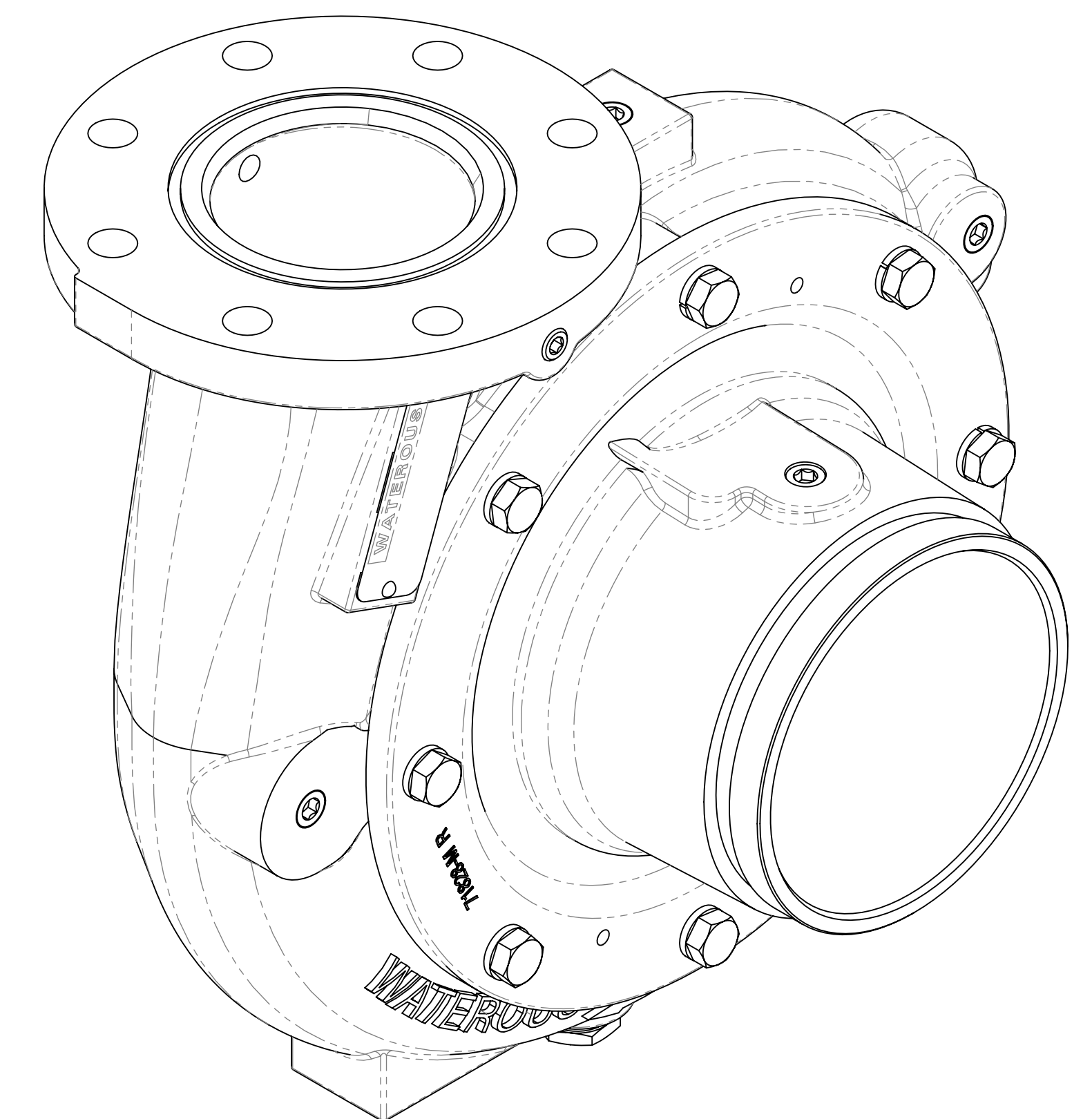
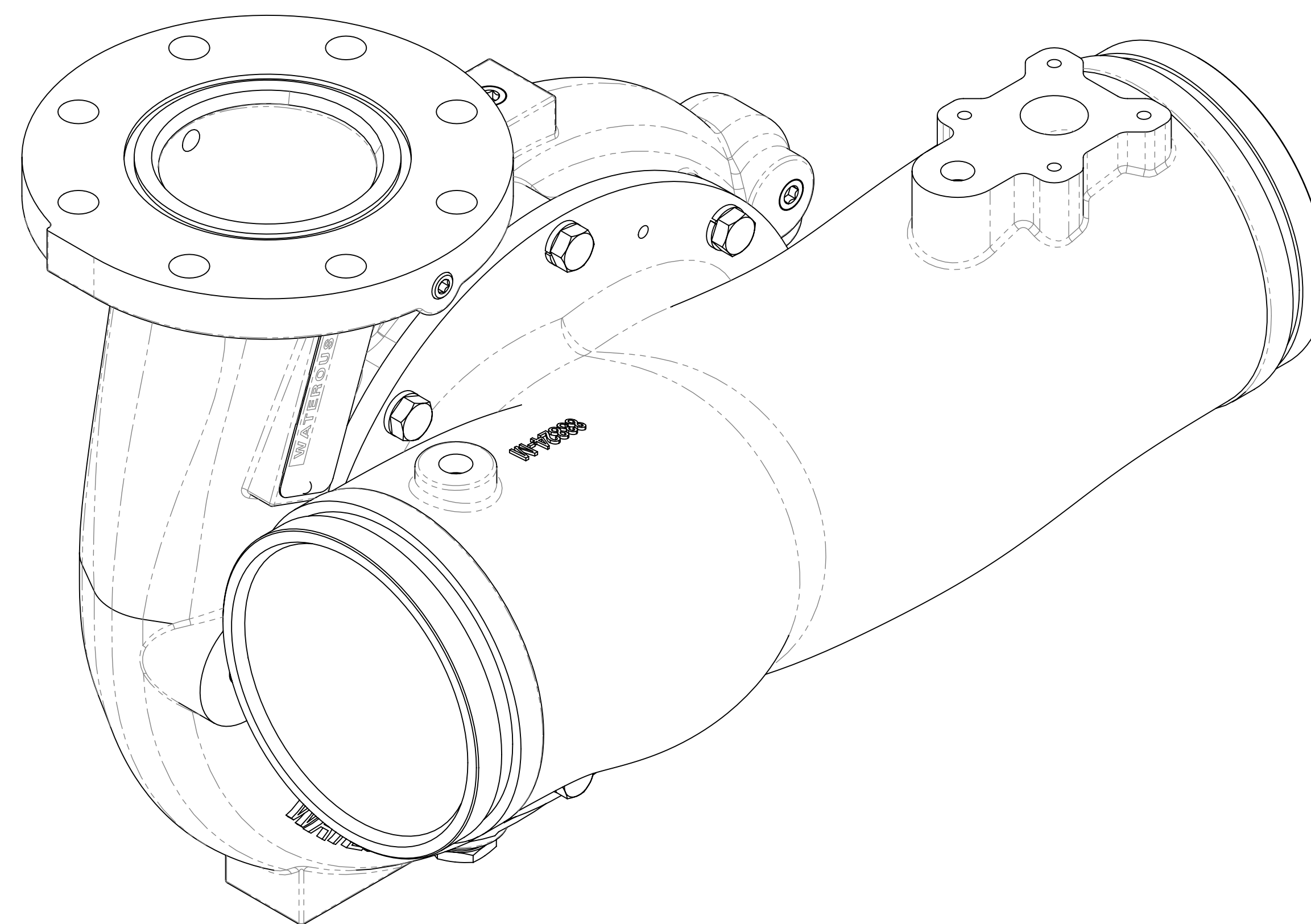
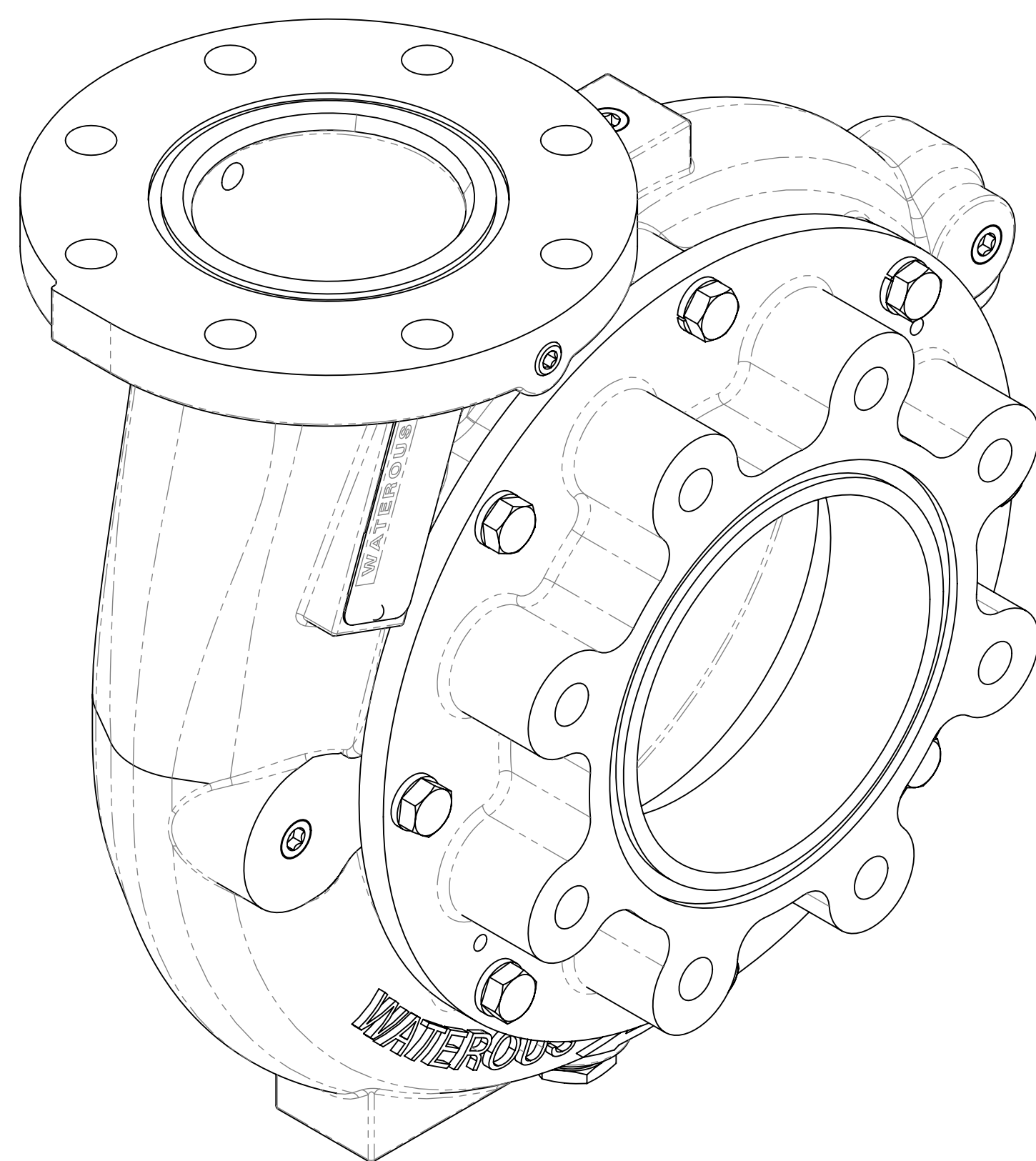


CX Series Fire Pump Dimensional Drawings
Pump Models: CXN, CXS, and CXV

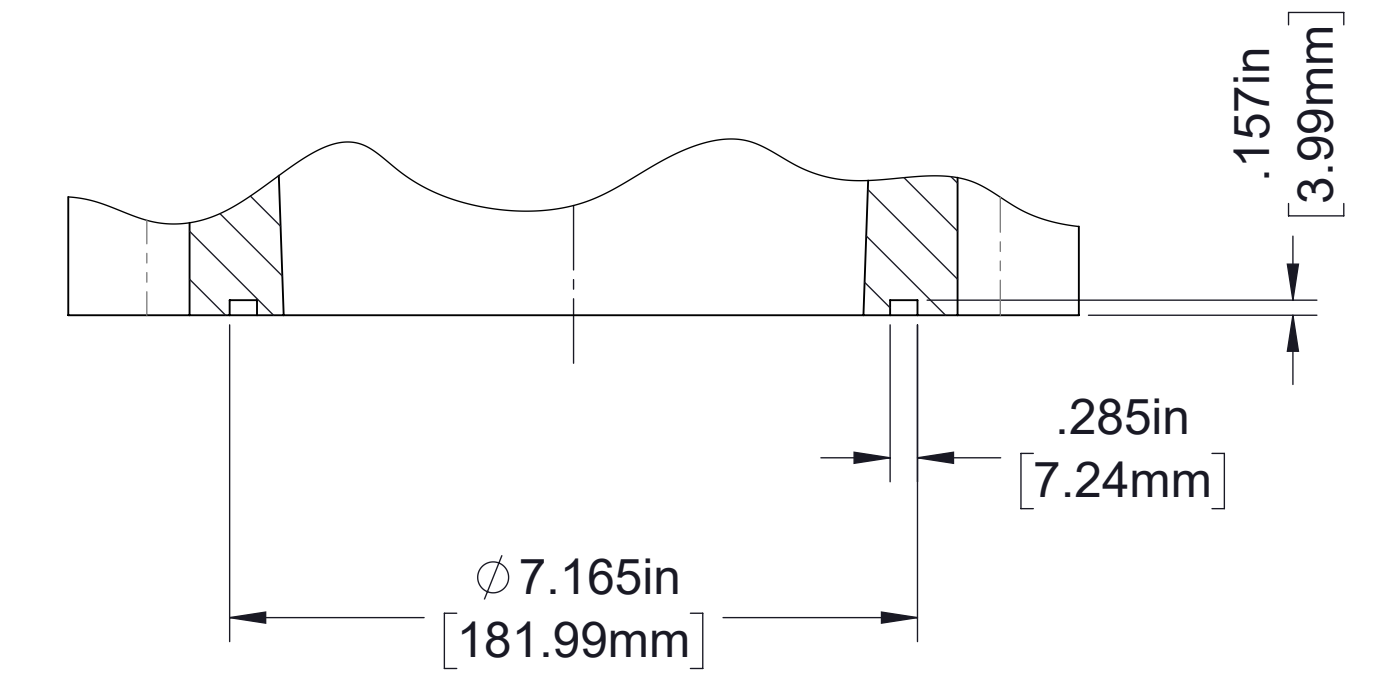
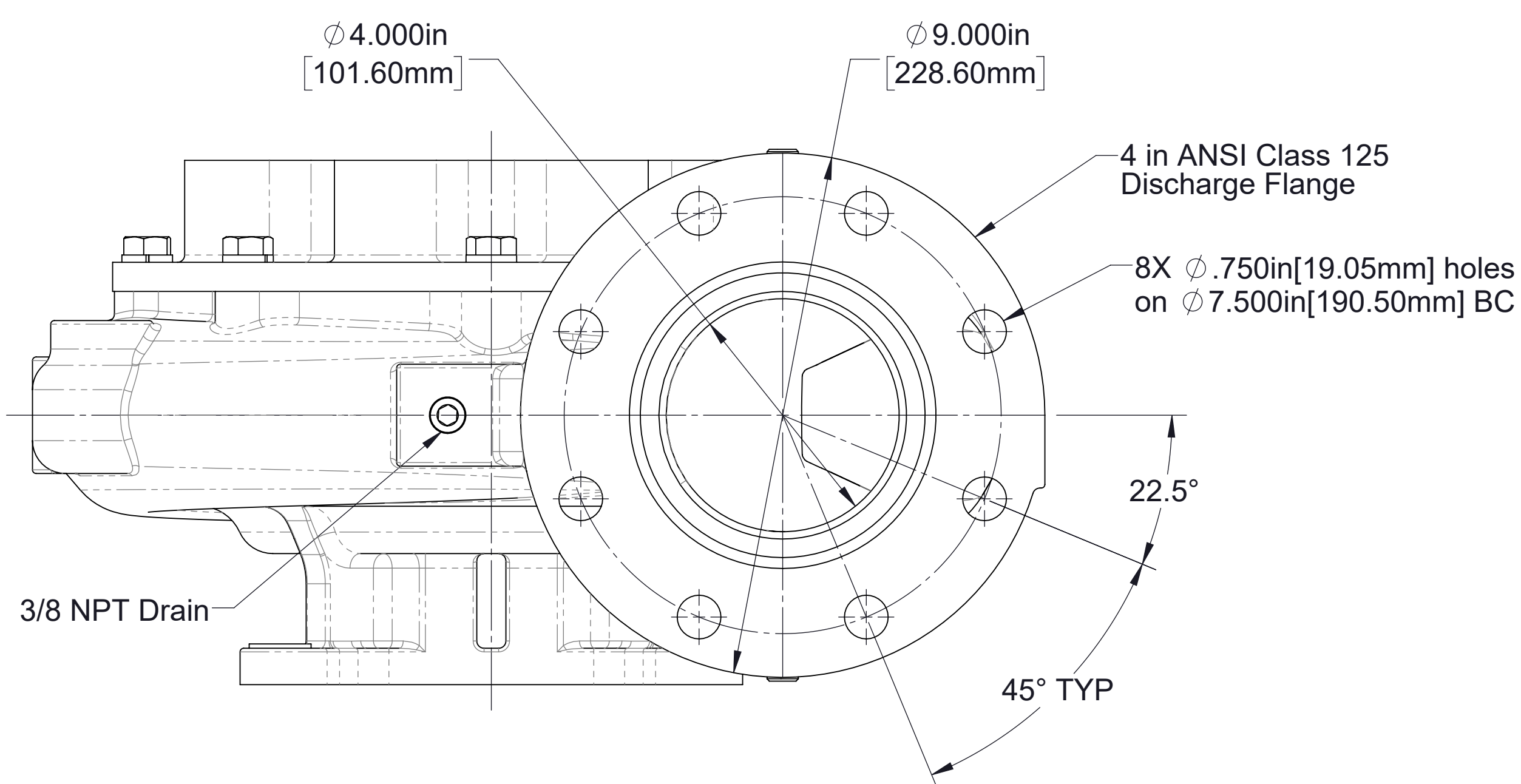
| Feature | | See Page | | | |
|---------------------------------------|-----------------------------------|---------------------------|----------------------------|-----|-----|
| | | CXN | CXS | CXV | |
| Basic Pump without Transmission | Body Dimensions | | 3-4 | 5-6 | 7-8 |
| | Optional Discharge Arrangments | Blank (4 in. ANSI Flange) | | | |
| | | Manifold | With 3-1/2 in. End Flanges | | 9 |
| | | | With 4 in. End Flanges | | 10 |
| Pump with Transmission | | | See Table on Page 2 | | |



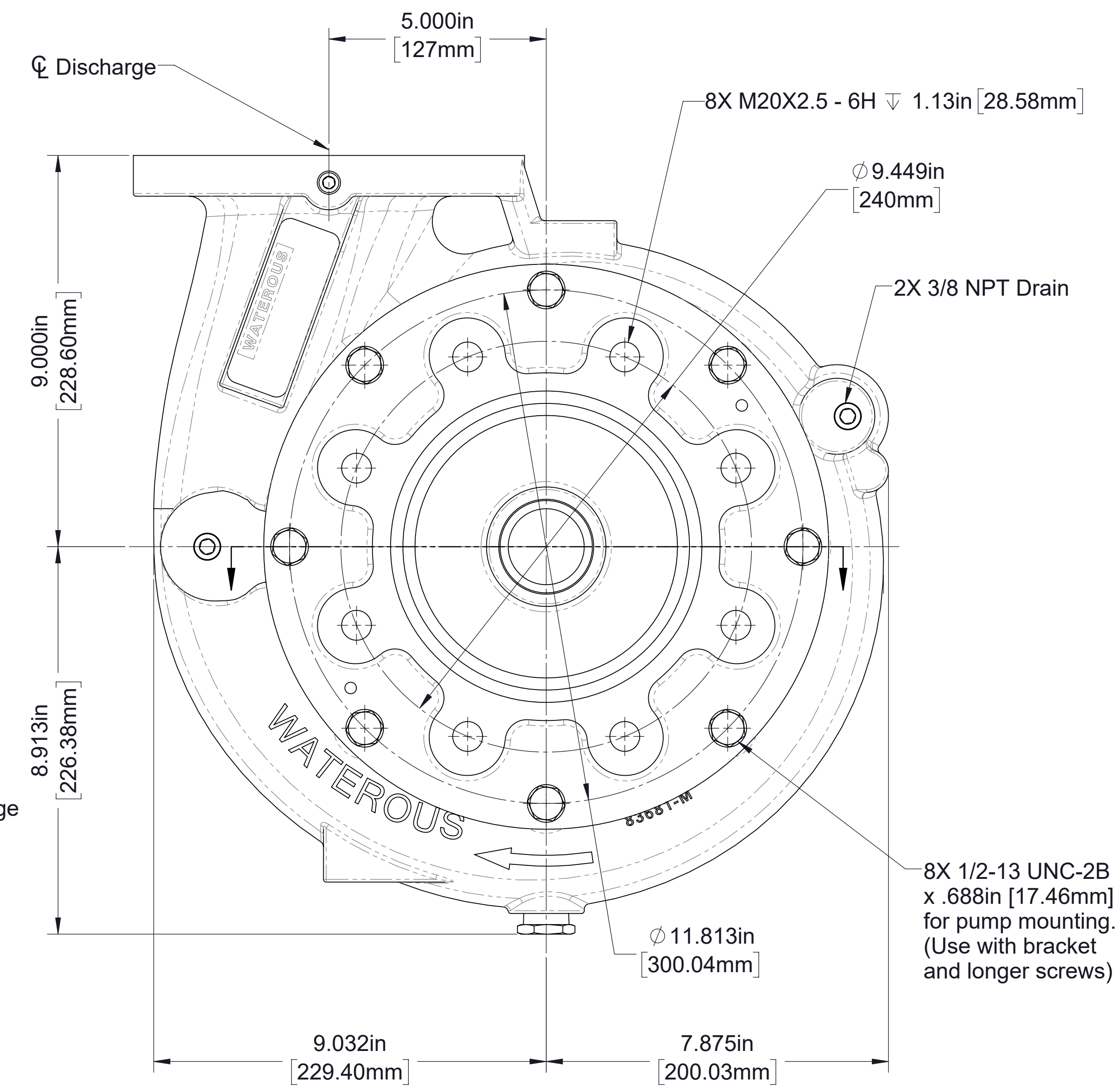
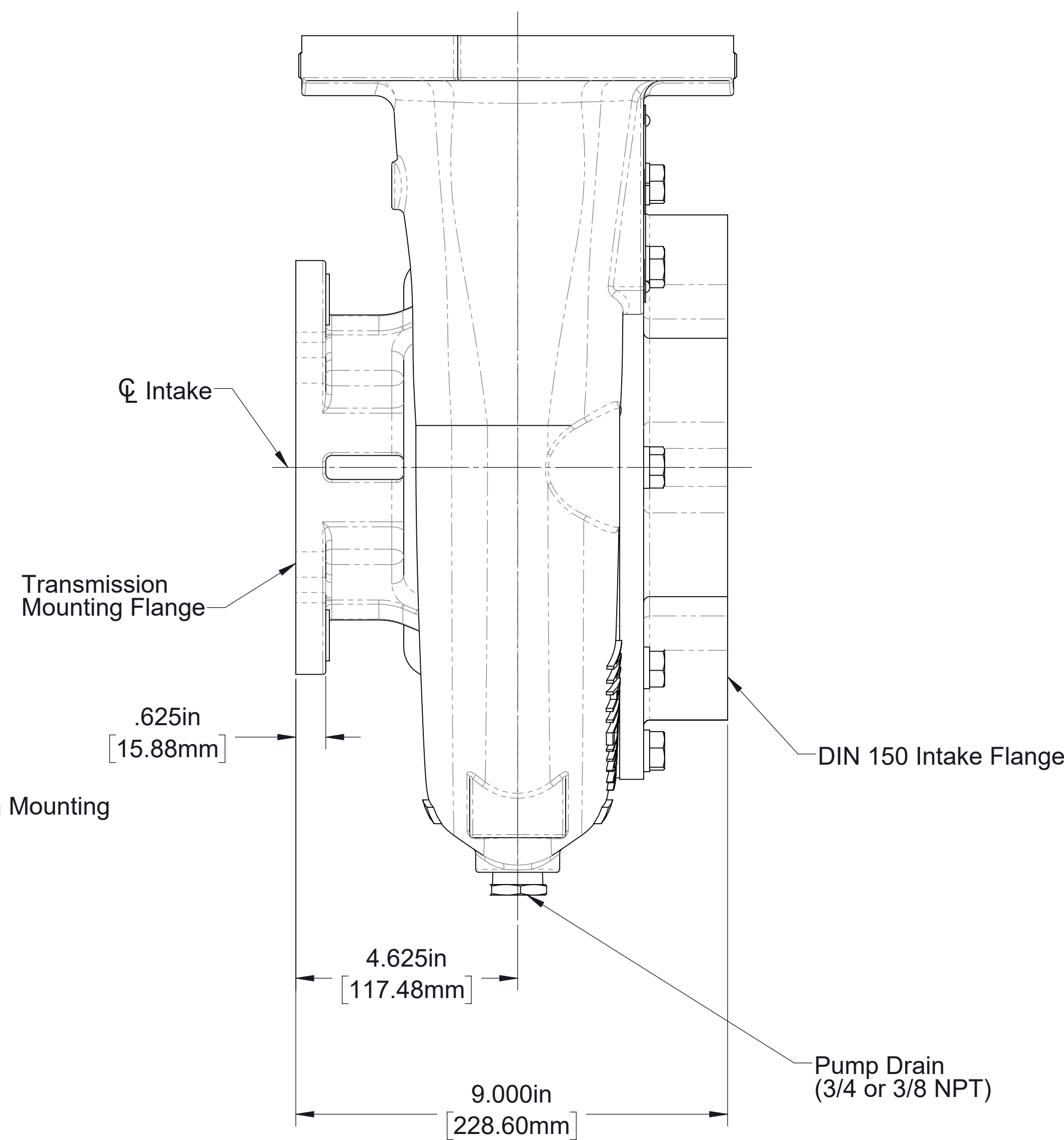
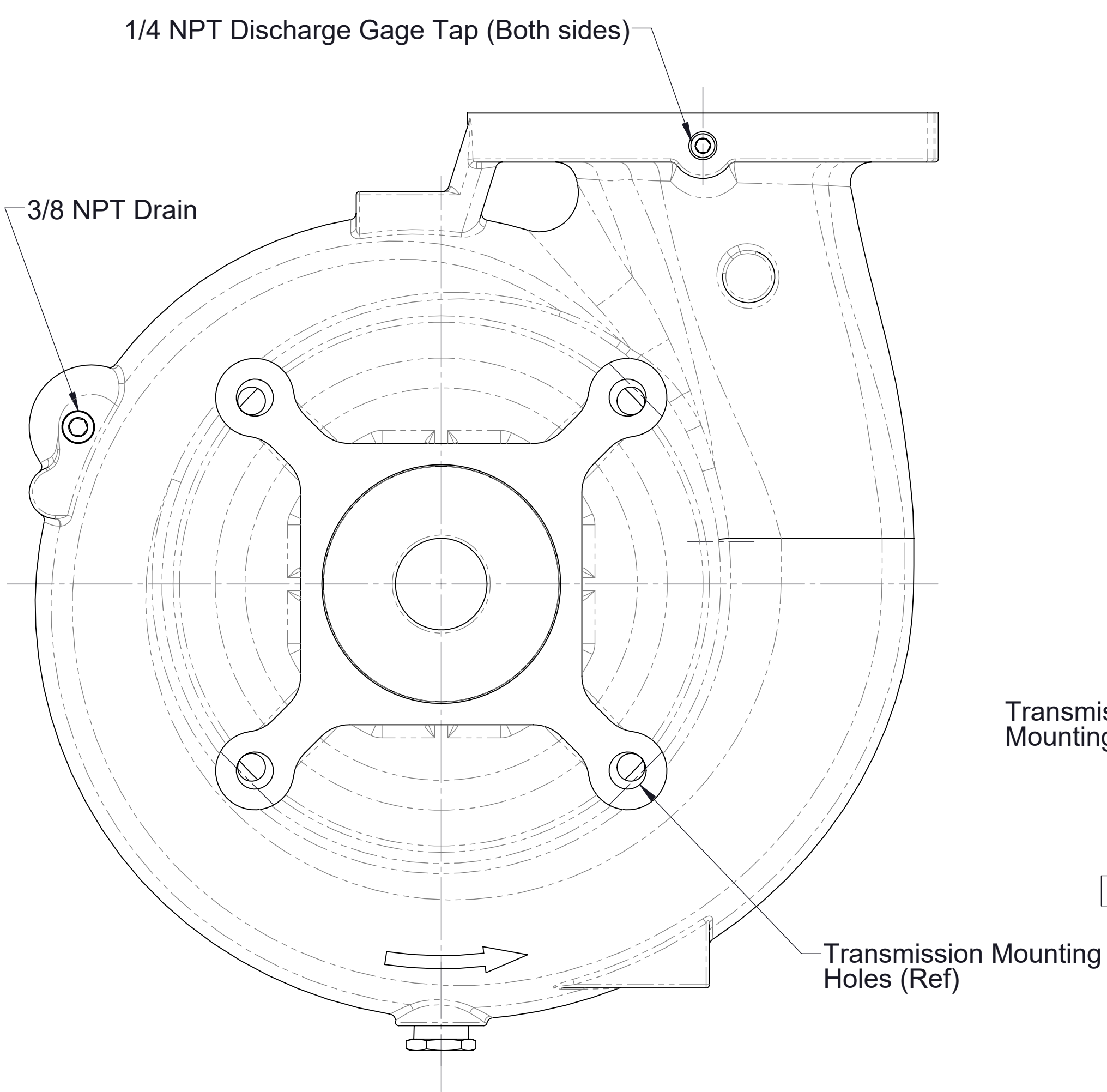
Note: Pump must be installed in accordance with Waterous Installation Instructions.

| Transmission | | | | Pump | | | | | See Page | | | | | |
|---|------------------------|-------------------------------|--------------------|-----------------------|-----------------------------|---------|---------|-----------------------------------|-----------------------|--------------------------|---------------------------------|--|-------------------------|--------------------|
| Type | Driveline | Pump Mounting on Transmission | Input Rotation (1) | Impeller Rotation (2) | Pump and Transmission Model | | | Hydraulic Pump Mounting Provision | Pump and Transmission | | | Optional Discharge Manifold Mounting on Pump | | |
| | | | | | CXN | CXS | CXV | | Dimensions | Available | | 3-1/2 in. End Flanges | | 4 in. End Flanges |
| | | | | | | | | | | Pump Discharge Positions | Transmission Mounting Positions | Perpendicular to Intake | Perpendicular to Intake | Parallel to Intake |
| C20 Series Chain Drive, Split Shaft | Input and Output Shaft | Front (Input Shaft Side) | CW | CW | CXNC20C | CXSC20C | CXVC20C | No | 11, 17 | 25 | 27 | 28 | 29 | 30 |
| | | | | | CXNC20D | CXSC20D | CXVC20D | Yes | 12, 17 | 25 | 27 | | | |
| | CXNC20E | CXSC20E | CXVC20E | No | 13, 17 | 25 | 27 | | | | | | | |
| | CXNC20F | CXSC20F | CXVC20F | Yes | 14, 17 | 25 | 27 | | | | | | | |
| | Input and Output Shaft | Rear (Output Shaft Side) | CW | CCW | CXNC20C | CXSC20C | CXVC20C | N/A | 15, 17 | 25 | 27 | 31 | 32 | 33 |
| | | | | | CXNC20D | CXSC20D | CXVC20D | N/A | 16, 17 | 25 | 27 | | | |
| | Input Shaft Only | Rear (Output Shaft Side) | CW | CCW | CXNC20C | CXSC20C | CXVC20C | N/A | 15, 17 | 25 | 27 | 31 | 32 | 33 |
| | | | | | CXNC20D | CXSC20D | CXVC20D | N/A | 16, 17 | 25 | 27 | | | |
| K Series Two Gear, PTO Driven | Input Shaft Only | Opposite Input Shaft | CW | CW | CXNK | CXSK | CXVK | N/A | 18 | 25 | 26 | 28 | 29 | 30 |
| | | | CCW | CCW | CXNK | CXSK | CXVK | N/A | 18 | 25 | 26 | 31 | 32 | 33 |
| T Series Two Gear, Direct Engine Mount | Input Shaft Only | Opposite Input Shaft | CW | CW | CXNT | CXST | CXVT | N/A | 19 | 25 | 26 | 28 | 29 | 30 |
| | | | CCW | CCW | CXNT | CXST | CXVT | N/A | 19 | 25 | 26 | 31 | 32 | 33 |
| P Series Chain Drive, PTO Driven | Input Shaft Only | Input Shaft Side | CW | CW | CXNPA | CXSPA | CXVPA | No | 20 | 25 | 27 | 28 | 29 | 30 |
| | | | | | | | | Yes | 21 | | | | | |
| QB Series Chain Drive, PTO Driven | Input Shaft Only | Front (Input Shaft Side) | CW | CW | N/A | N/A | CXVQB | Yes | 22 | 25 | 27 | N/A | N/A | N/A |
| | | Rear (Opposite Input Shaft) | CW | CCW | N/A | N/A | CXVQB | Yes | 23 | | | | | |
| D Series Directly from a PTO | Input Shaft Only | Opposite Input Shaft | CW | CCW | CXND | CXSD | CXD | N/A | 24 | 25 | N/A | 31 | 32 | 33 |
| | | | CCW | CW | CXND | CXSD | CXD | N/A | 24 | 25 | N/A | 28 | 29 | 30 |

- Notes:
1. Input rotation is viewed looking directly at the transmission input shaft.
2. Impeller rotation is viewed looking directly at the intake fitting (impeller eye)

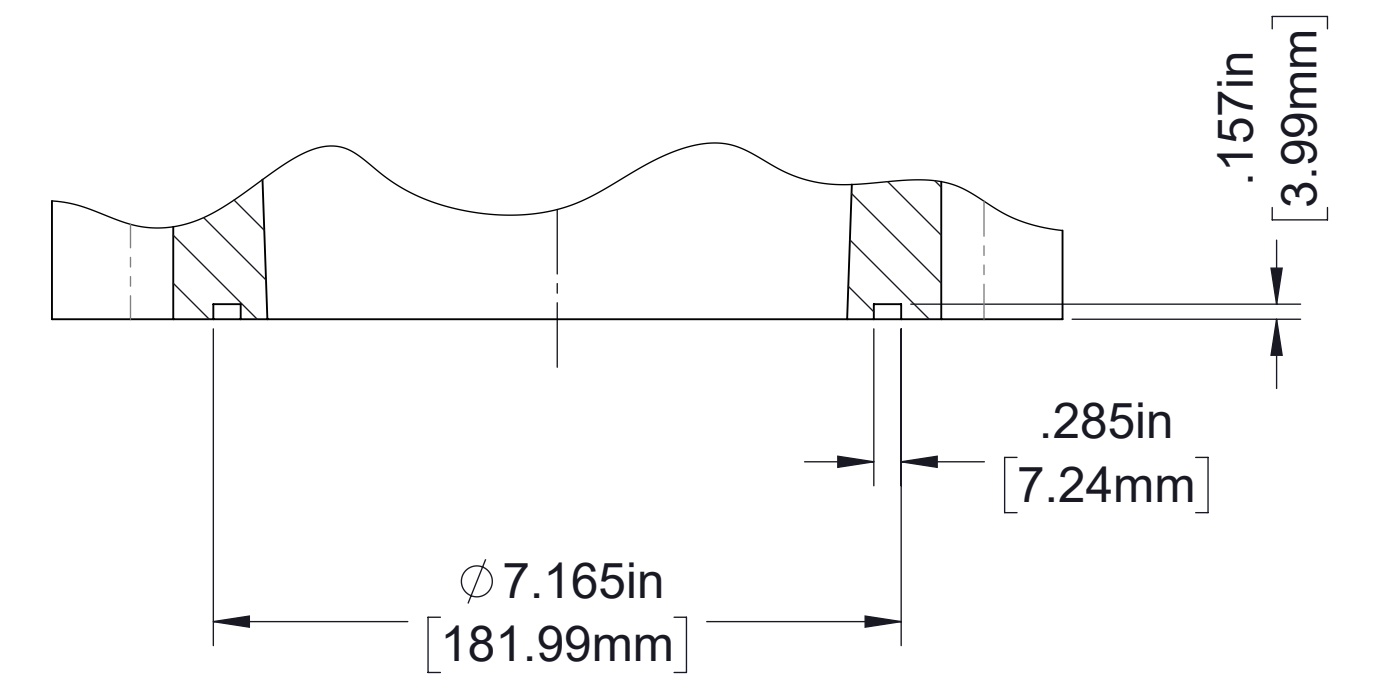
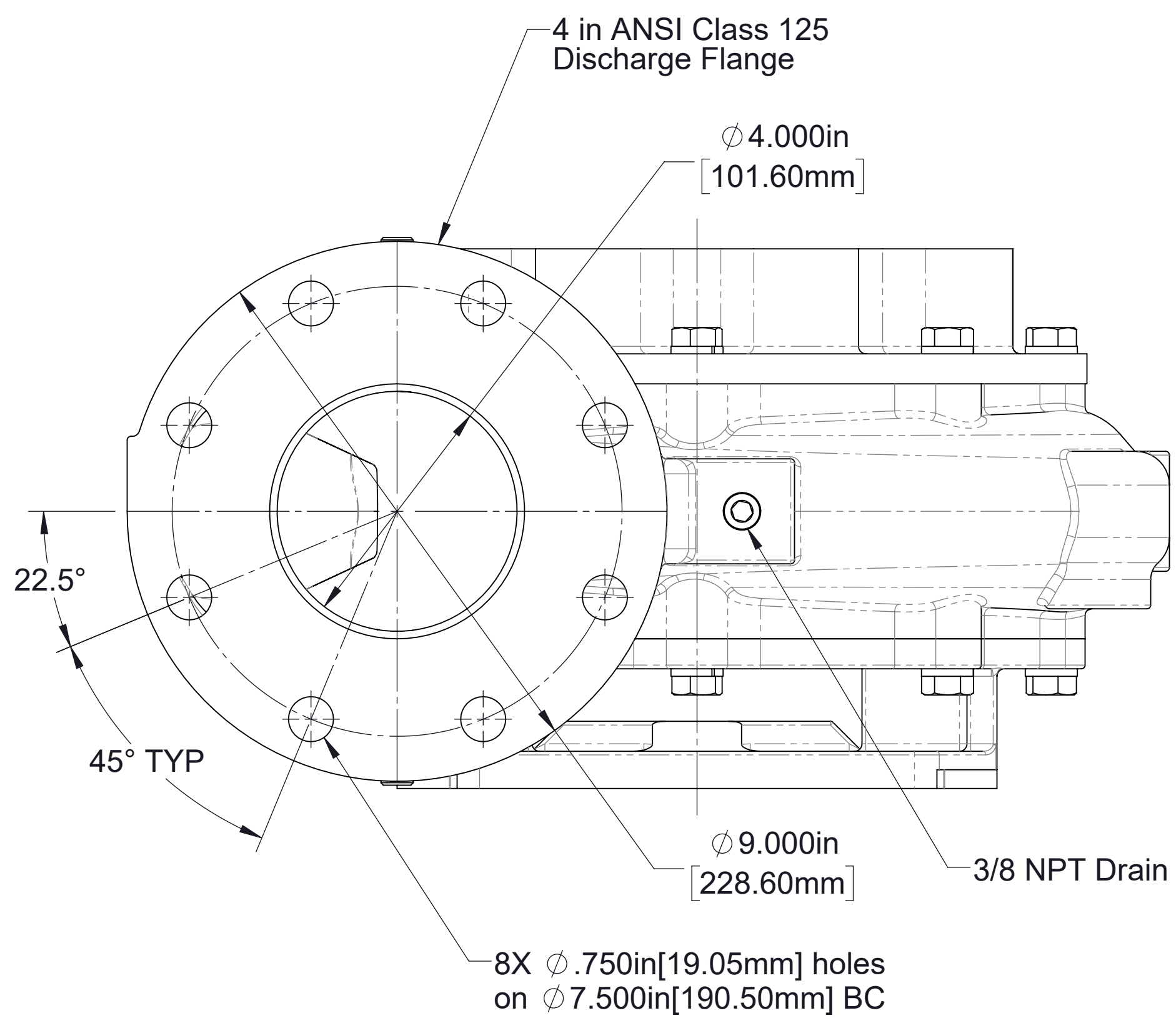


End Flange O-ring Dimensions
 Use 6.125in I.D. x .210 cross-section O-ring
 or order part No. W37108-6 from Waterous

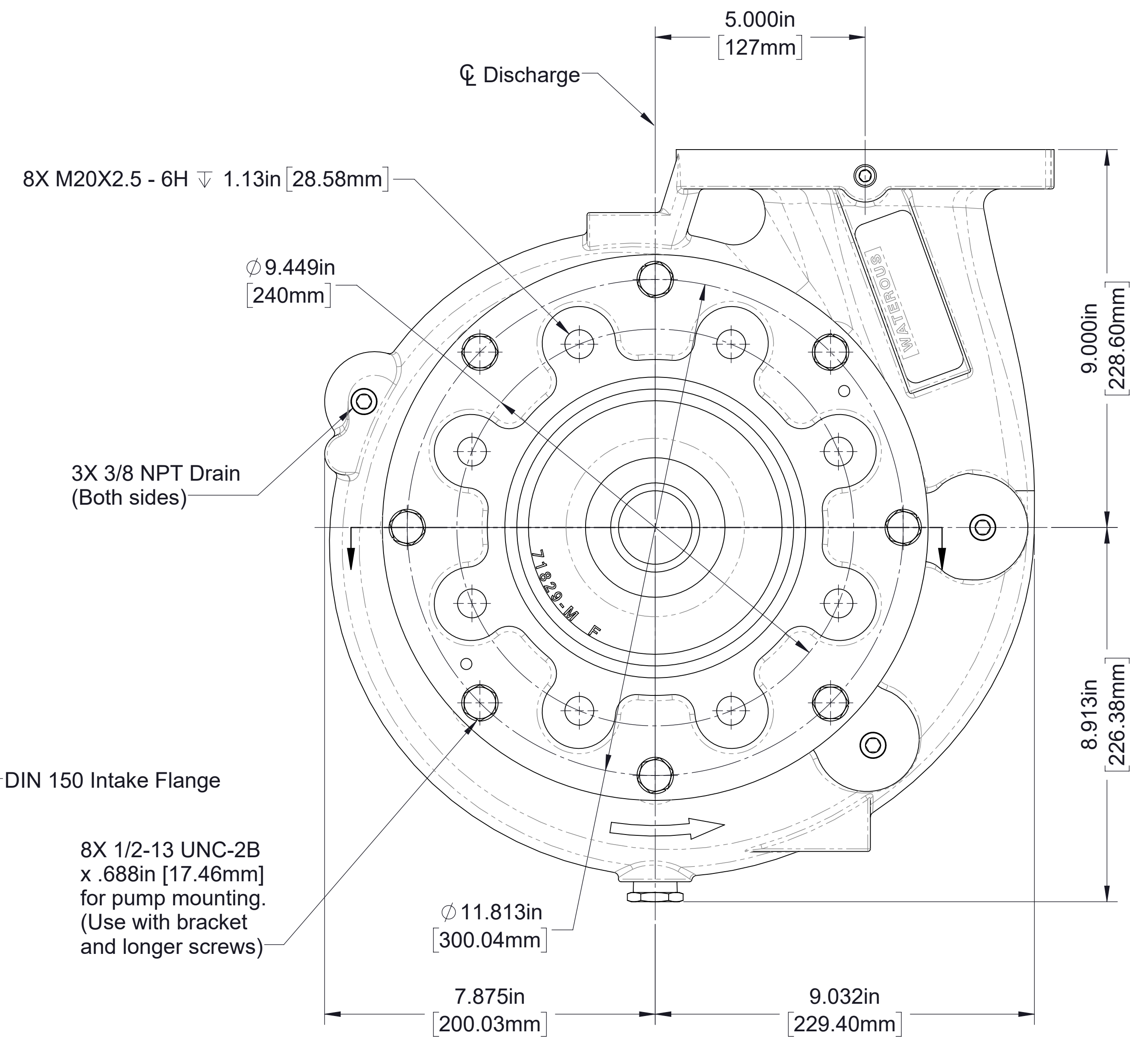
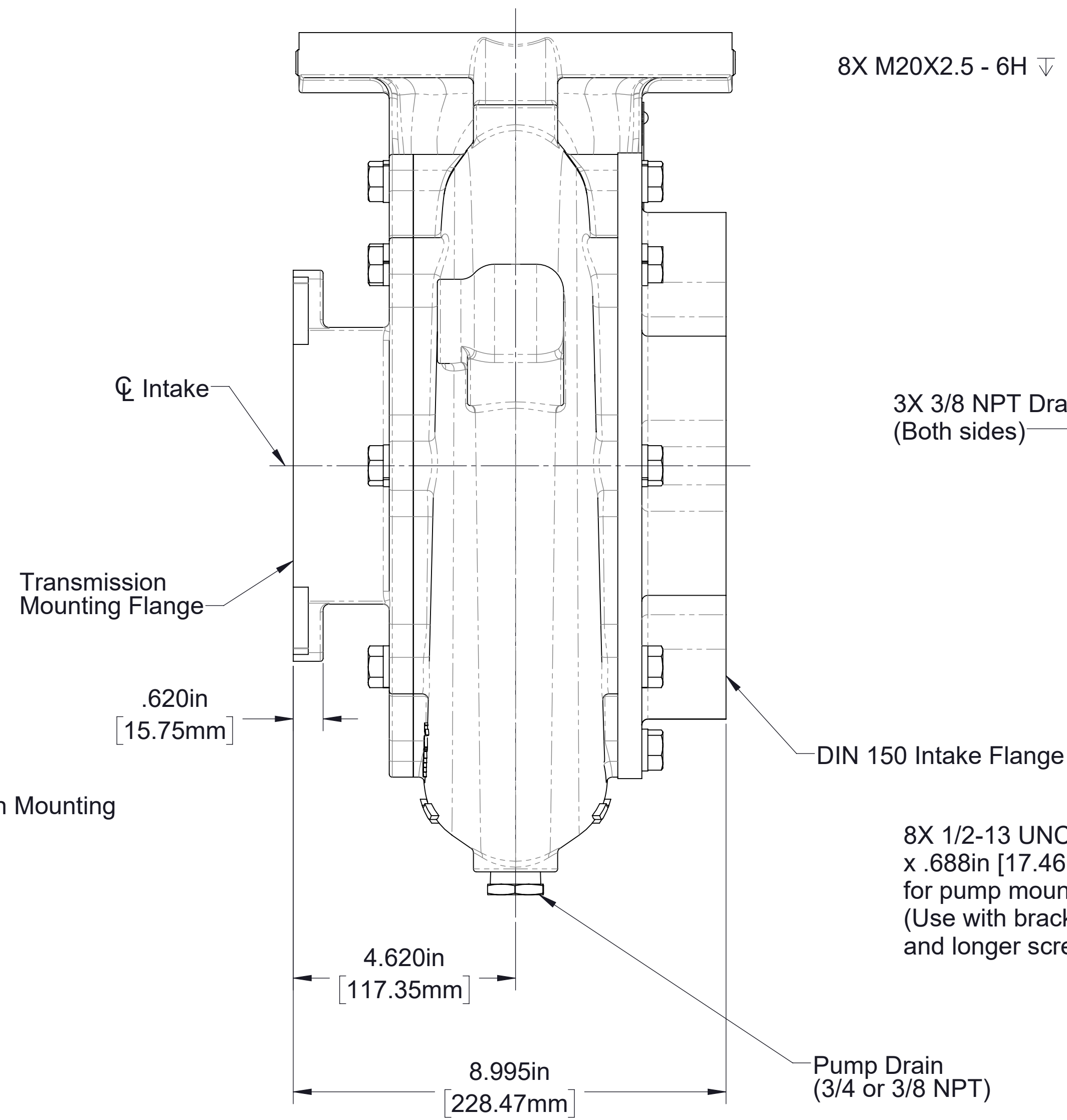
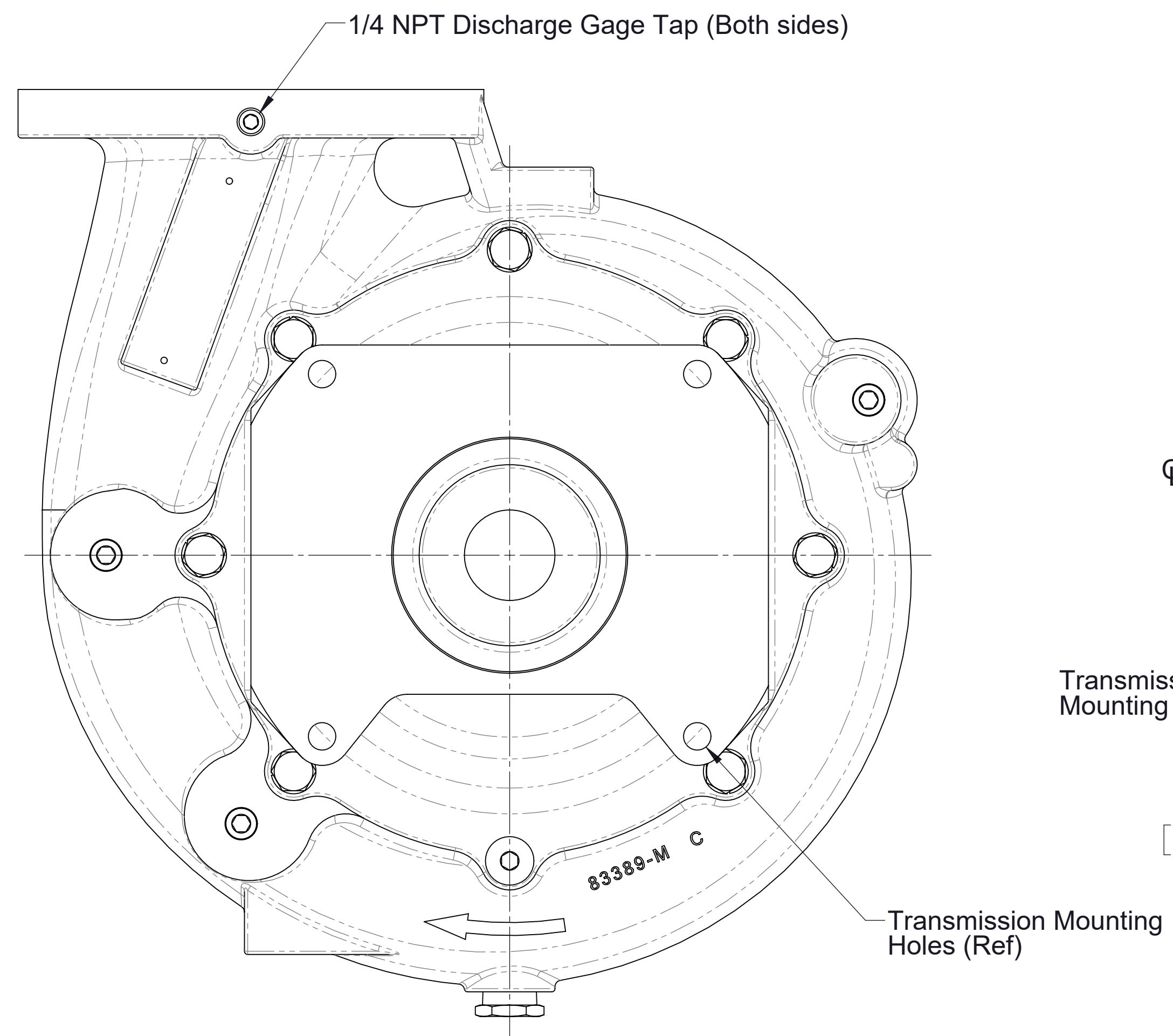


CXN Body Dimensions CW Impeller Rotation

Shown with blank 4 in. ANSI flange discharge
 See pages 9 & 10 for optional discharge manifolds

