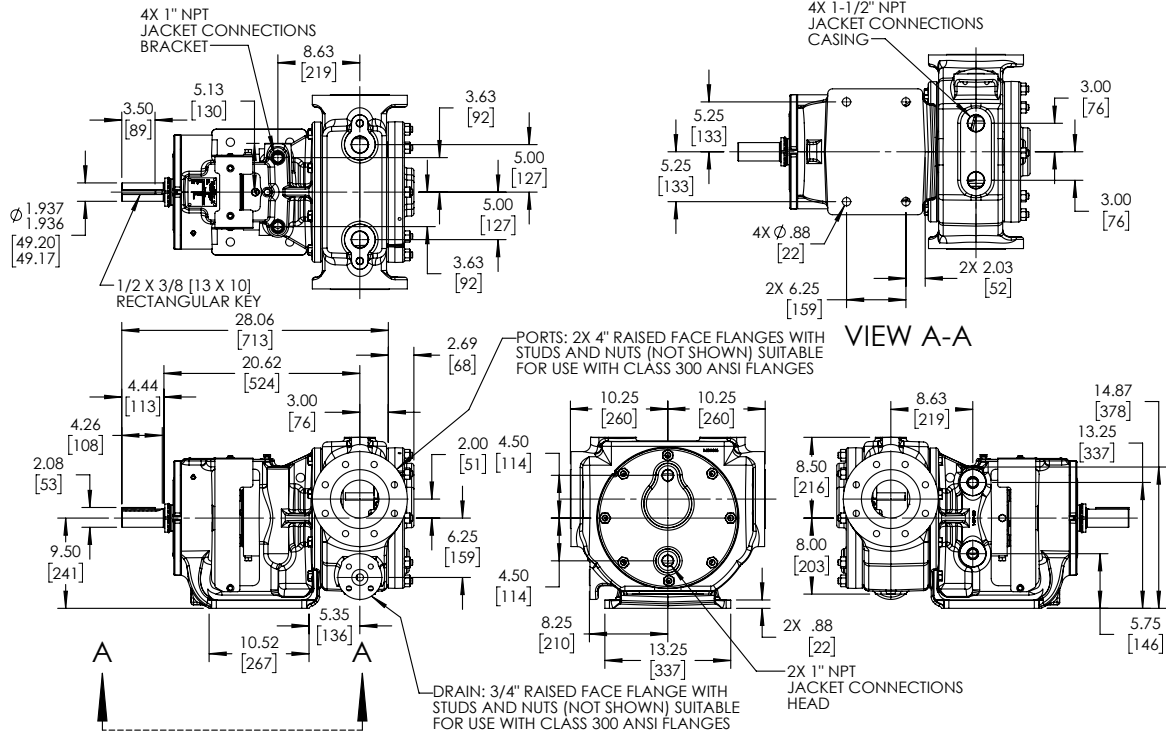
Note: All dimensional drawings are shown with optional jacketed head.  
These dimensions are average and not for construction purposes. Certified prints on request.

