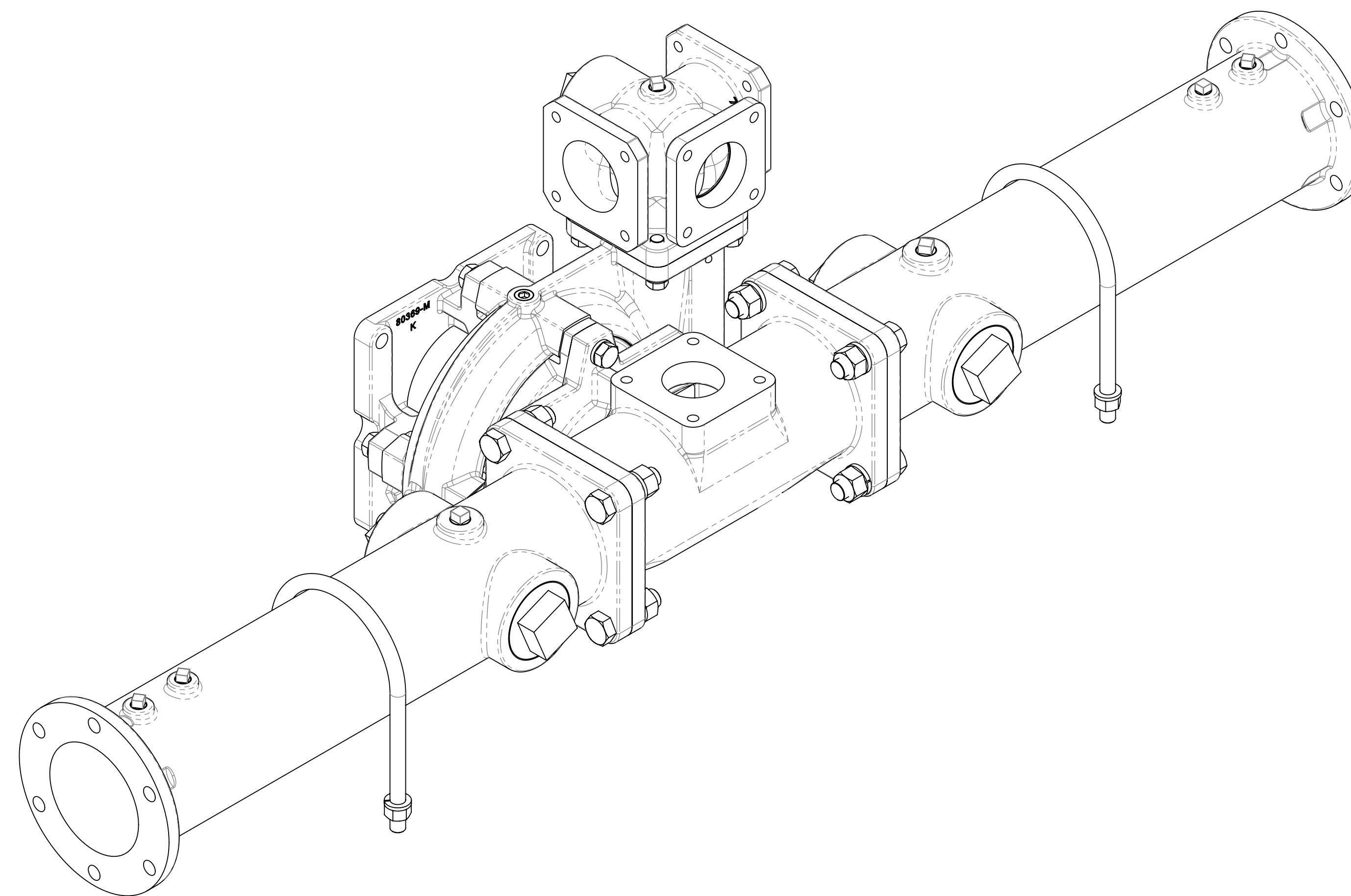# CLS Series Fire Pump Dimensional Drawings

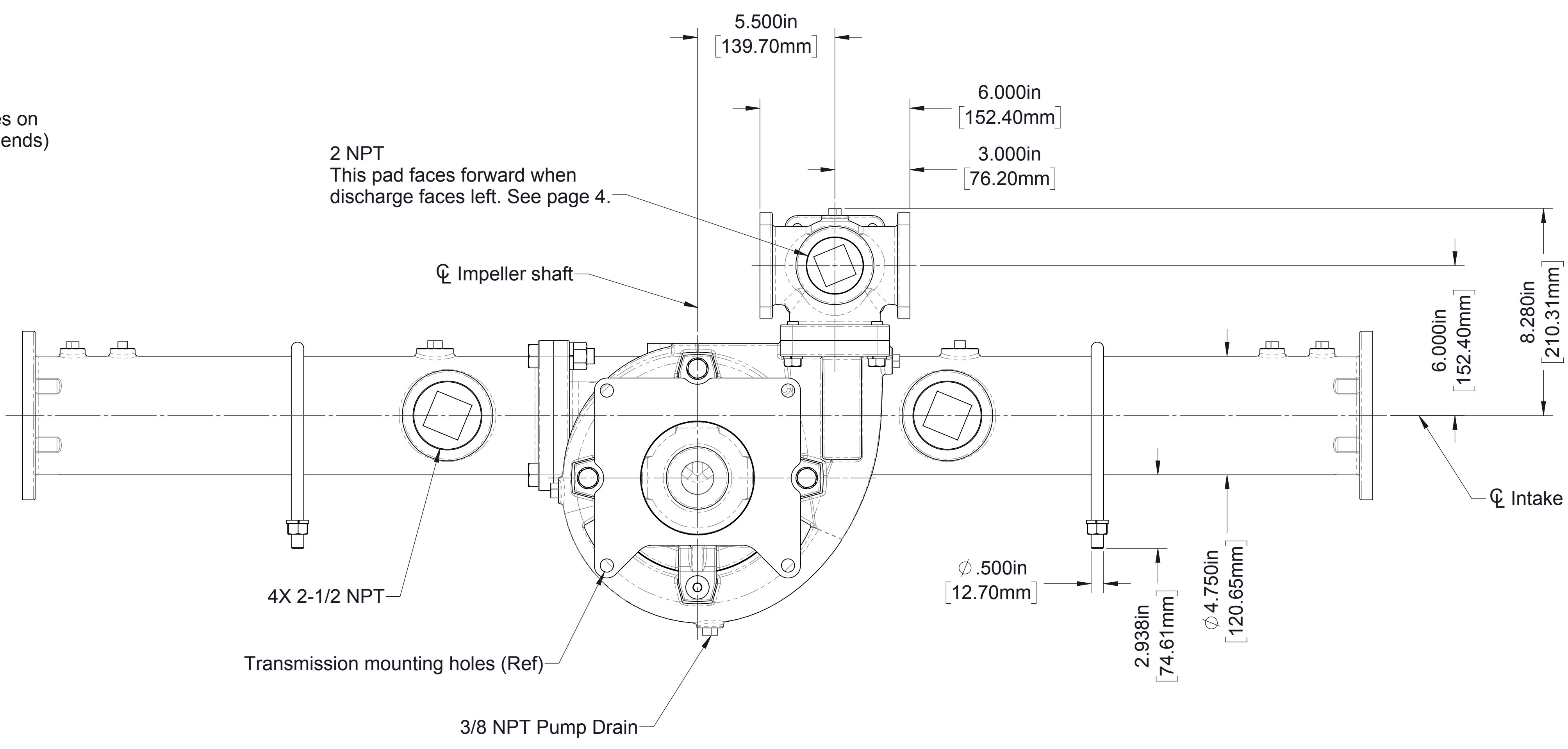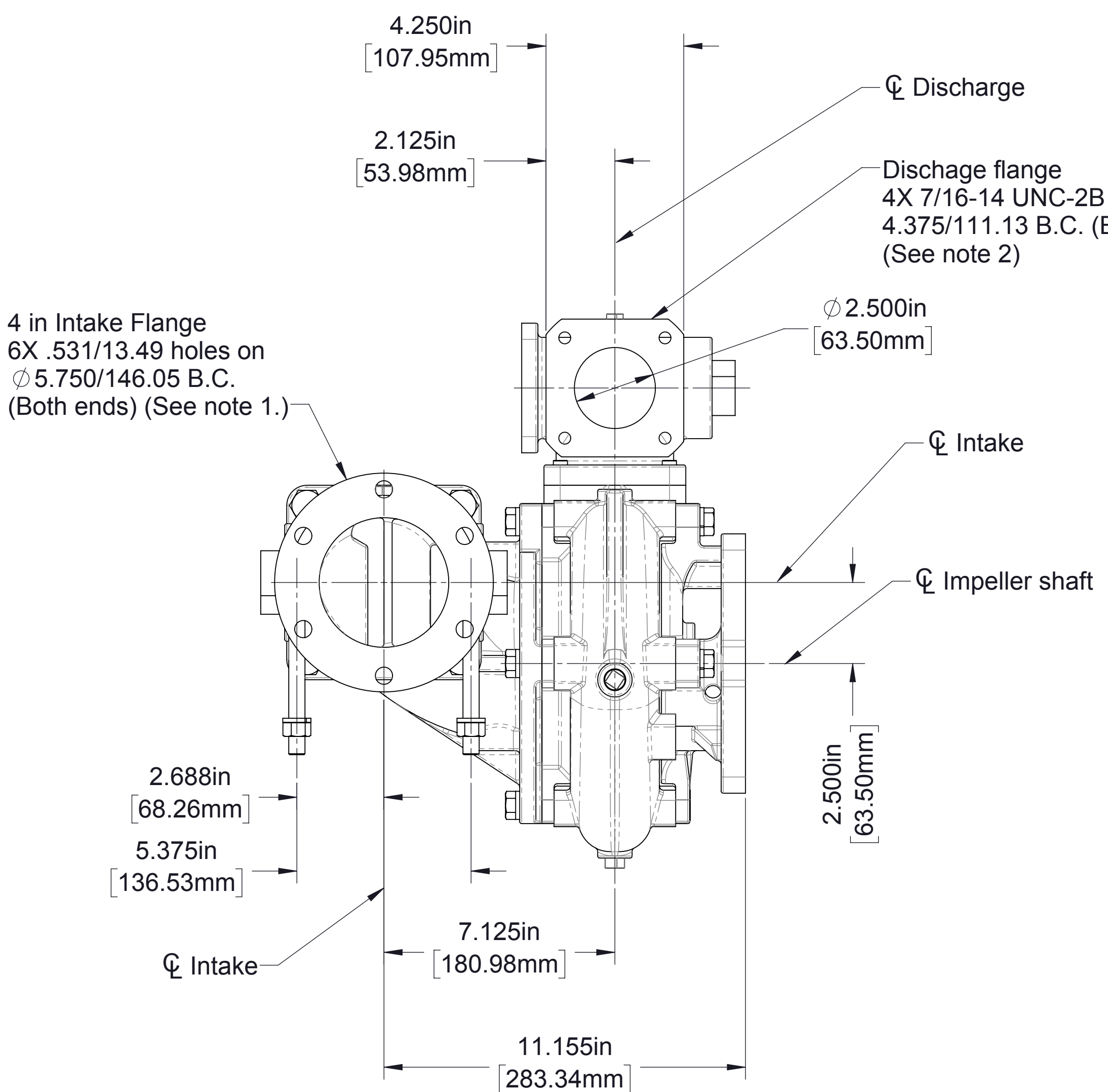