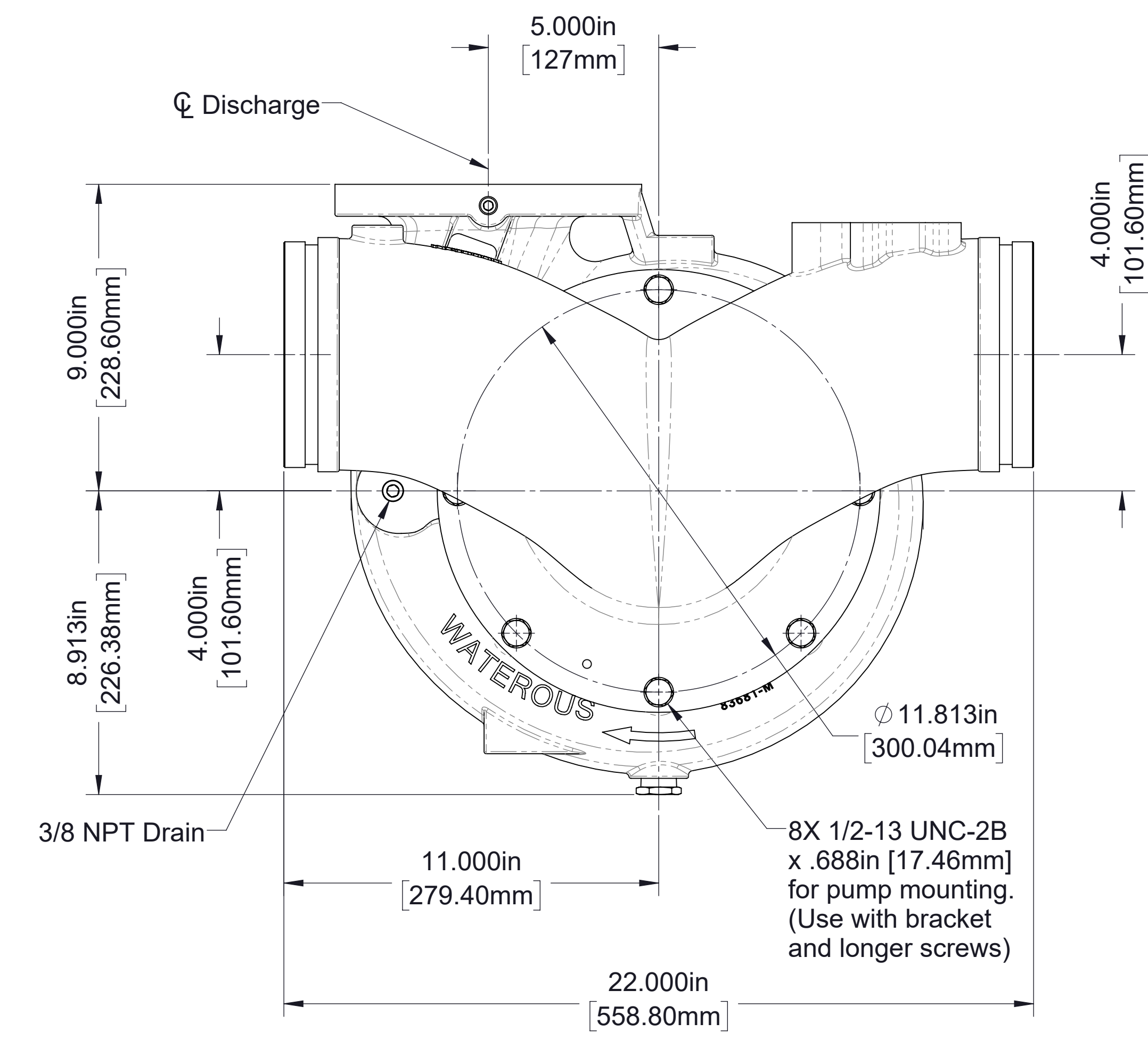
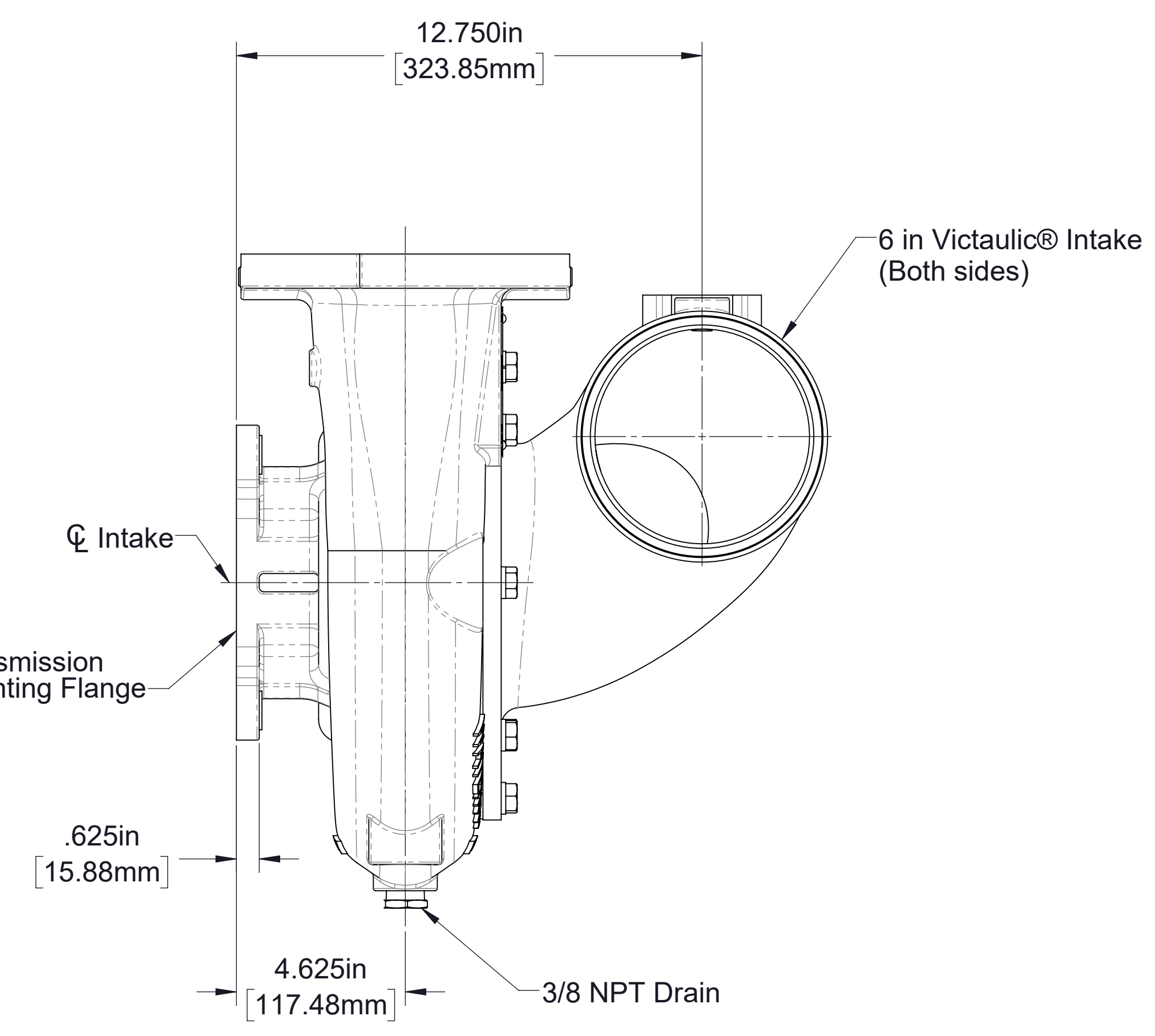
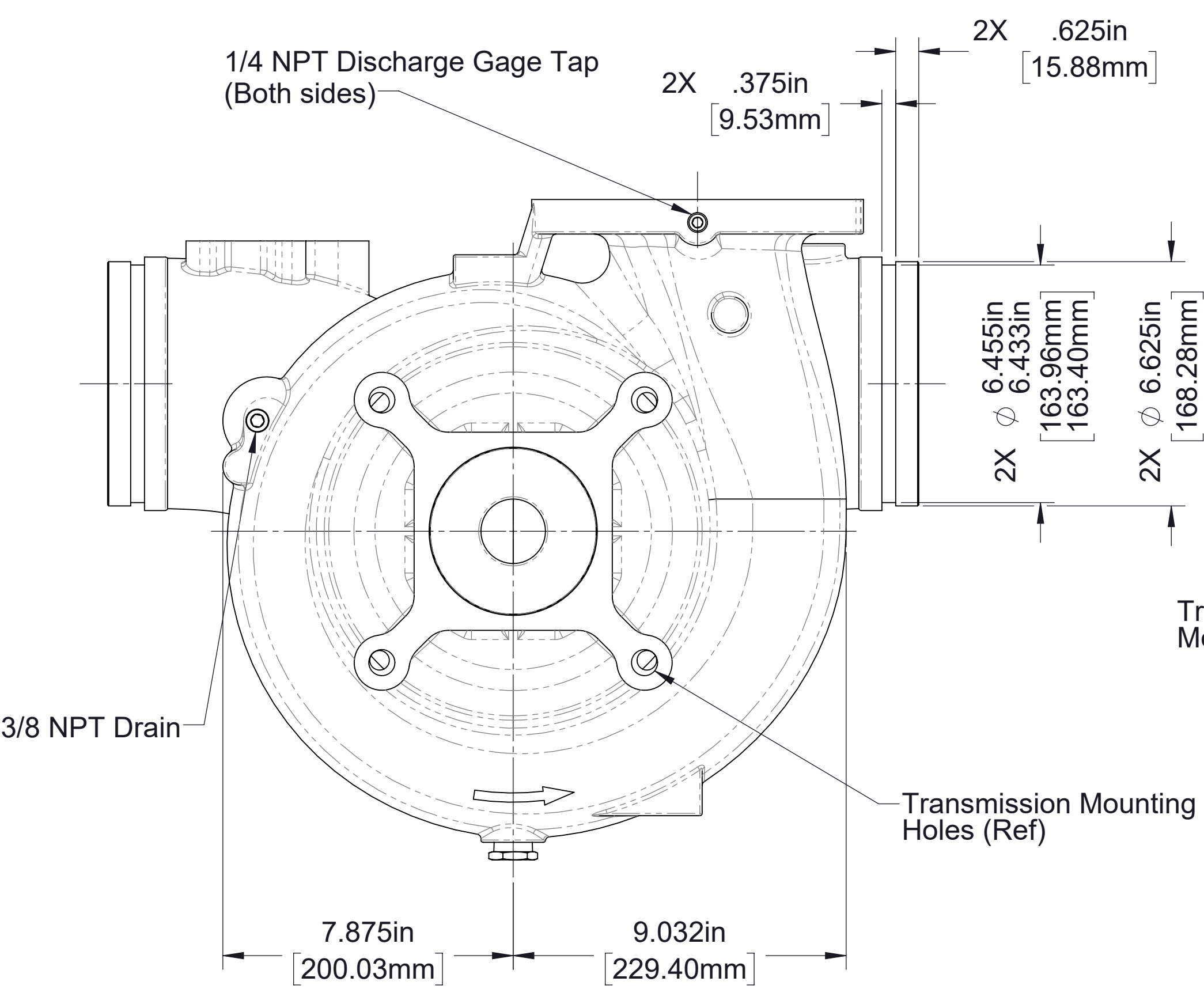
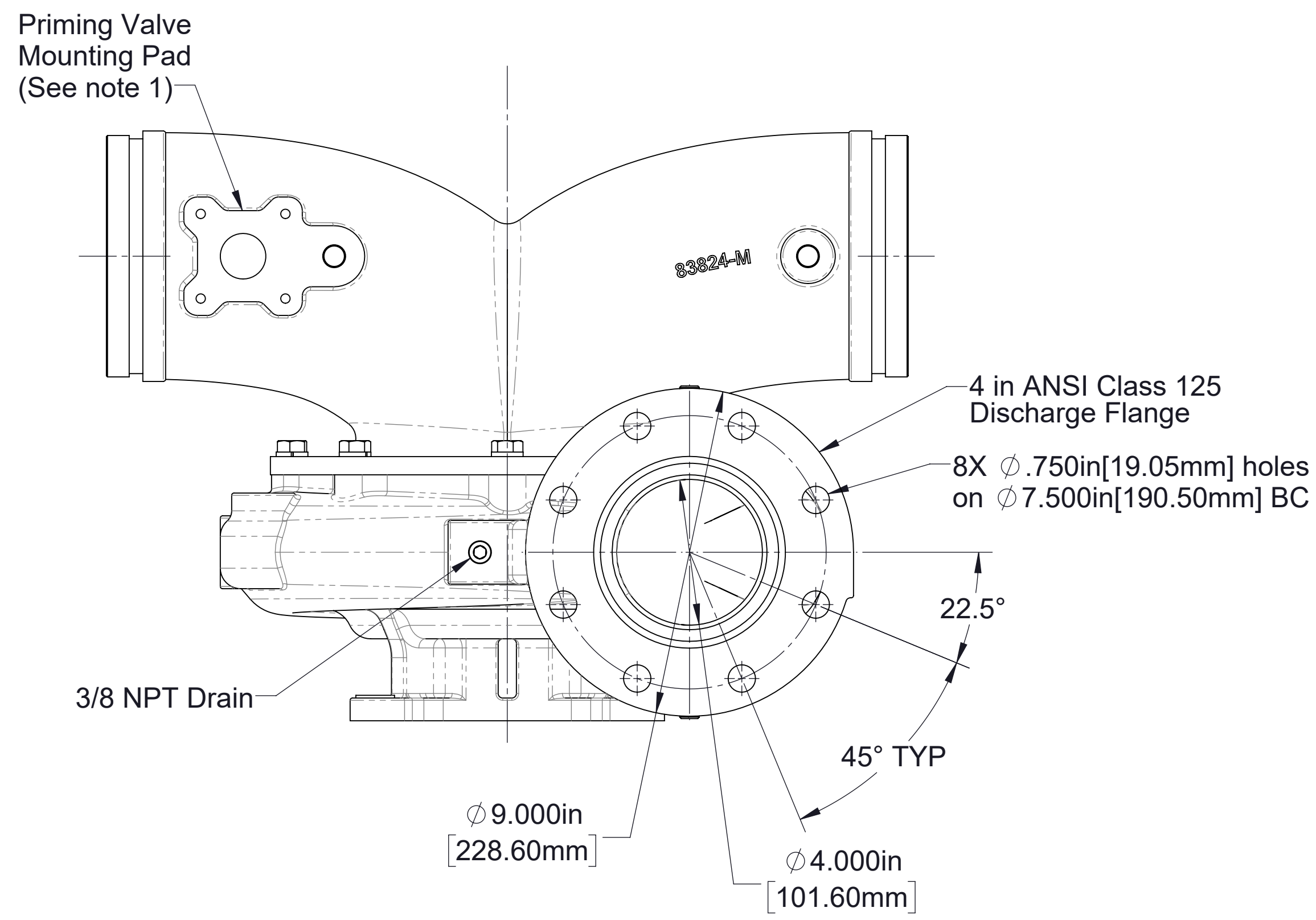


End Flange O-ring Dimensions
 Use 6.125in I.D. x .210 cross-section O-ring
 or order part No. W37108-6 from Waterous



CXN Body Dimensions CCW Impeller Rotation

Shown with blank 4 in. ANSI flange discharge
 See pages 9 & 10 for optional discharge manifolds

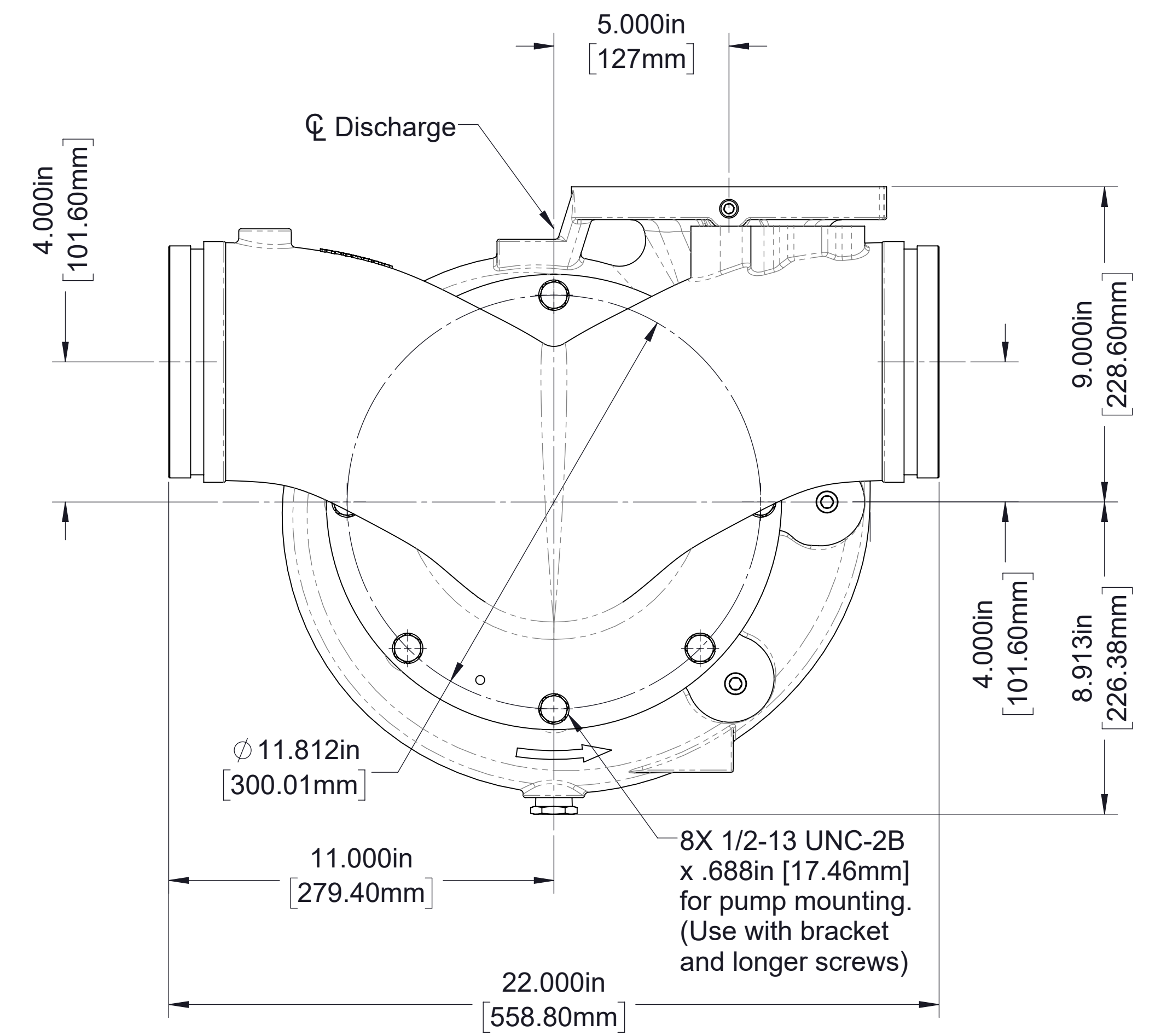
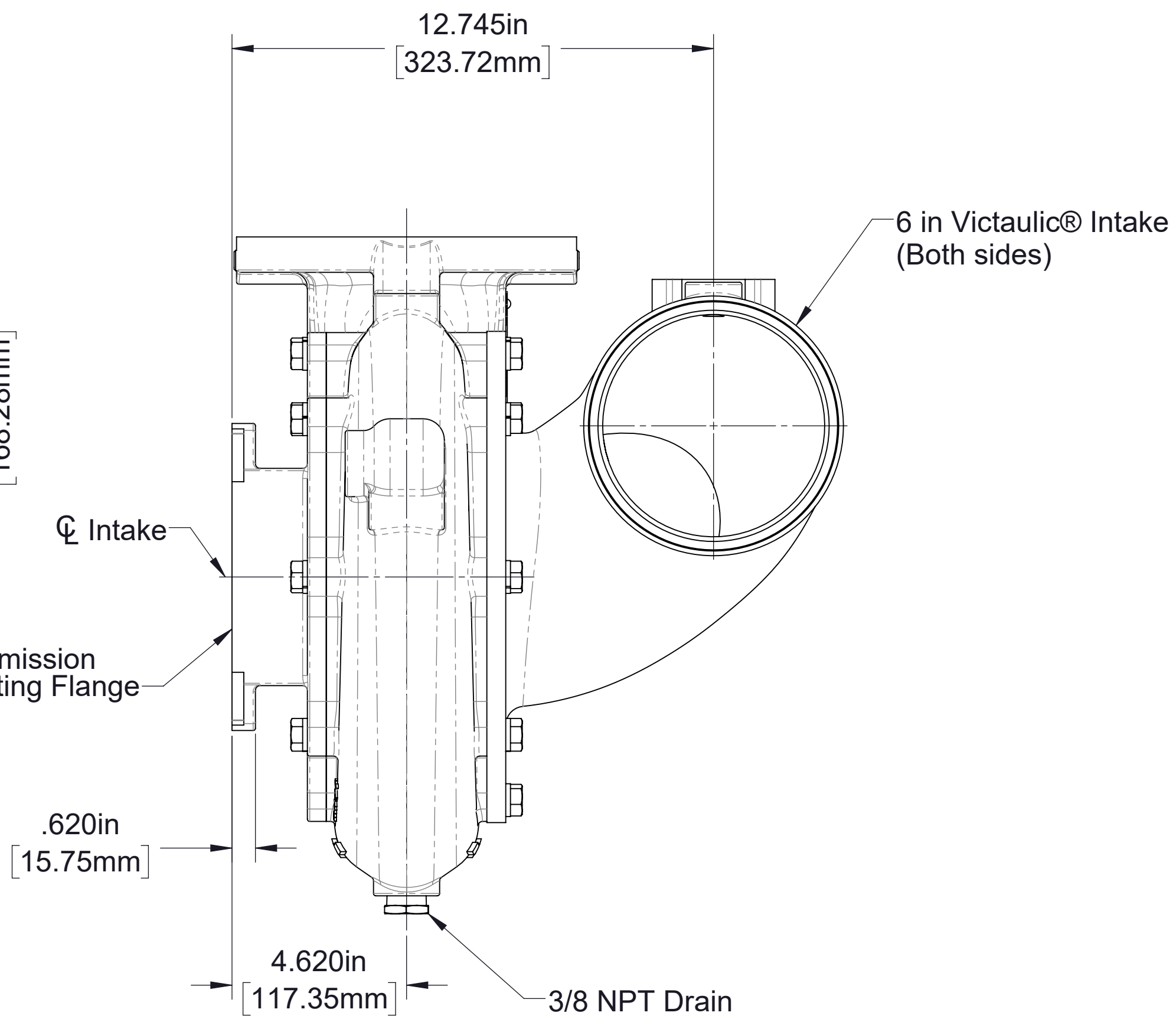
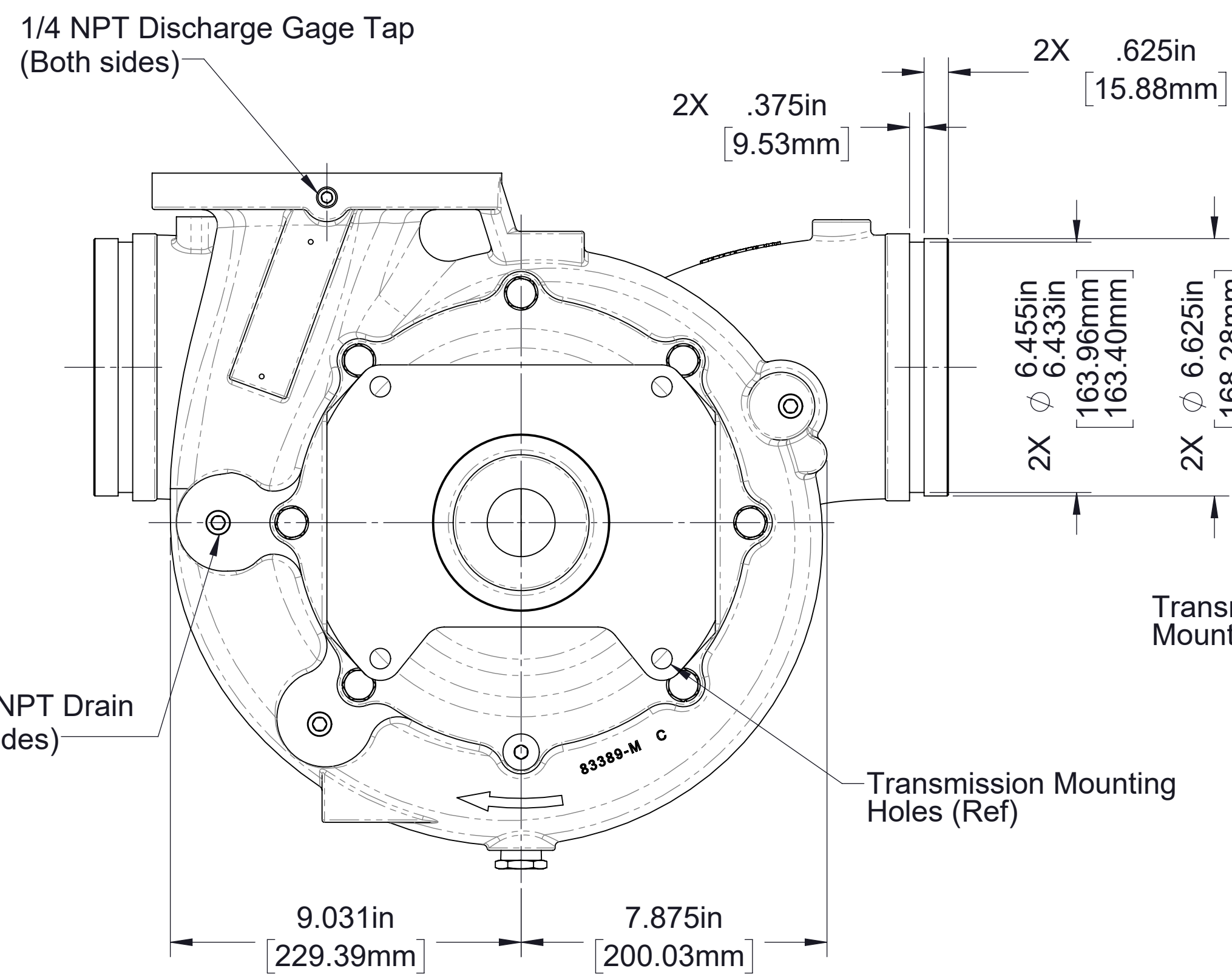
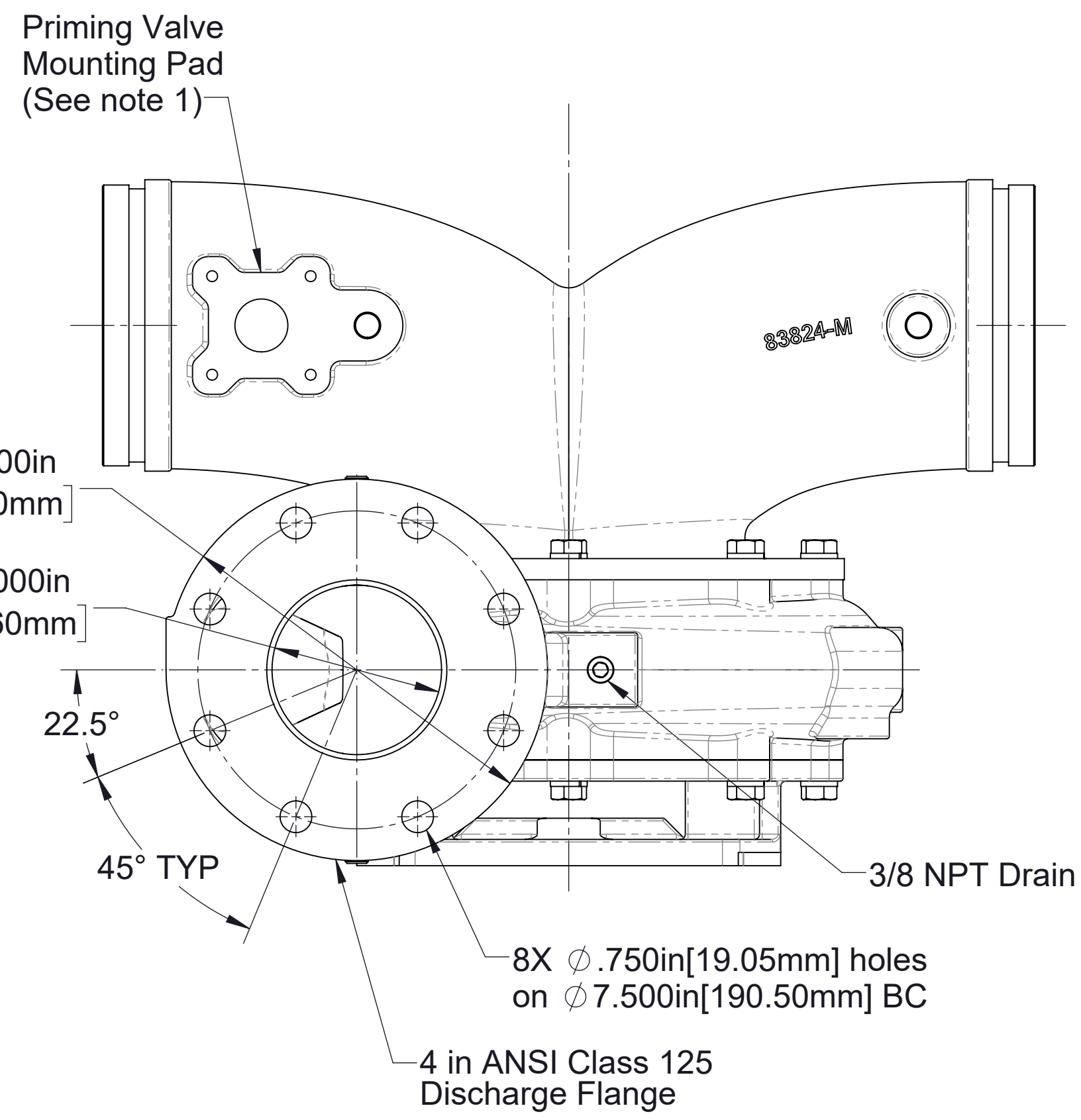


Note:
1. See drawing DPL82908 for priming valve details.

CXS Body Dimensions

CW Impeller Rotation

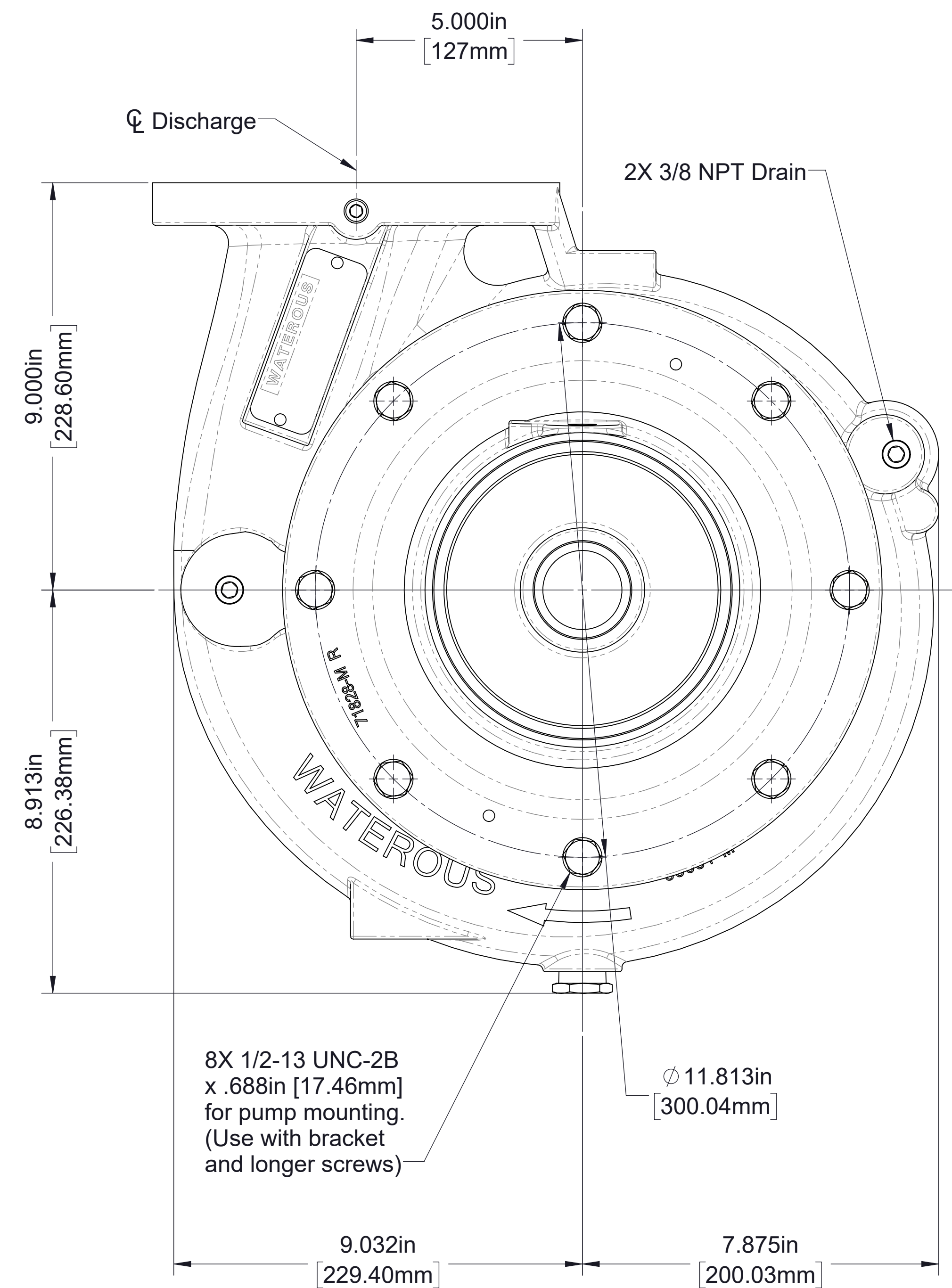
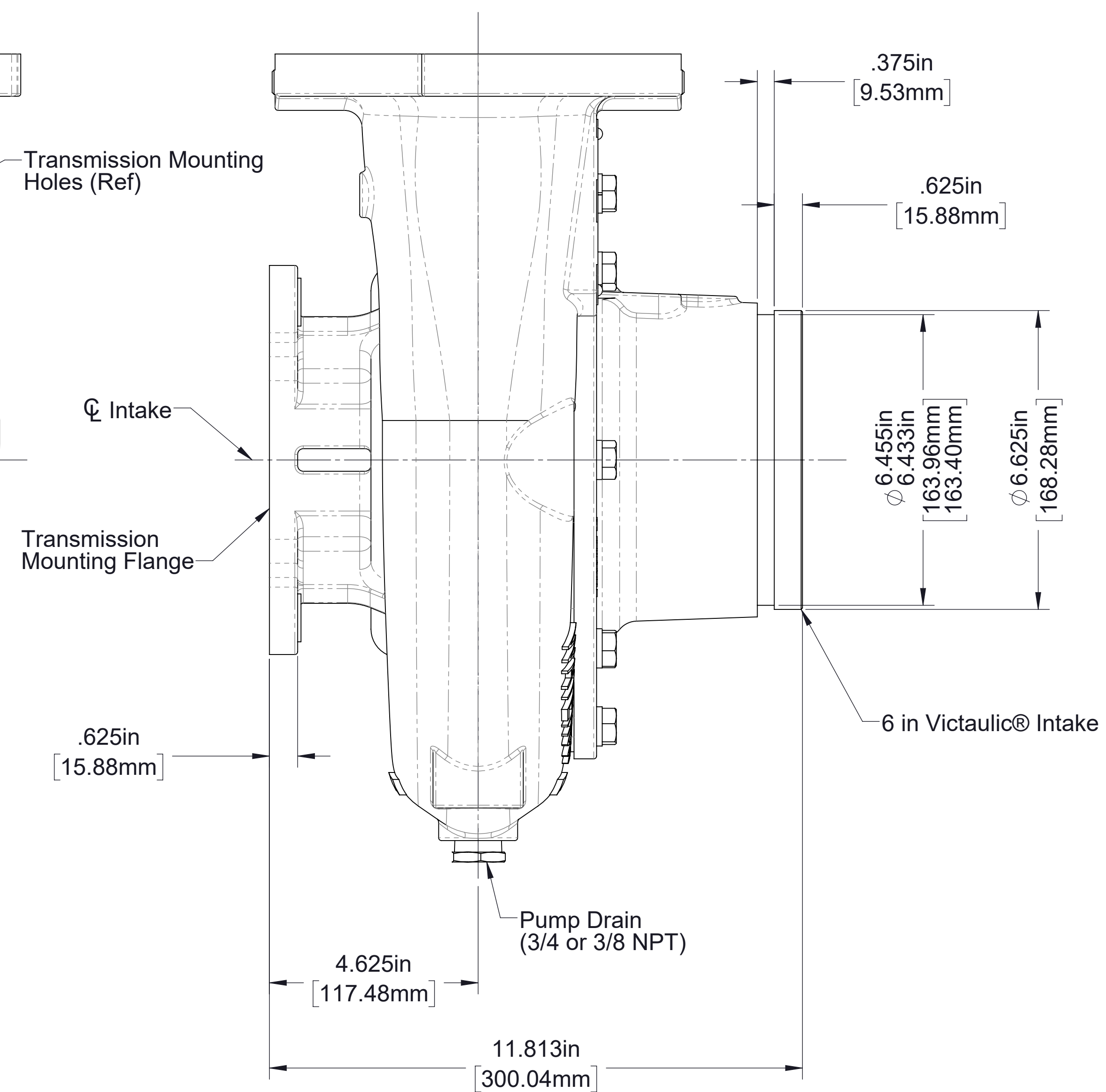
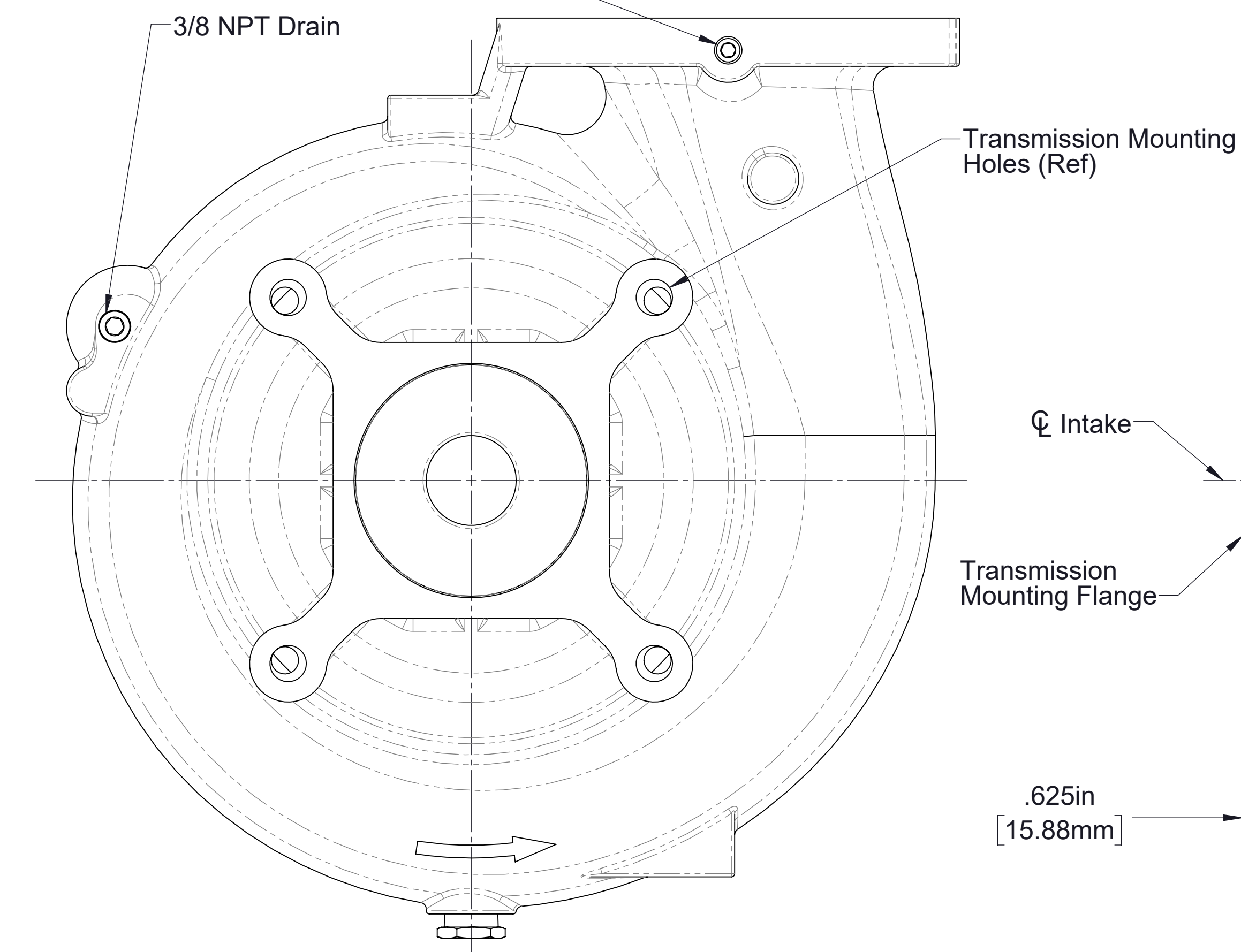
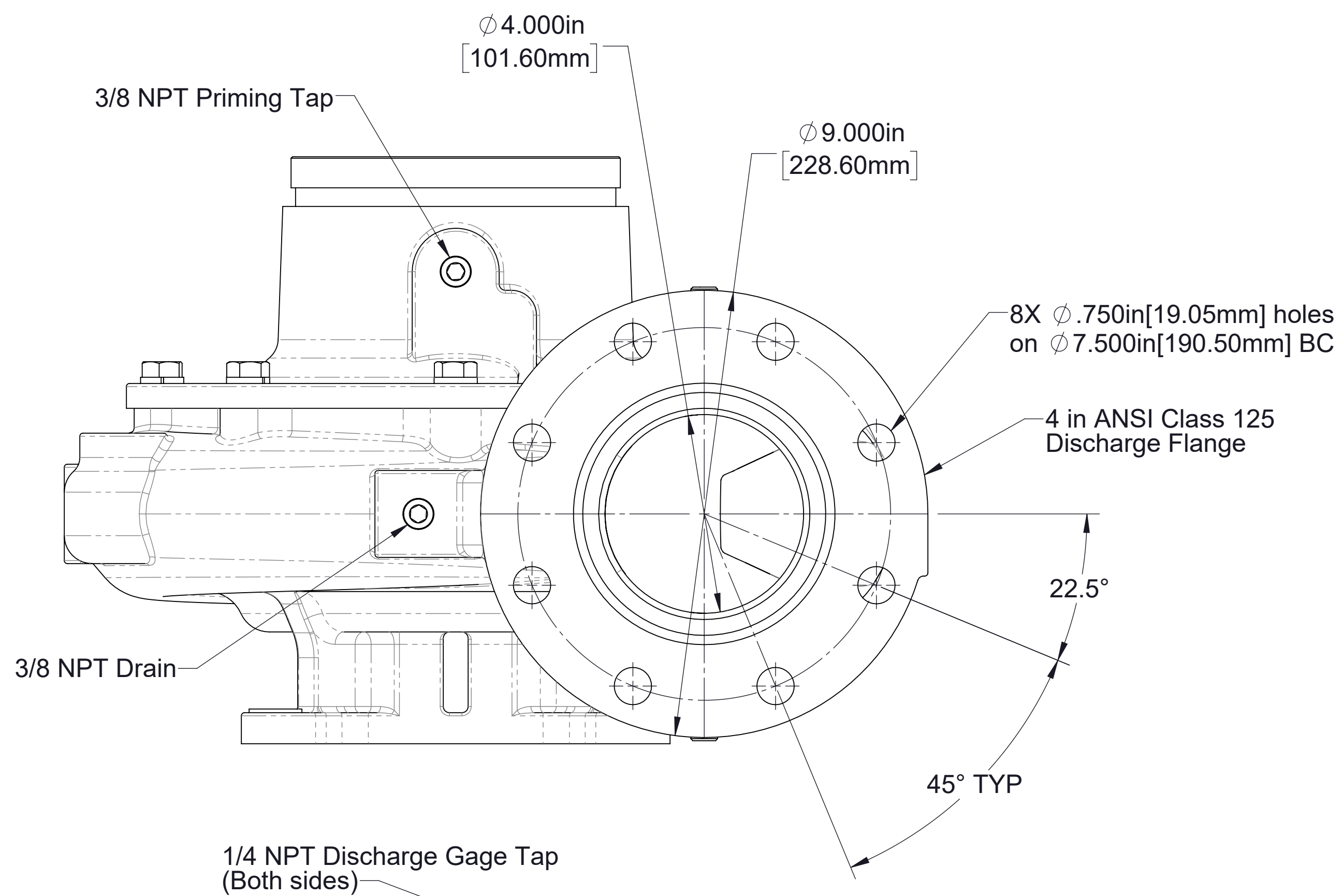
Shown with blank 4 in. ANSI flange discharge
See pages 9 & 10 for optional discharge manifolds



Note:
1. See drawing DPL82908 for priming valve details.

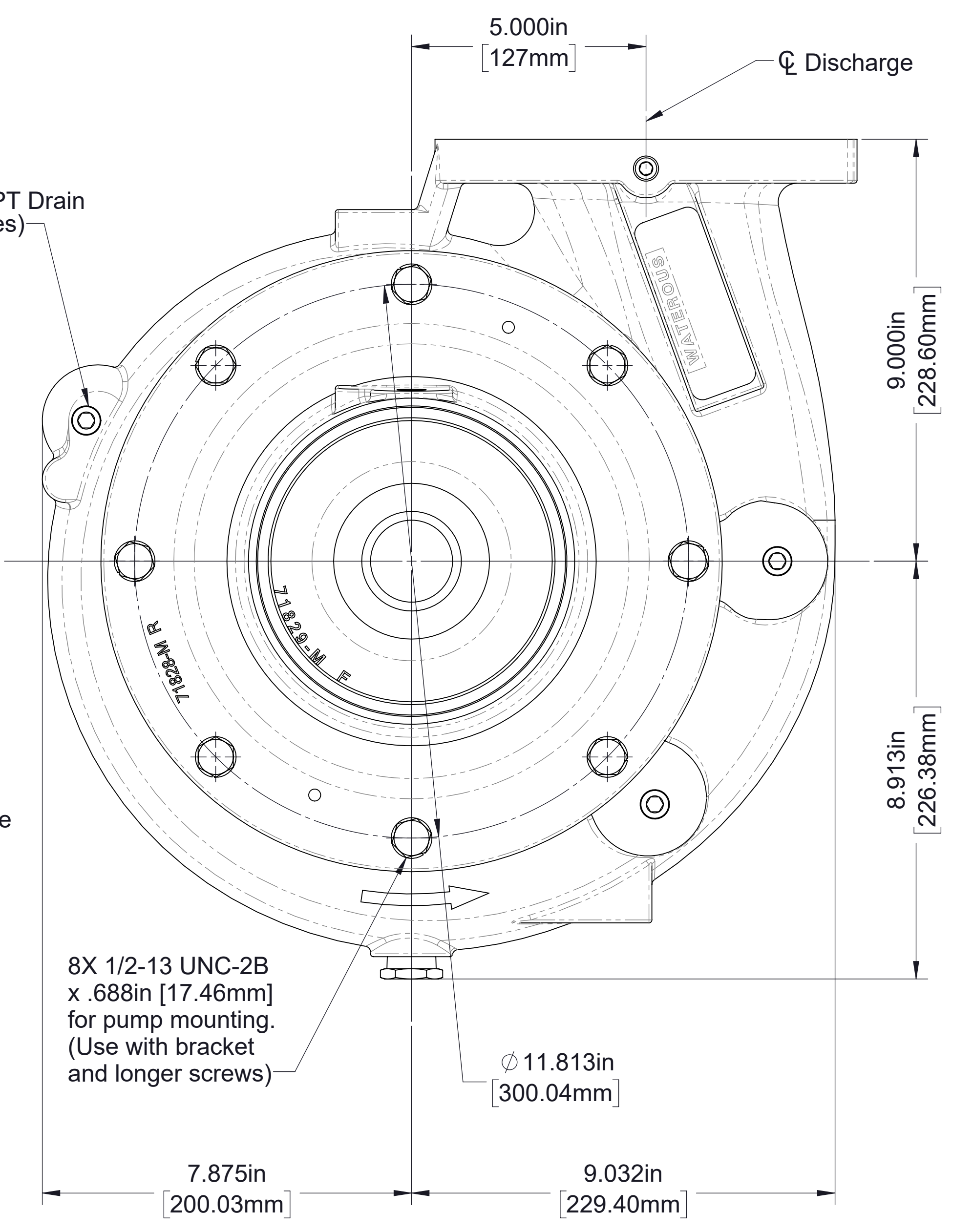
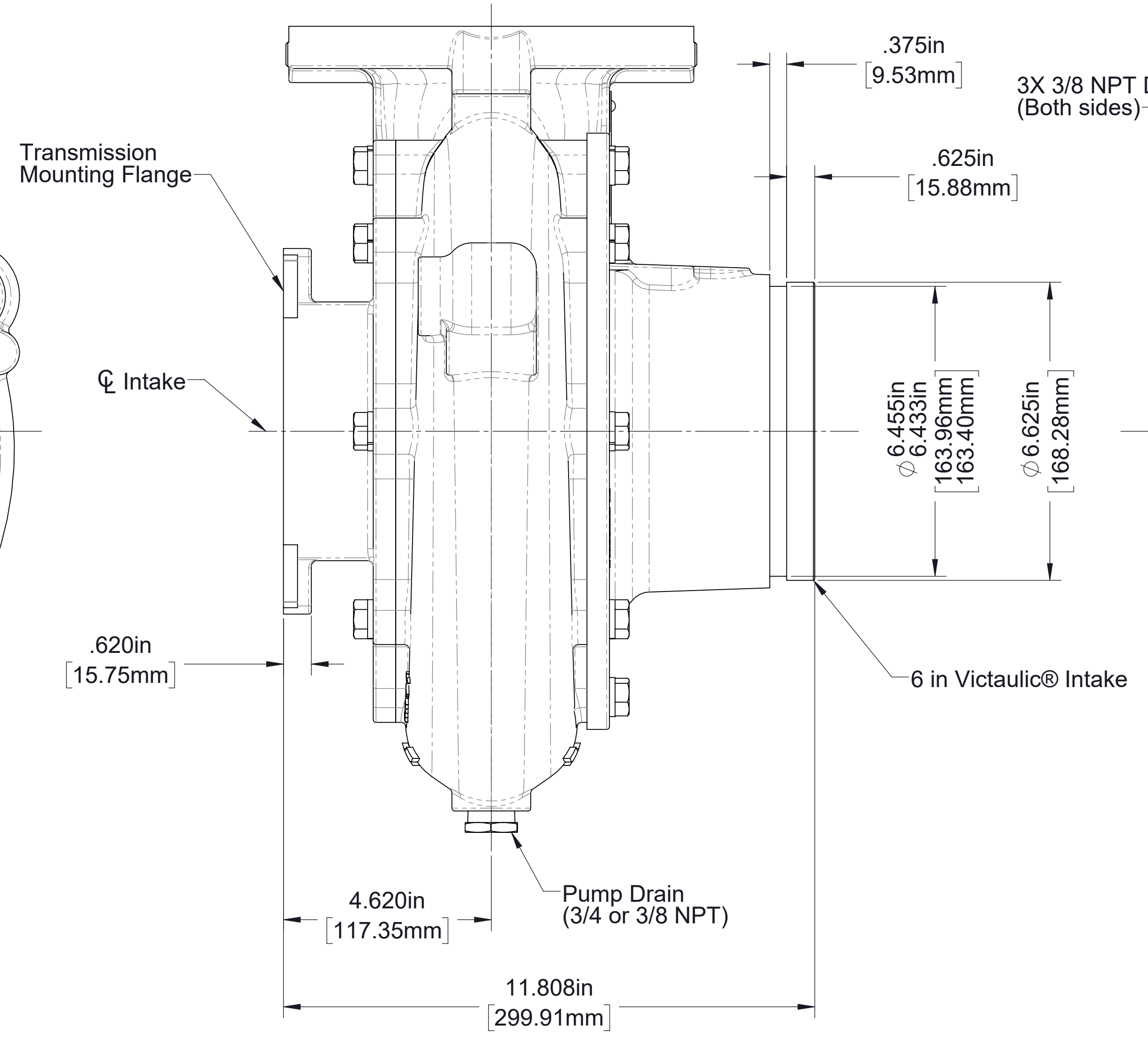
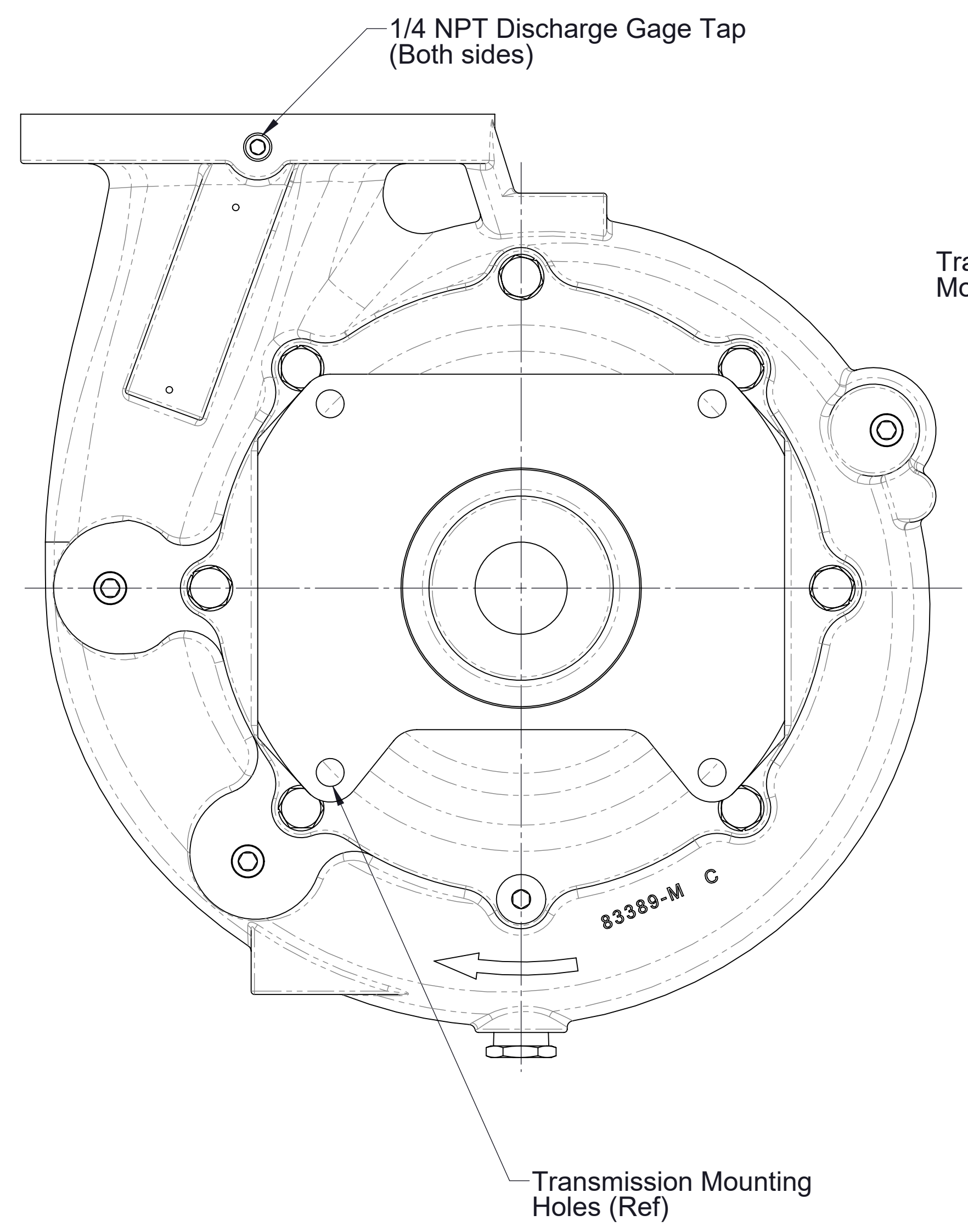
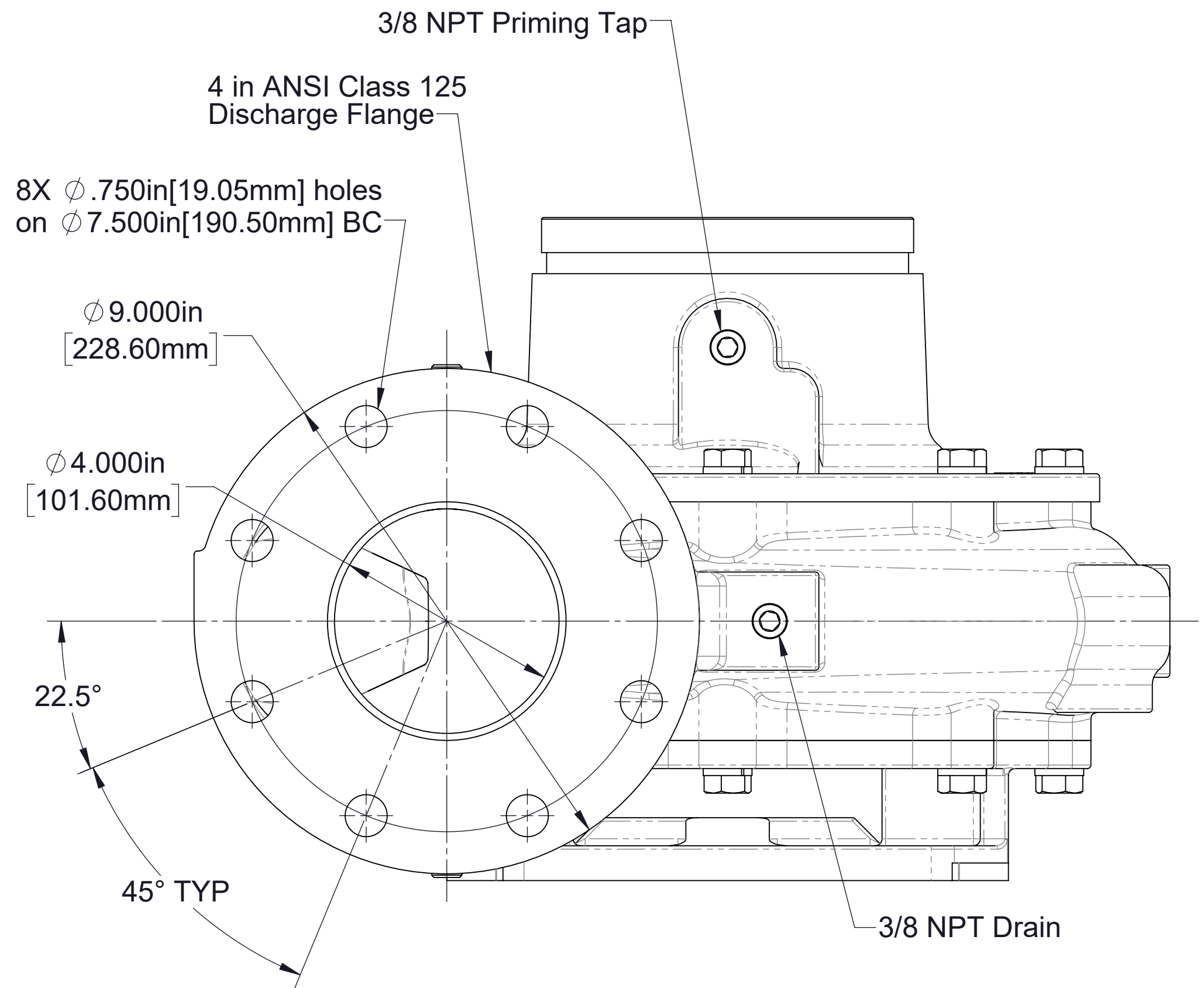
CXS Body Dimensions CCW Impeller Rotation