# UNIVERSAL PRODUCT LINE: STEEL EXTERNALS — JACKETED PUMPS

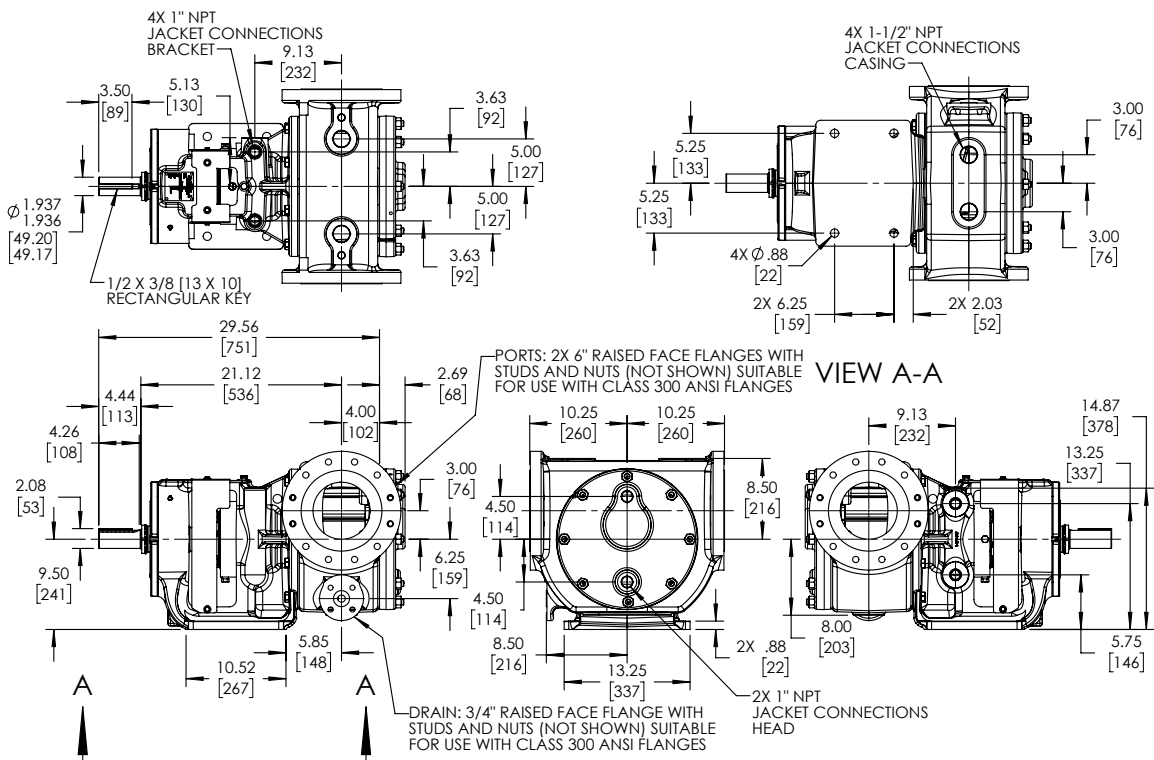
SERIES 4223AX, 4323AX (Full Compliance with API 676 Standards)

|         |        |
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| Section | 1305   |
| Page    | 1305.7 |
| Issue   | B      |

## DIMENSIONS — Q4223AX



## DIMENSIONS — QS4223AX



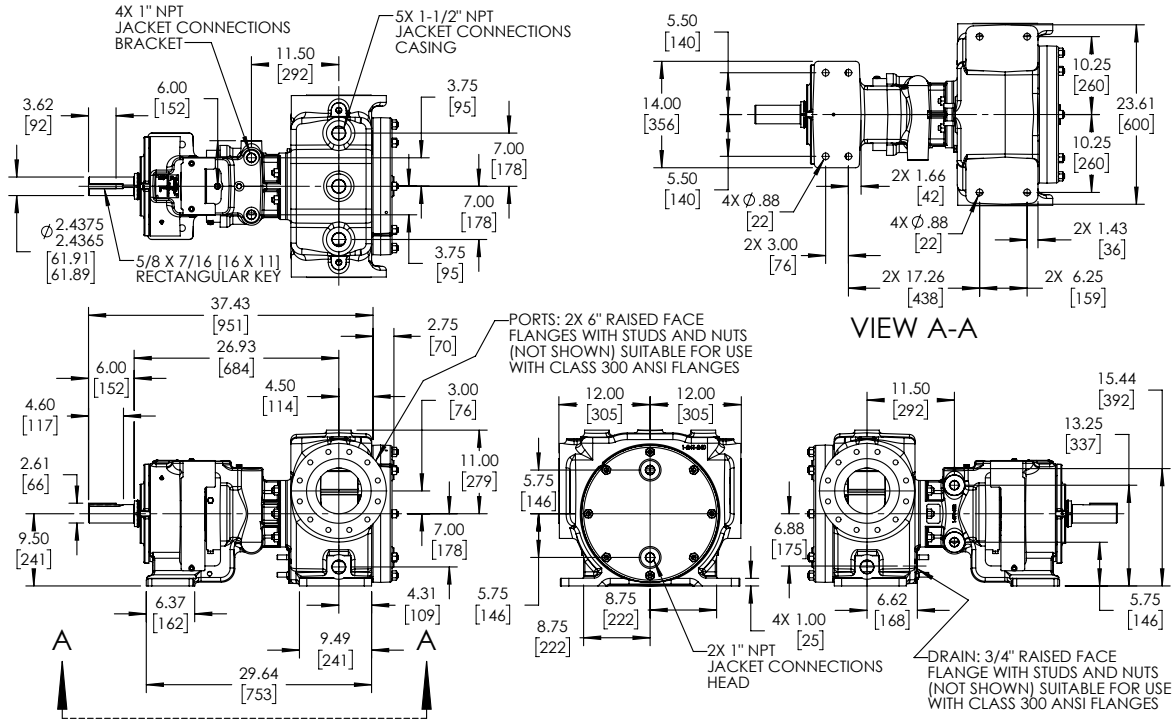
Note: All dimensional drawings are shown with optional jacketed head.

These dimensions are average and not for construction purposes. Certified prints on request.

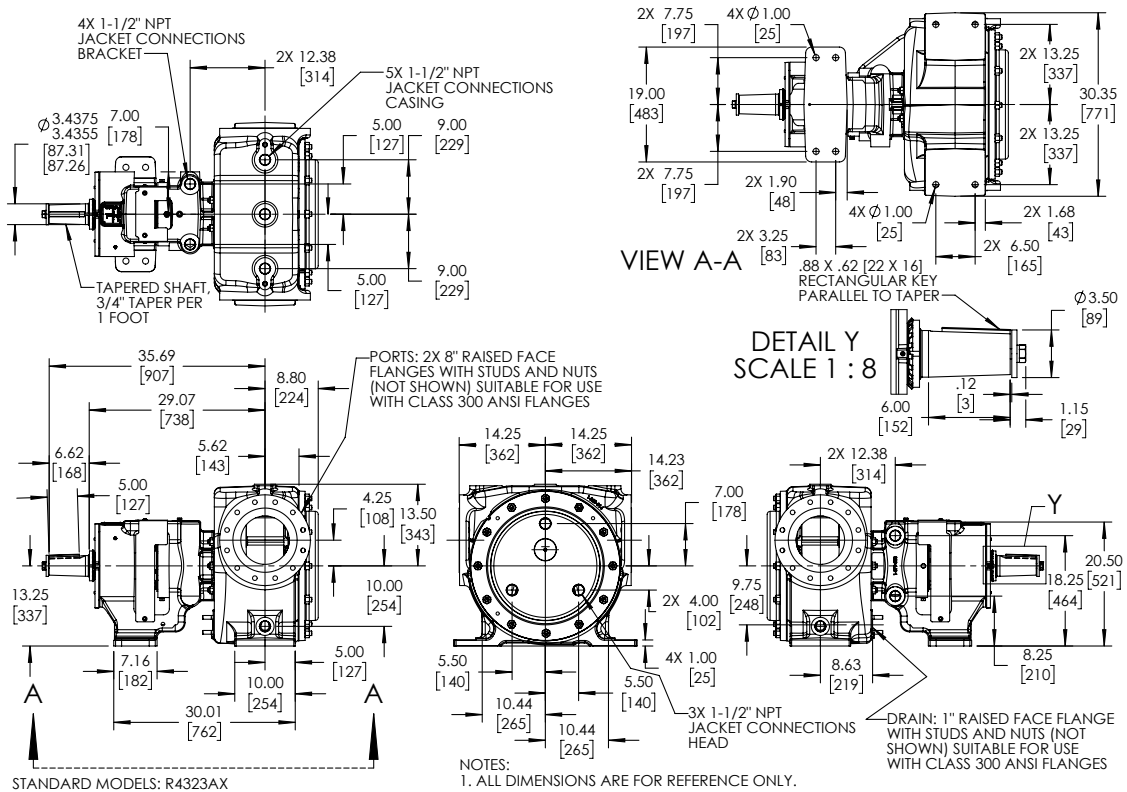
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| Section | 1305   |
| Page    | 1305.8 |
| Issue   | B      |