Shown with blank 4 in. ANSI flange discharge
See pages 9 & 10 for optional discharge manifolds



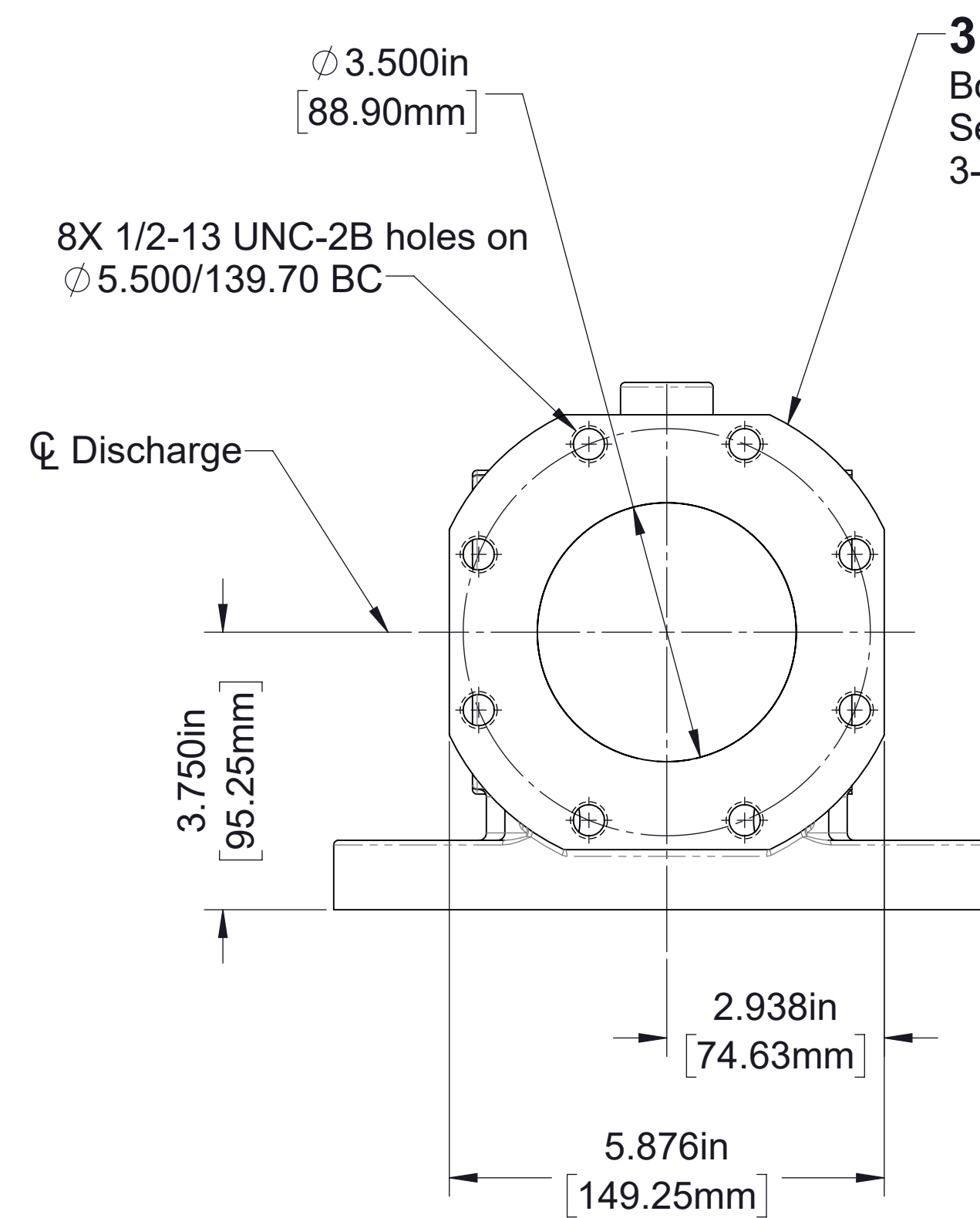
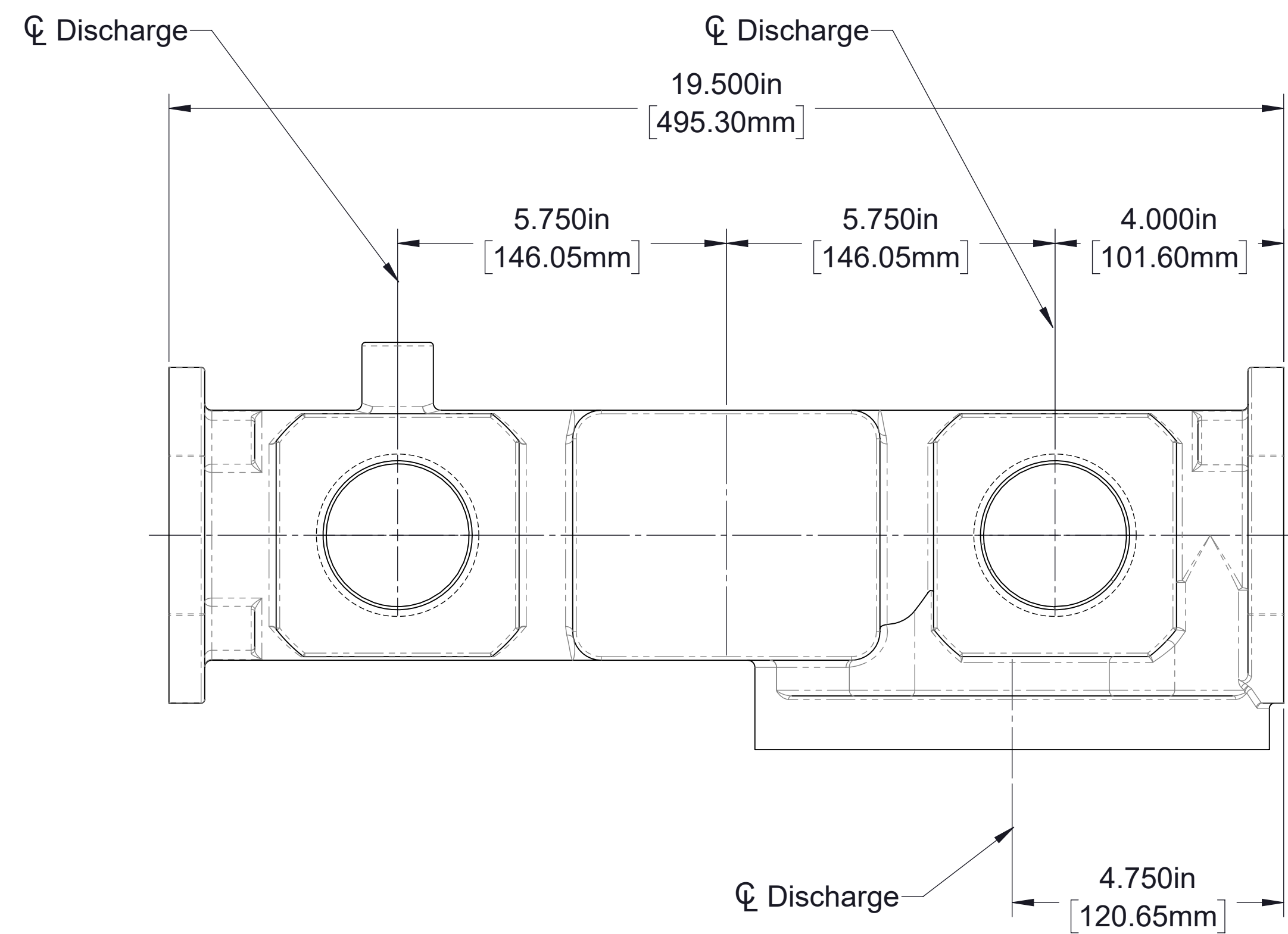
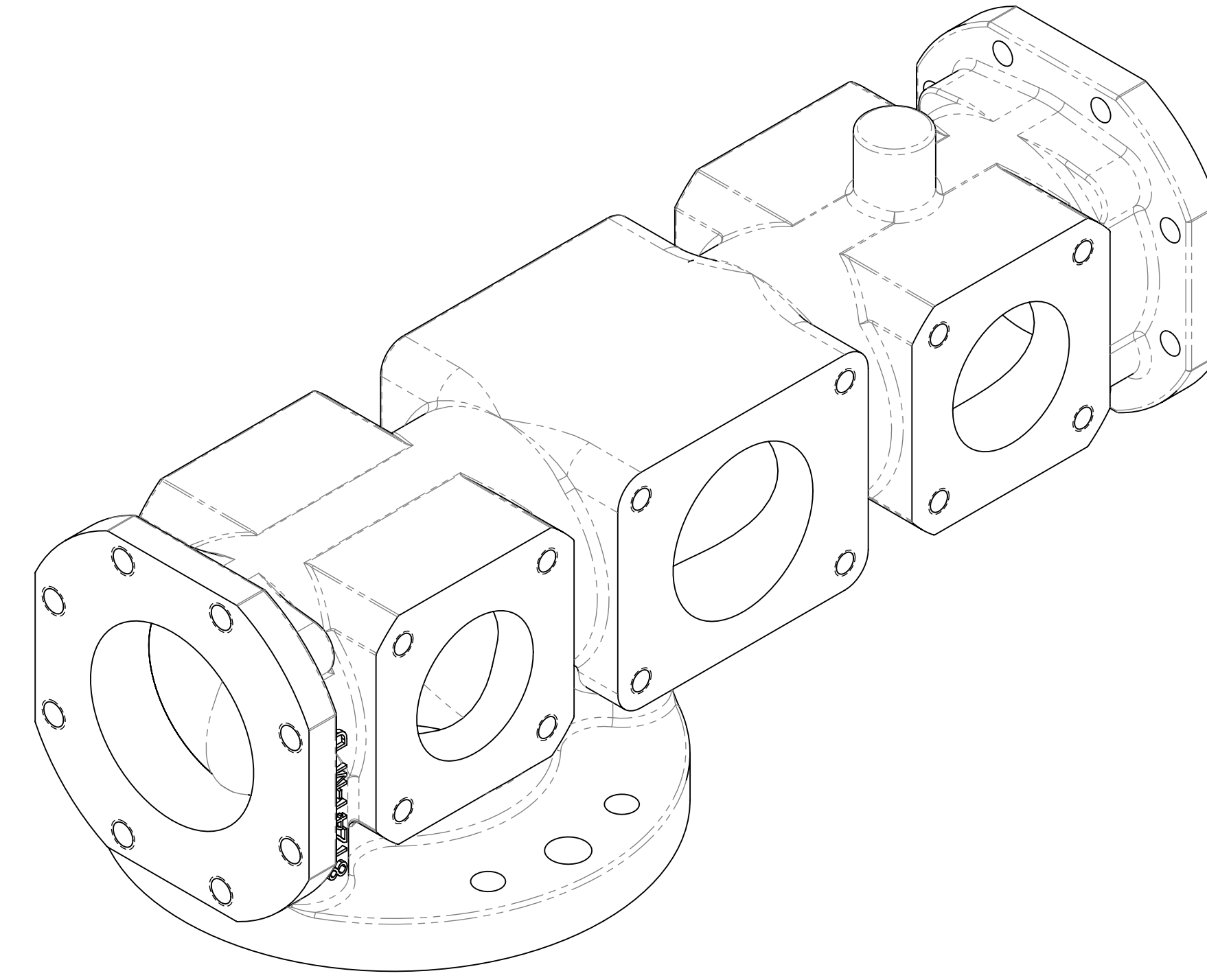
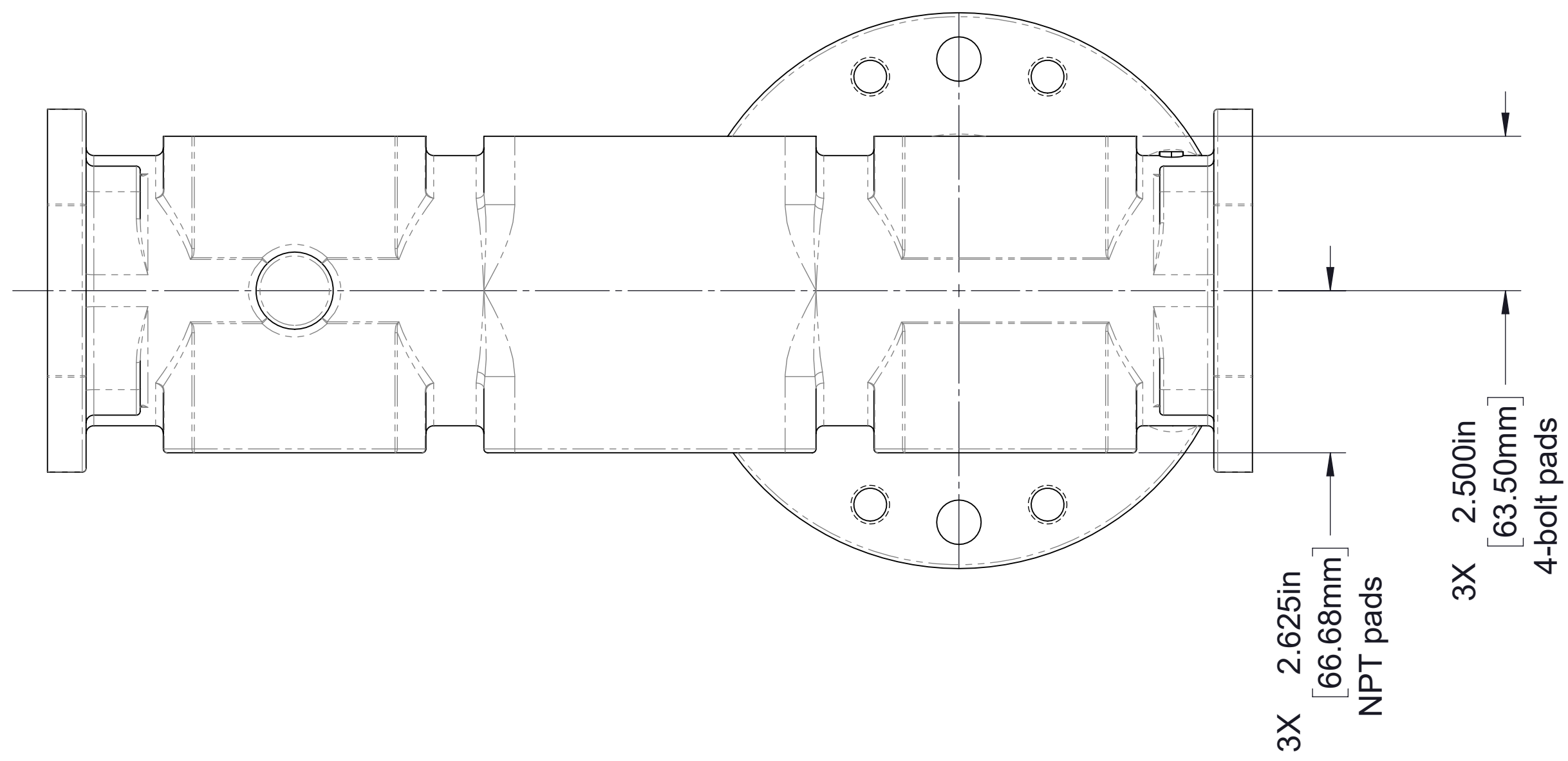
CXV Body Dimensions CW Impeller Rotation

Shown with blank 4 in. ANSI flange discharge
See pages 9 & 10 for optional discharge manifolds

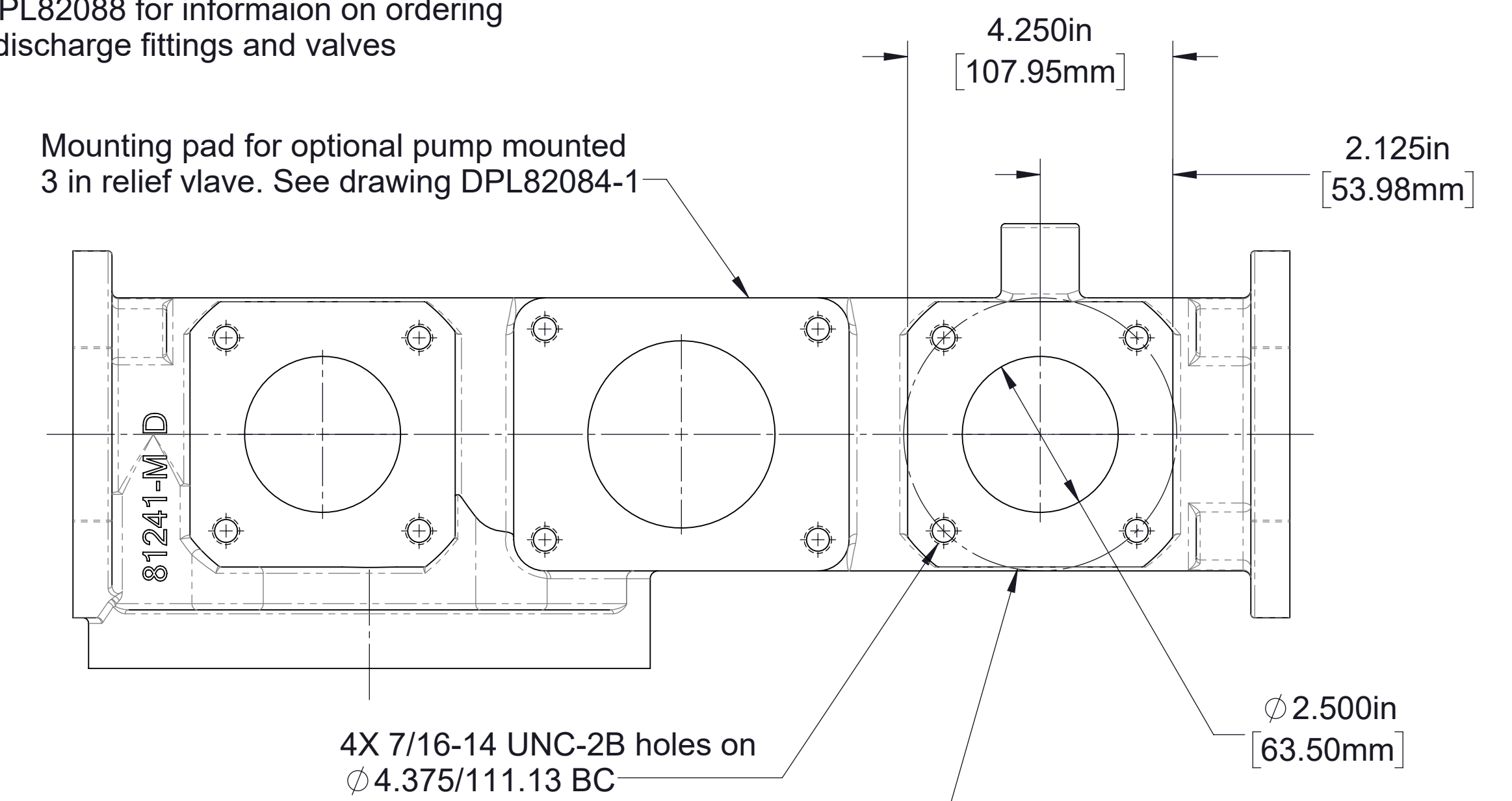


CXV Body Dimensions CCW Impeller Rotation

Shown with blank 4 in. ANSI flange discharge
See pages 9 & 10 for optional discharge manifolds

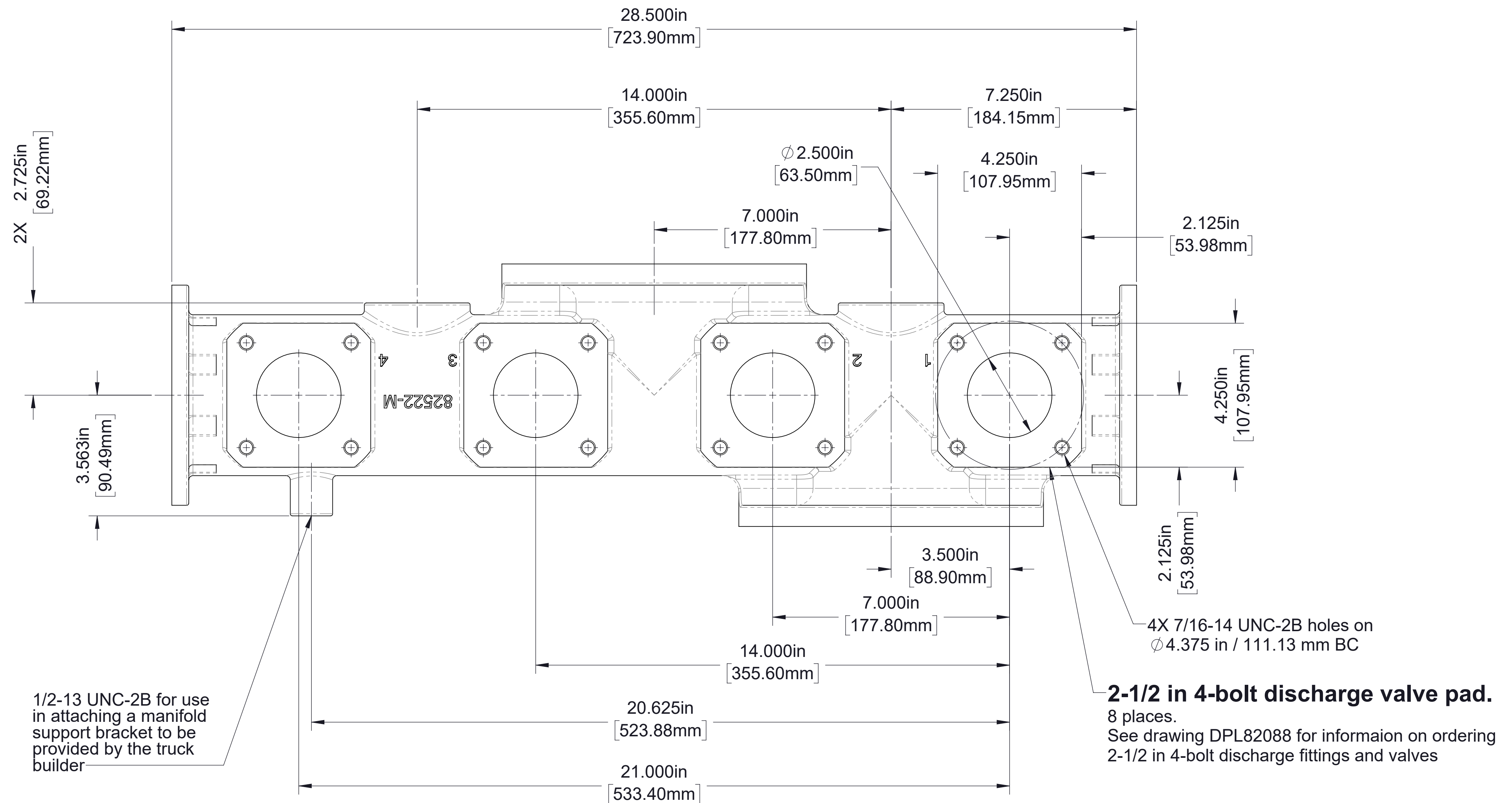
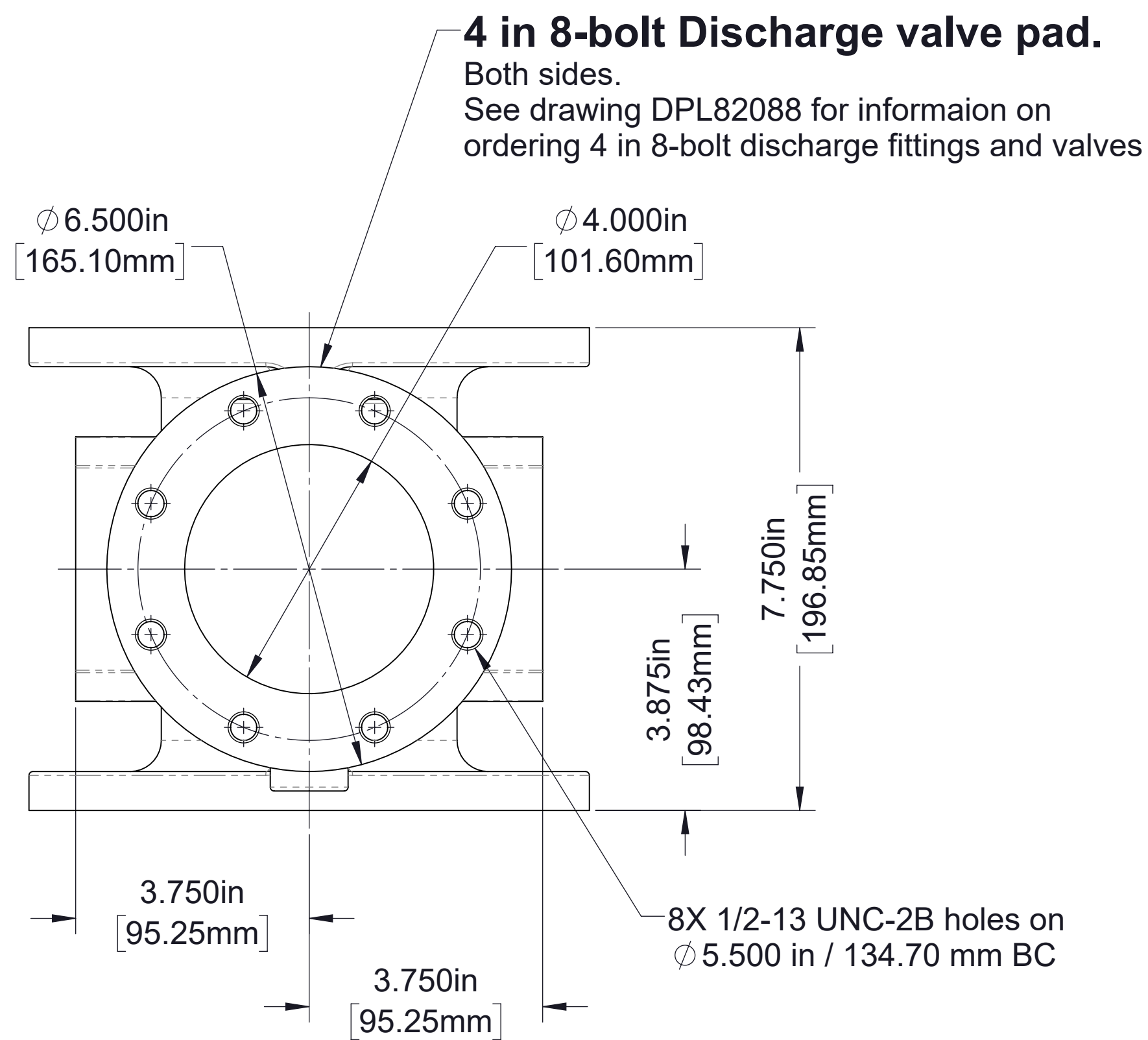
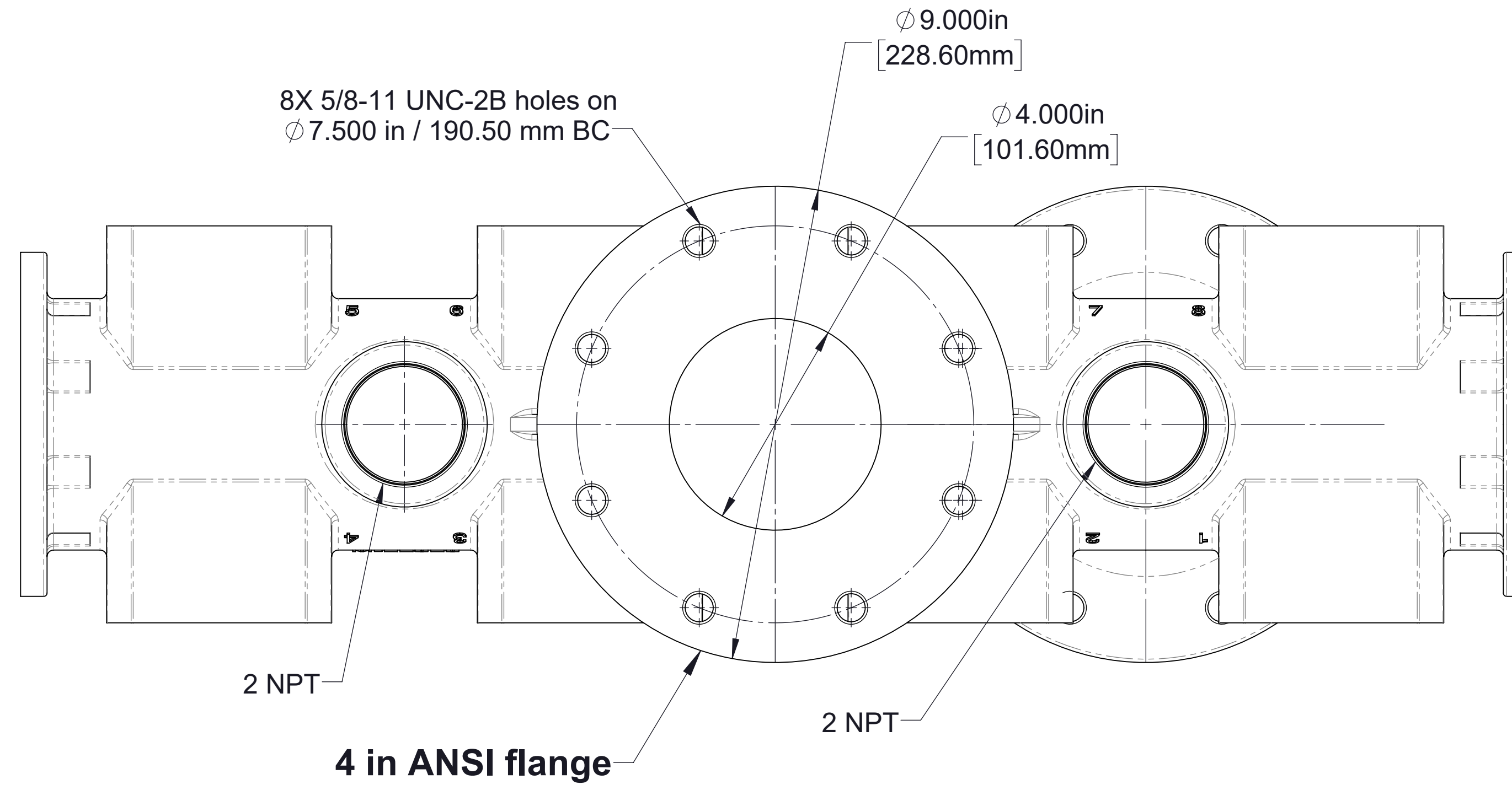
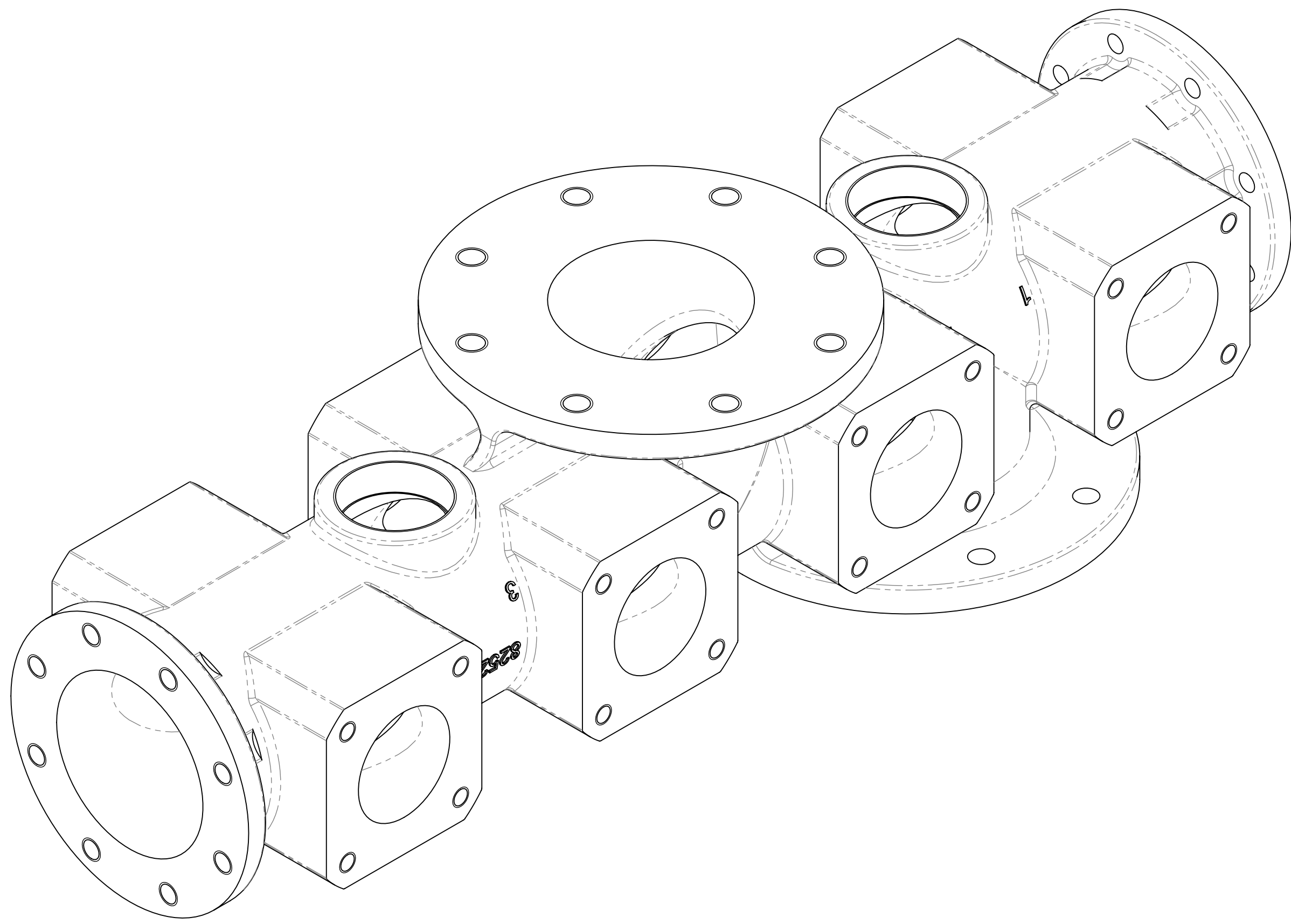


3-1/2 in 8-bolt discharge valve pad.
 Both sides.
 See drawing DPL82088 for information on ordering 3-1/2 in 8-bolt discharge fittings and valves

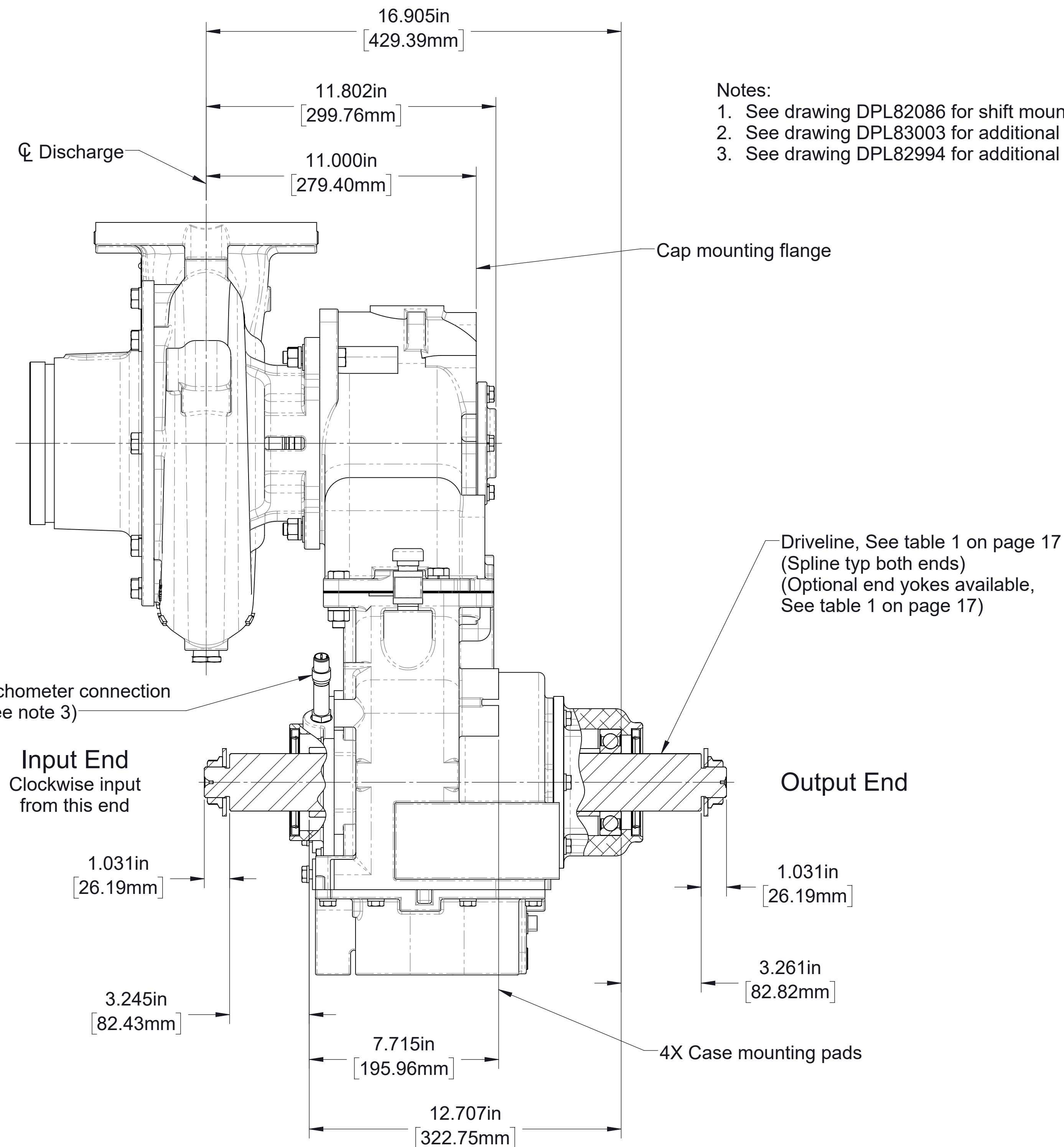
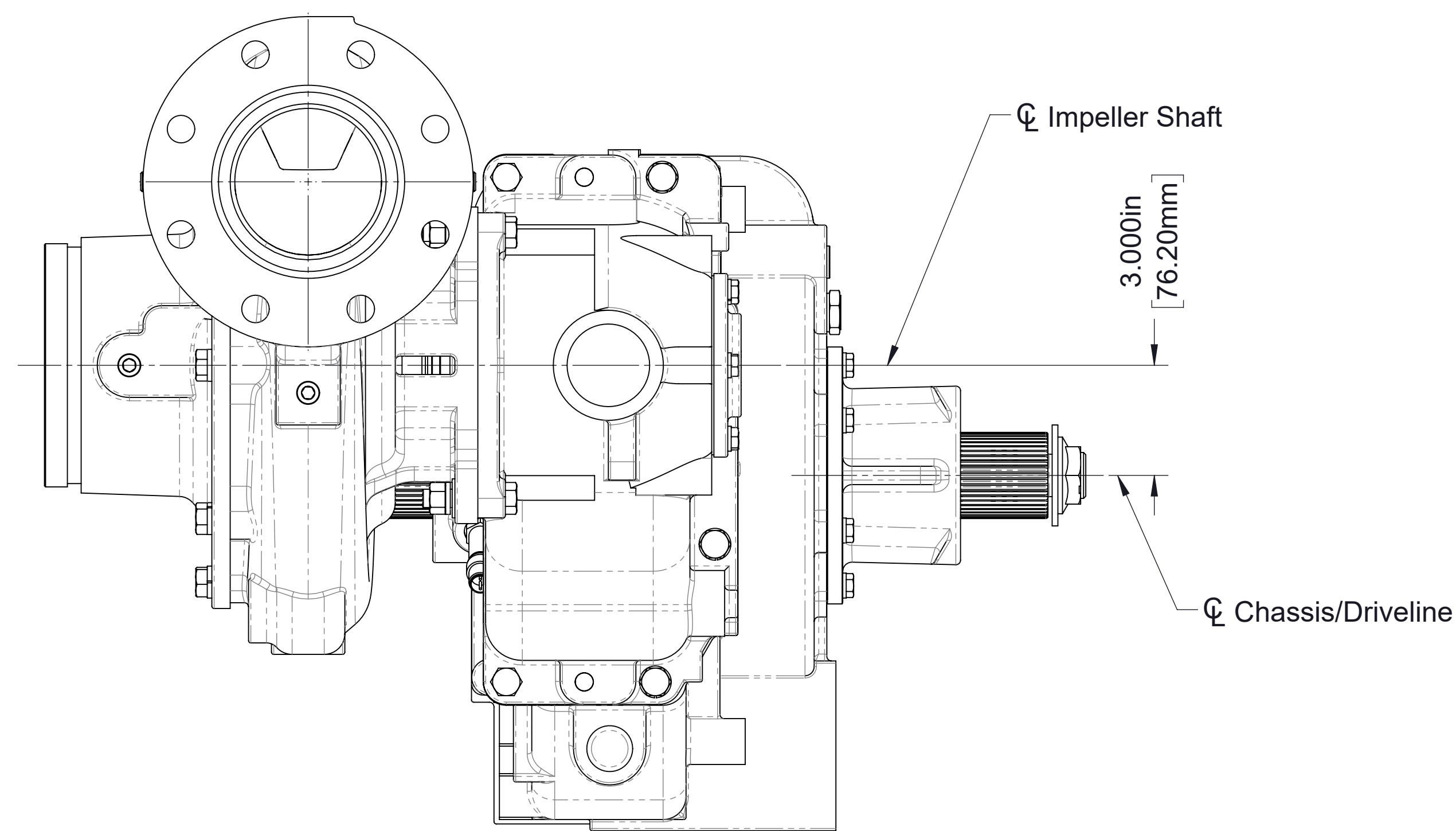


2-1/2 in 4-bolt discharge valve pad.
 Two places.
 See drawing DPL82088 for information on ordering 2-1/2 in 4-bolt discharge fittings and valves

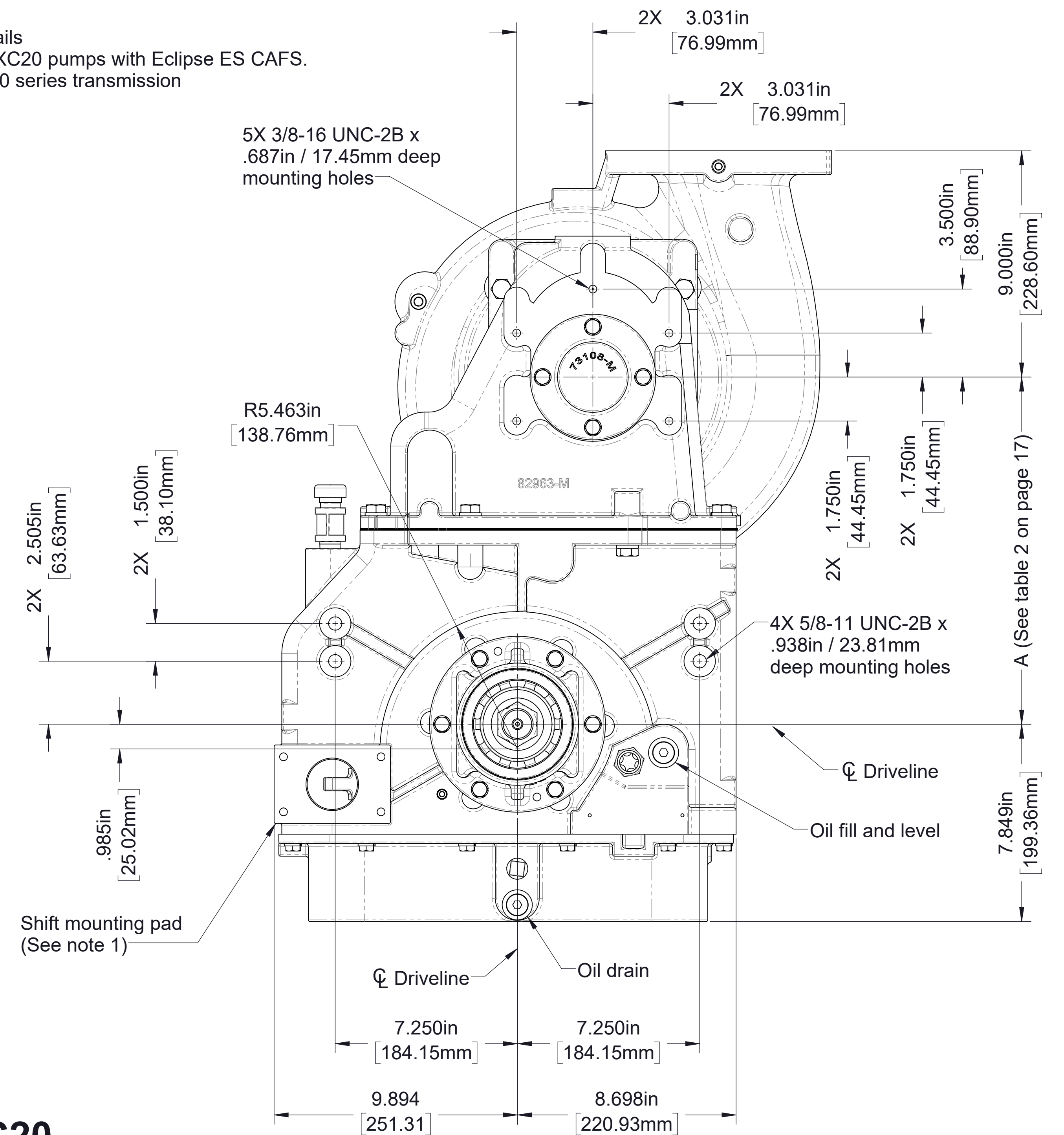
**Optional Discharge Manifold
 w/ 3-1/2 in End Flanges**
 See pages 28 and 31 for mounting details
 and pad designations



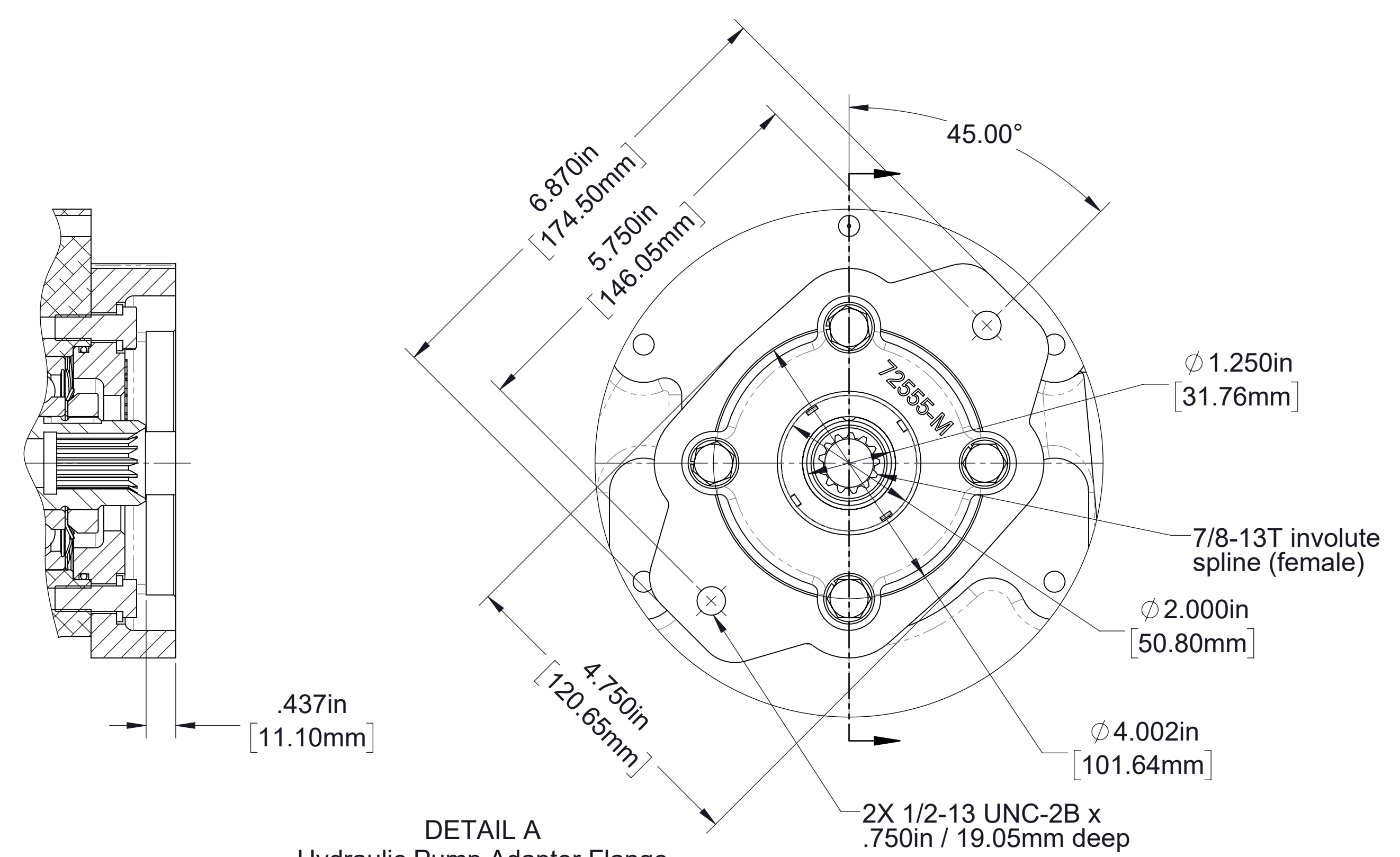
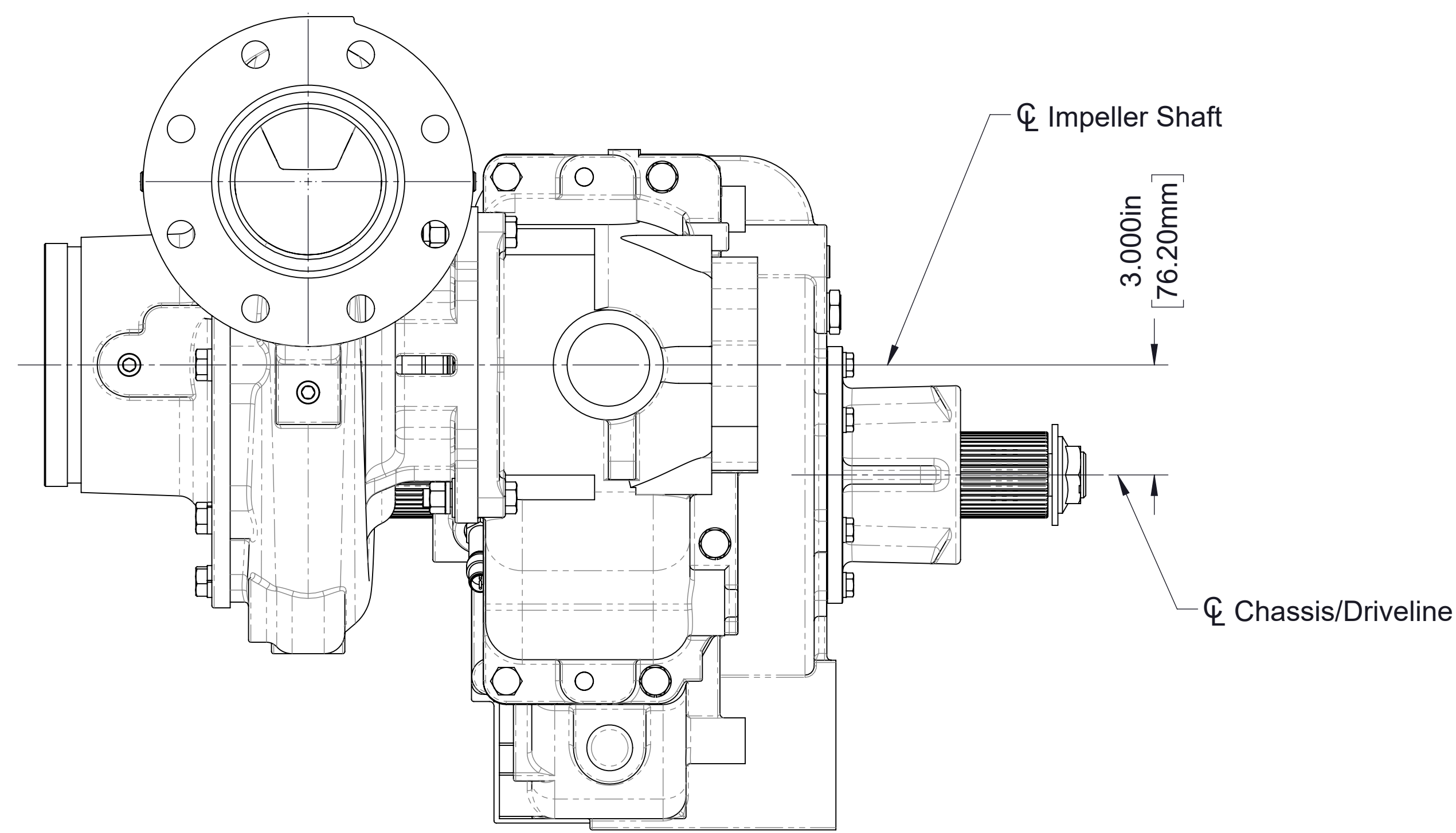
**Optional Discharge Manifold
 w/ 4 in End Flanges**
 See pages 29, 30, 32, and 33 for mounting details and pad designations



- Notes:
1. See drawing DPL82086 for shift mounting pad details
 2. See drawing DPL83003 for additional details on CXC20 pumps with Eclipse ES CAFS.
 3. See drawing DPL82994 for additional details of C20 series transmission

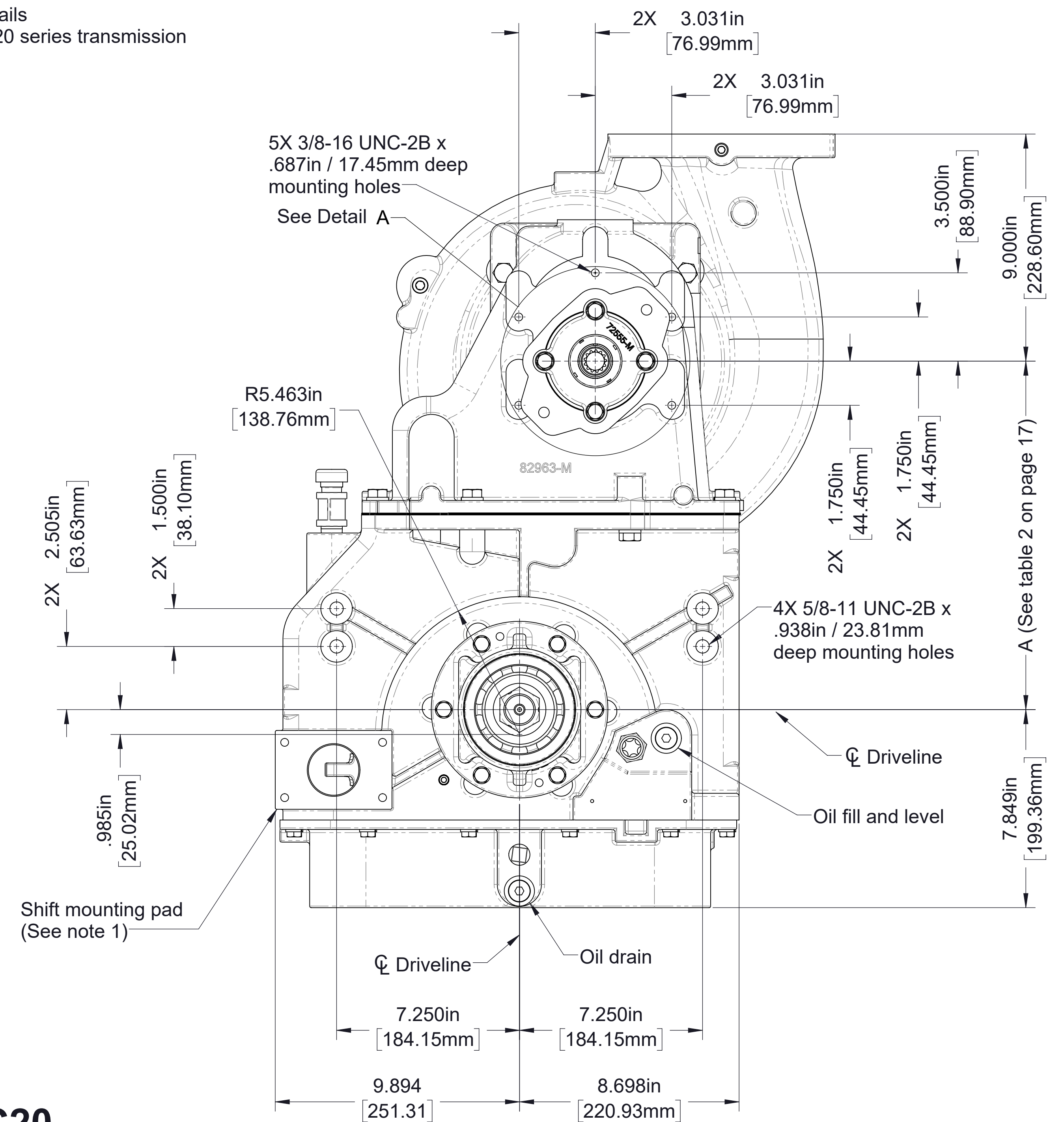
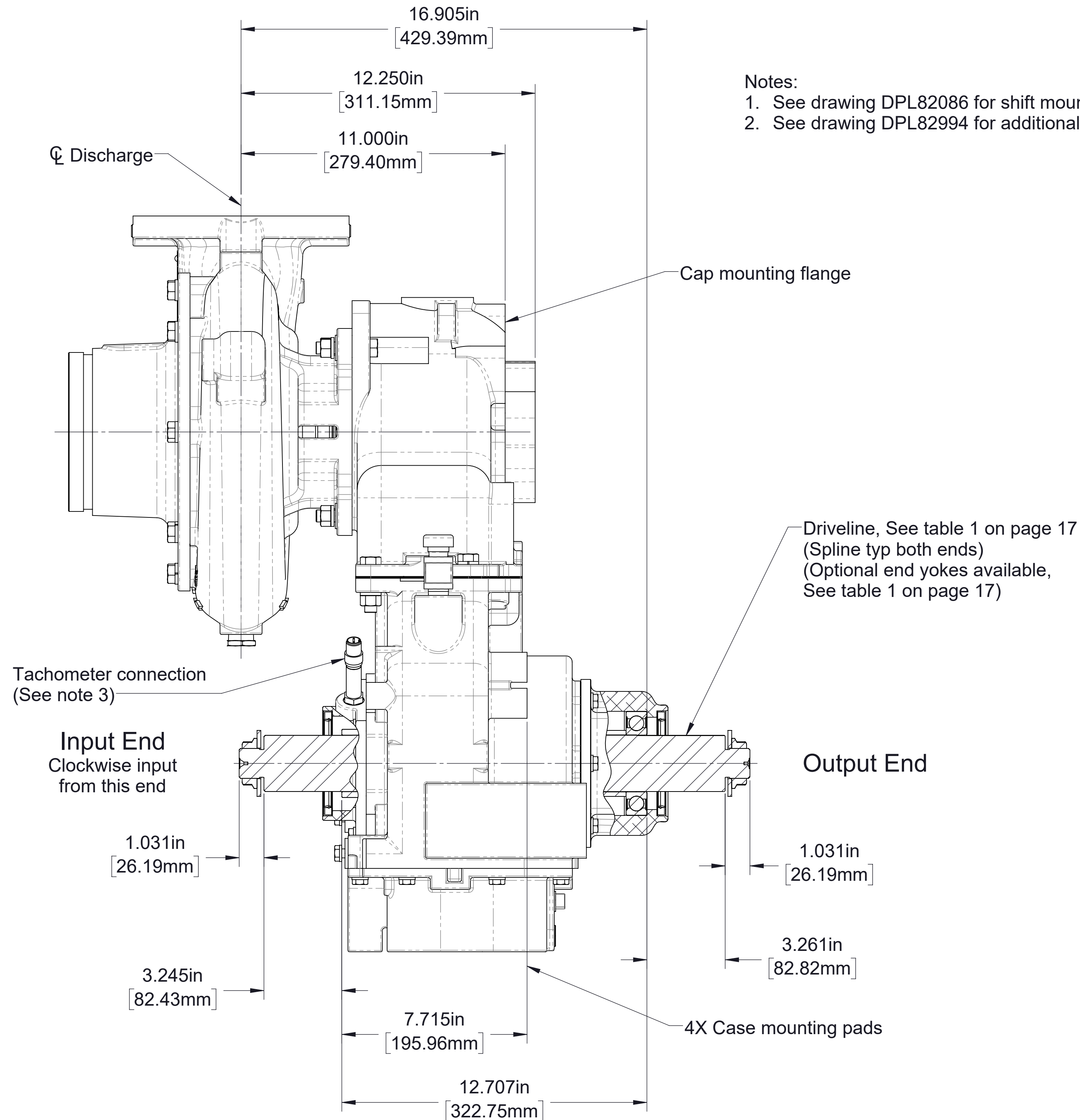


Model CX with C20
Input and Output Shaft
Pump mounted on front (Input shaft side) of transmission
Clockwise input, model CXVC20C, 2.27 ratio, blank discharge shown

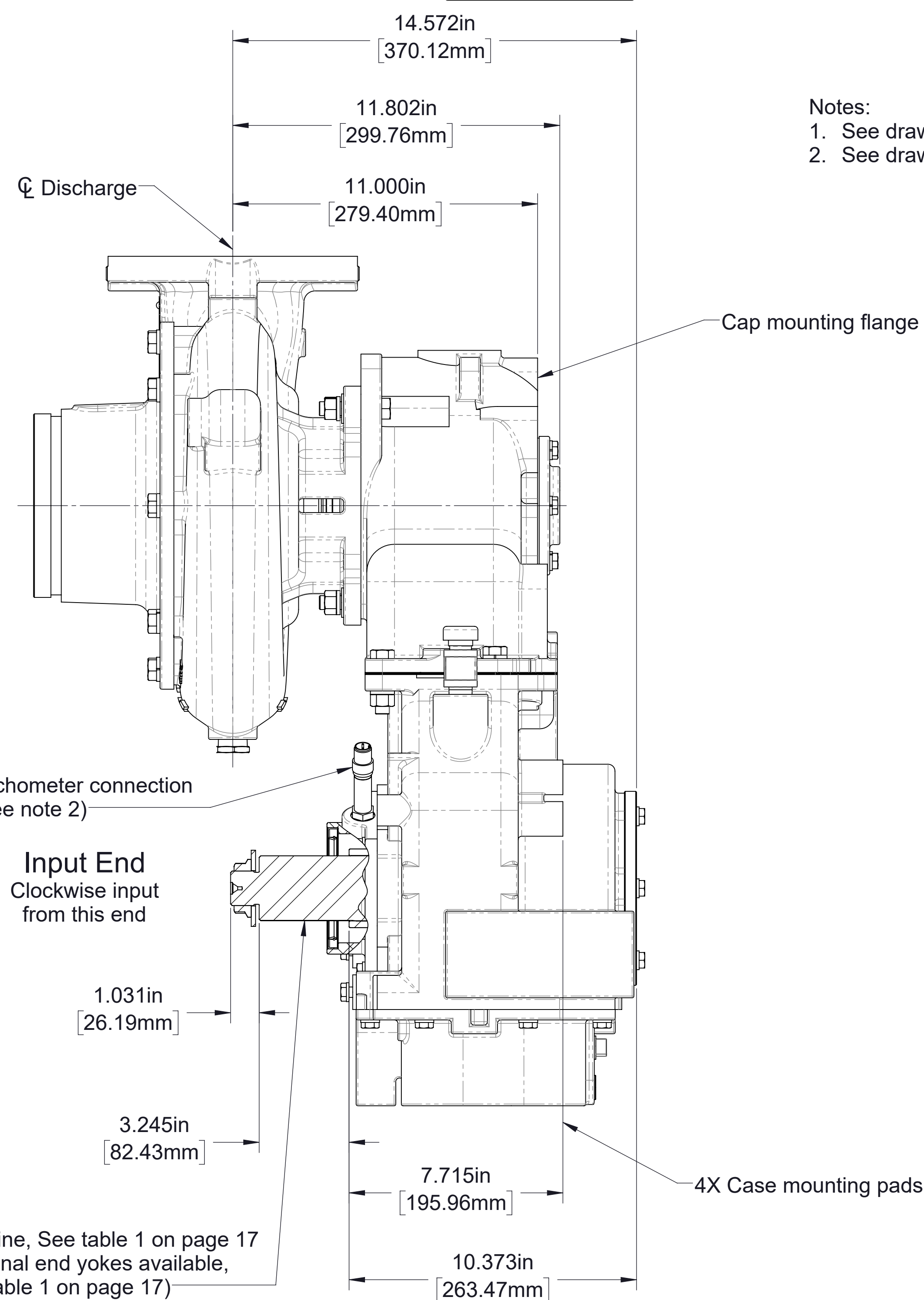
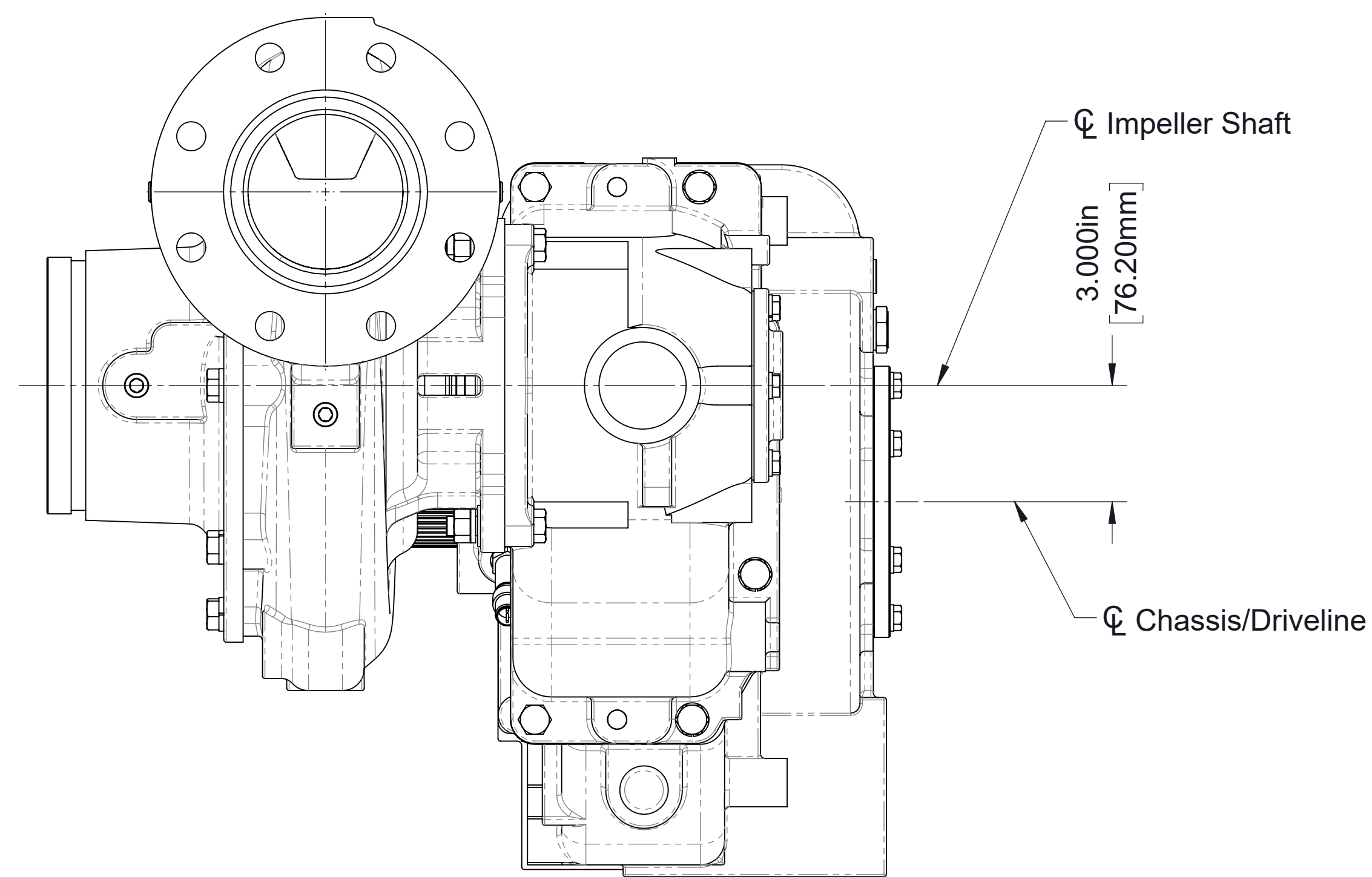


DETAIL A
 Hydraulic Pump Adapter Flange
 Used for SAE J744 class B 2-bolt hydraulic pump with male 7/8-13T 16/32 pitch involute spline

- Notes:
1. See drawing DPL82086 for shift mounting pad details
 2. See drawing DPL82994 for additional details of C20 series transmission

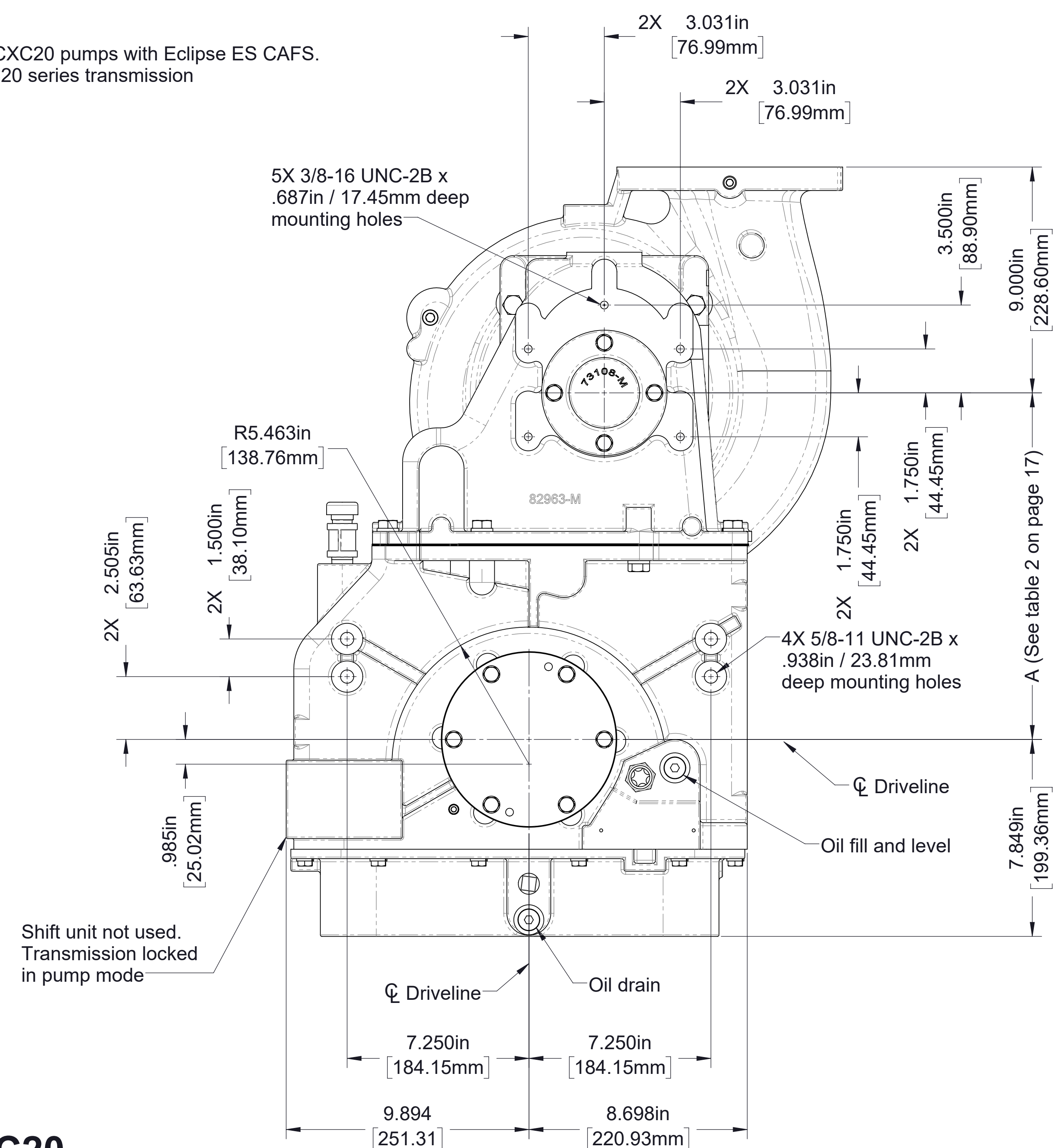


Model CX with C20
Input and Output Shaft
Pump mounted on front (Input shaft side) of transmission
With optional hydraulic motor mount provision
Clockwise input, model CXVC20C, 2.27 ratio, blank discharge shown

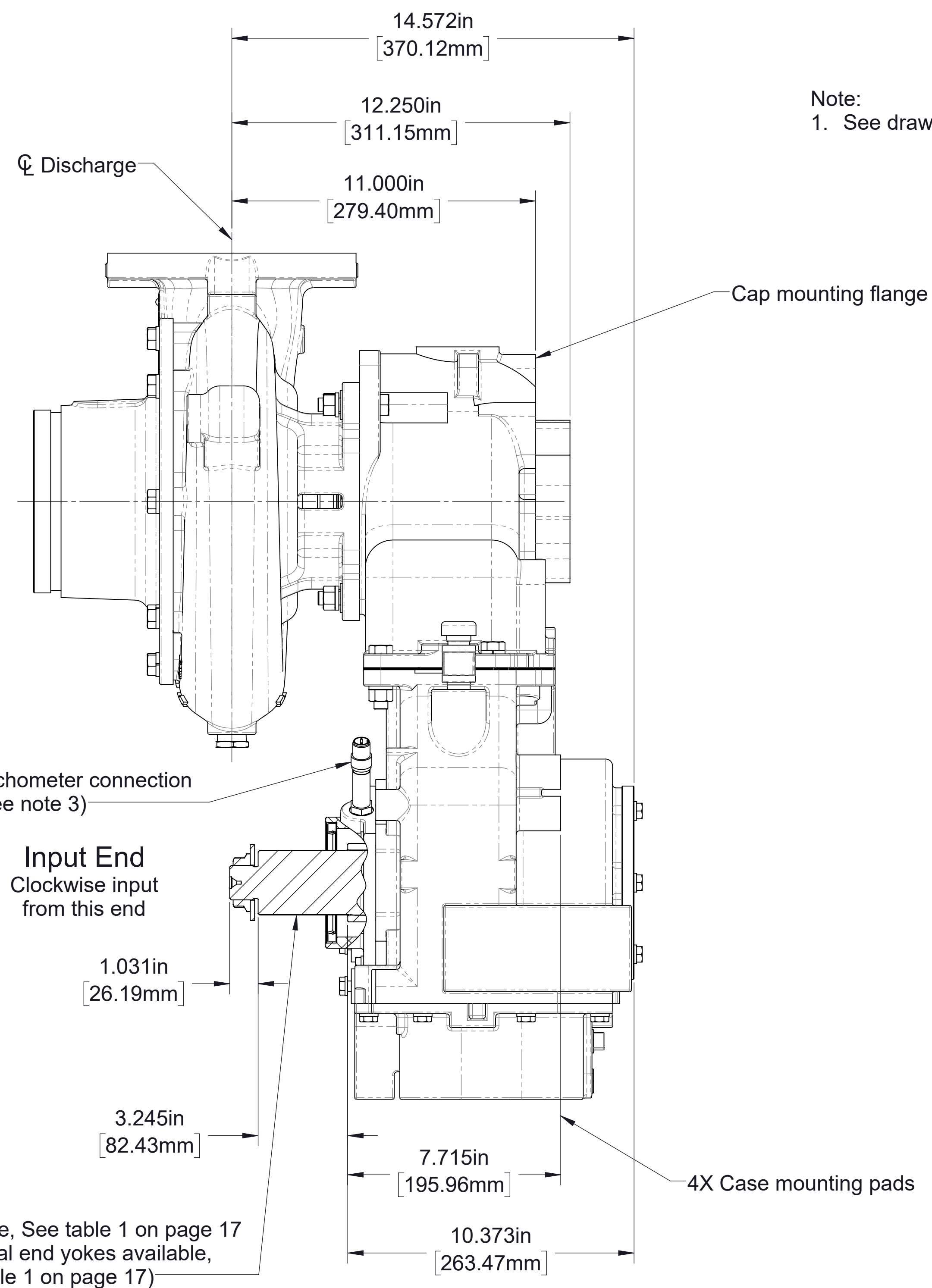
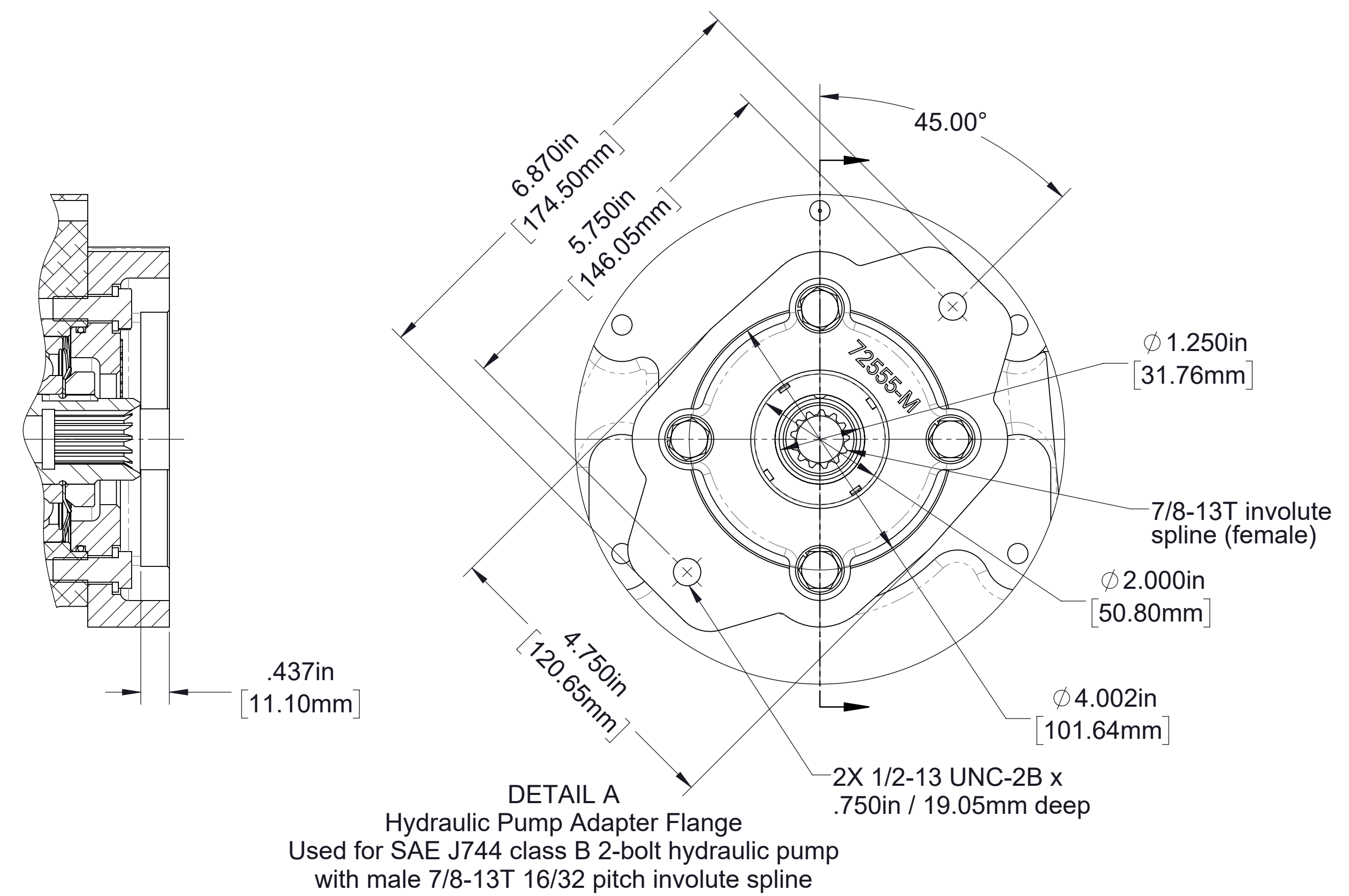
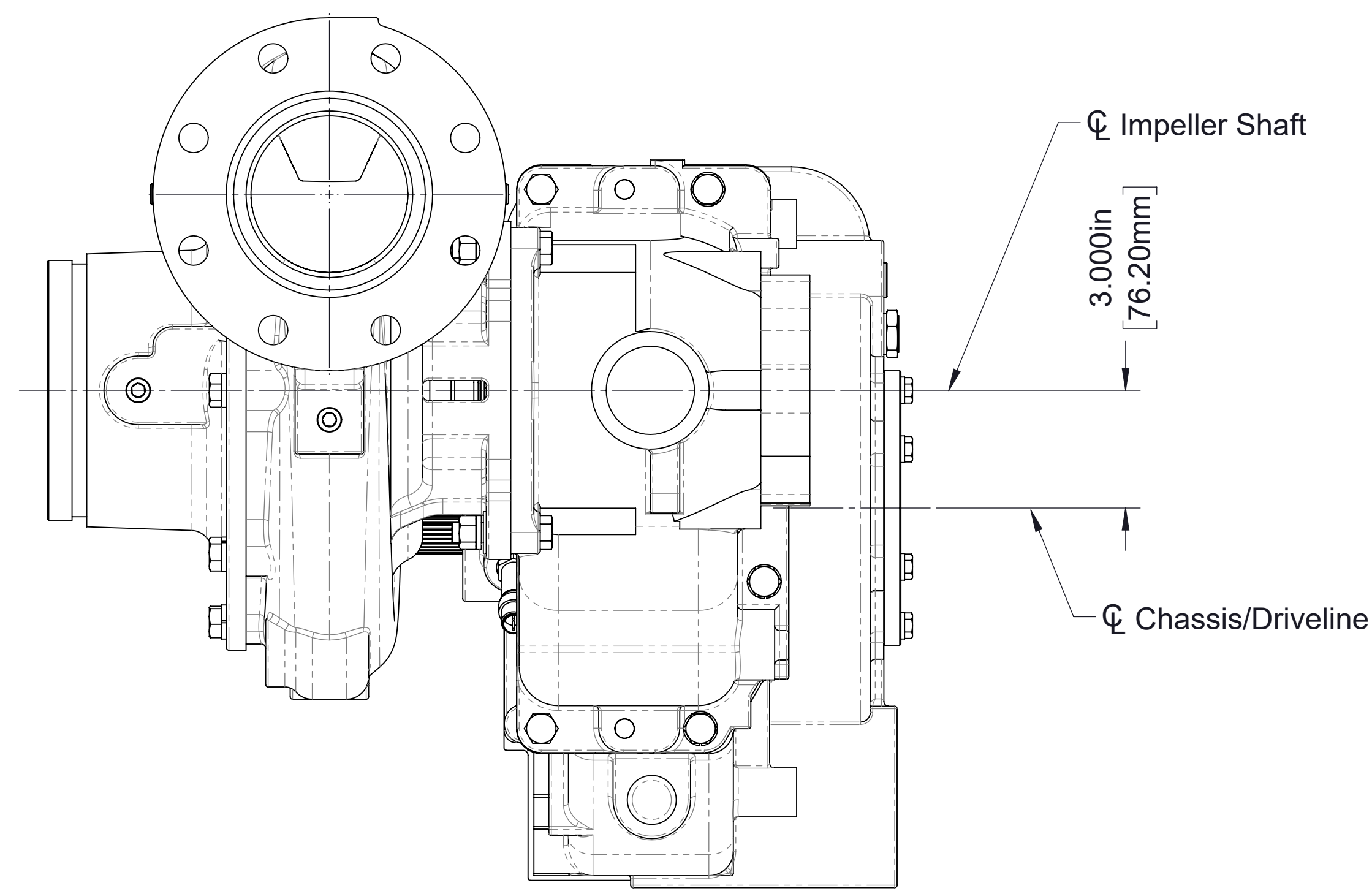


- Notes:
1. See drawing DPL83003 for additional details on CXC20 pumps with Eclipse ES CAFS.
 2. See drawing DPL82994 for additional details of C20 series transmission

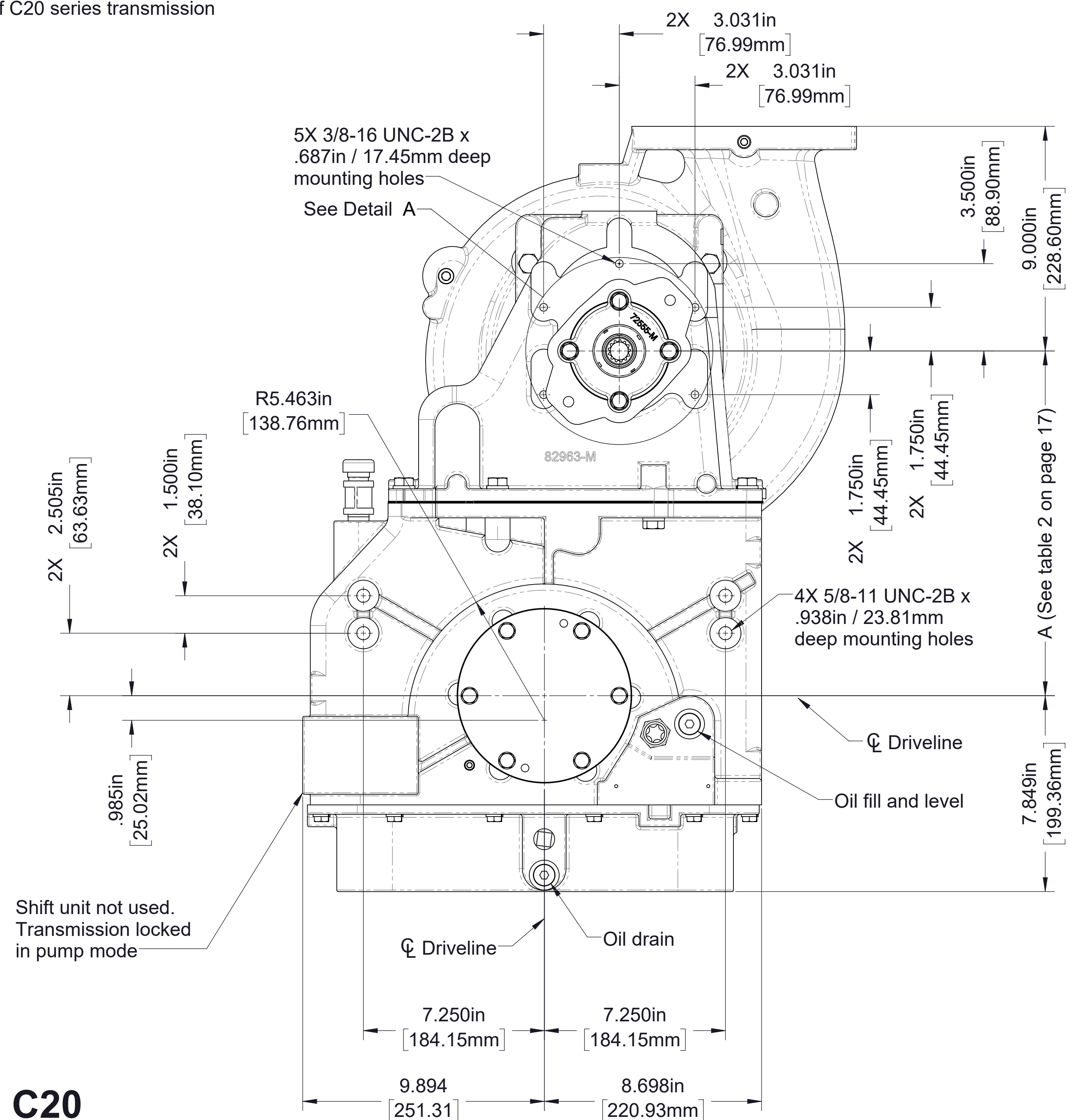
Driveline, See table 1 on page 17
 (Optional end yokes available,
 See table 1 on page 17)



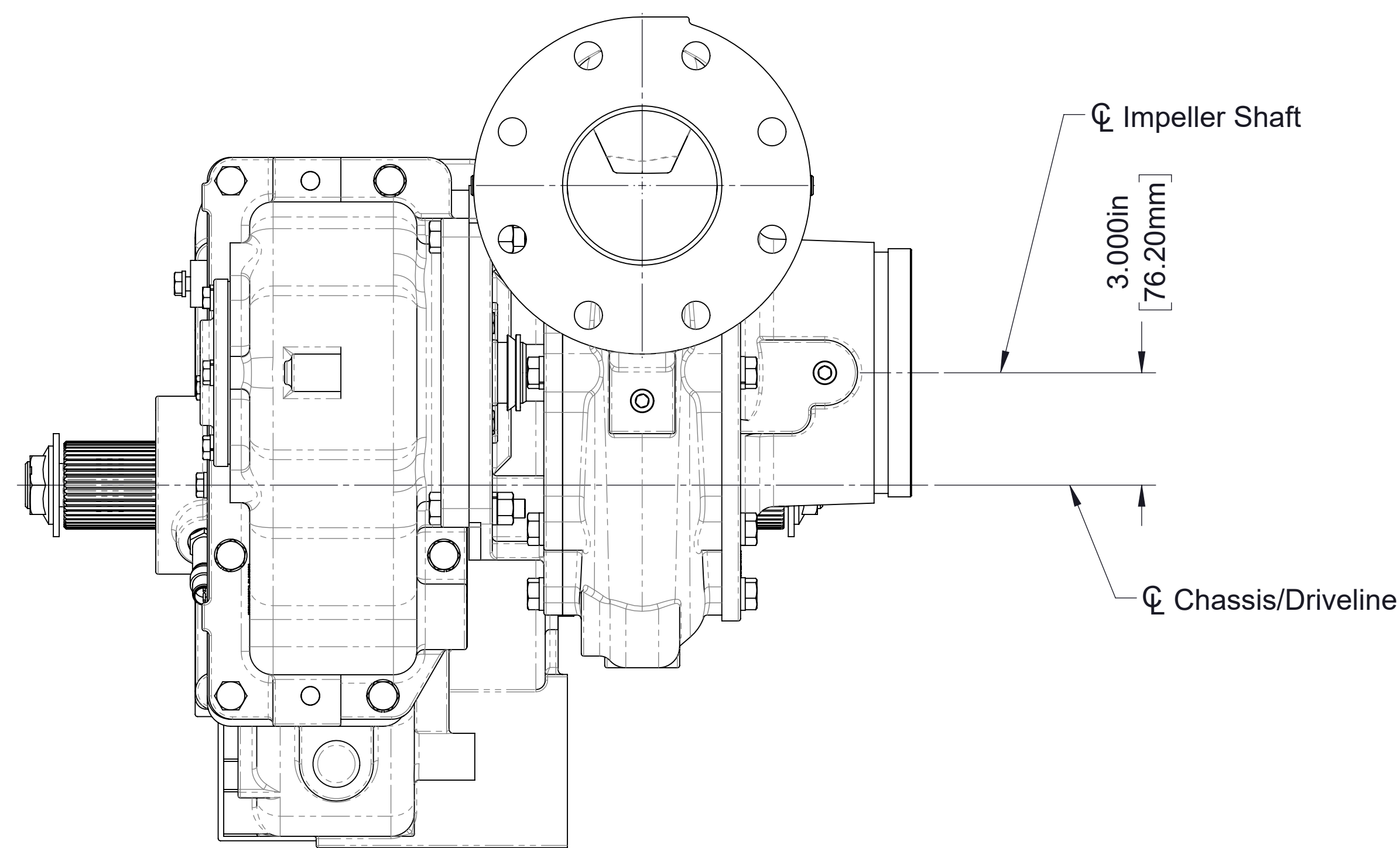
Model CX with C20
Input Shaft Only
Pump mounted on front (Input shaft side) of transmission
Clockwise input, model CXVC20C, 2.27 ratio, blank discharge shown



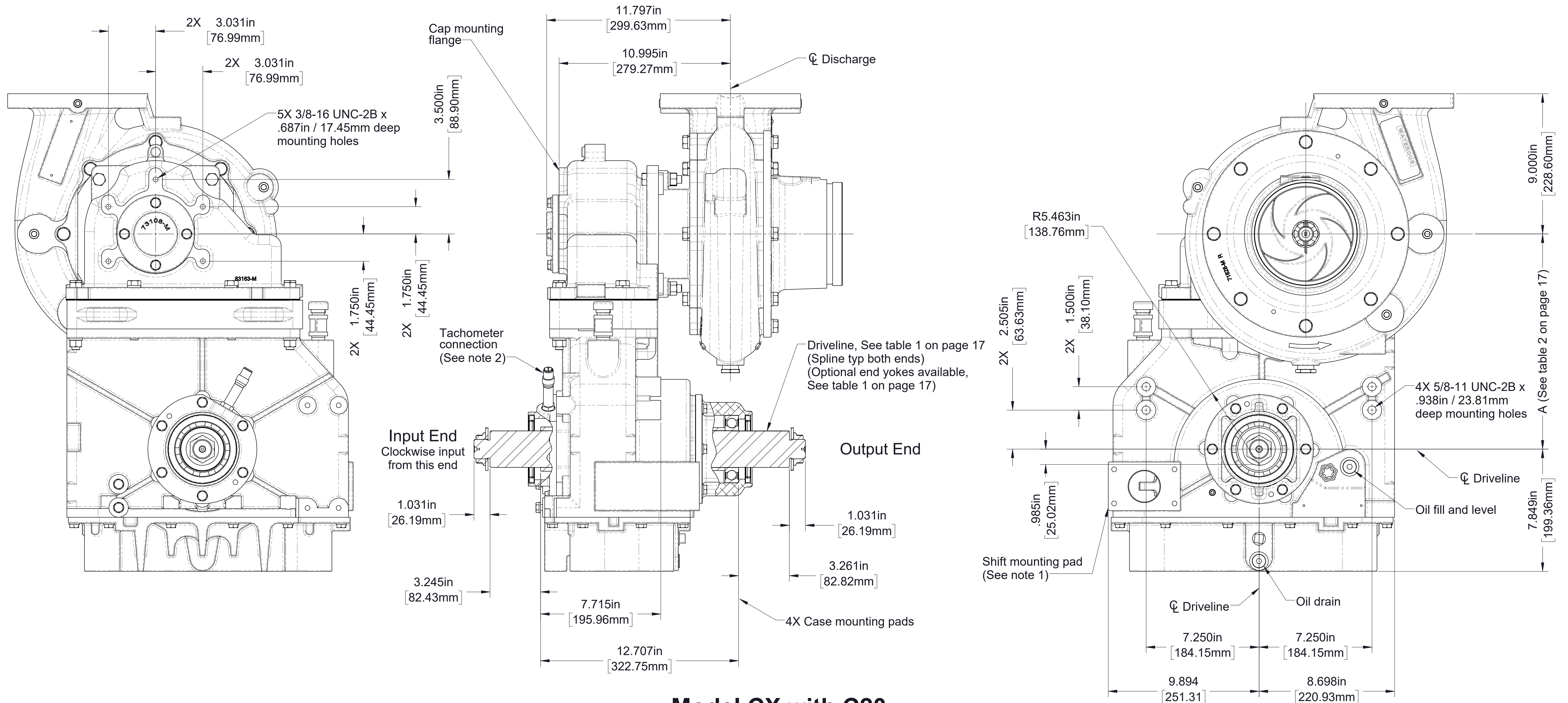
Note:
 1. See drawing DPL82994 for additional details of C20 series transmission