**UNIVERSAL PRODUCT LINE:  
STEEL EXTERNALS — JACKETED PUMPS**  
SERIES 4223AX, 4323AX (Full Compliance with API 676 Standards)

**DIMENSIONS – N4323AX**



**DIMENSIONS – R4323AX**



STANDARD MODELS: R4323AX

Note: All dimensional drawings are shown with optional jacketed head.  
These dimensions are average and not for construction purposes. Certified prints on request.

**UNIVERSAL PRODUCT LINE:  
STEEL EXTERNALS — JACKETED PUMPS**  
SERIES 4223AX, 4323AX (Full Compliance with API 676 Standards)

|         |        |
|---------|--------|
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**NPSH REQUIRED**

Printed performance curves are not available.

Performance curves can be electronically generated with the Viking Pump Curve Generator on [vikingpump.com](http://vikingpump.com).

NPSHR data is not available on the curve generator.

**NPSH (Net Positive Suction Head):** The  $NPSH_R$  (Net Positive Suction Head Required by the pump) is given in the table below and applies for viscosities through 750 SSU.  $NPSH_A$  (Net Positive Suction Head – Available in the system) must be greater than the  $NPSH_R$ . For a complete explanation of NPSH, see Application Data Sheet AD-19.

**FOR VISCOSITIES UP TO 750 SSU –** See  $NPSH_R$  table below.

**$NPSH_R$  for high viscosities can be estimated using the following method:**

1. Calculate line loss for a 1 foot long pipe of a diameter matching the pump inlet port size. Use your flow rate and max viscosity.
2. Convert this value into Feet of Liquid (S.G. 1.0)
3. Add this value to the  $NPSH_R$  value in the chart below.

$NPSH_R$  – FEET OF LIQUID (Specific Gravity 1.0), Viscosities up to 750 SSU

| PUMP SIZE | PUMPS SPEED, RPM |     |     |      |      |      |      |     |      |      |     |     |      |      |      |
|-----------|------------------|-----|-----|------|------|------|------|-----|------|------|-----|-----|------|------|------|
|           | 100              | 125 | 155 | 190  | 230  | 280  | 350  | 420 | 520  | 640  | 780 | 950 | 1150 | 1450 | 1750 |
| HL        | —                | —   | —   | —    | 1.7  | 1.8  | 1.9  | 2.1 | 2.4  | 2.8  | 3.4 | 4.5 | 6.2  | 9.5  | 13.5 |
| KK        | —                | 1.7 | 1.8 | 1.9  | 2.1  | 2.3  | 2.8  | 3.3 | 4.4  | 6.3  | 9.1 | —   | —    | —    | —    |
| LS        | 1.6              | 1.8 | 2.0 | 2.2  | 2.5  | 3.0  | 3.8  | 5.0 | 7.3  | 10.8 | —   | —   | —    | —    | —    |
| Q, QS     | 1.9              | 2.1 | 2.3 | 2.7  | 3.3  | 4.2  | 6.1  | 8.4 | 12.7 | —    | —   | —   | —    | —    | —    |
| N         | 2.1              | 2.3 | 3.5 | 4.5  | 6.3  | 9.5  | 15.0 | —   | —    | —    | —   | —   | —    | —    | —    |
| R         | 6.1              | 7.1 | 8.3 | 10.1 | 12.1 | 15.2 | —    | —   | —    | —    | —   | —   | —    | —    | —    |