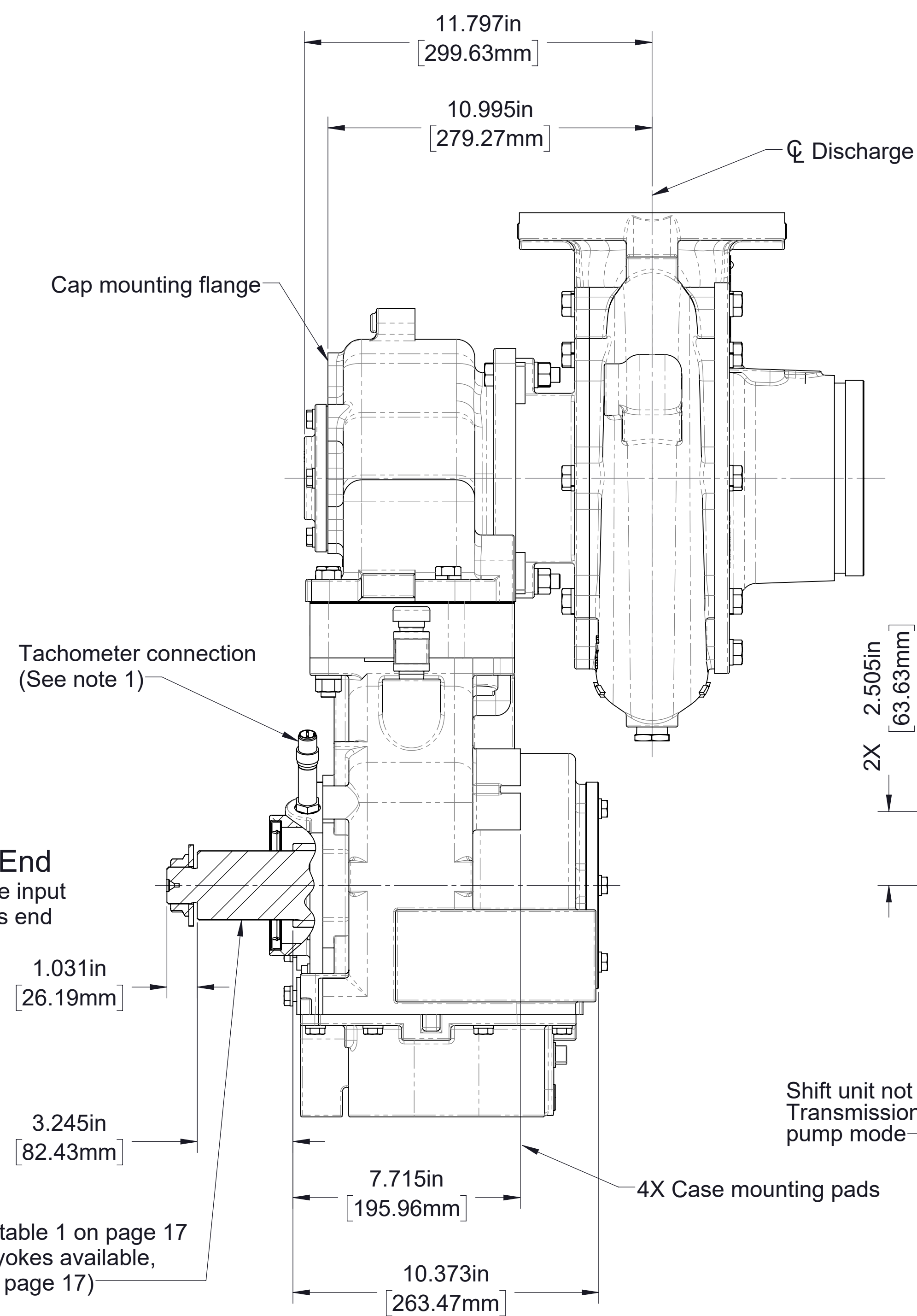
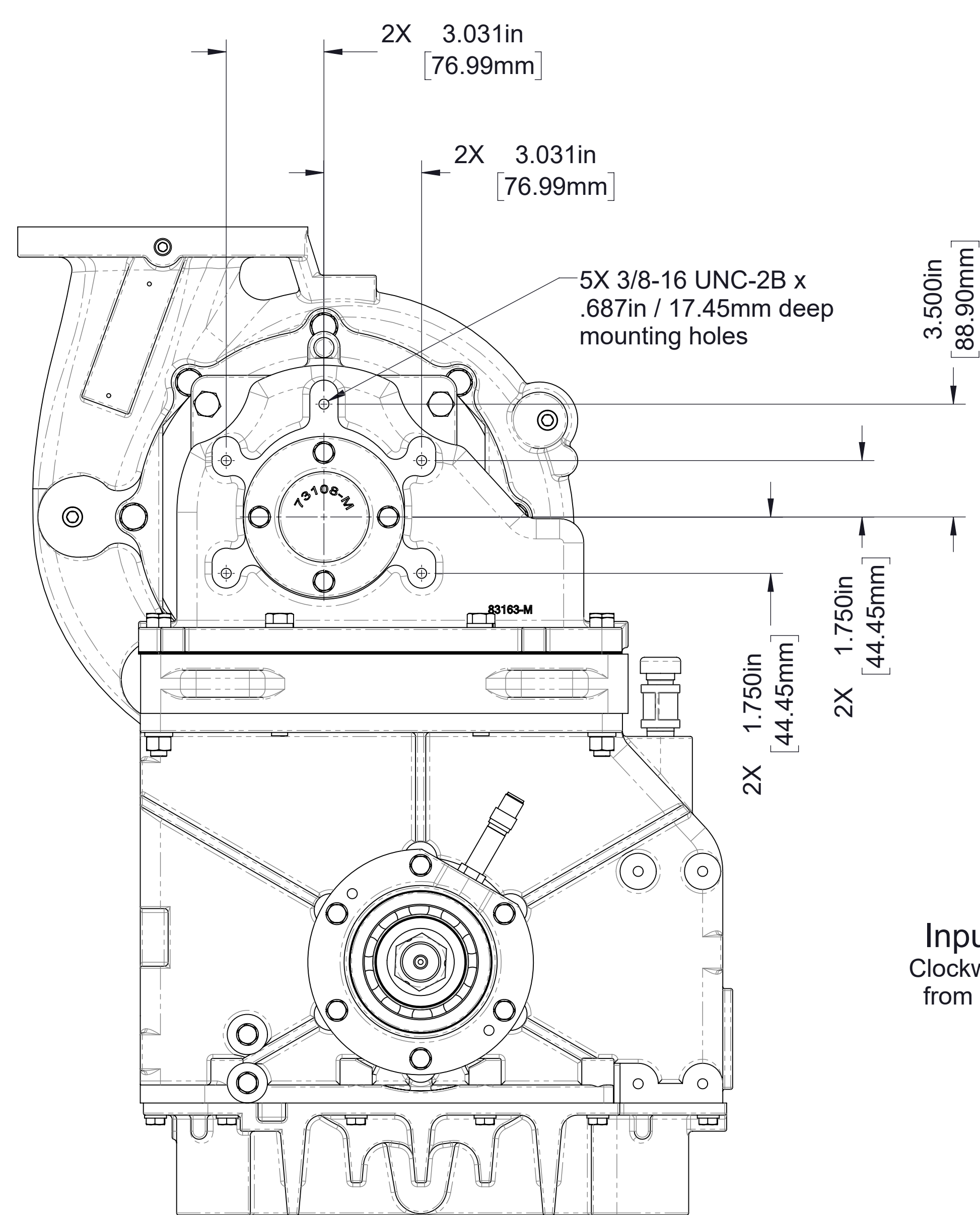
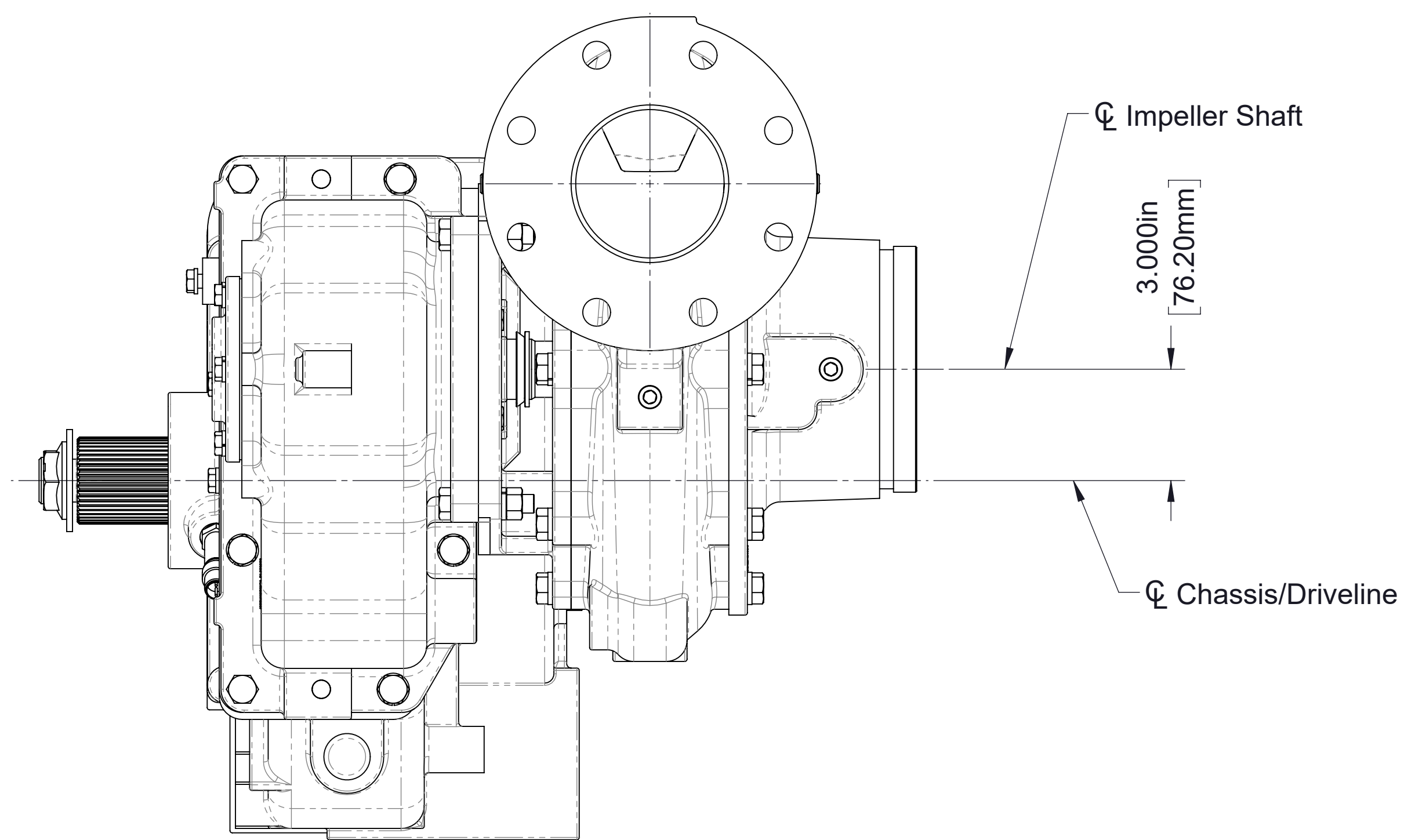
Model CX with C20
Input Shaft Only
Pump mounted on front (Input shaft side) of transmission
With optional hydraulic motor mount provision
Clockwise input, model CXVC20C, 2.27 ratio, blank discharge shown



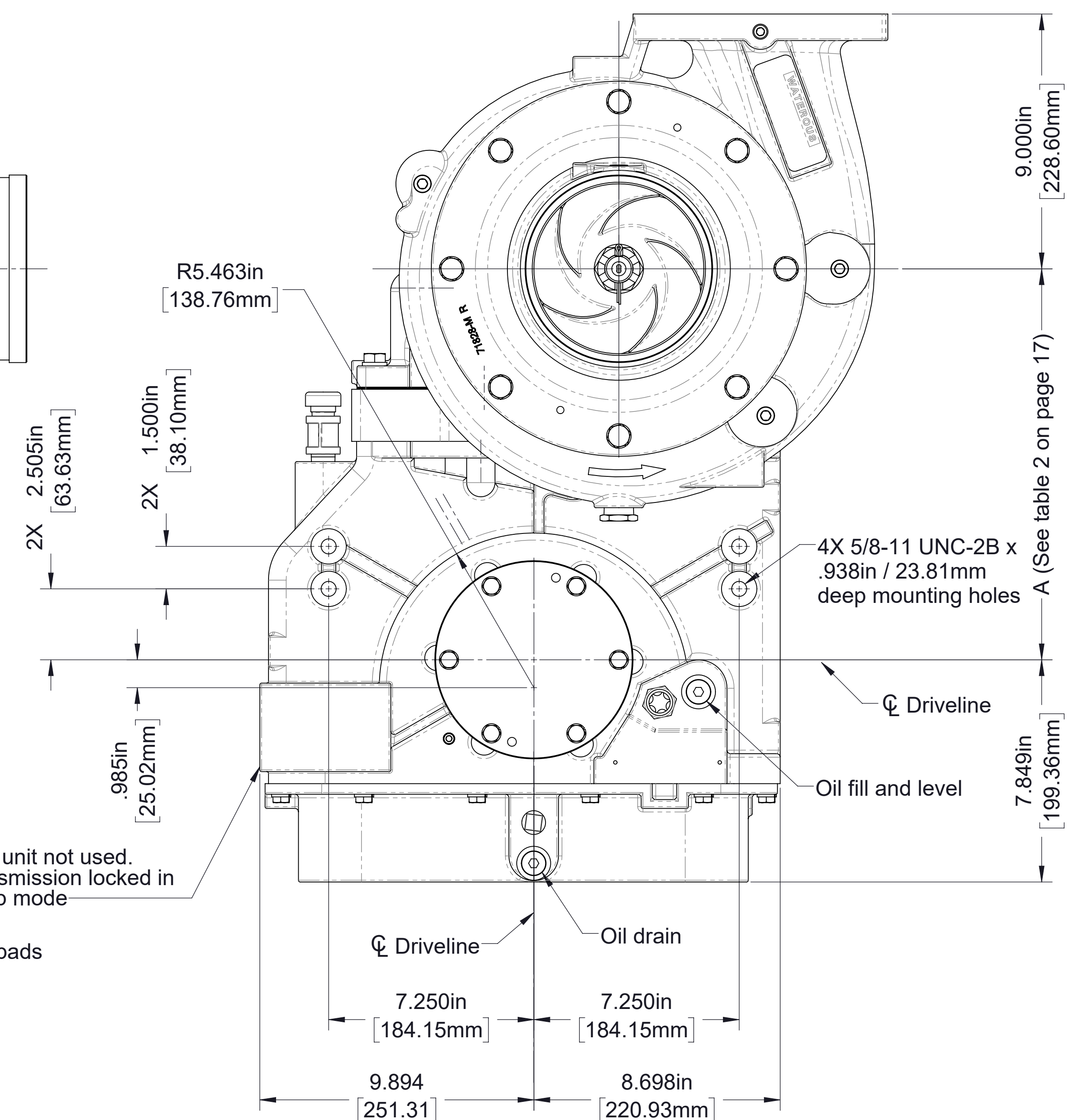
- Notes:
1. See drawing DPL82086 for shift mounting pad details
 2. See drawing DPL82994 for additional details of C20 series transmission



Model CX with C20
Input and Output Shaft
Pump mounted on rear (Output shaft side) of transmission
Clockwise input, model CXVC20C, 2.27 ratio, blank discharge shown



Note:
 1. See drawing DPL82994 for additional details of C20 series transmission



Driveline, See table 1 on page 17
 (Optional end yokes available,
 See table 1 on page 17)

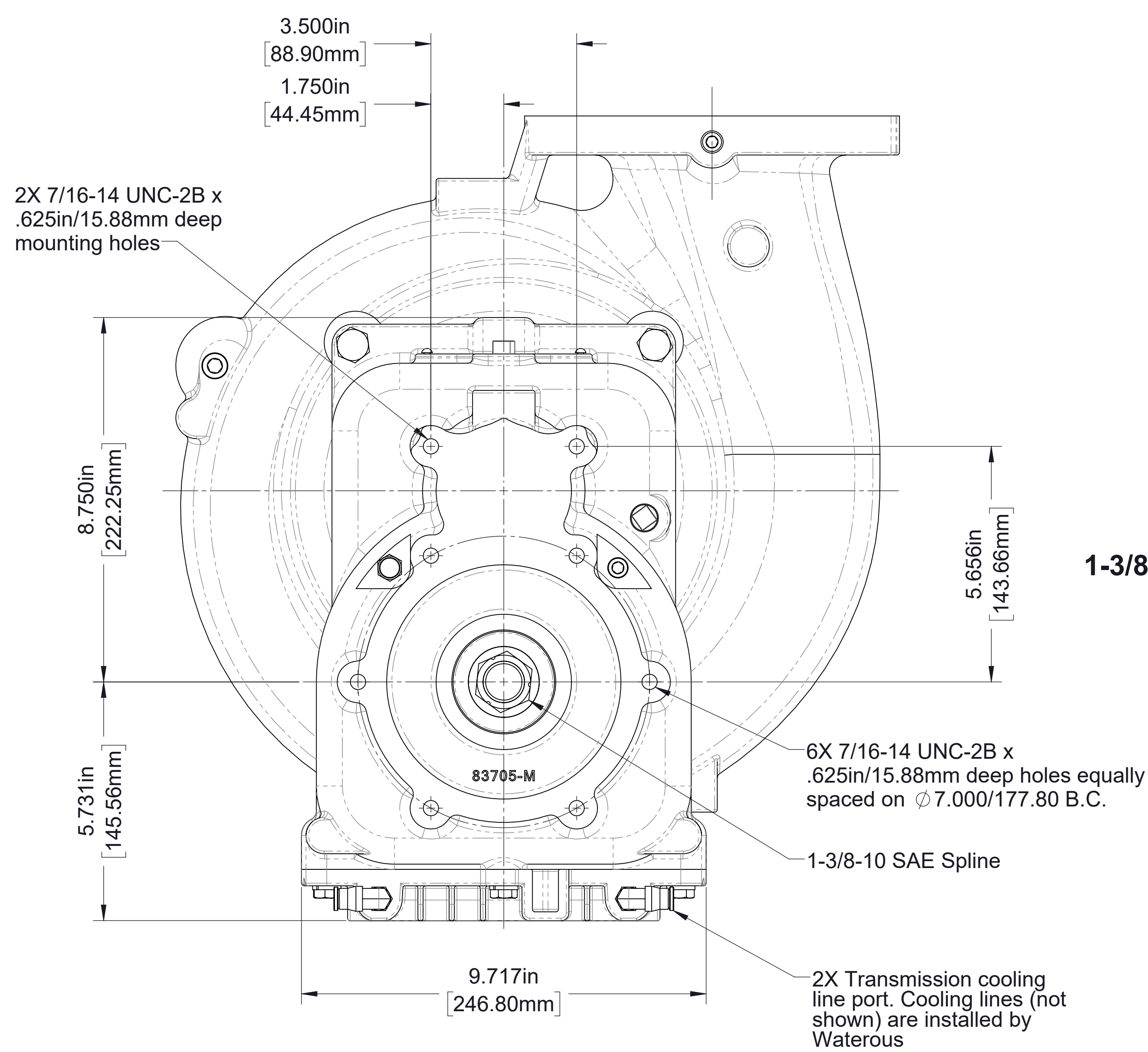
Shift unit not used.
 Transmission locked in
 pump mode

Model CX with C20
Input Shaft Only
Pump mounted on rear (Output shaft side) of transmission
Clockwise input, model CXVC20C, 2.27 ratio, blank discharge shown

| Table 1 - Available Driveline/Models | | | | | | |
|--------------------------------------|-----------|-------------------|--|----------|-----------------------|------------------|
| Driveline | | | Optional End Yokes Available from Waterous | | | Companion Flange |
| Type | Size | Spline | Yoke | | Cross and Bearing Kit | |
| | | | Spicer Series | Part No. | | |
| Extra Heavy Duty | 2.35 Inch | 2.35-46T Involute | 1480/1610 | -- | -- | V 3719 |
| | | | 1650/1710 | -- | -- | V 3619 |
| | | | 1710 BP | V 2837 | V 2839 | -- |
| | | | 1810 BP | V 2838 | V 2840 | -- |
| | | | 1710 HR | V 4101 | -- | -- |
| | | | 1810 HR | V 4102 | -- | -- |
| | | | SPL140 | V 3388 | V 3389 | -- |

| Table 2 - Available Ratios | | | | |
|----------------------------|---|---------------|---------------|---------------|
| Dimension A | | | | |
| Drive to Driven Ratio | All dimensions shown as inch/millemeter | | | |
| | C20C | C20D | C20E | C20F |
| 1.27 | 14.312/363.52 | 14.825/376.56 | 16.861/428.27 | 18.892/479.86 |
| 1.41 | 13.899/353.03 | 14.931/379.25 | 16.971/431.06 | 19.002/482.65 |
| 1.48 | 13.878/352.50 | 14.907/378.64 | 16.951/430.56 | 18.981/482.12 |
| 1.58 | 13.756/349.40 | 14.788/375.62 | 16.830/427.48 | 18.861/479.07 |
| 1.69 | 13.839/351.51 | 14.876/377.85 | 16.923/429.84 | 18.961/481.61 |
| 1.79 | 14.045/356.74 | 15.072/382.83 | 17.127/435.03 | 19.168/486.87 |
| 1.88 | 13.690/347.73 | 14.717/373.81 | 16.773/426.03 | 18.809/477.75 |
| 1.97 | 13.870/352.30 | 14.912/378.76 | 16.970/431.04 | 19.012/482.90 |
| 2.03 | 13.984/355.19 | 15.028/381.71 | 17.086/433.98 | 19.132/485.95 |
| 2.27 | 13.811/350.80 | 14.856/377.34 | 16.920/429.77 | 18.971/481.86 |
| 2.46 | 14.042/356.67 | 15.087/383.21 | 17.154/435.71 | 19.205/487.81 |
| 2.68 | 13.746/349.15 | 14.793/375.74 | 16.865/428.37 | 18.923/480.64 |

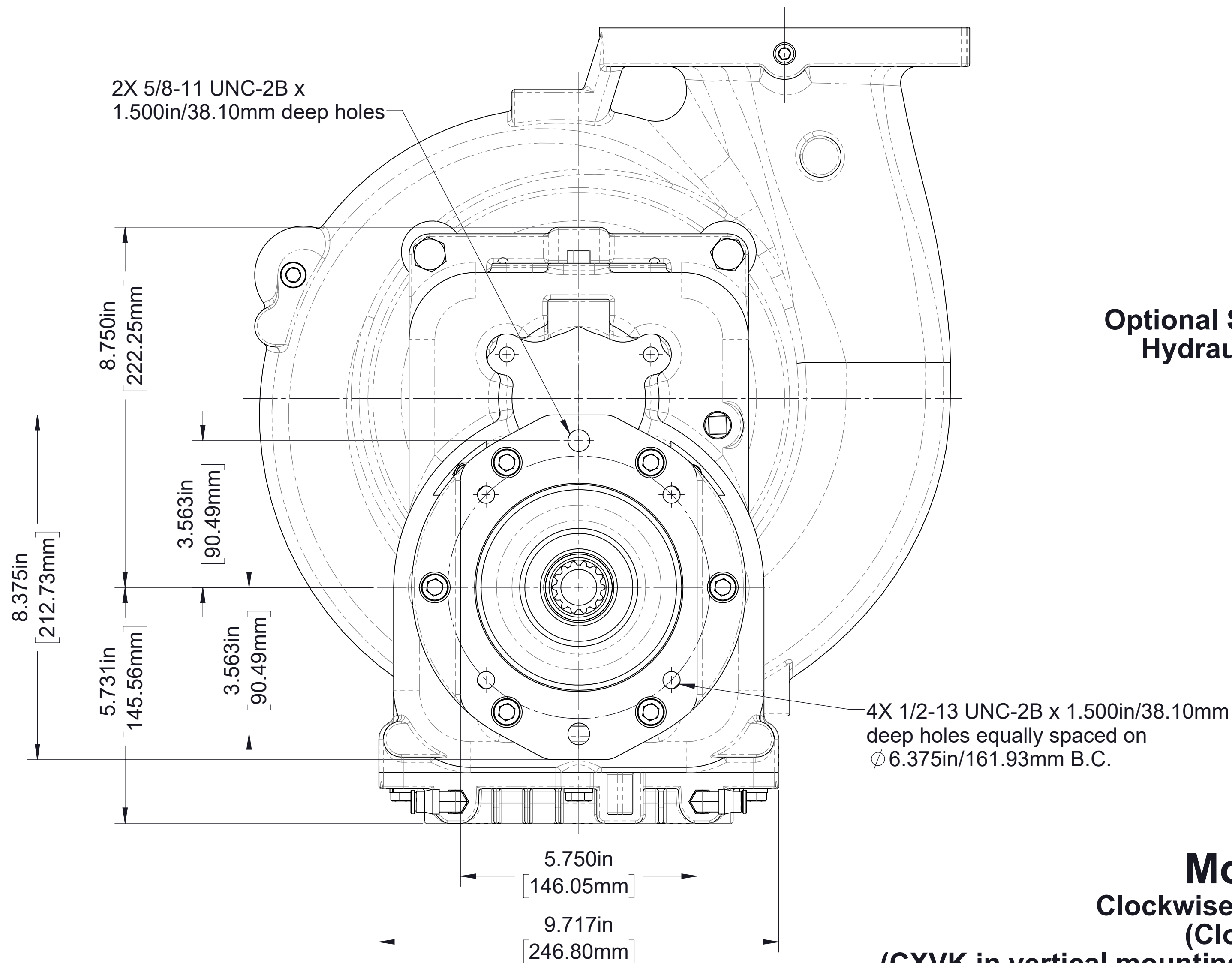
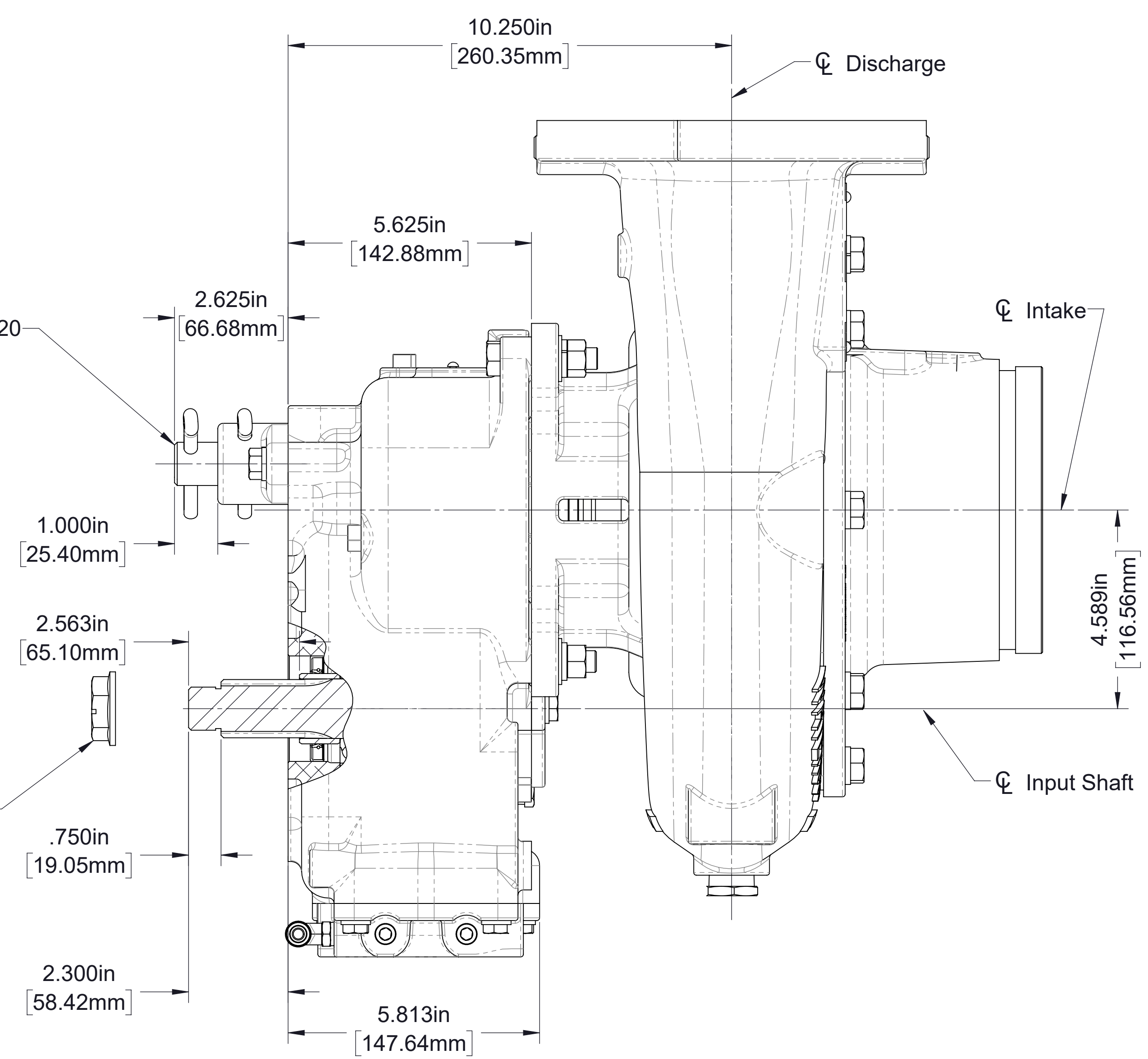
C20 Data Tables



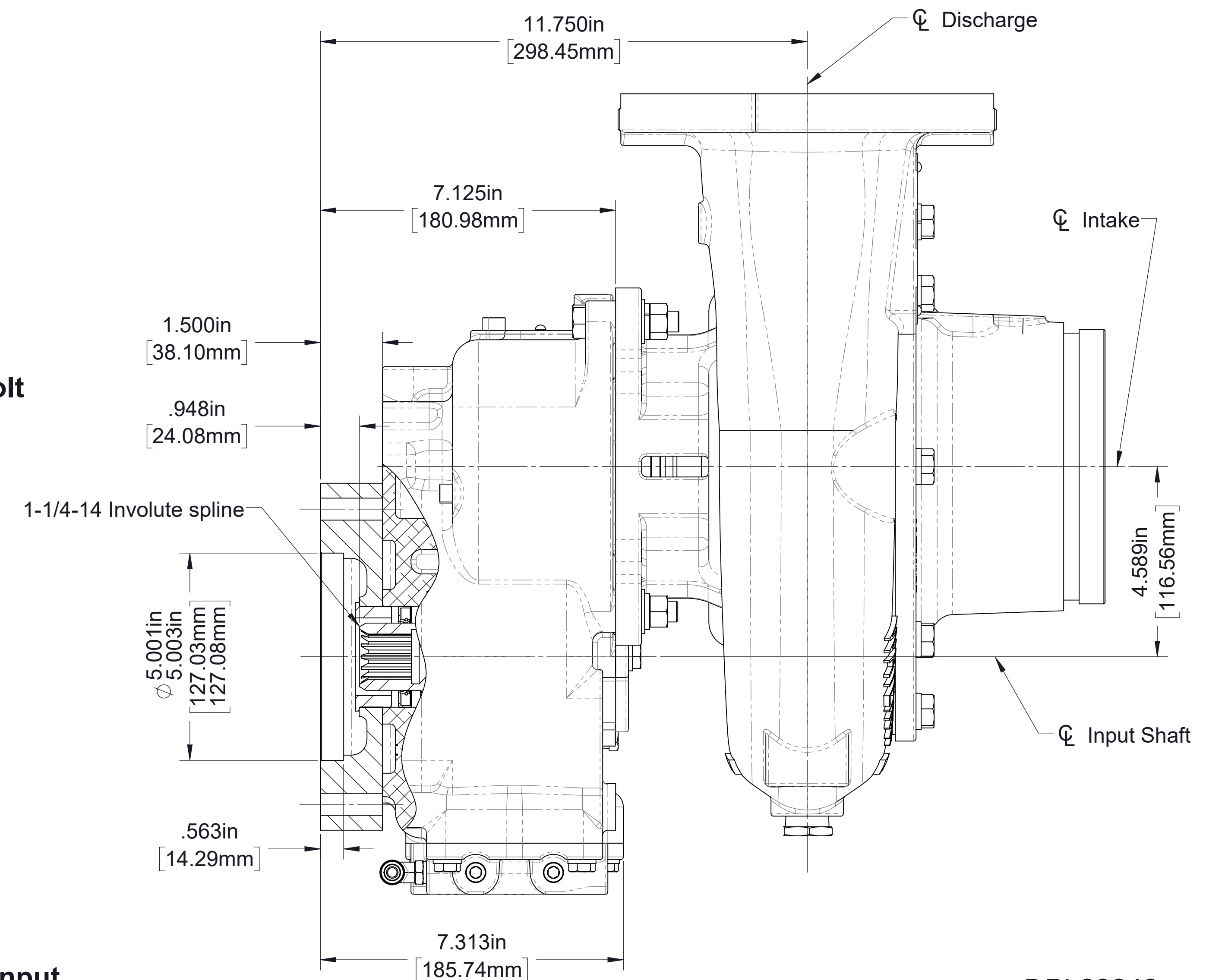
1-3/8-10 SAE Splined Input

Optional ϕ 1.000in/25.4mm suspension pin. Order kit K520

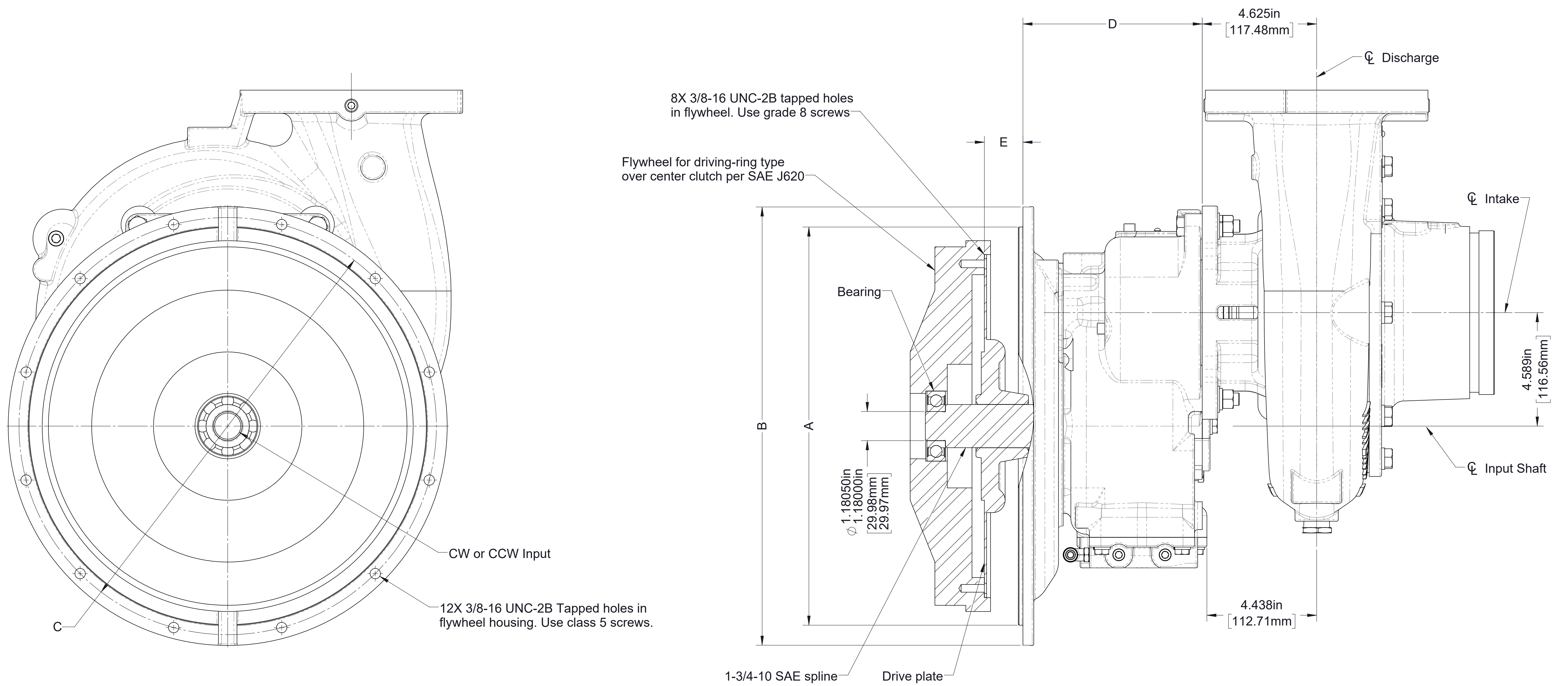
1-20 Shaft Nut, Included on drive shaft. Torque to 275-325 Lb-Ft



Optional SAE Class "C" 2 or 4 Bolt Hydraulic Pump Flange Input

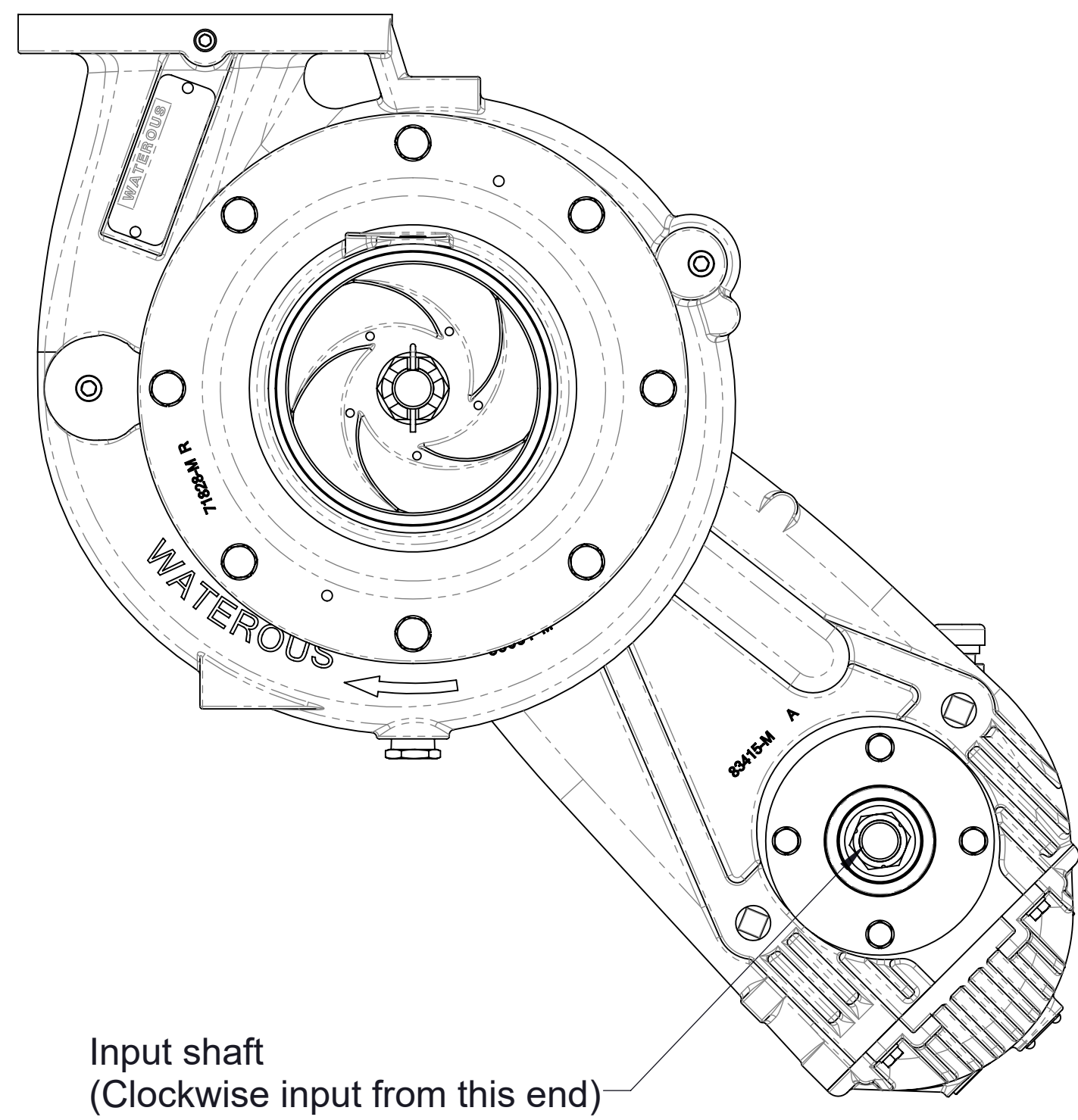


Model CX with K
Clockwise or Counterclockwise input
(Clockwise input shown)
(CXVK in vertical mounting position shown, See page 26 for mounting positions)



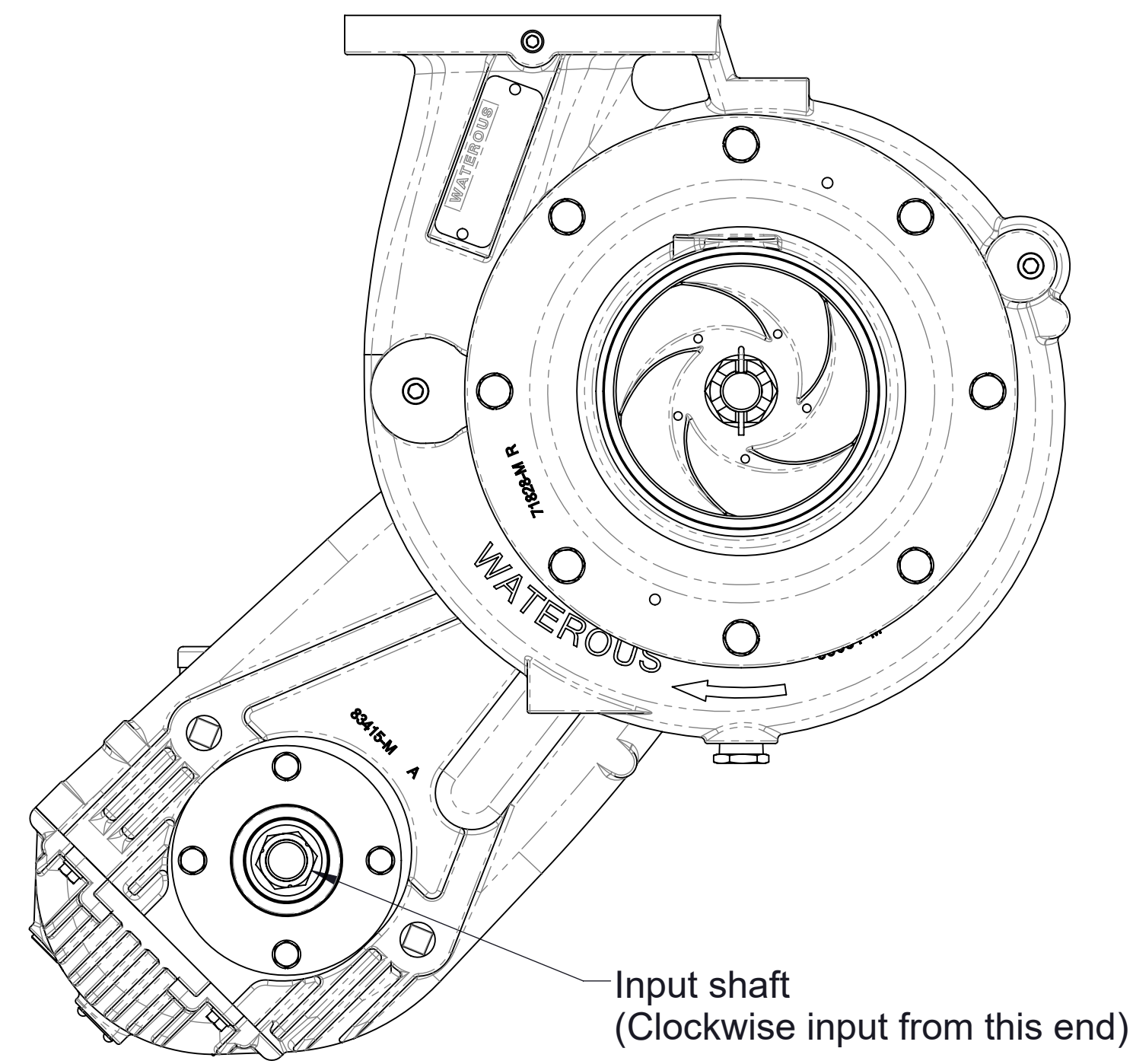
| SAE Bellhousing | | | | D | SAE Flywheel | | Drive Plate | |
|-----------------|----------------------|----------------------|----------------------|---------------------|--------------|-------------------|-------------|--------------------------|
| Size | A | B | C | | Clutch No. | E | Part No. | Torque Rating |
| 2 | 17.625in 447.68mm | 19.250in 488.95mm | 18.375in 466.73mm | 8.250in 209.55mm | 10 | 2.12in 53.85mm | V 2462 | 850 ft-lb 1153 Joules |
| 3 | 16.125in 409.58mm | 17.750in 450.85mm | 16.875in 428.63mm | 7.250in 184.15mm | | | | |
| 4 | 14.250in 361.95mm | 15.875in 403.23mm | 15.000in 381.00mm | | | | | |
| 2 | 17.625in 447.68mm | 19.250in 488.95mm | 18.375in 466.73mm | 8.250in 209.55mm | 11-1/2 | 1.56in 39.62mm | V 2463 | |
| 3 | 16.125in 409.58mm | 17.750in 450.85mm | 16.875in 428.63mm | 7.250in 184.15mm | | | | |

Model CX with T
Clockwise or Counterclockwise input
(Clockwise input shown)
(CXVT in vertical mounting position shown, See page 26 for mounting positions)

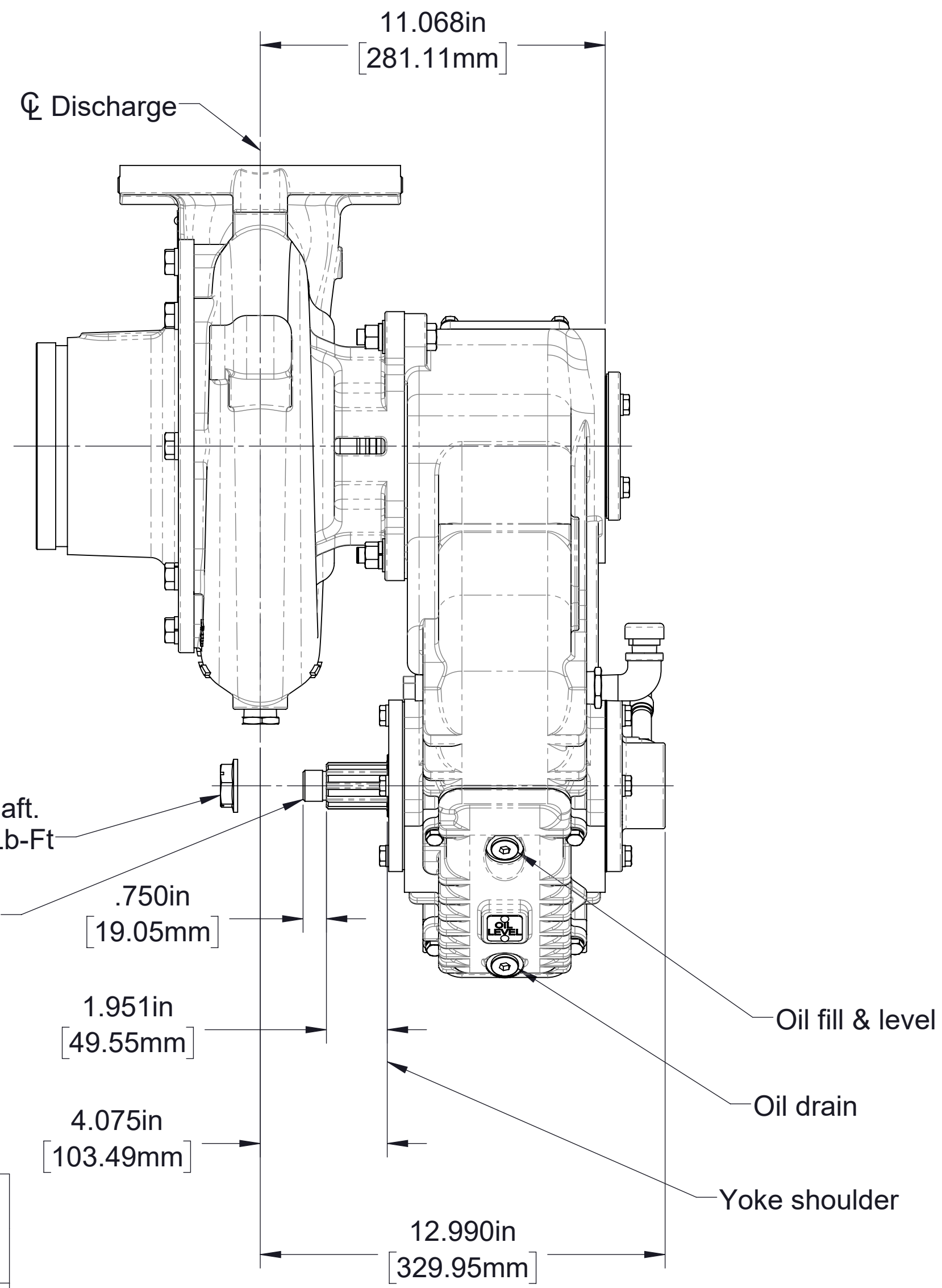


Vertical Mounting
(Transmission input shaft to the right of the pump intake)

| Drive Line | | Ratio | Dim A | Dim B | Dim C | Dim D |
|------------|--------------|-------|----------------------|----------------------|---------------------|---------------------|
| Size | Spline | | | | | |
| 1-1/2 in | 1-1/2-10 SAE | 1.70 | 11.288in 286.71mm | 10.943in 277.94mm | 6.111in 155.22mm | 4.737in 120.32mm |
| | | 1.90 | 11.269in 286.24mm | 10.924in 277.47mm | 6.130in 155.70mm | 4.755in 120.79mm |
| | | 2.10 | 11.239in 285.46mm | 10.894in 276.70mm | 6.160in 156.46mm | 4.786in 121.56mm |



Left Mounting
(Transmission input shaft to the left of the pump intake)
(CXV and CXS pumps only)



1-20 Shaft Nut,
Included on drive shaft.
Torque to 275-325 Lb-Ft

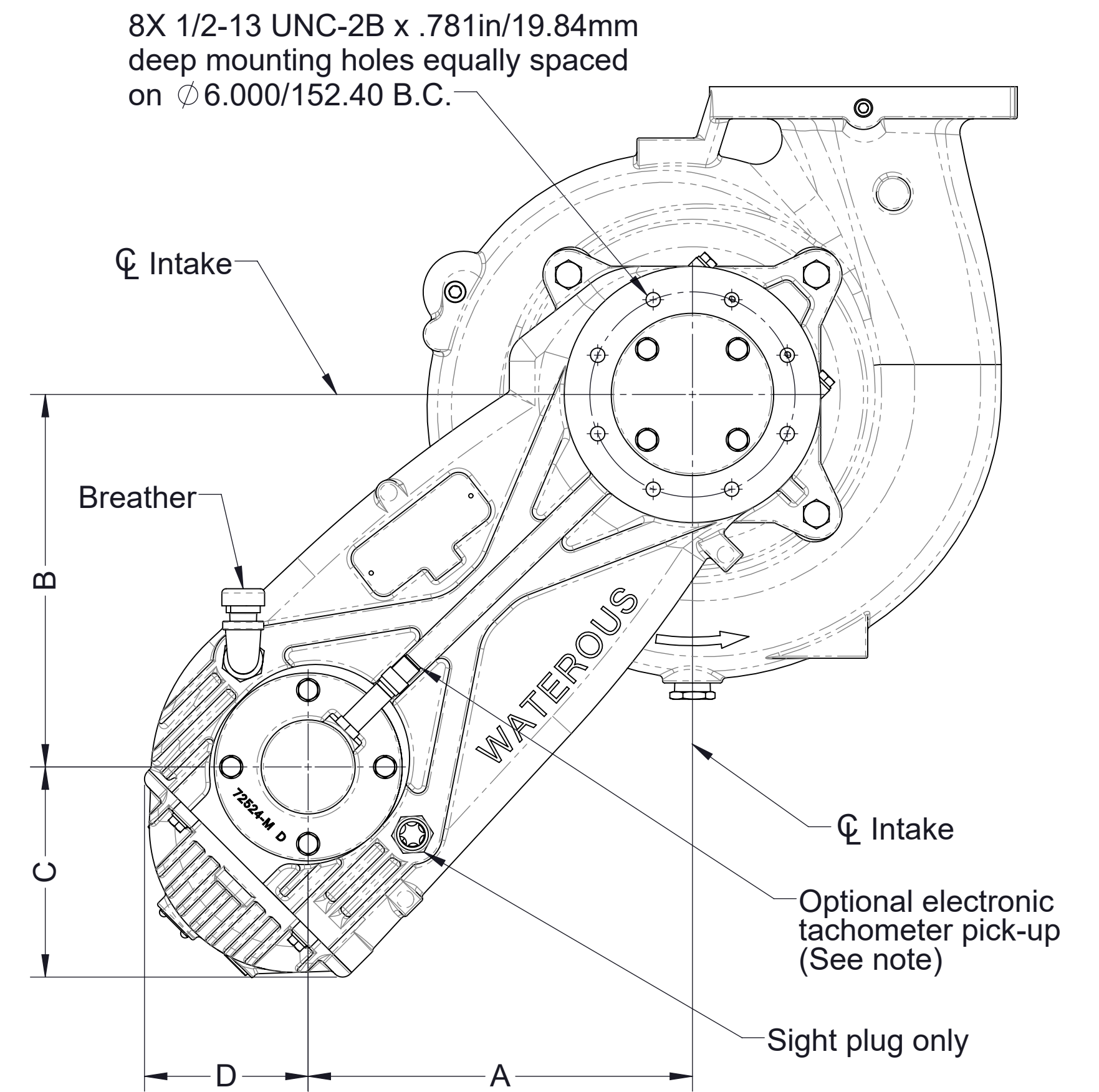
1-1/2-10 SAE spline

.750in
[19.05mm]

1.951in
[49.55mm]

4.075in
[103.49mm]

12.990in
[329.95mm]



8X 1/2-13 UNC-2B x .781in/19.84mm
deep mounting holes equally spaced
on ϕ 6.000/152.40 B.C.

ϕ Intake

Breather

B

C

D

A

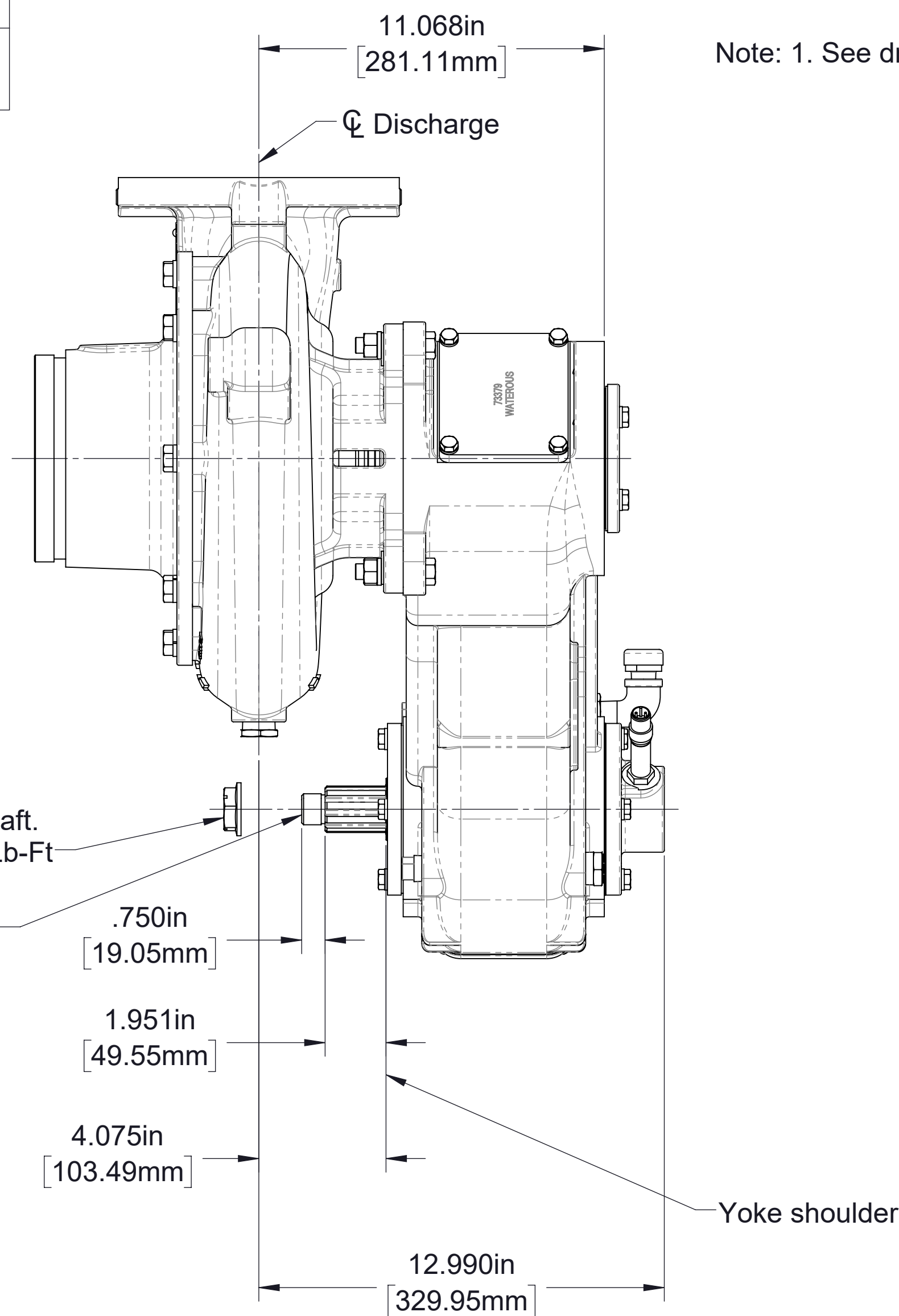
ϕ Intake

Optional electronic
tachometer pick-up
(See note)

Sight plug only

Model CX with PA
Clockwise input
CXVPA shown

Note: 1. See drawing DPL82080 for additional details of PA transmission



1-20 Shaft Nut,
Included on drive shaft.
Torque to 275-325 Lb-Ft

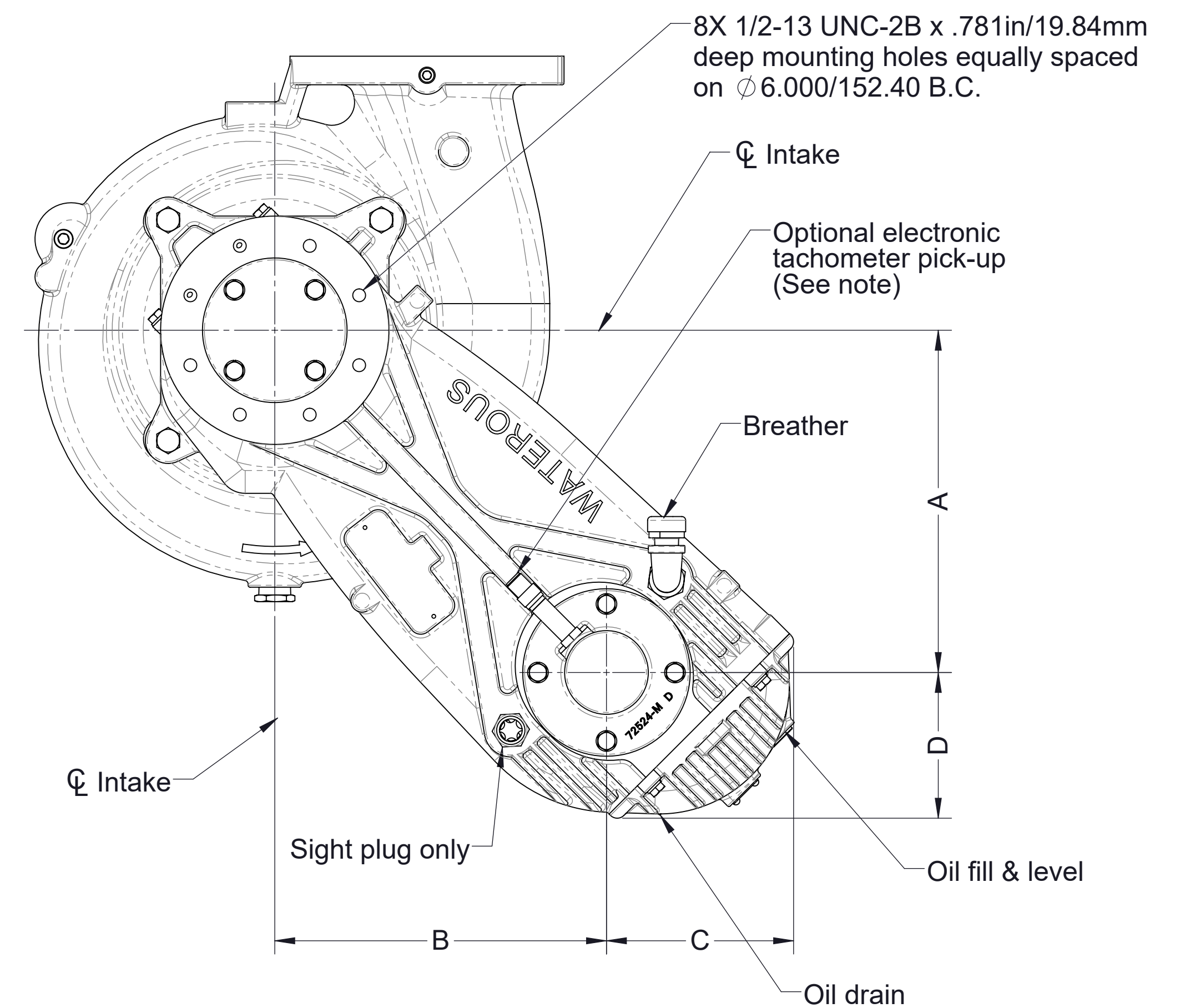
1-1/2-10 SAE spline

.750in
[19.05mm]

1.951in
[49.55mm]

4.075in
[103.49mm]

12.990in
[329.95mm]



8X 1/2-13 UNC-2B x .781in/19.84mm
deep mounting holes equally spaced
on ϕ 6.000/152.40 B.C.

ϕ Intake

Optional electronic
tachometer pick-up
(See note)

Breather

A

D

ϕ Intake

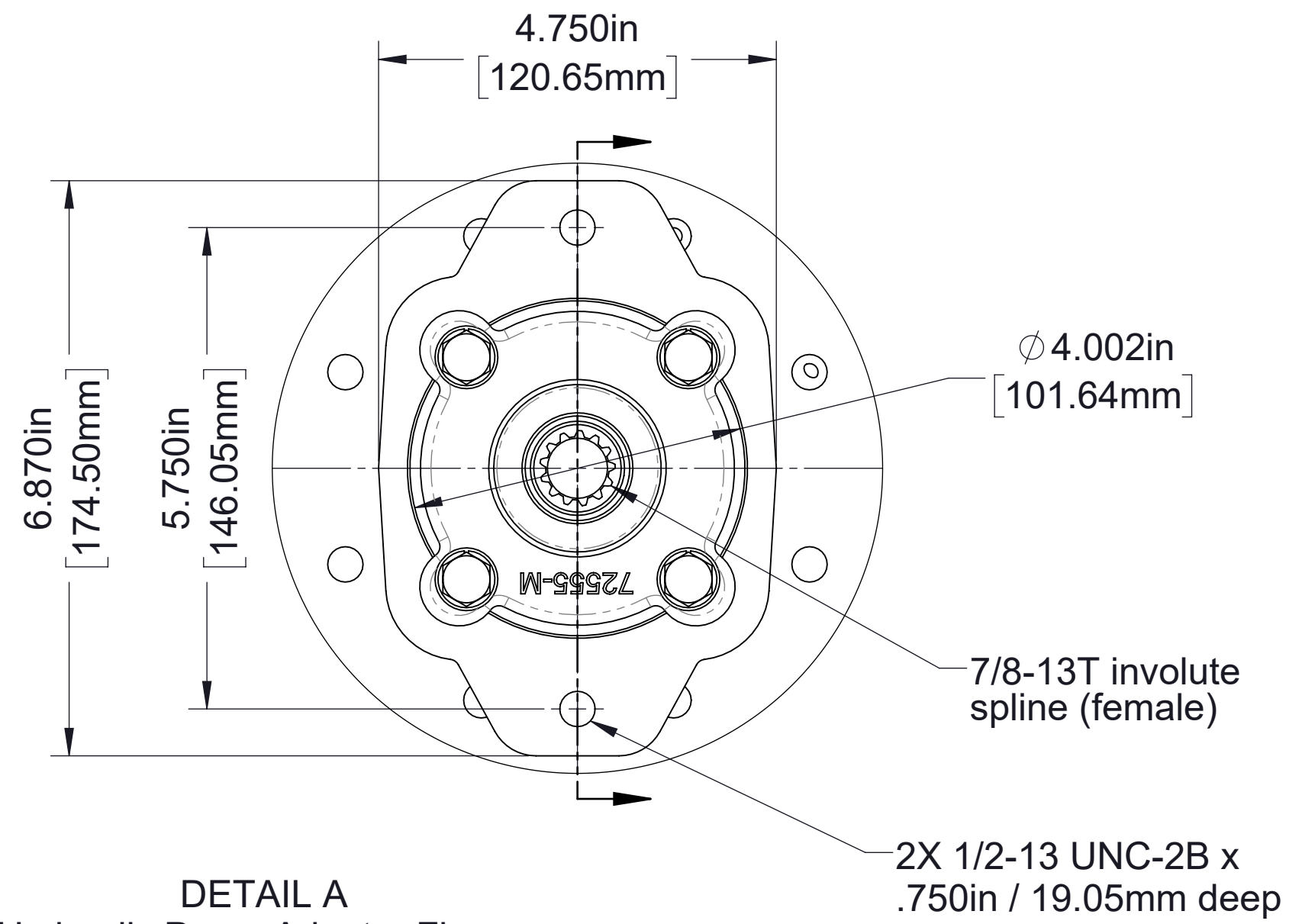
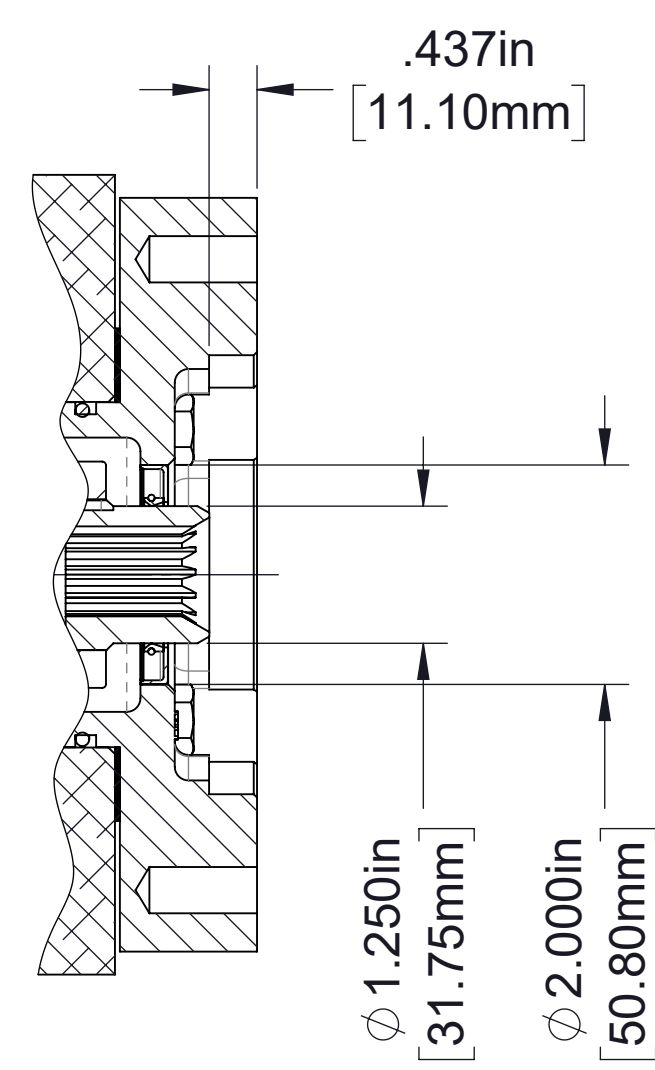
Sight plug only

B

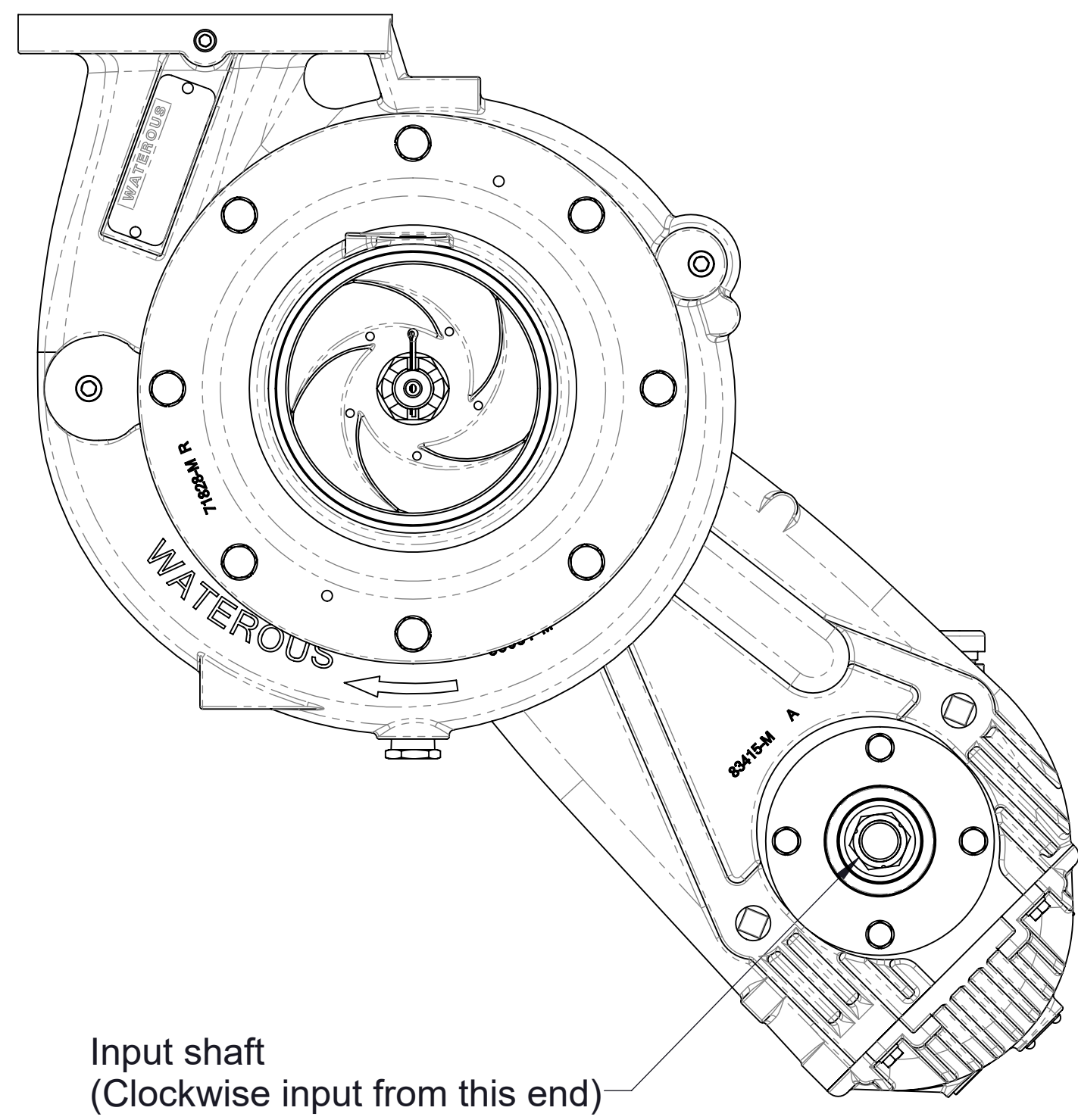
C

Oil fill & level

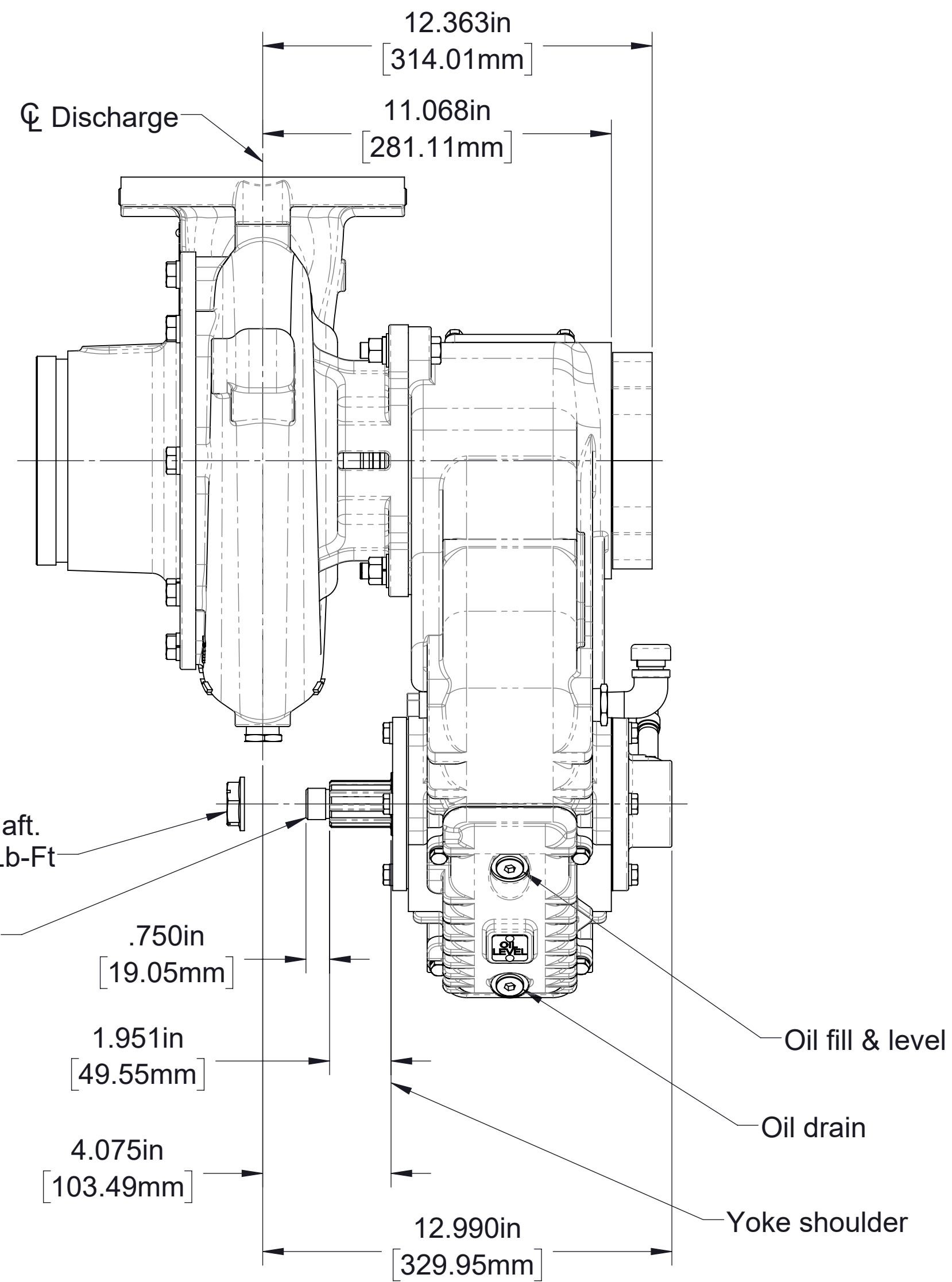
Oil drain



DETAIL A
 Hydraulic Pump Adapter Flange
 Used for SAE J744 class B 2-bolt hydraulic pump
 with male 7/8-13T 16/32 pitch involute spline



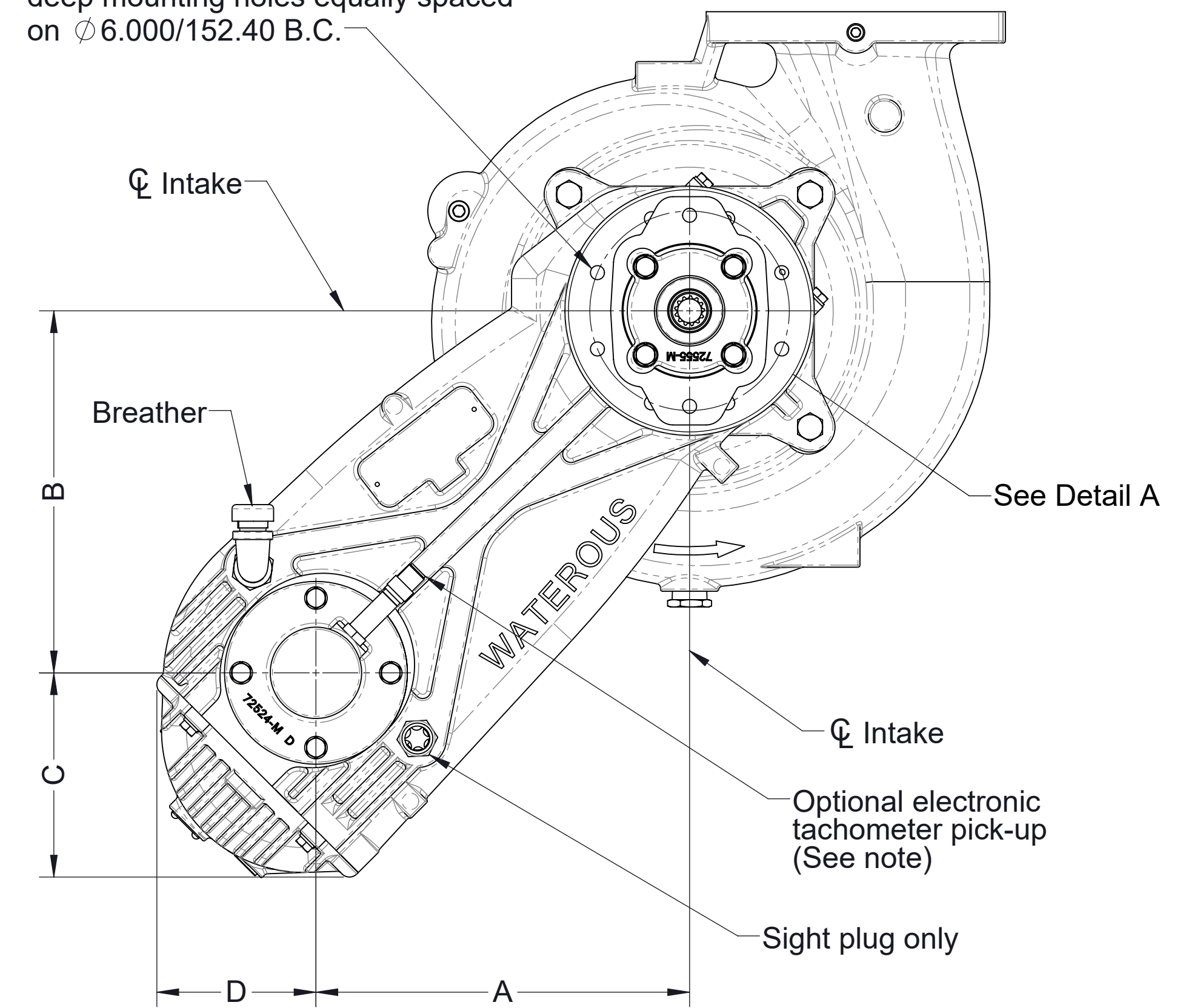
Vertical Mounting
 (Transmission input shaft to the right of the pump intake)



1-20 Shaft Nut,
 Included on drive shaft.
 Torque to 275-325 Lb-Ft

1-1/2-10 SAE spline

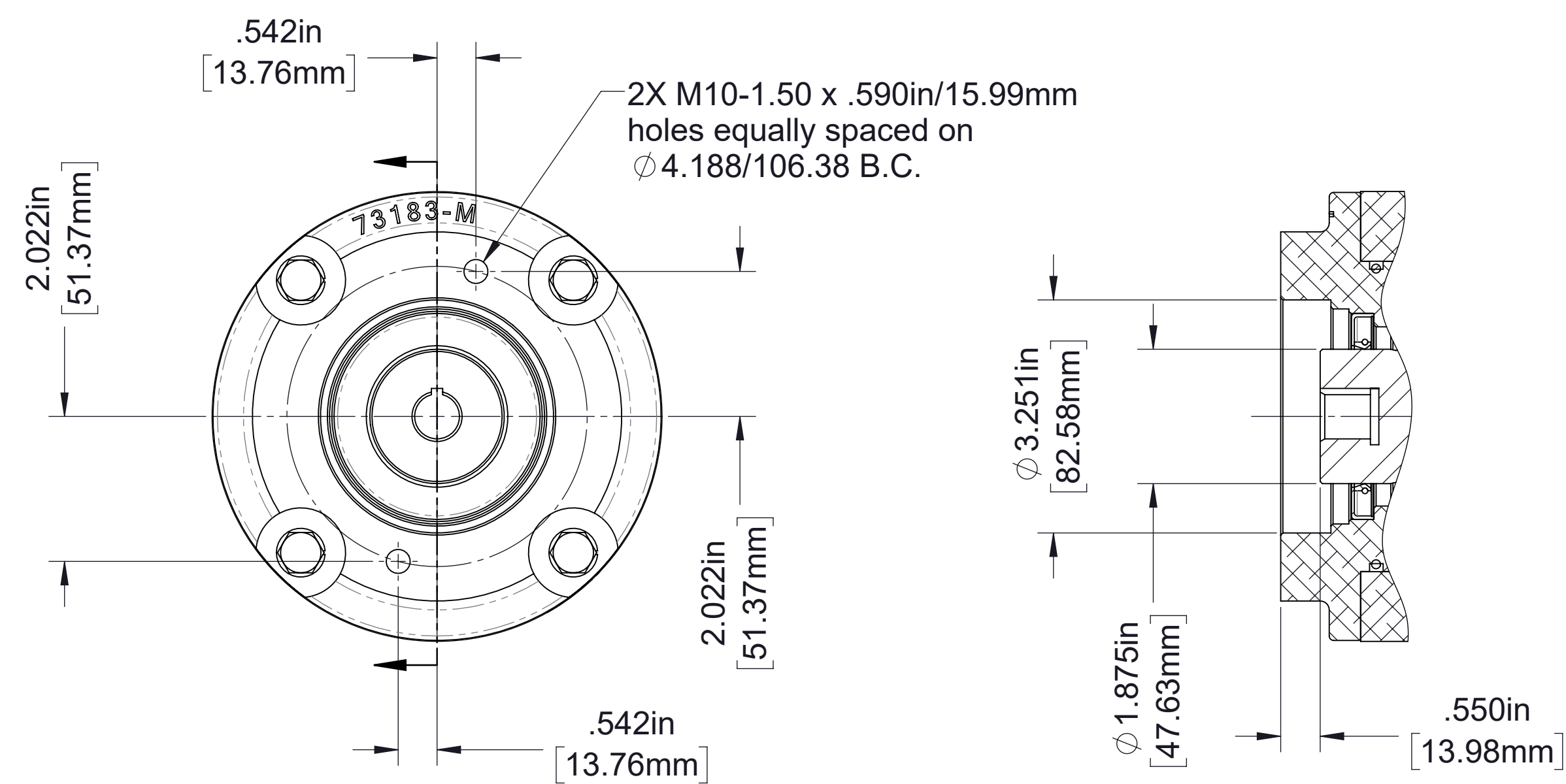
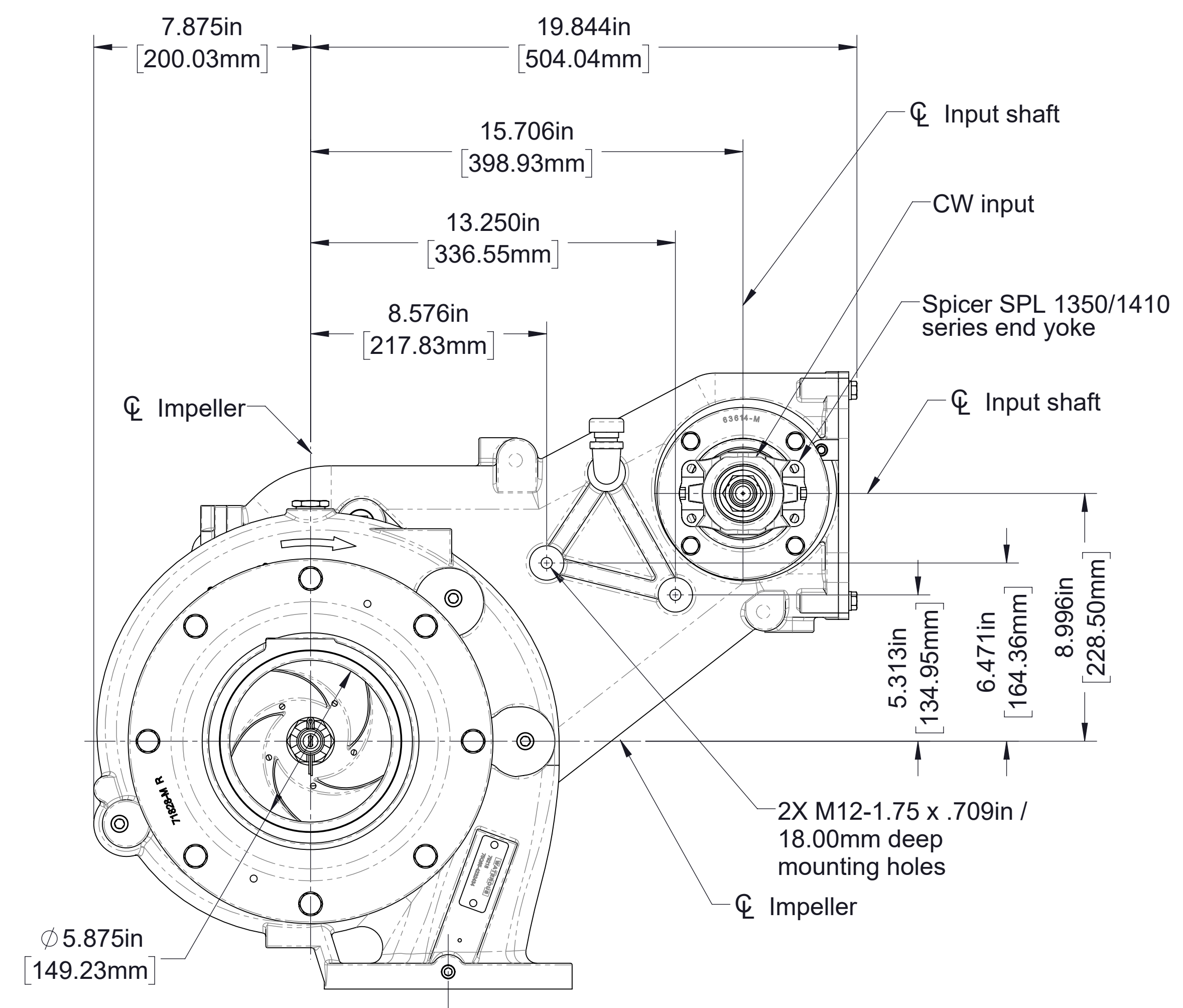
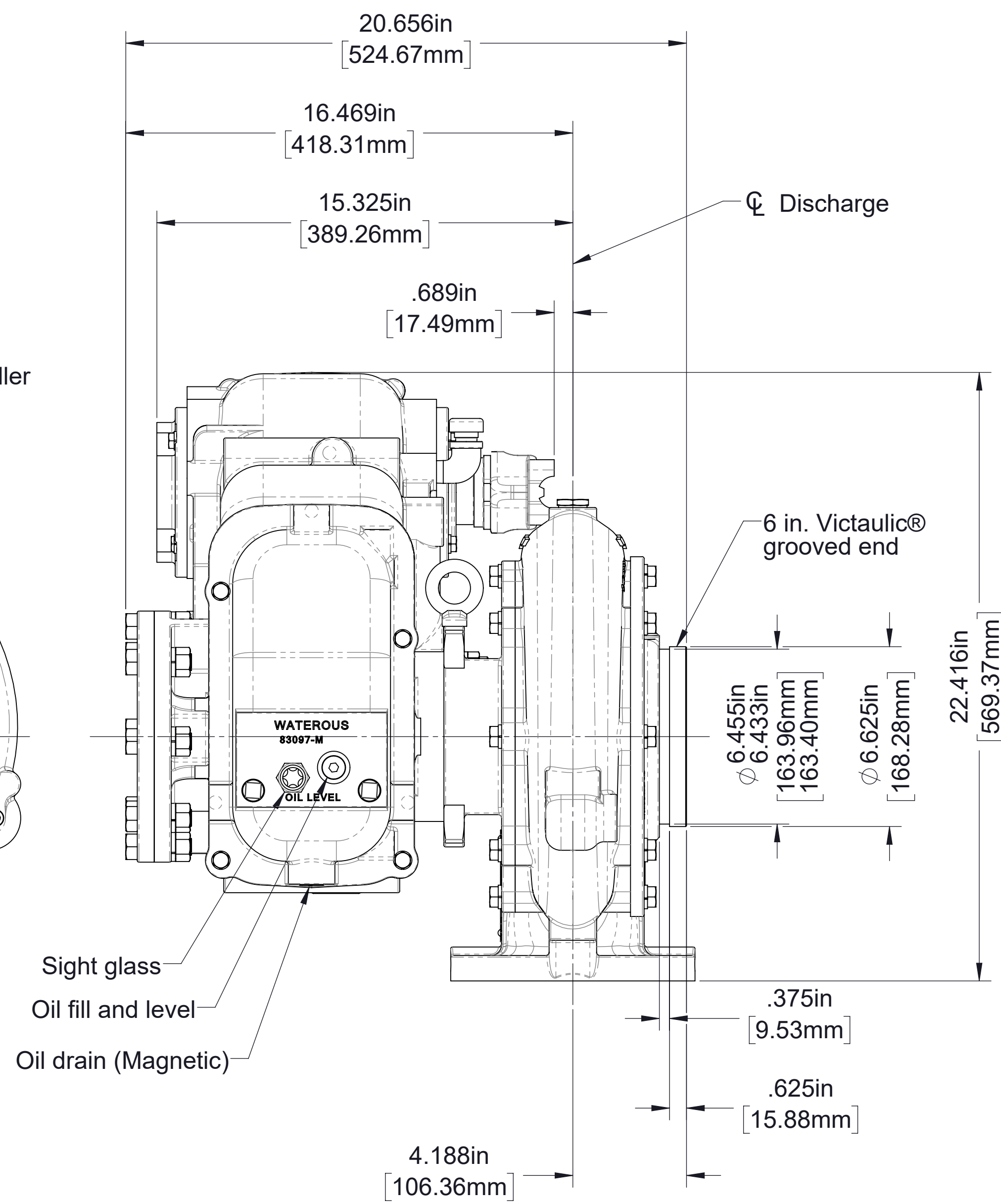
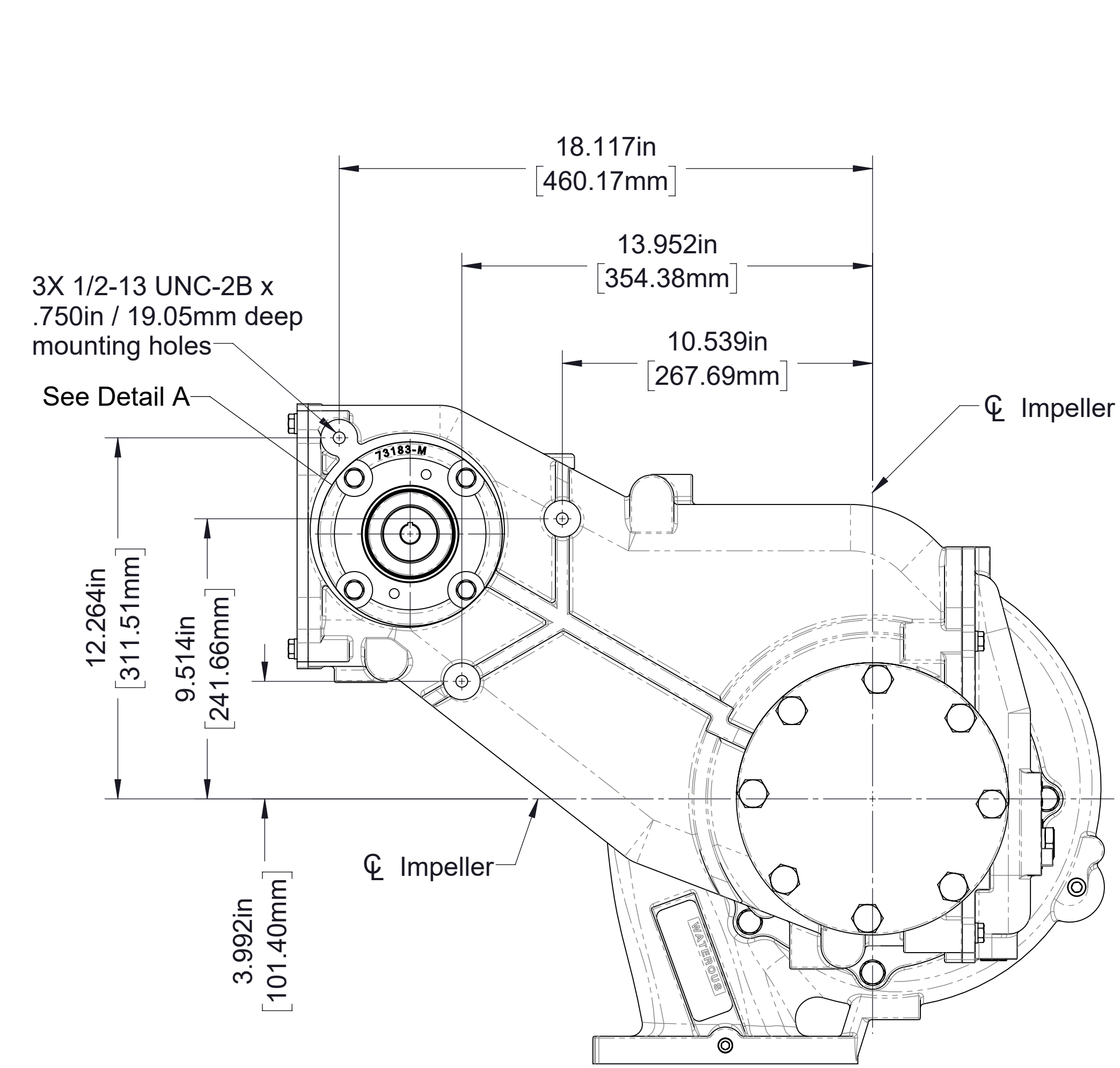
8X 1/2-13 UNC-2B x .781in/19.84mm
 deep mounting holes equally spaced
 on 6.000/152.40 B.C.



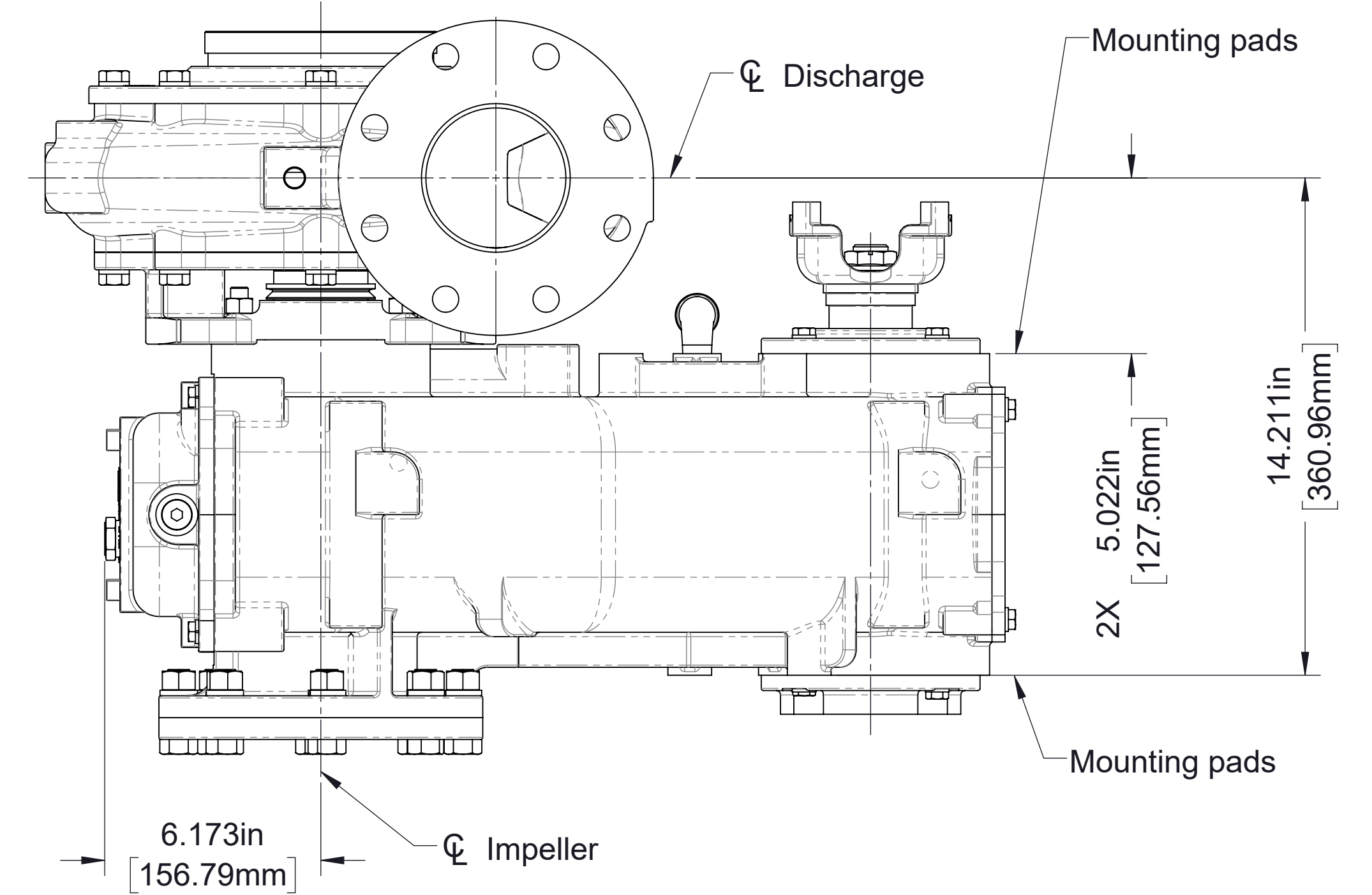
| Drive Line | | Ratio | Dim A | Dim B | Dim C | Dim D |
|------------|--------------|-------|----------------------|----------------------|---------------------|---------------------|
| Size | Spline | | | | | |
| 1-1/2 in | 1-1/2-10 SAE | 1.70 | 11.288in 286.71mm | 10.943in 277.94mm | 6.111in 155.22mm | 4.737in 120.32mm |
| | | 1.90 | 11.269in 286.24mm | 10.924in 277.47mm | 6.130in 155.70mm | 4.755in 120.79mm |
| | | 2.10 | 11.239in 285.46mm | 10.894in 276.70mm | 6.160in 156.46mm | 4.786in 121.56mm |

Model CX with PA
 With optional hydraulic motor mount provision
 Clockwise input
 CXVPA shown

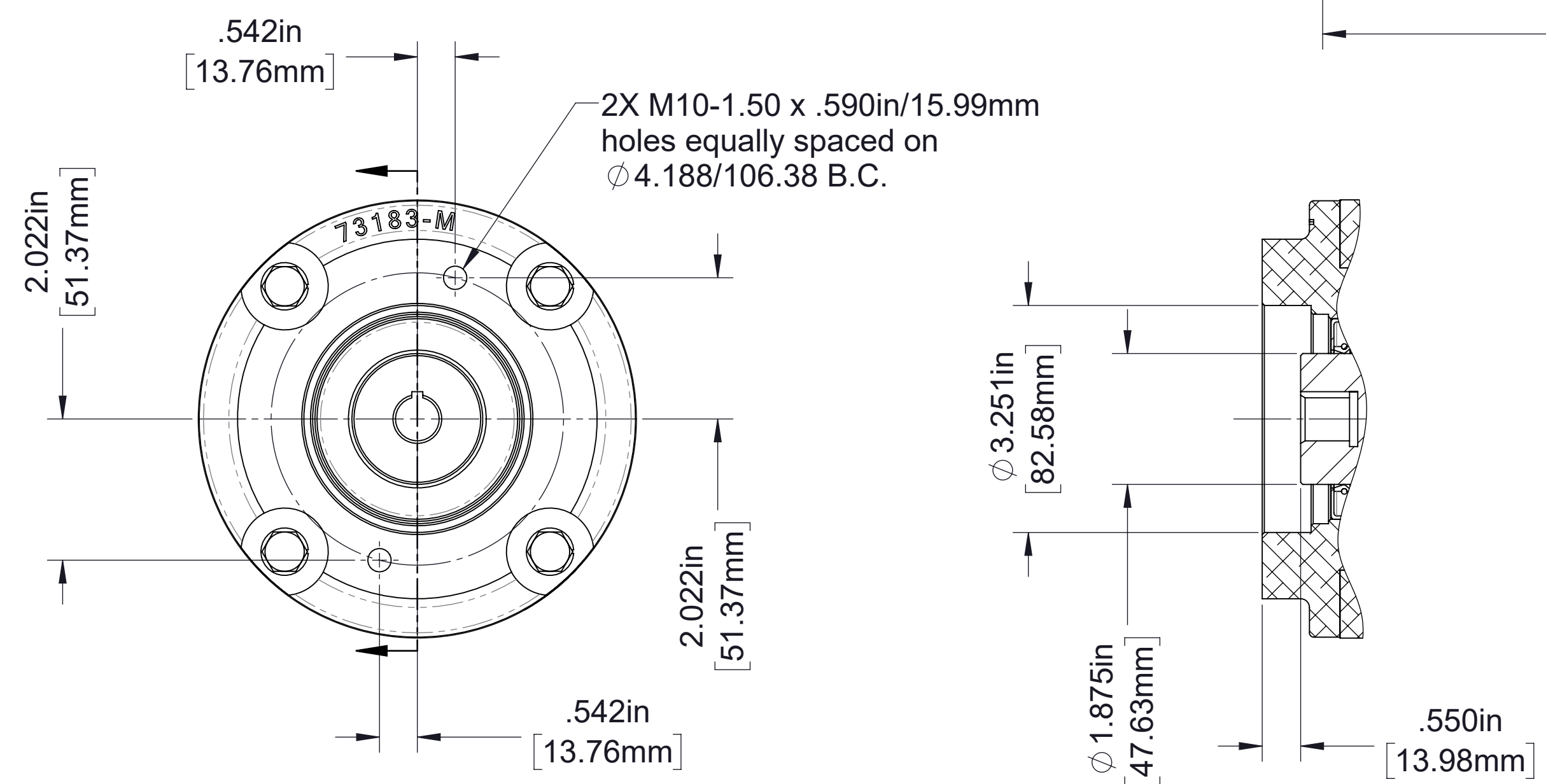
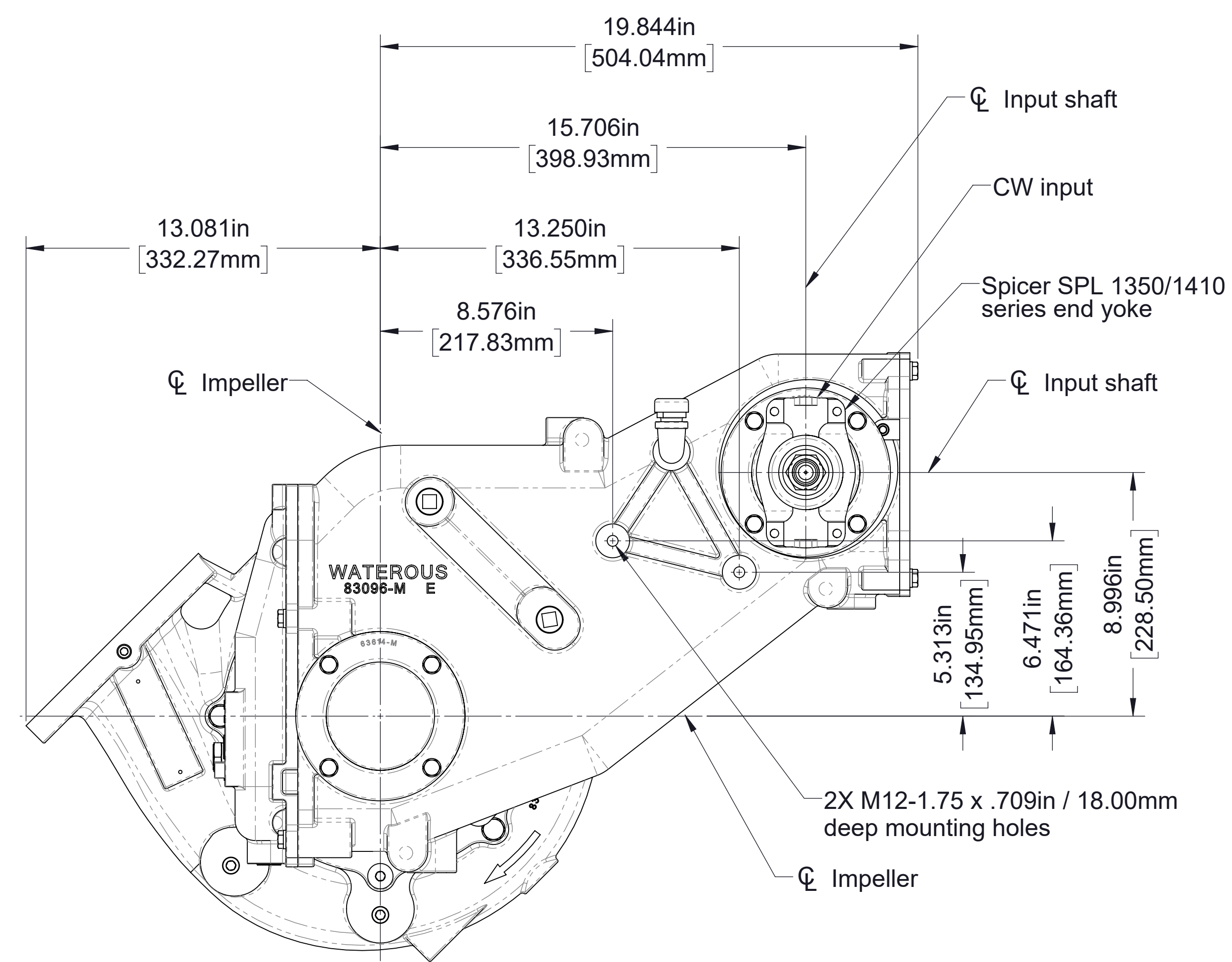
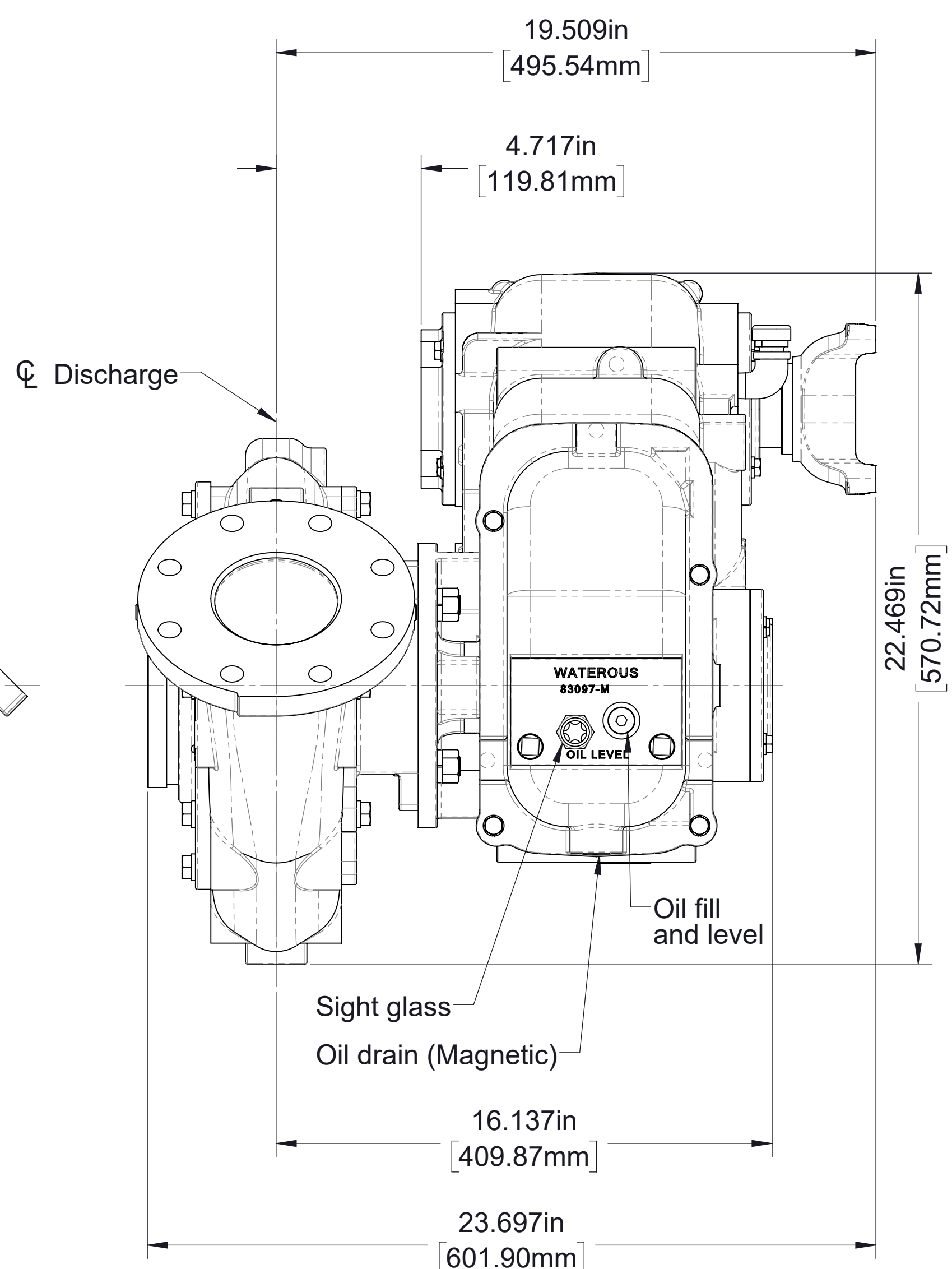
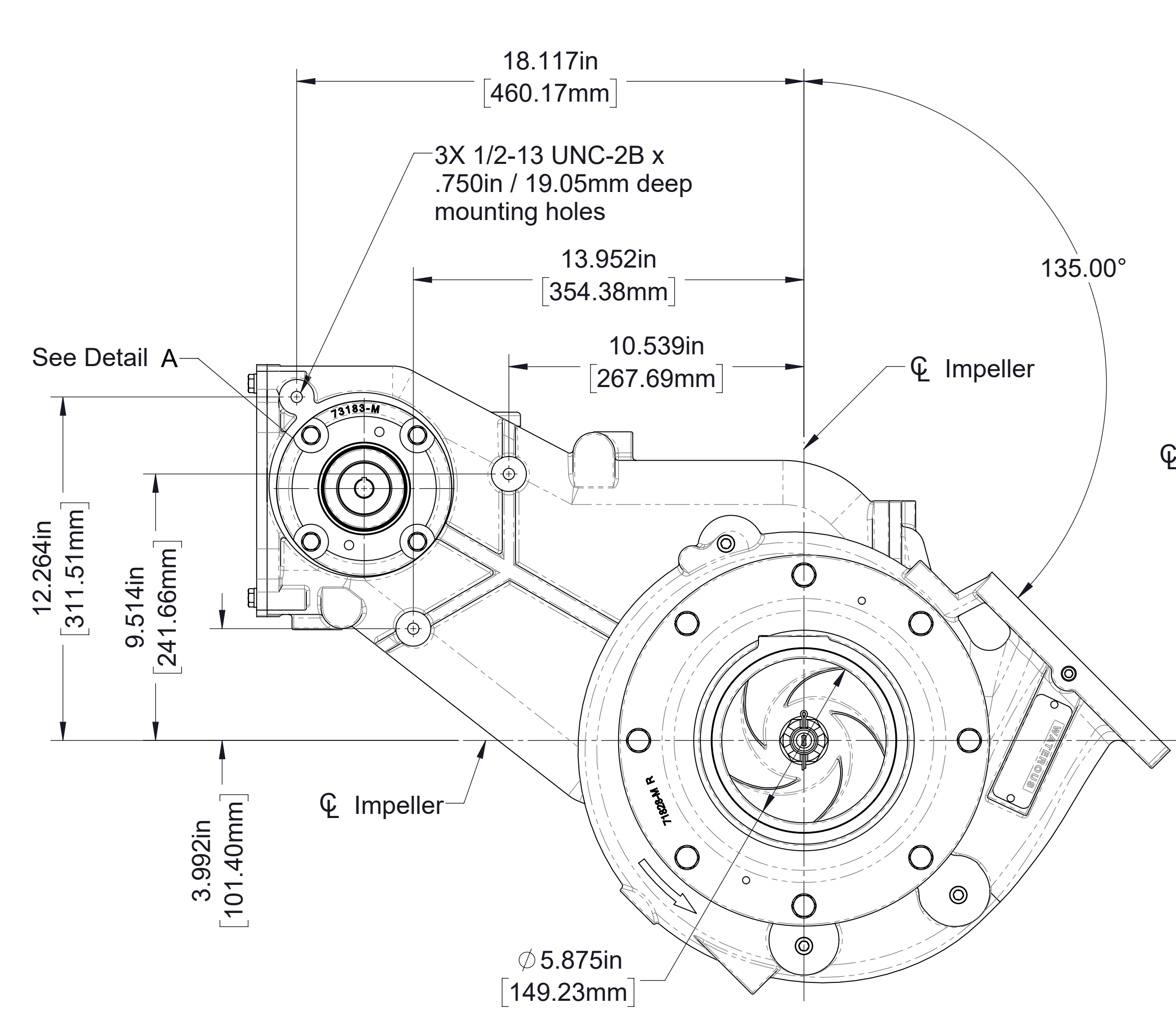
Note: See drawing DPL82080 for additional details of PA transmission



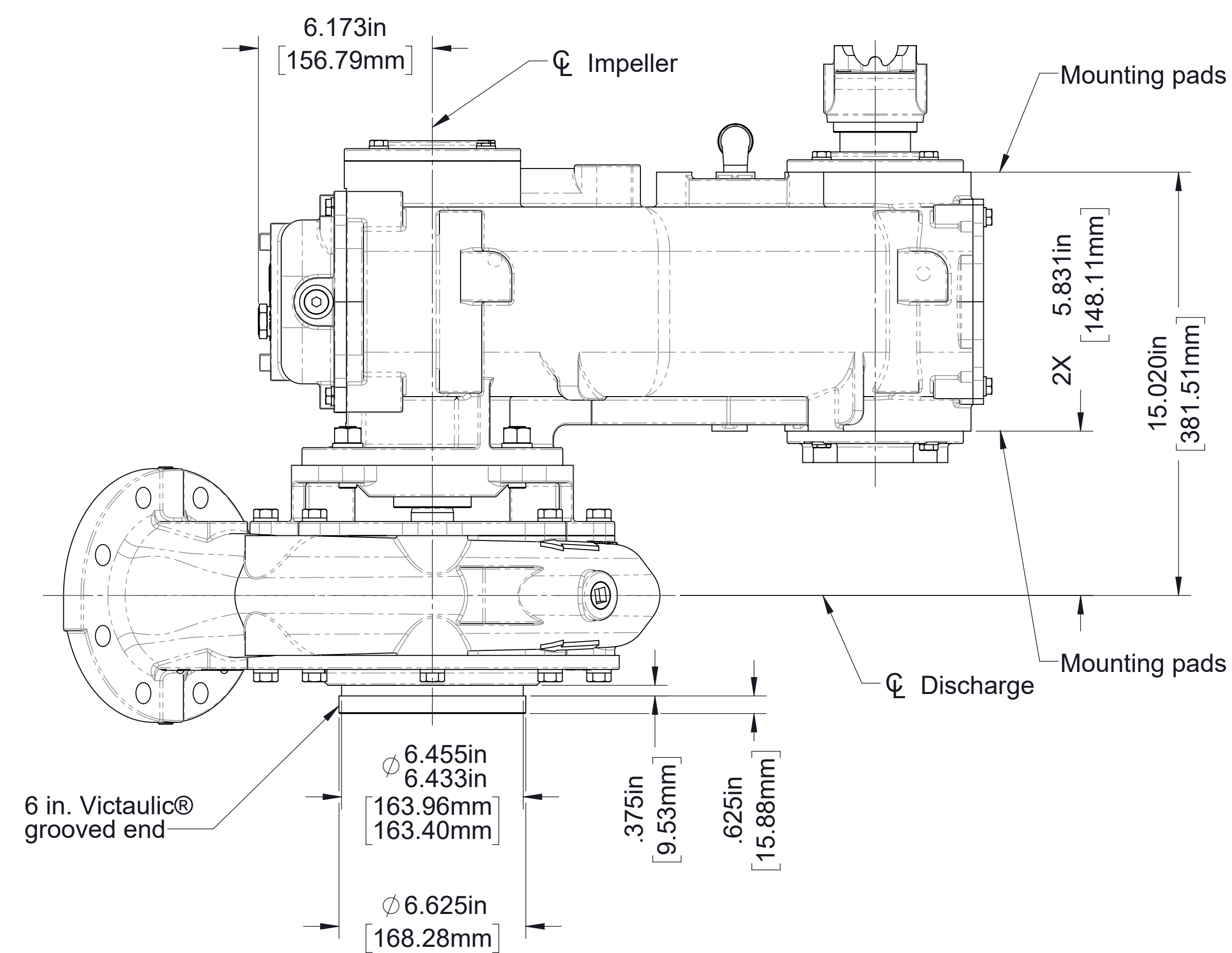
DETAIL A
Hydraulic Pump Adapter Flange
Used for SAE J744 class A 2-bolt hydraulic pump with male 5/8in keyed shaft



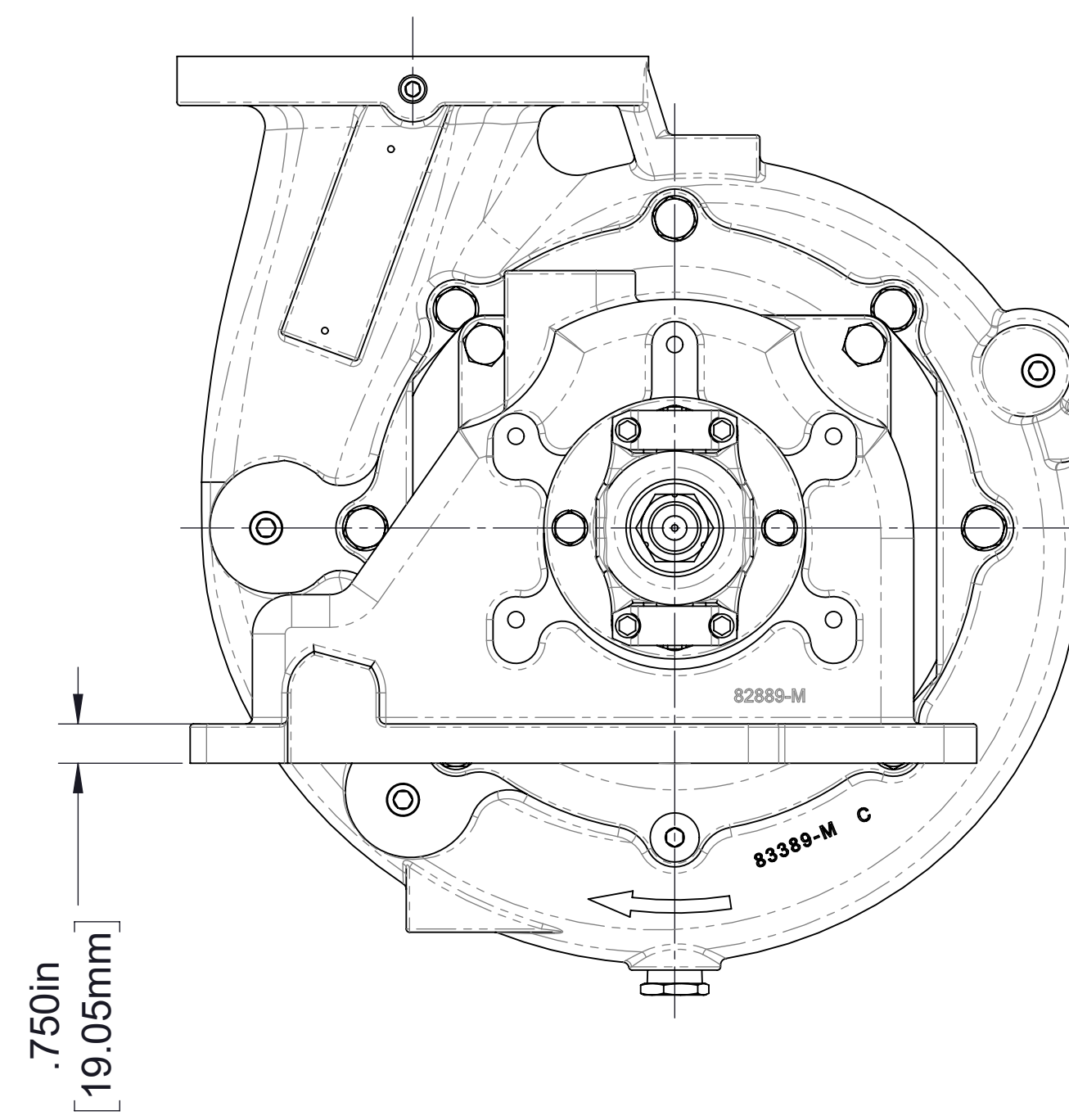
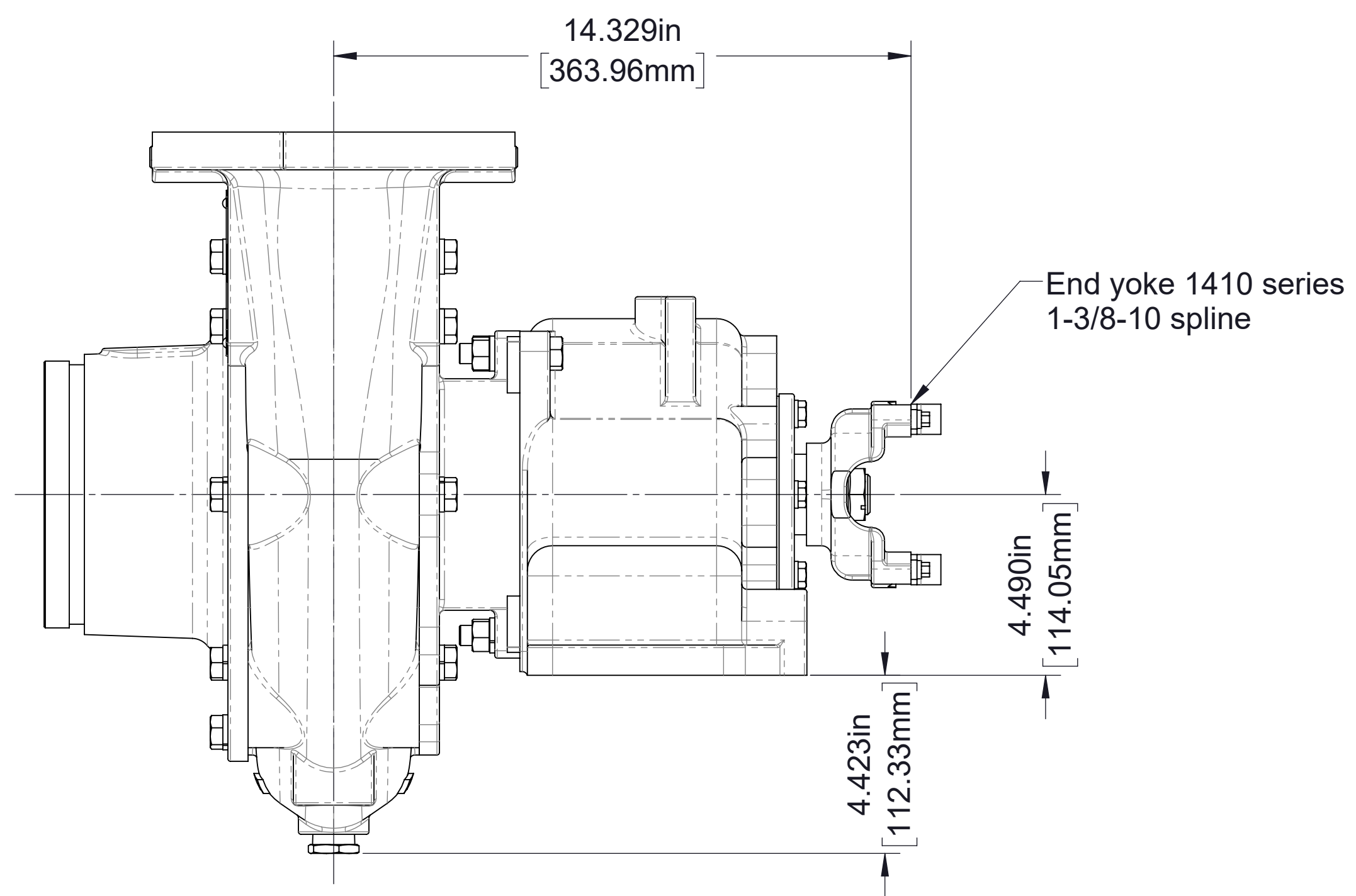
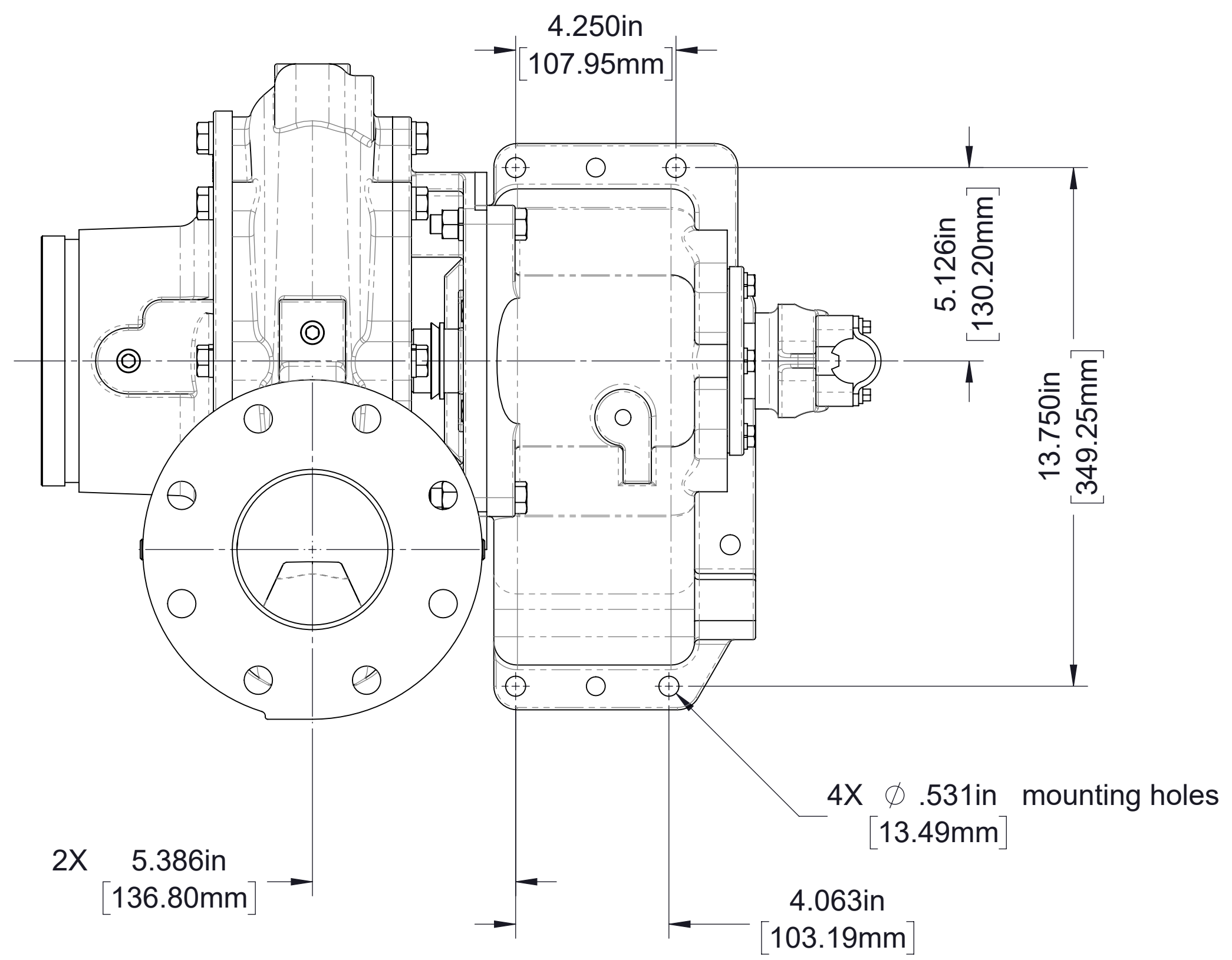
Model CXVQB
Front facing pump
Clockwise input
(CXV pumps only)



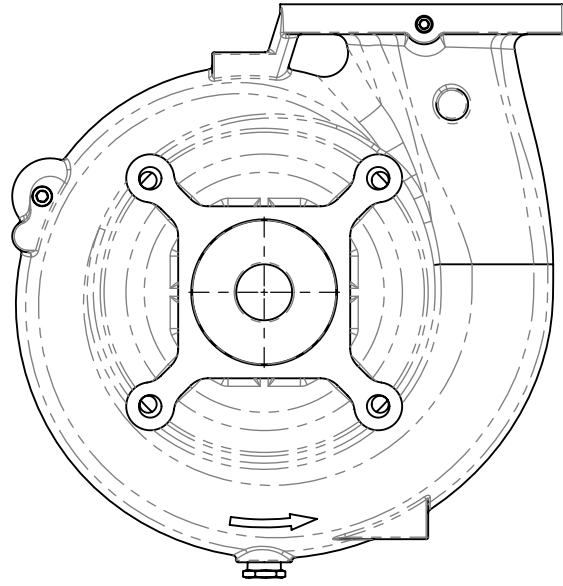
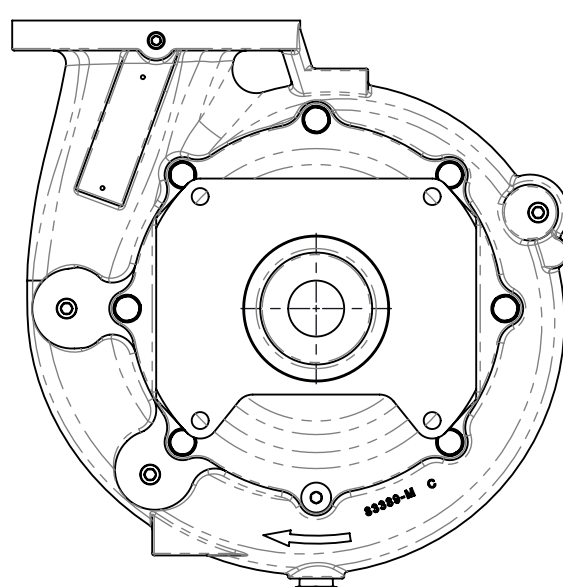
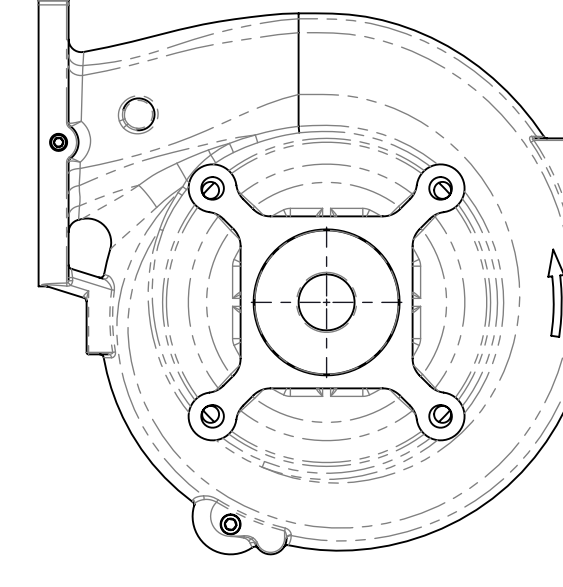
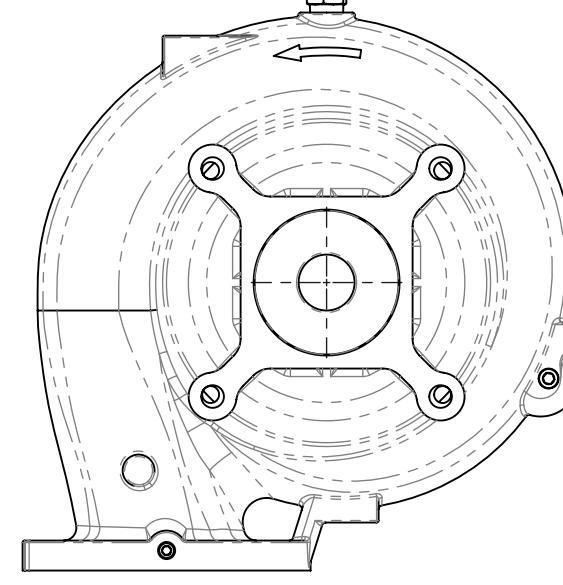
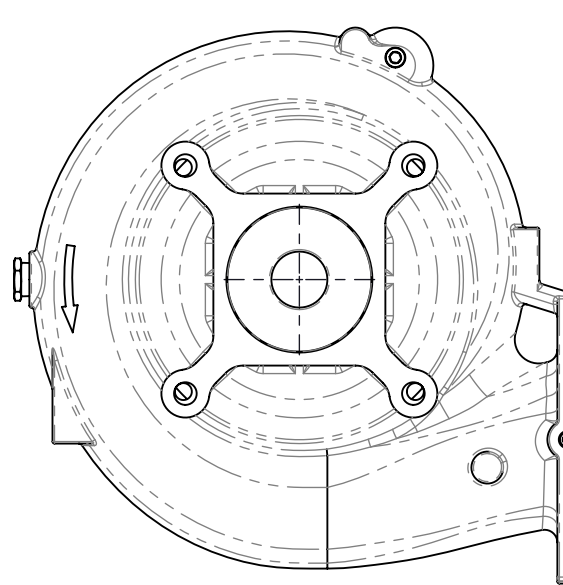
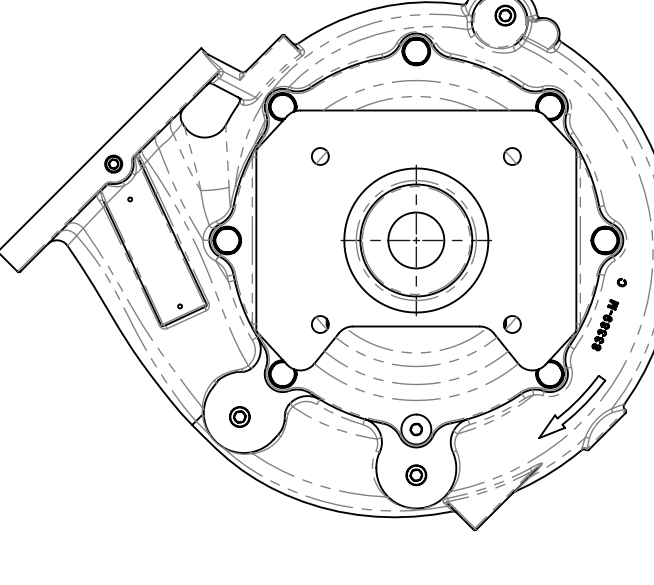
DETAIL A
Hydraulic Pump Adapter Flange
Used for SAE J744 class A 2-bolt hydraulic pump with male 5/8in keyed shaft



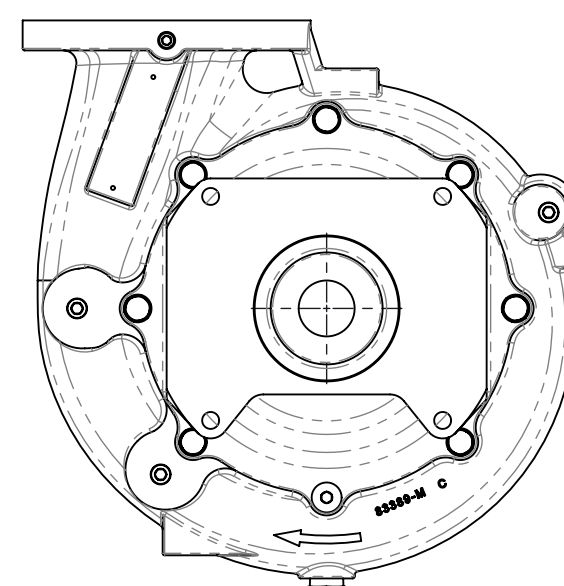
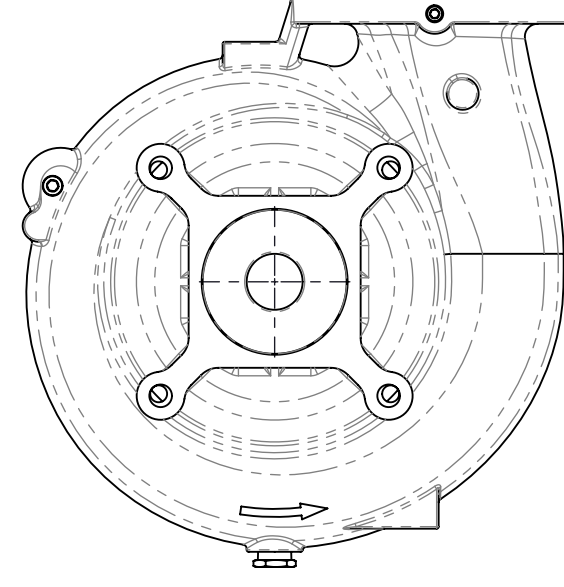
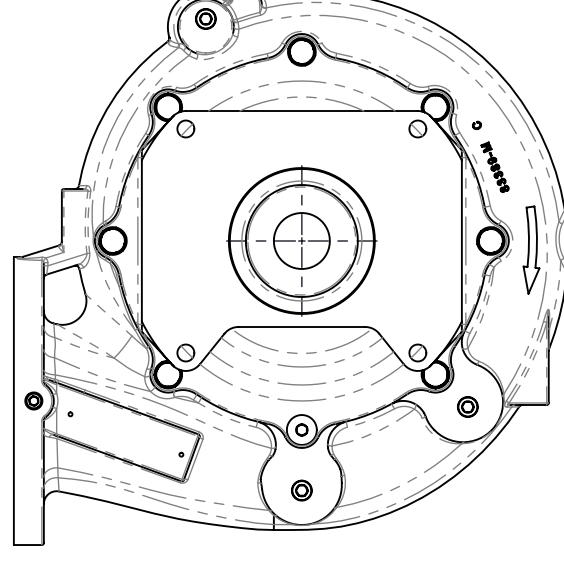
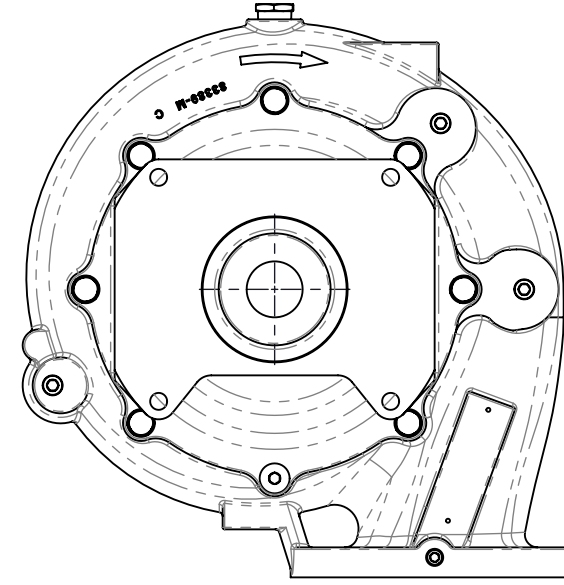
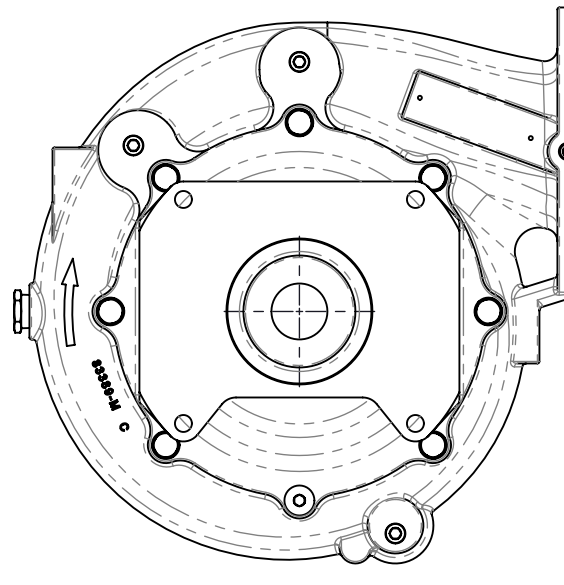
Model CXVQB
Rear facing pump
Clockwise input
(CXV pumps only)



Model CX Direct Drive
 Clockwise or Counterclockwise input
 (Clockwise shown)
 (CXV shown)

| Discharge Position | | Available with: | | | | | | | | |
|--------------------|---|----------------------------------|-----------------------------------|-----|-----|------------------|-------------------|-----|-----|--------------------|
| | | Transmission Series | | | | | | | | Discharge Manifold |
| | | C20 | | D | K | PA | | QB | T | |
| | | Pump mounted on input shaft side | Pump mounted on output shaft side | | | Vertical (Right) | Horizontal (Left) | | | |
| Up |  | Yes | No | No | Yes | Yes | Yes | No | Yes | Yes |
| |  | No | Yes | Yes | No | No | No | No | No | Yes |
| Left |  | No | No | No | Yes | Yes | No | No | Yes | No |
| Down |  | No | No | No | Yes | No | Yes | Yes | Yes | No |
| Right |  | No | No | No | Yes | Yes | No | No | Yes | No |
| 45° |  | No | No | No | No | No | No | Yes | No | No |

Clockwise (CW) Input Rotation

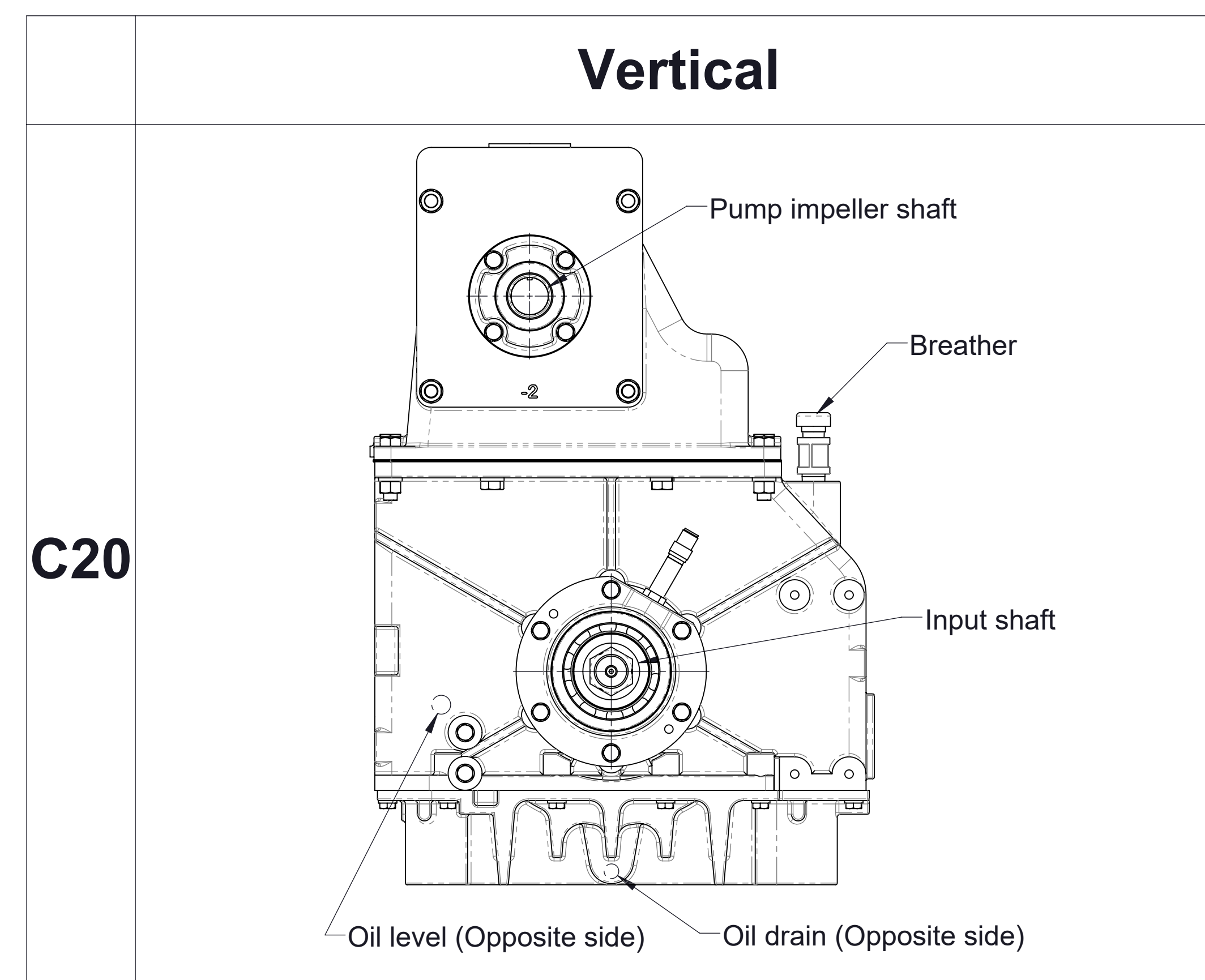
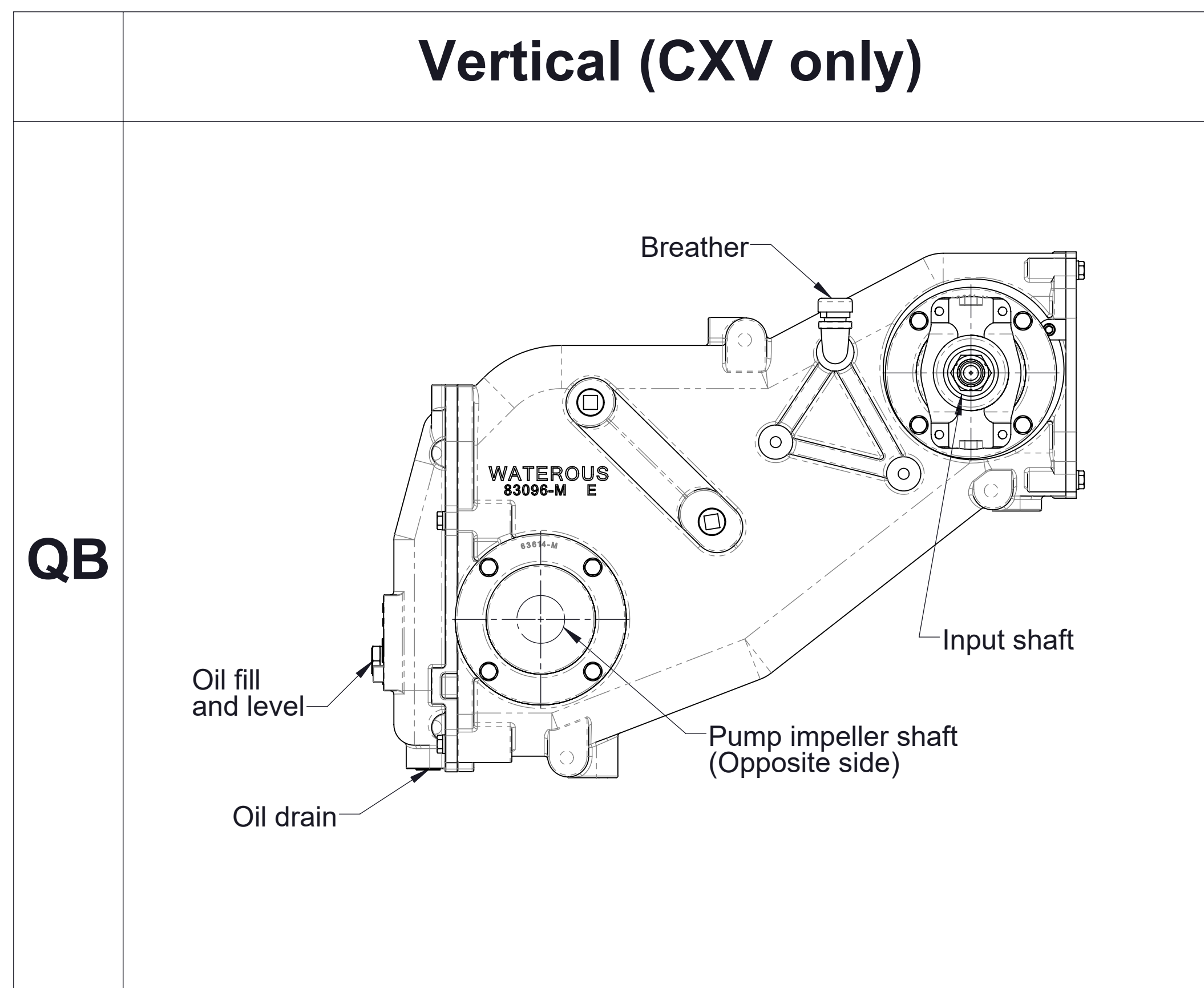
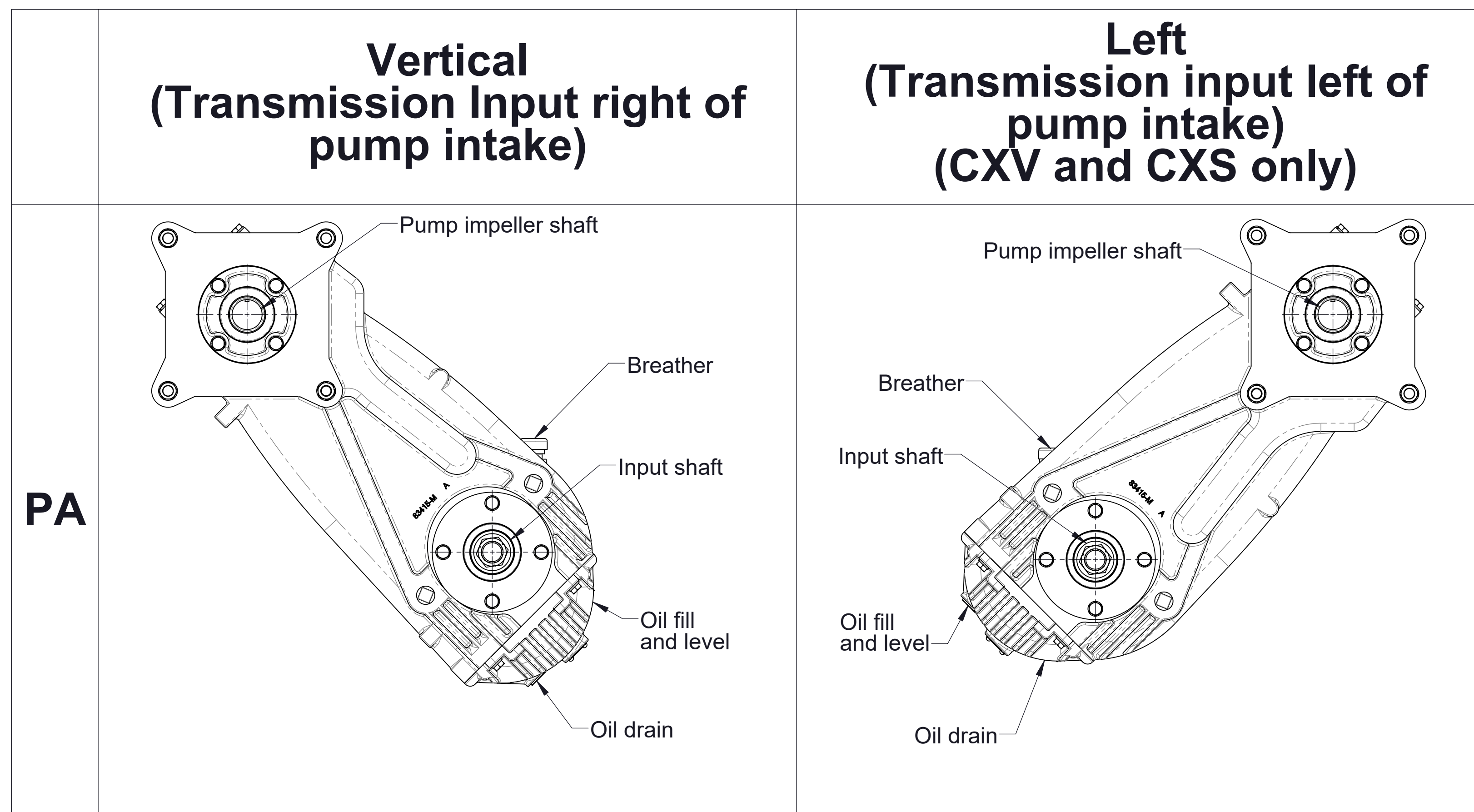
| Discharge Position | | Available with: | | | | |
|--------------------|---|---------------------|-----|----|-----|--------------------|
| | | Transmission Series | | | | Discharge Manifold |
| | | D | K | QB | T | |
| Up |  | No | Yes | No | Yes | Yes |
| |  | Yes | No | No | No | Yes |
| Left |  | No | Yes | No | Yes | No |
| Down |  | No | Yes | No | Yes | No |
| Right |  | No | Yes | No | Yes | No |

Counterclockwise (CCW) Input Rotation

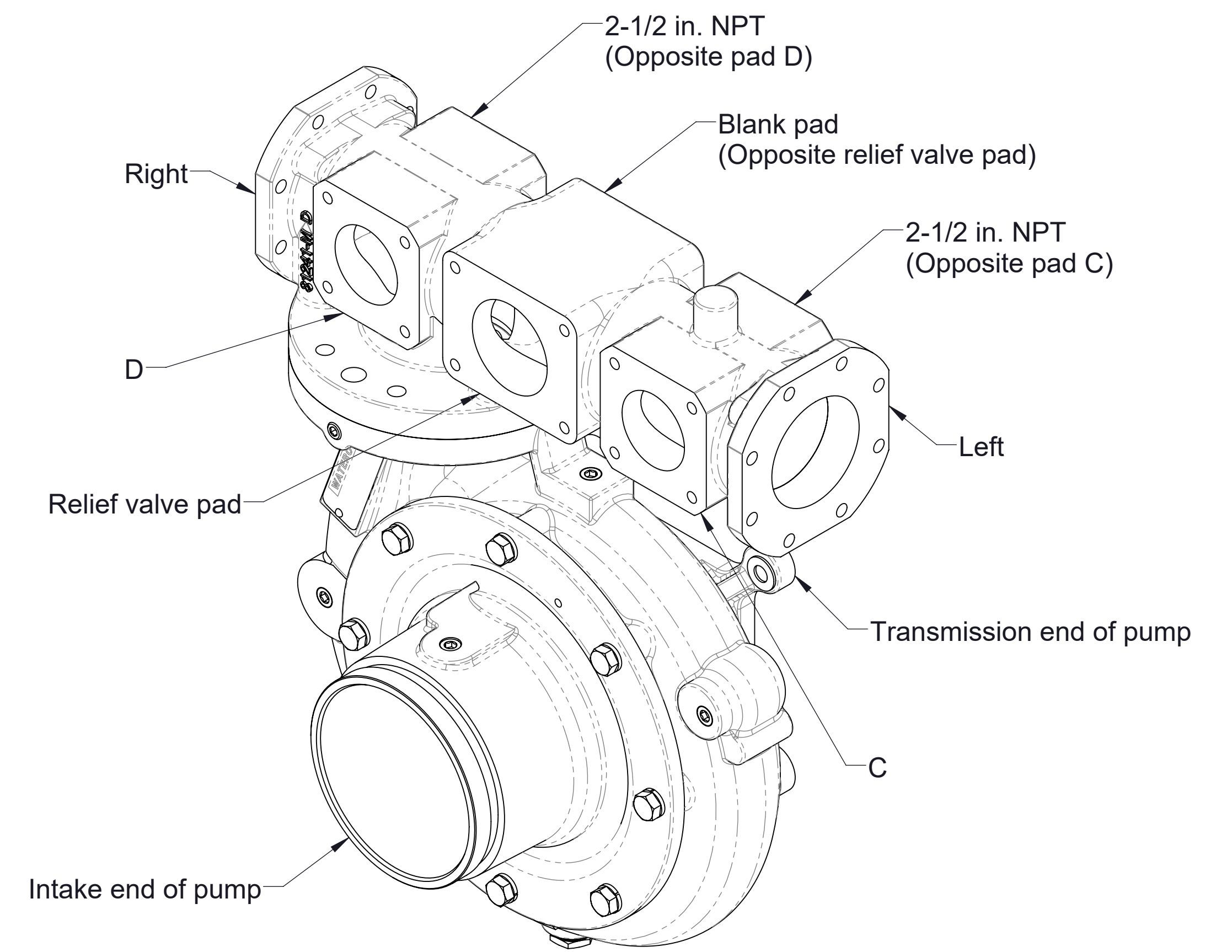
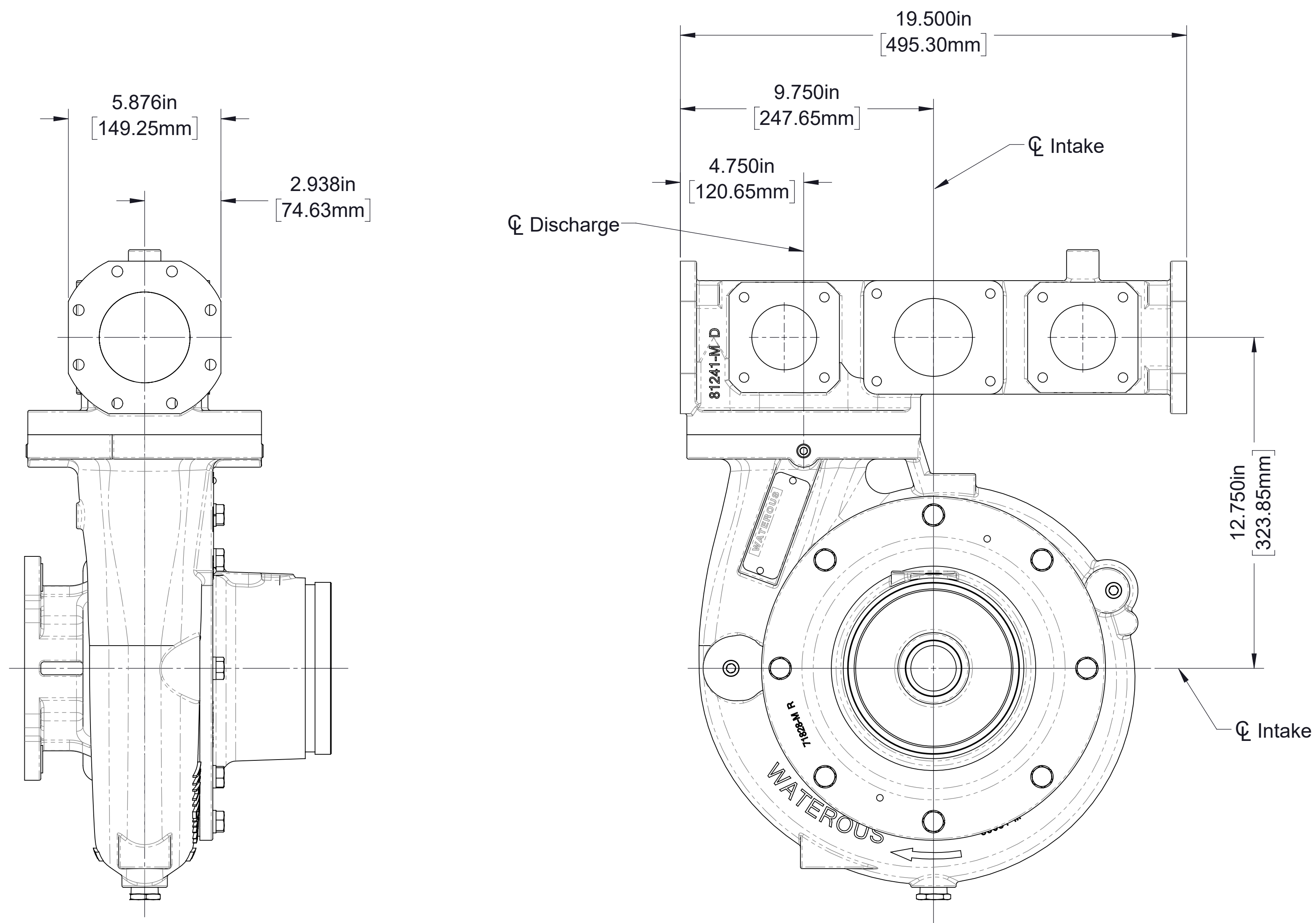
Available pump discharge positions as viewed from transmission end of pump

| | Vertical | Inverted | Left | Right |
|----------|----------------------------------|----------------------------------|-----------------------------|-----------------------------|
| K | | | | |
| T | <p>(CXN and CXV only)</p> | <p>(CXN and CXV only)</p> | <p>Not Available</p> | <p>Not Available</p> |

**Available transmission mounting positions
as viewed from transmission input shaft**

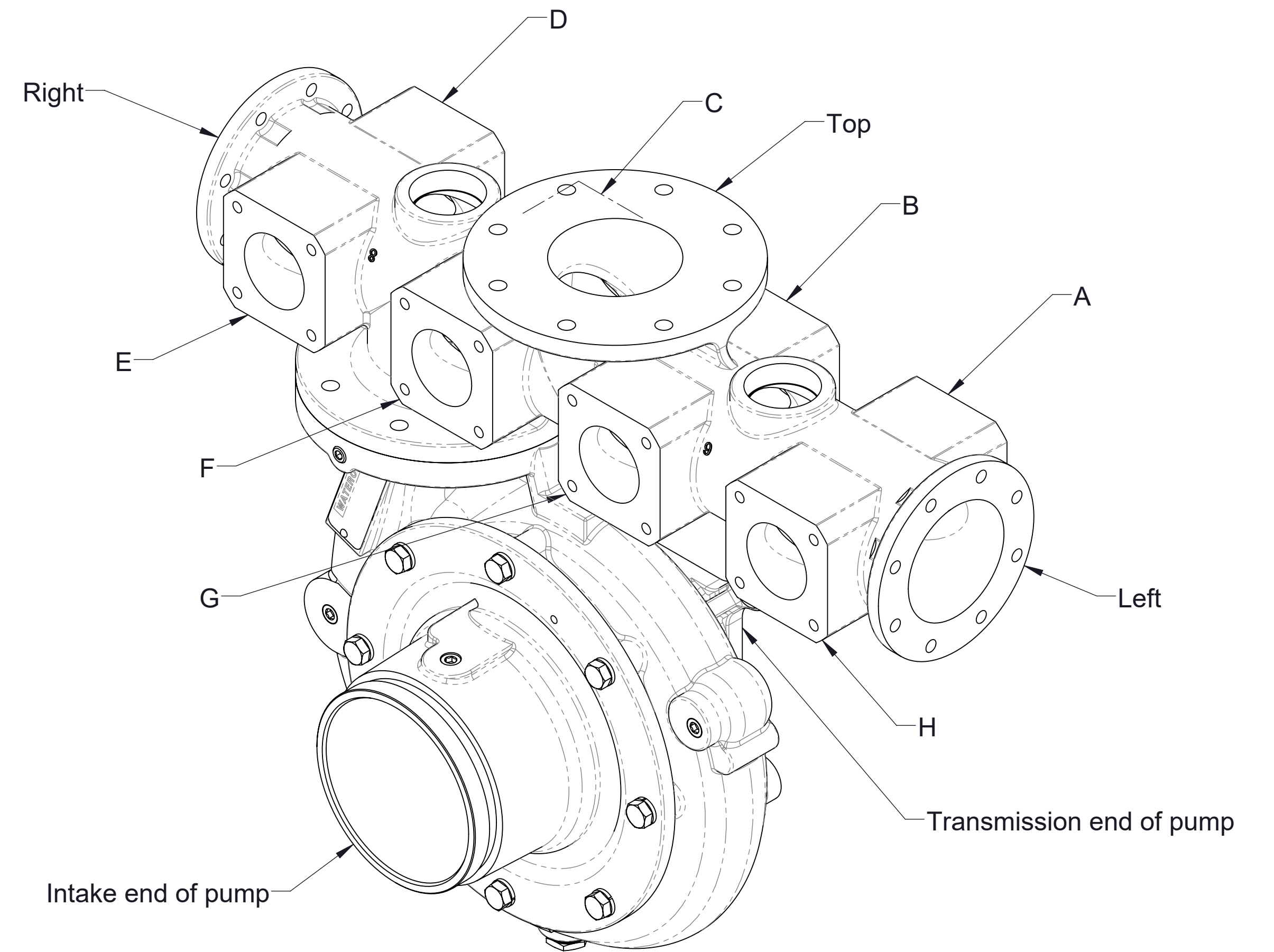
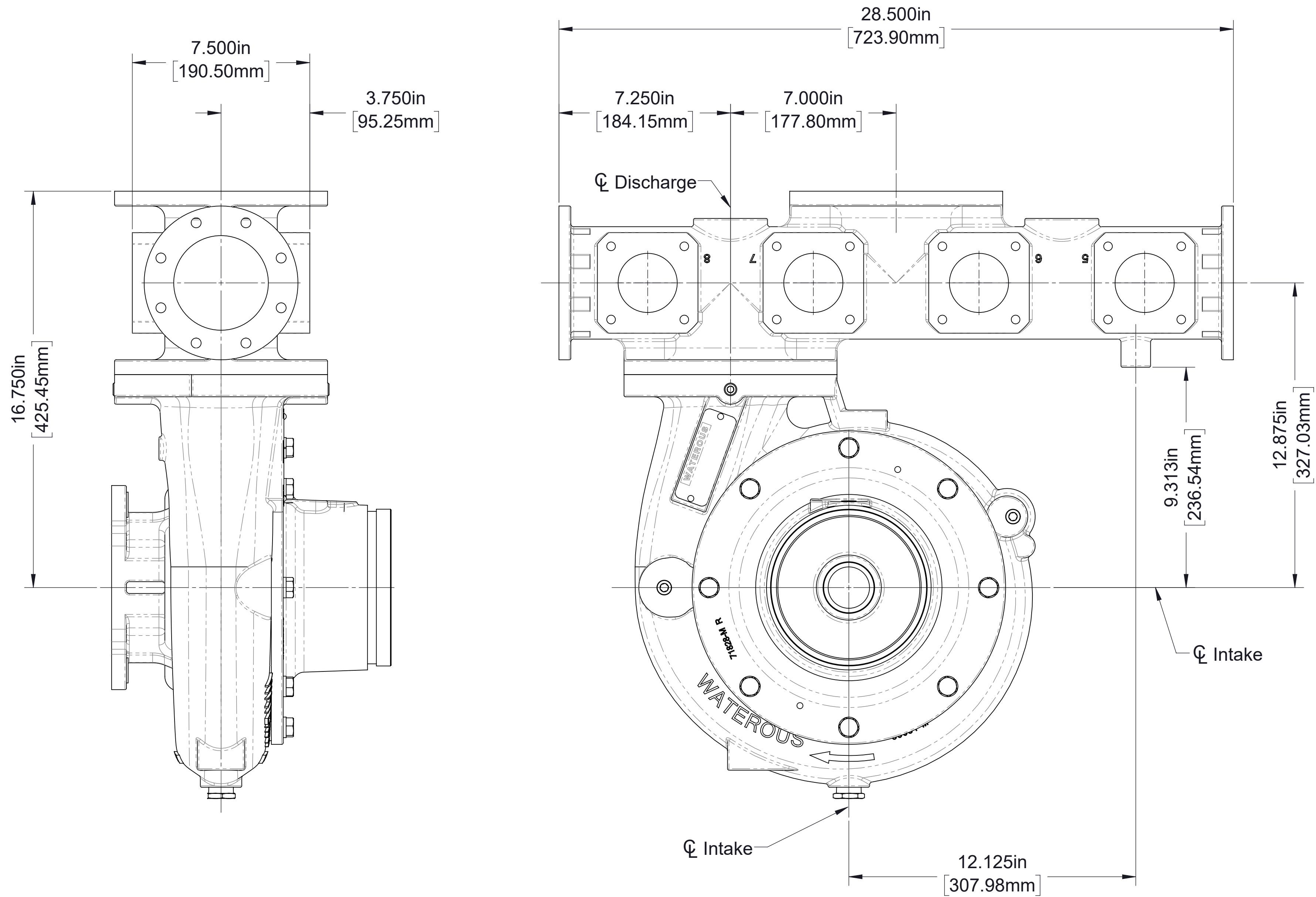


**Available transmission mounting positions
as viewed from transmission input shaft**



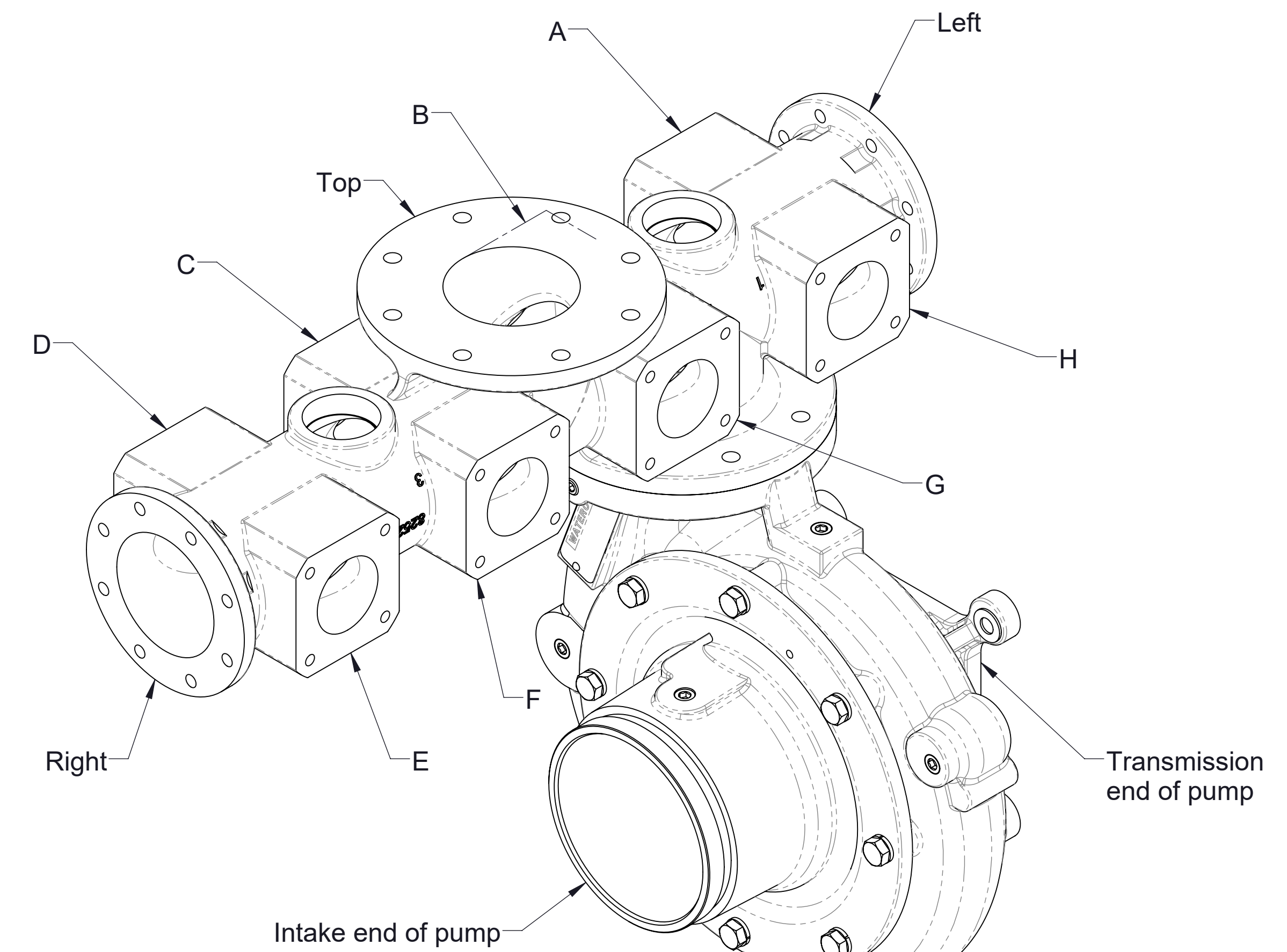
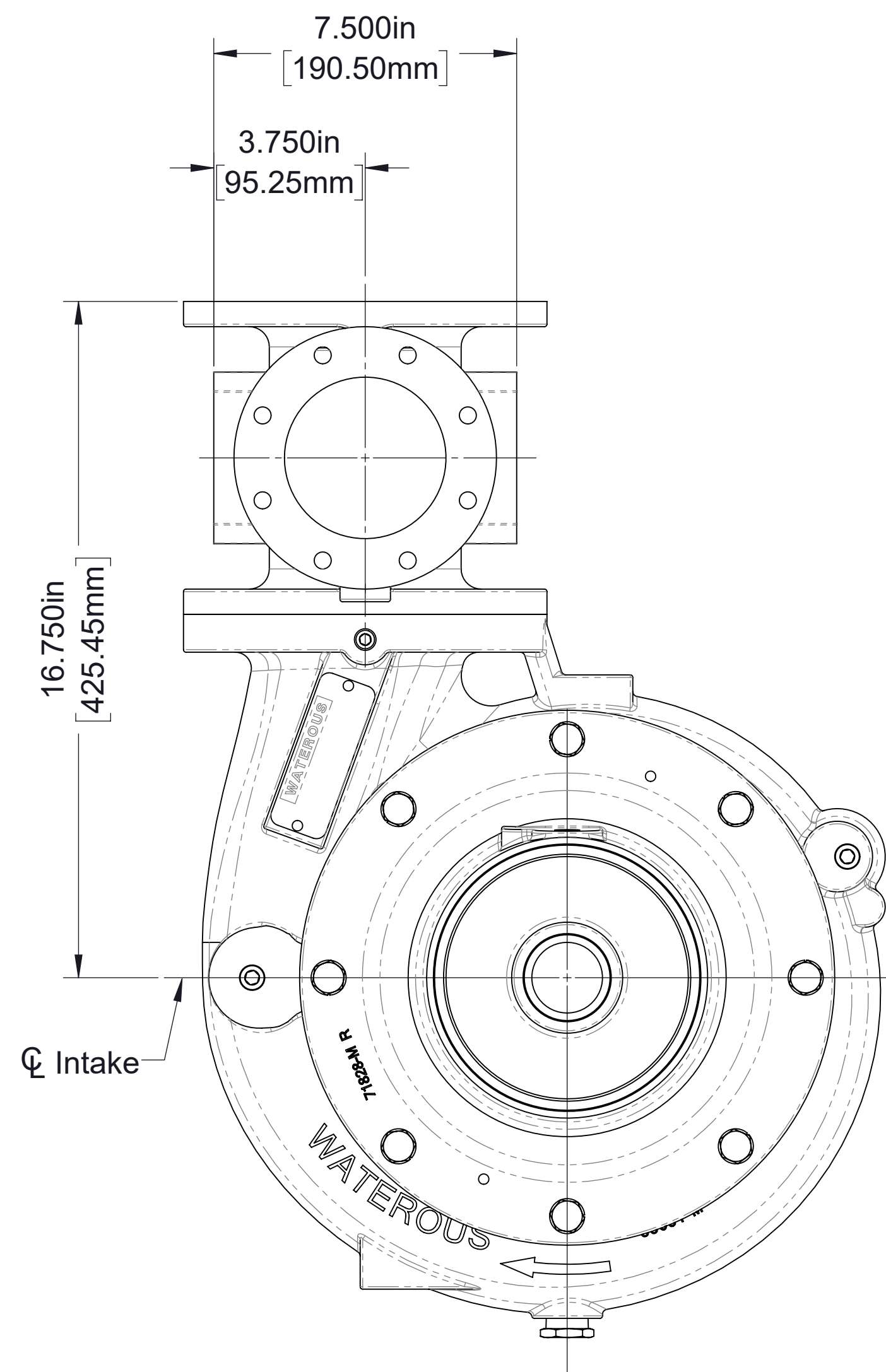
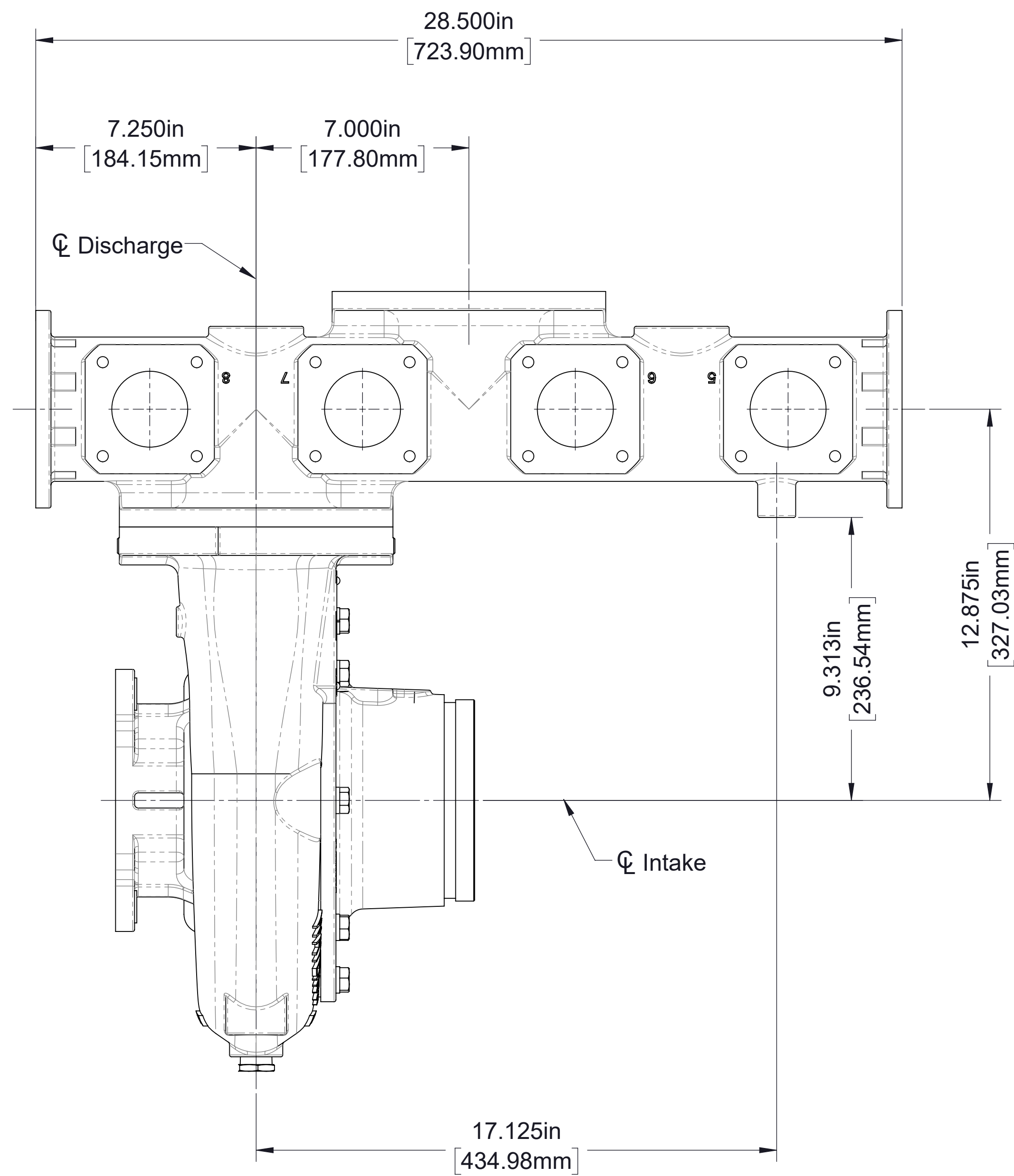
| Pad | Size |
|--------------|------------------|
| Left | 3-1/2 in. 8-bolt |
| Right | 3-1/2 in. 8-bolt |
| Relief Valve | 3 in. R.V. |
| C | 2-1/2 in. 4-bolt |
| D | 2-1/2 in. 4-bolt |

**Manifold with 3-1/2 in. end flanges mounted perpendicular to intake
CW impeller rotation**
(See page 9 for manifold dimensions not shown)



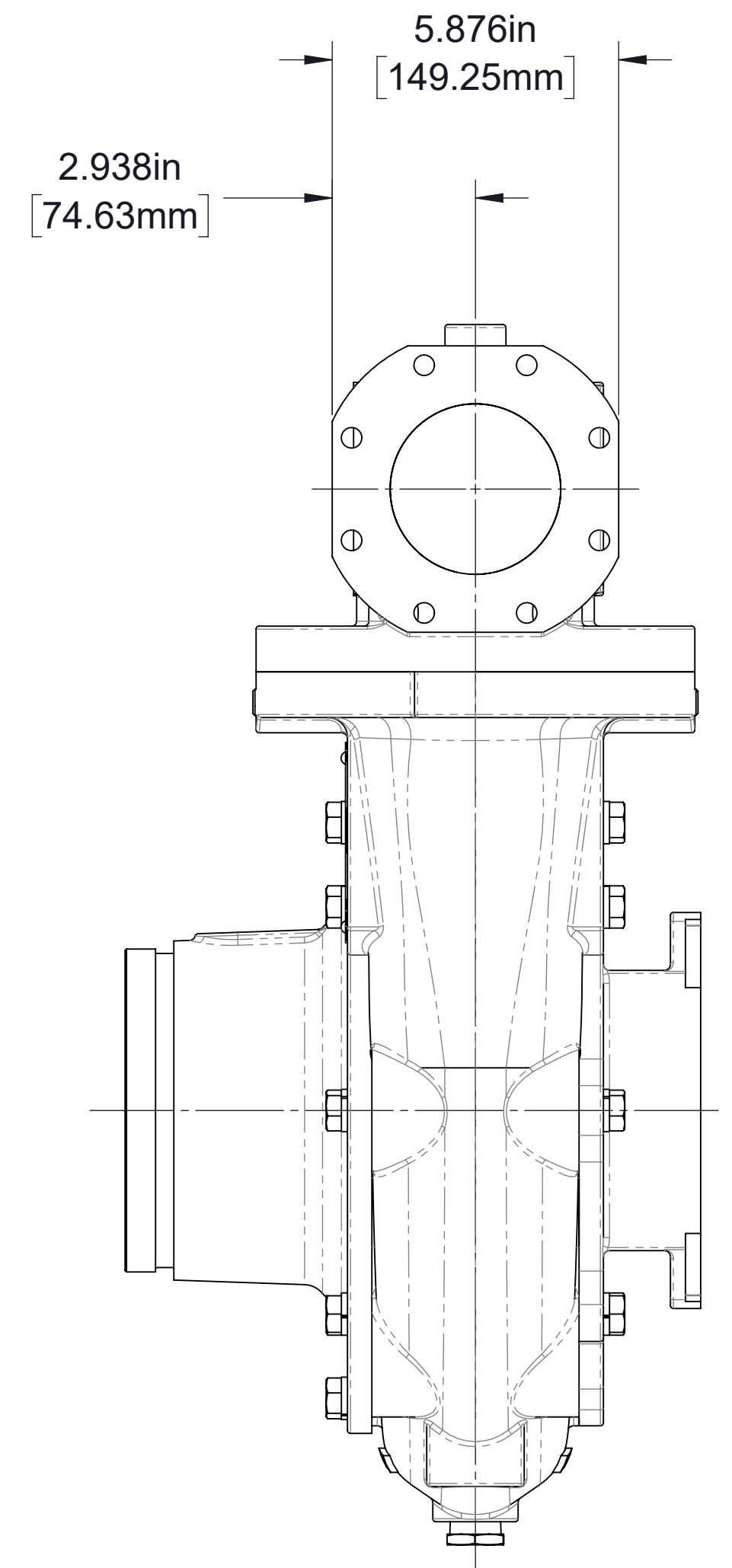
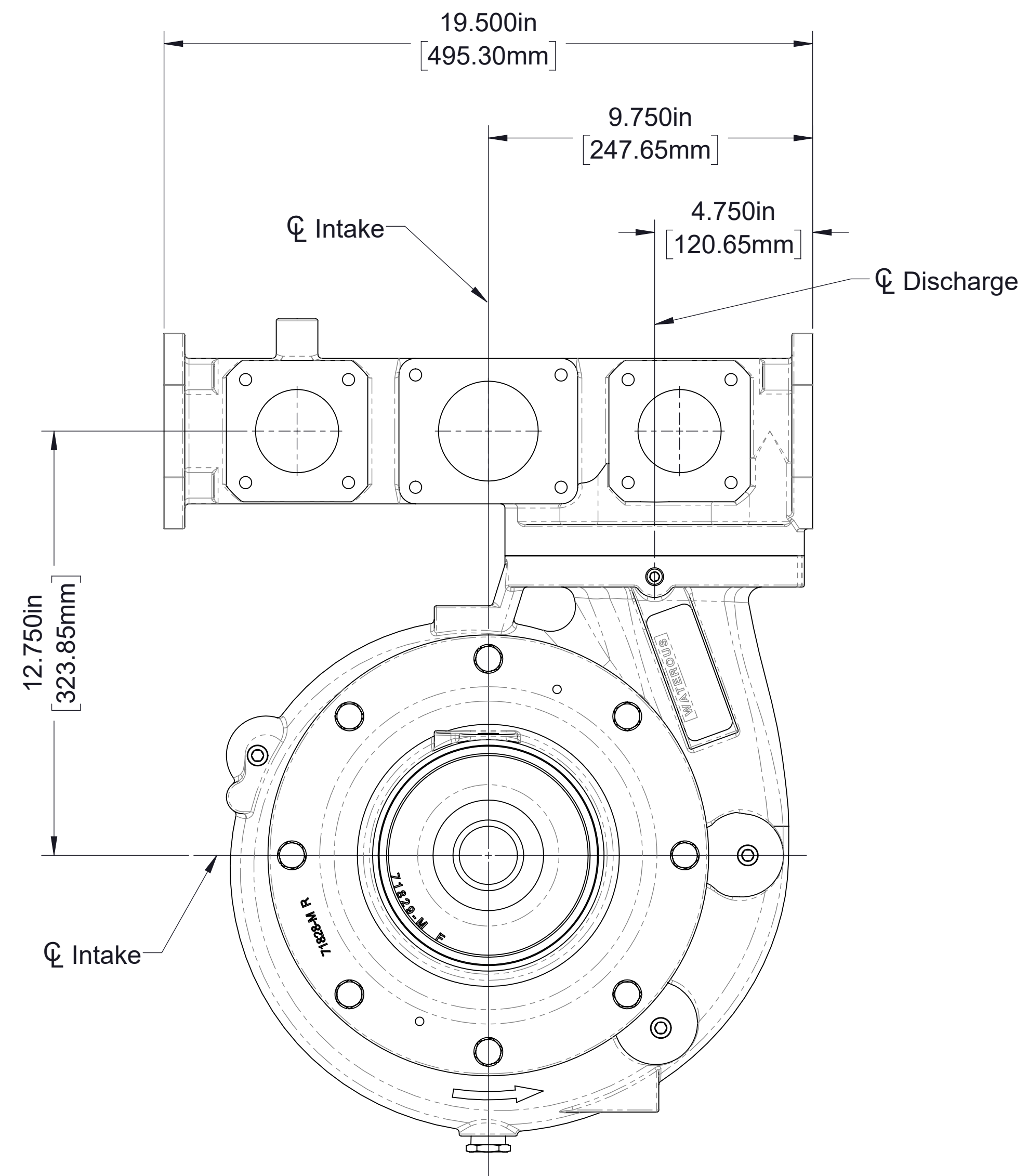
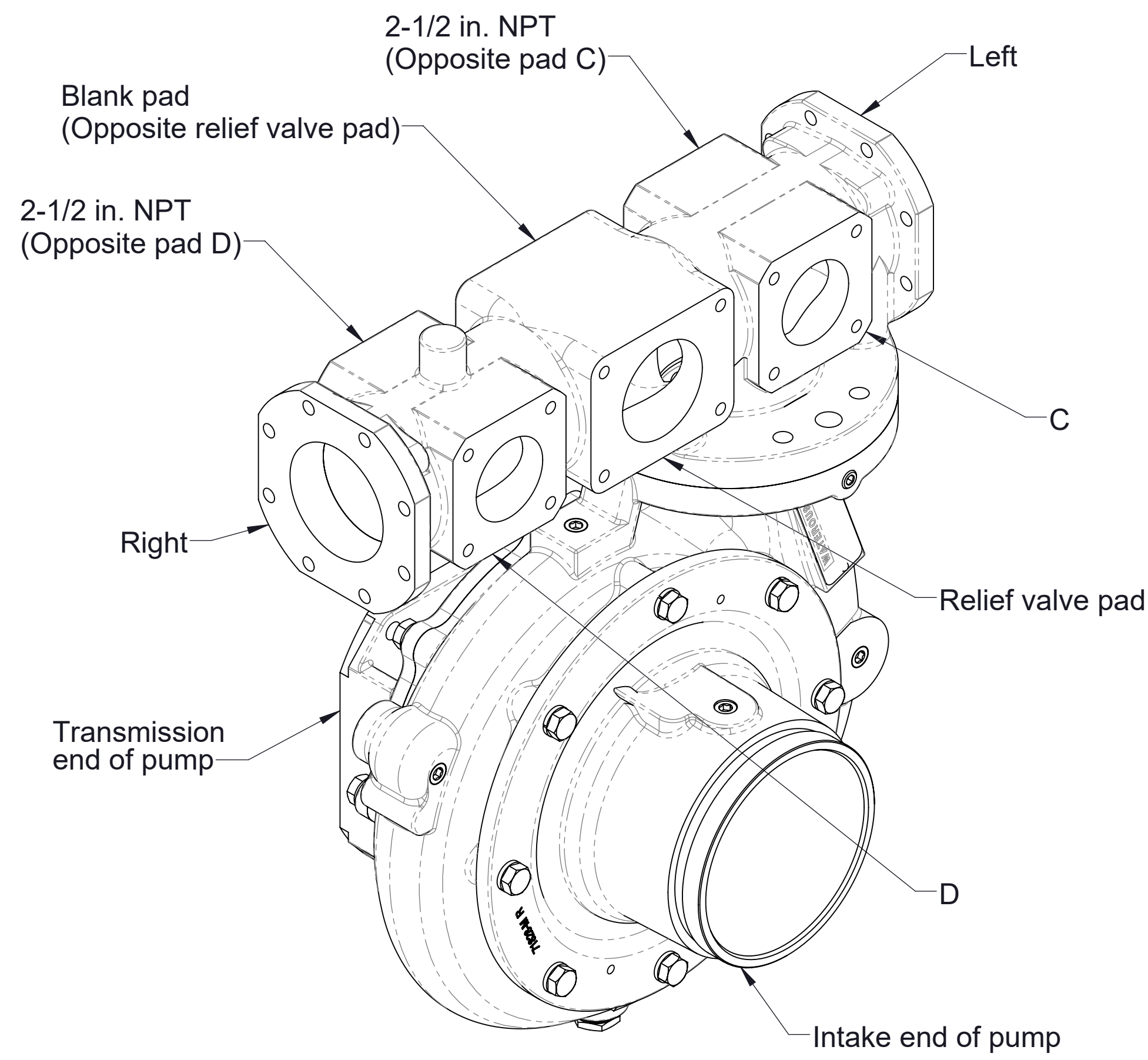
| Pad | Size |
|-------|------------------|
| Left | 4 in. 8-bolt |
| Right | 4 in. 8-bolt |
| Top | 4 in. ANSI |
| A | 2-1/2 in. 4-bolt |
| B | 2-1/2 in. 4-bolt |
| C | 2-1/2 in. 4-bolt |
| D | 2-1/2 in. 4-bolt |
| E | 2-1/2 in. 4-bolt |
| F | 2-1/2 in. 4-bolt |
| G | 2-1/2 in. 4-bolt |
| H | 2-1/2 in. 4-bolt |

**Manifold with 4 in. end flanges mounted perpendicular to intake
CW impeller rotation**
(See page 10 for manifold dimensions not shown)



| Pad | Size |
|-------|------------------|
| Left | 4 in. 8-bolt |
| Right | 4 in. 8-bolt |
| Top | 4 in. ANSI |
| A | 2-1/2 in. 4-bolt |
| B | 2-1/2 in. 4-bolt |
| C | 2-1/2 in. 4-bolt |
| D | 2-1/2 in. 4-bolt |
| E | 2-1/2 in. 4-bolt |
| F | 2-1/2 in. 4-bolt |
| G | 2-1/2 in. 4-bolt |
| H | 2-1/2 in. 4-bolt |

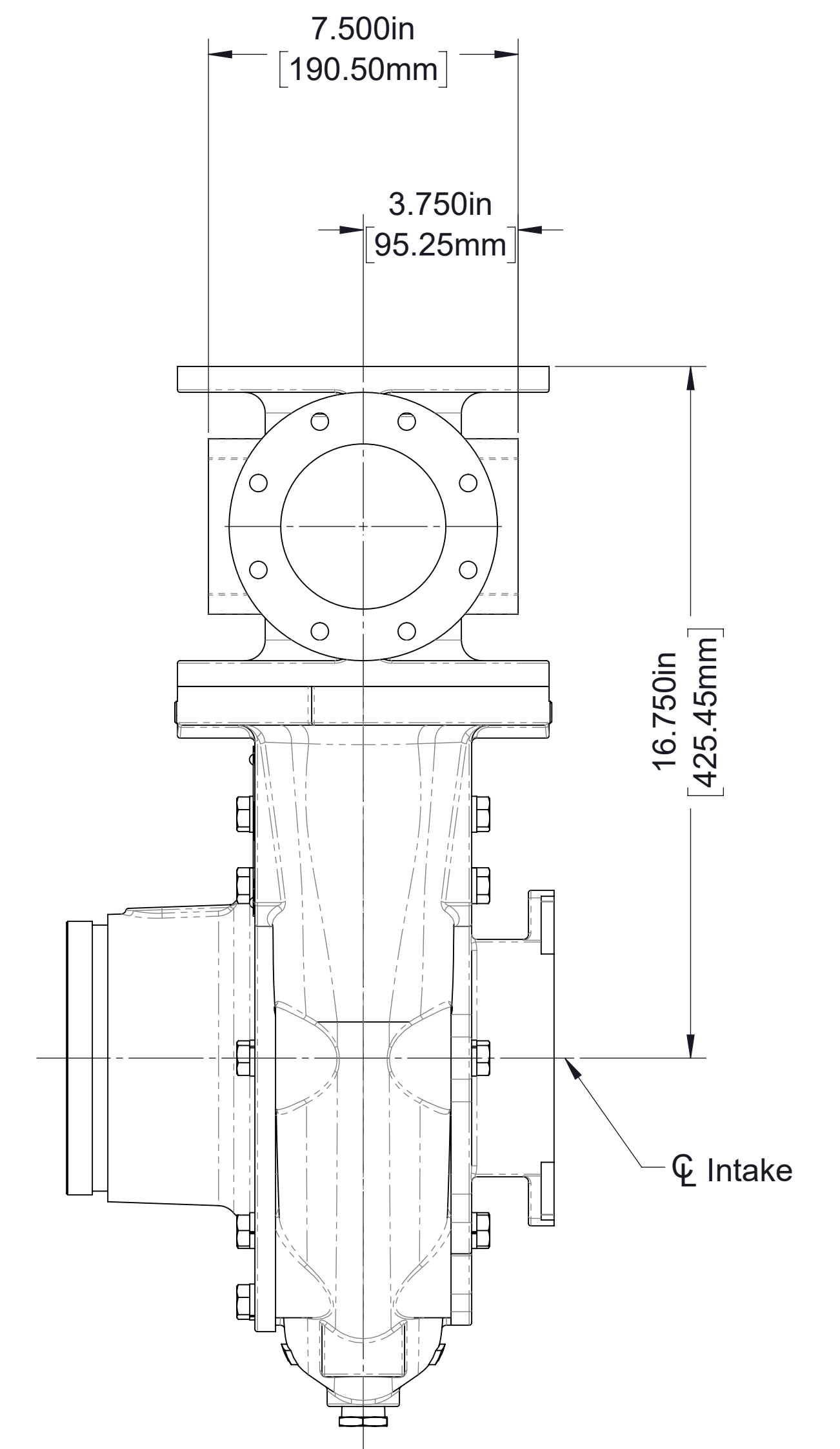
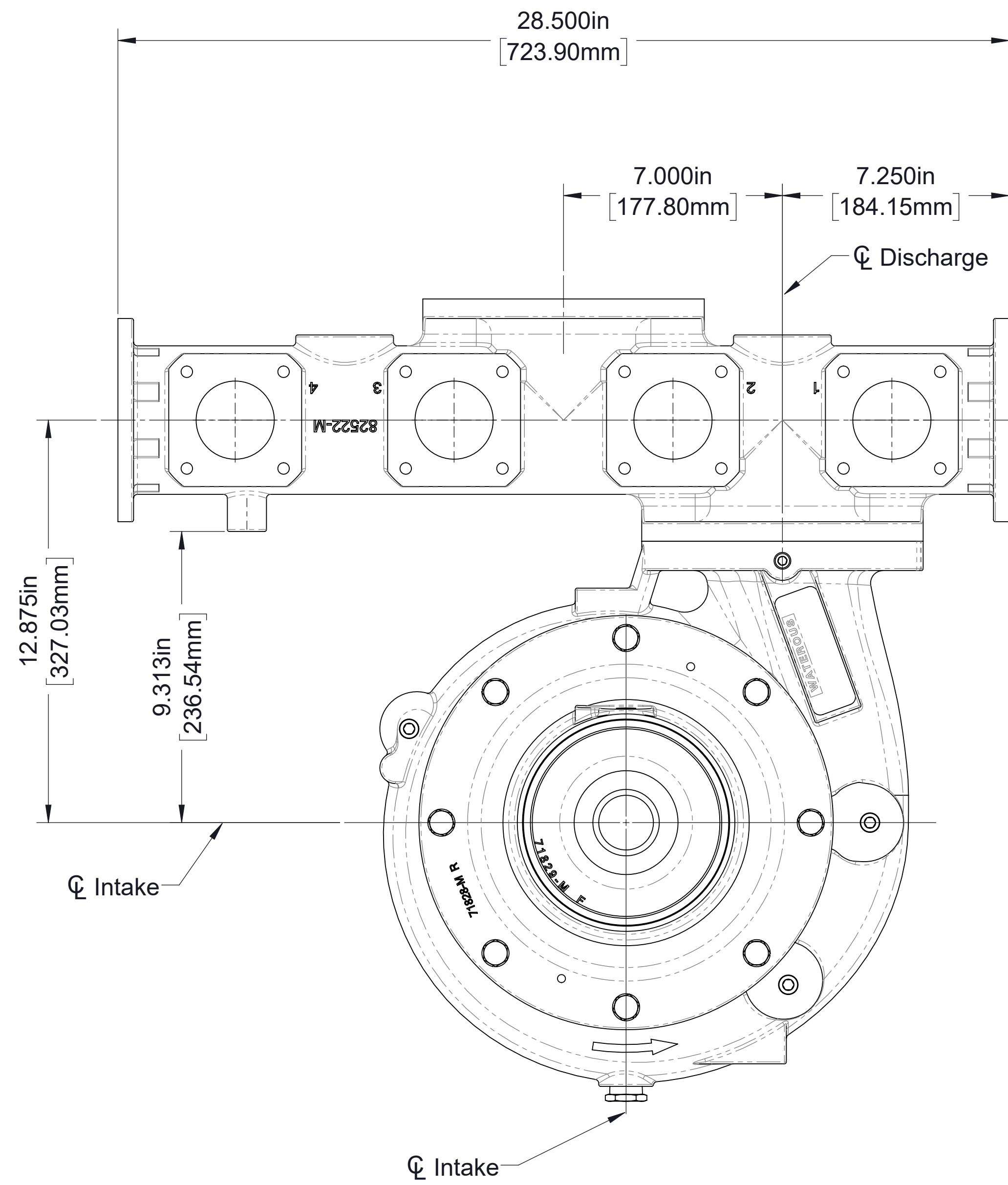
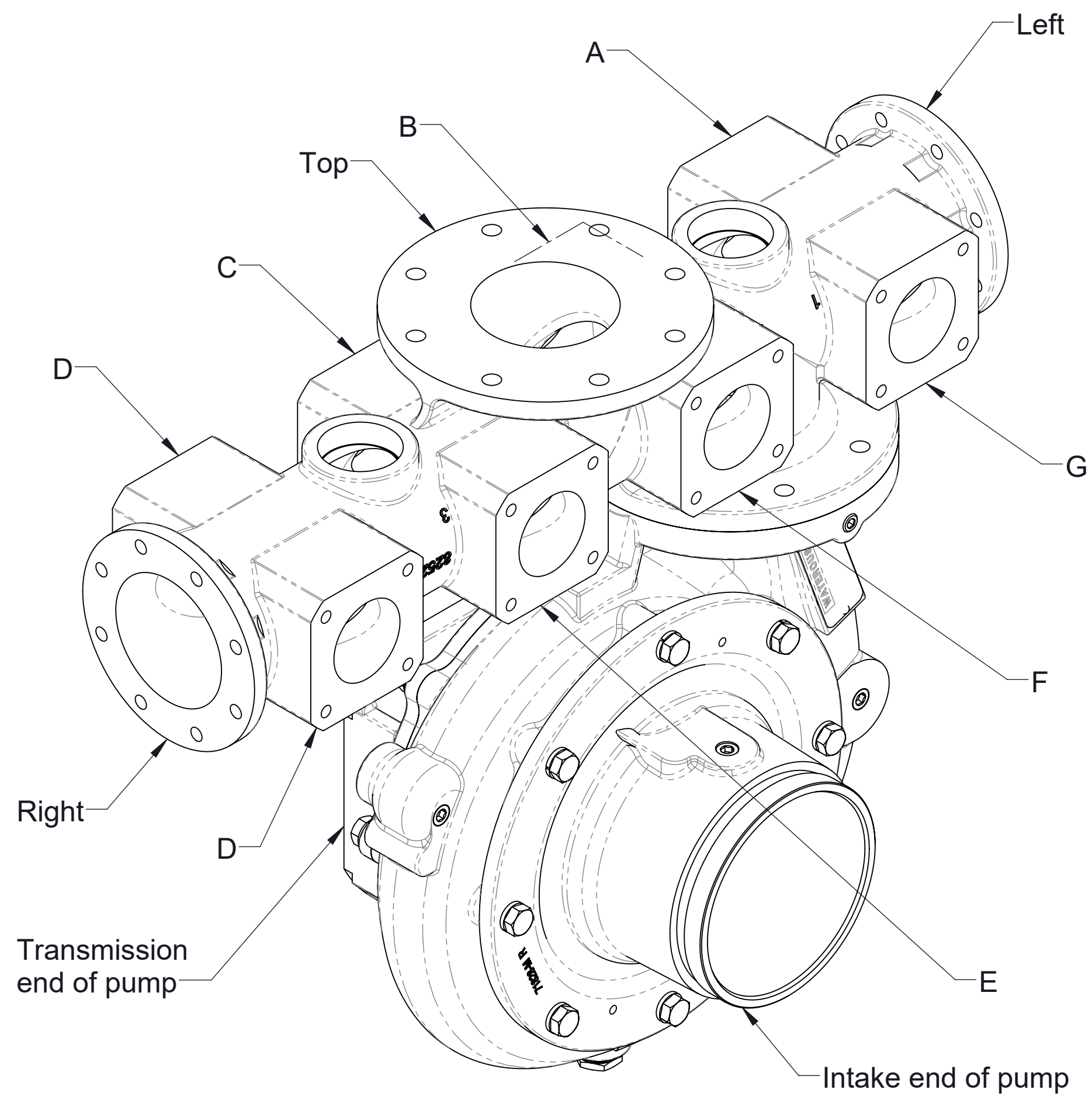
**Manifold with 4 in. end flanges mounted parallel to intake
CW impeller rotation**
(See page 10 for manifold dimensions not shown)



| Pad | Size |
|--------------|------------------|
| Left | 3-1/2 in. 8-bolt |
| Right | 3-1/2 in. 8-bolt |
| Relief Valve | 3 in. R.V. |
| C | 2-1/2 in. 4-bolt |
| D | 2-1/2 in. 4-bolt |

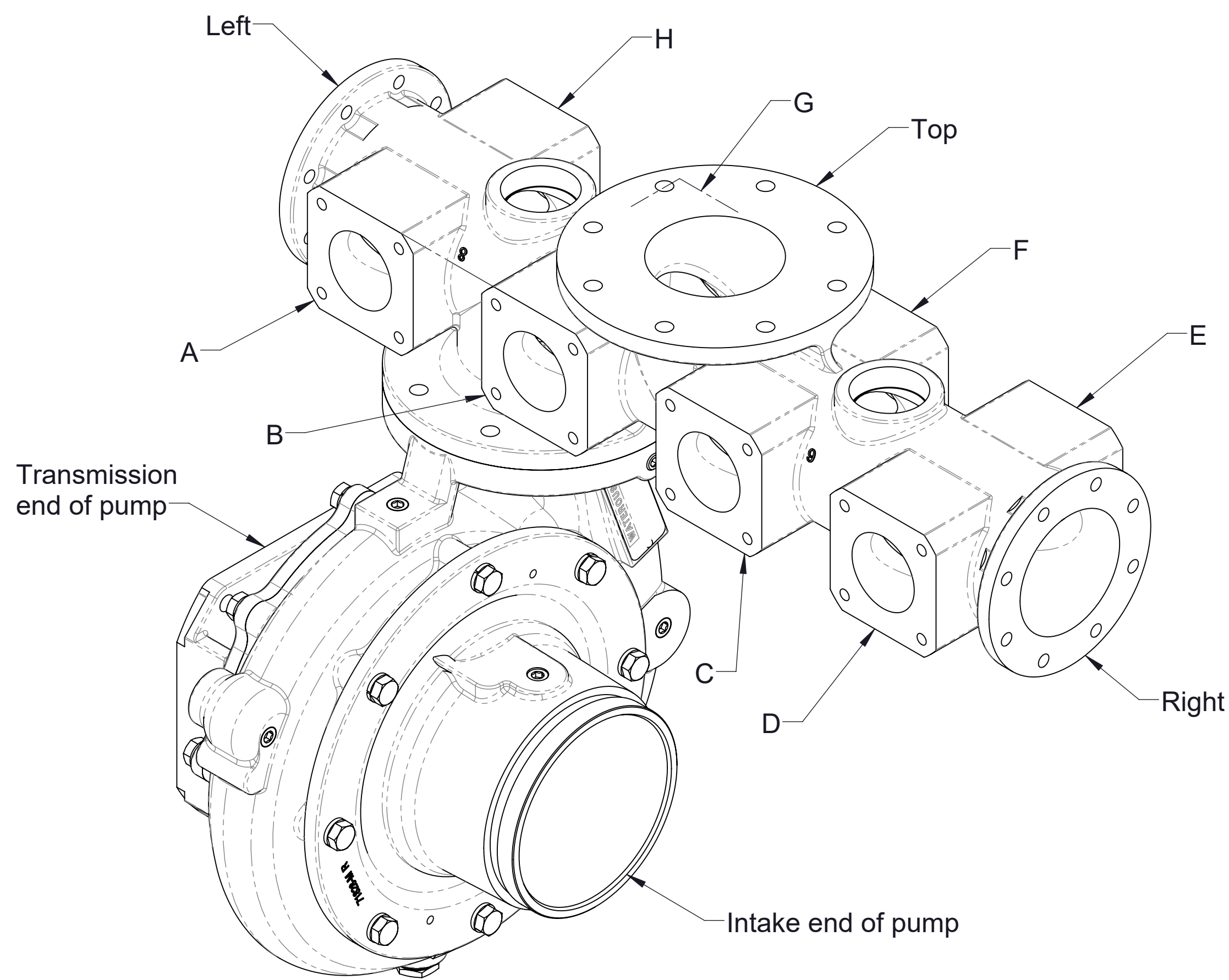
**Manifold with 3-1/2 in. end flanges mounted perpendicular to intake
CCW impeller rotation**

(See page 9 for manifold dimensions not shown)

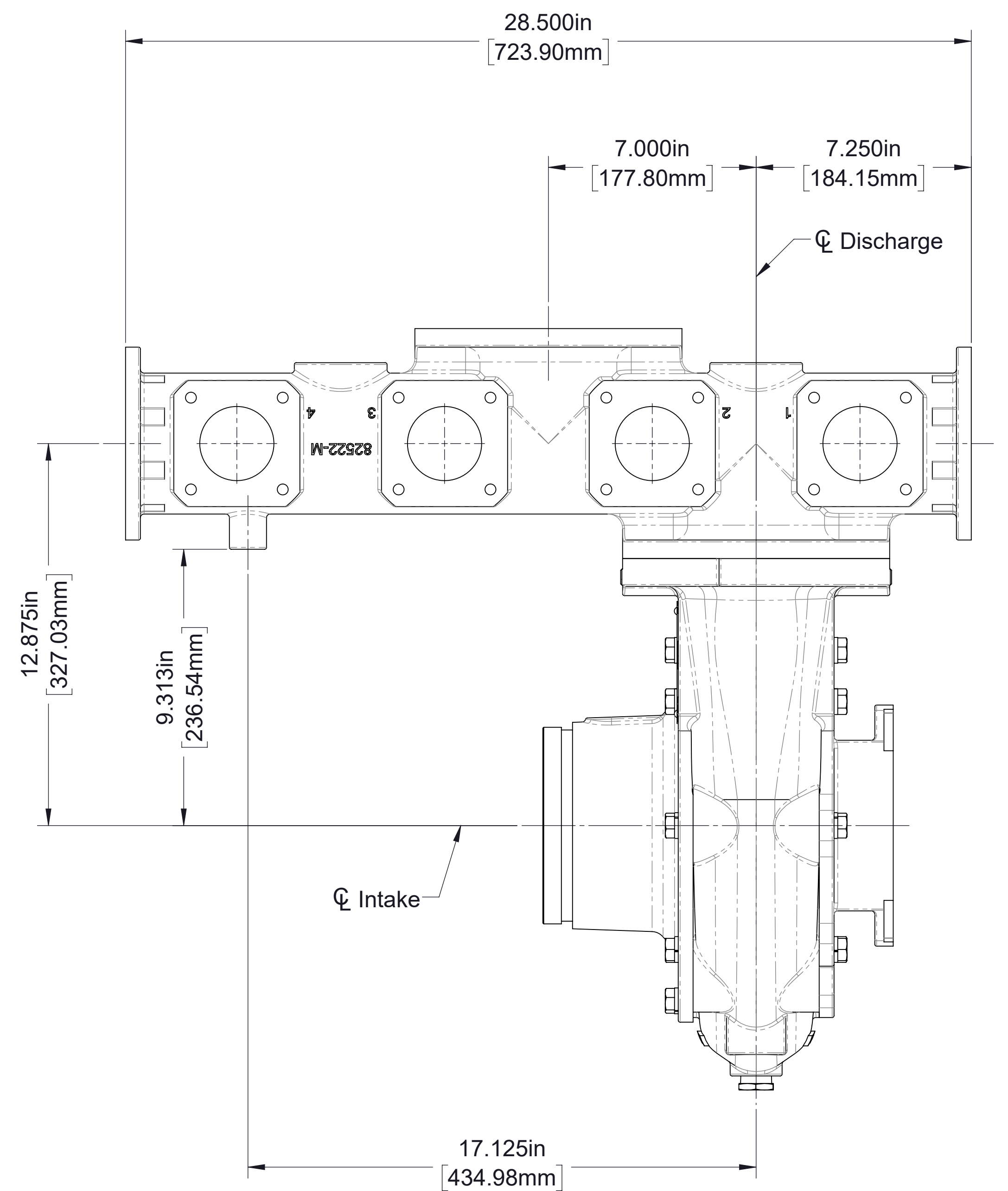
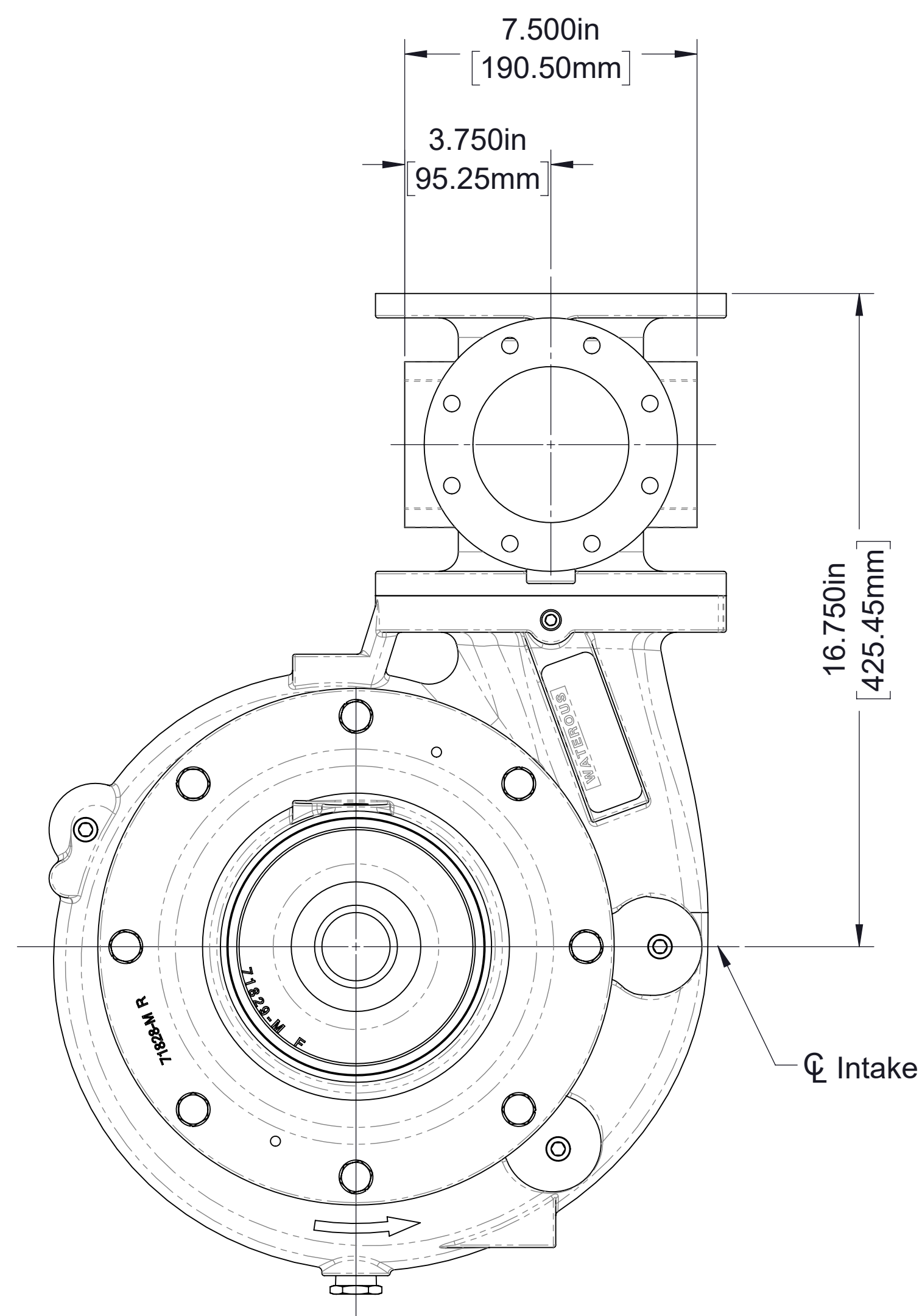


| Pad | Size |
|-------|------------------|
| Left | 4 in. 8-bolt |
| Right | 4 in. 8-bolt |
| Top | 4 in. ANSI |
| A | 2-1/2 in. 4-bolt |
| B | 2-1/2 in. 4-bolt |
| C | 2-1/2 in. 4-bolt |
| D | 2-1/2 in. 4-bolt |
| E | 2-1/2 in. 4-bolt |
| F | 2-1/2 in. 4-bolt |
| G | 2-1/2 in. 4-bolt |
| H | 2-1/2 in. 4-bolt |

**Manifold with 4 in. end flanges mounted
perpendicular to intake
CCW impeller rotation**
(See page 10 for manifold dimensions not shown)



| Pad | Size |
|-------|------------------|
| Left | 4 in. 8-bolt |
| Right | 4 in. 8-bolt |
| Top | 4 in. ANSI |
| A | 2-1/2 in. 4-bolt |
| B | 2-1/2 in. 4-bolt |
| C | 2-1/2 in. 4-bolt |
| D | 2-1/2 in. 4-bolt |
| E | 2-1/2 in. 4-bolt |
| F | 2-1/2 in. 4-bolt |
| G | 2-1/2 in. 4-bolt |
| H | 2-1/2 in. 4-bolt |



**Manifold with 4 in. end flanges mounted parallel to intake
CCW impeller rotation**
(See page 10 for manifold dimensions not shown)