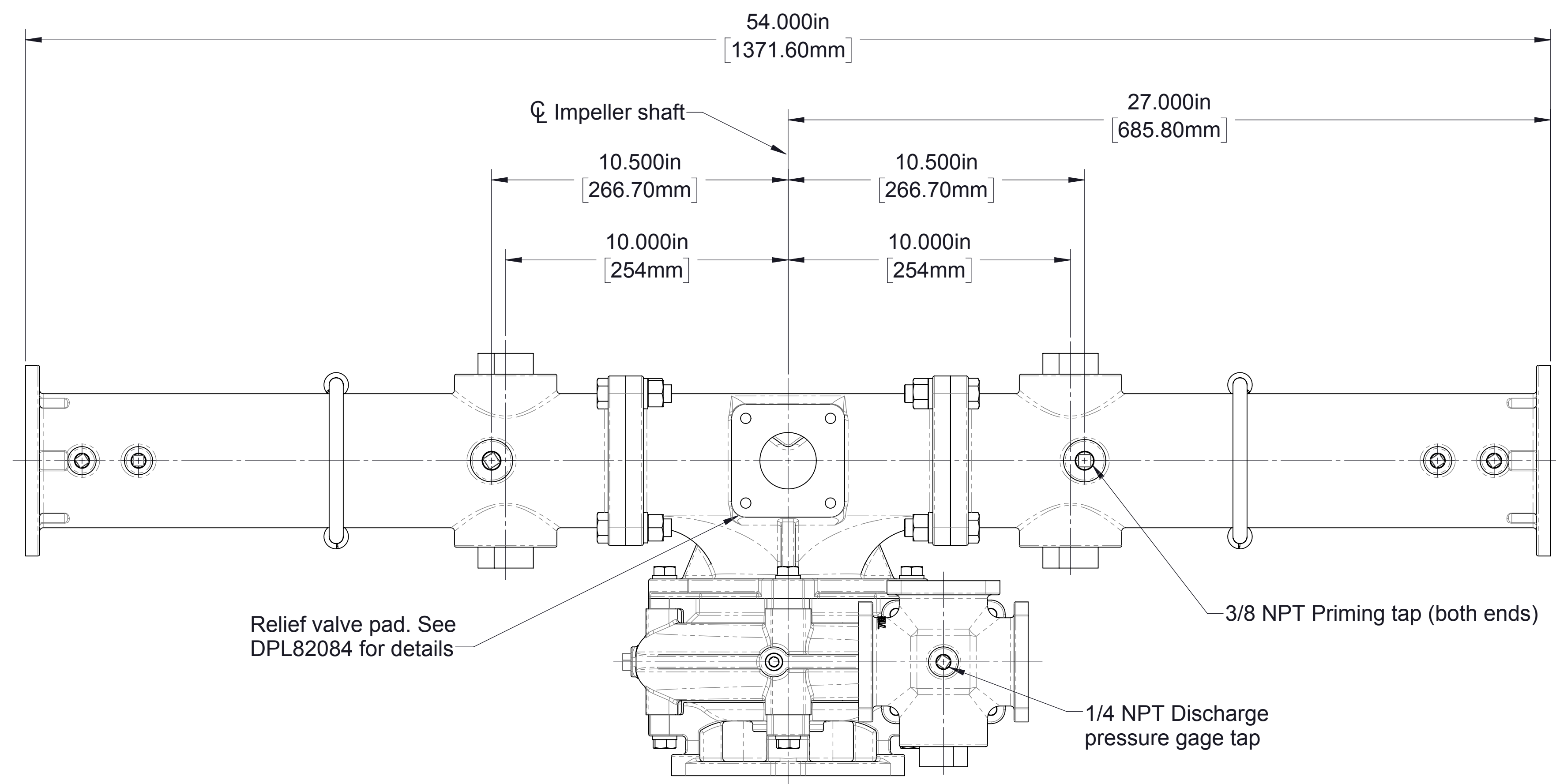| Transmission				Pump			See Page			
								Pump and Transmission		
Type	Driveline	Pump Mounting on Transmission	Input Rotation (1)	Impeller Rotation (2)	Pump and Transmission Model	Basic Pump Dimensions	Dimensions	Available		
								Pump Discharge Positions	Transmission Mounting Positions	
K Series Two Gear, PTO Driven	Input Shaft Only	Opposite Input Shaft	CW	CW	CLSK	2-3	4	6	7	
P Series Chain Drive, PTO Driven	Input Shaft Only	Input Shaft Side	CW	CW	CLSPA	2-3	5	6	7	

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)
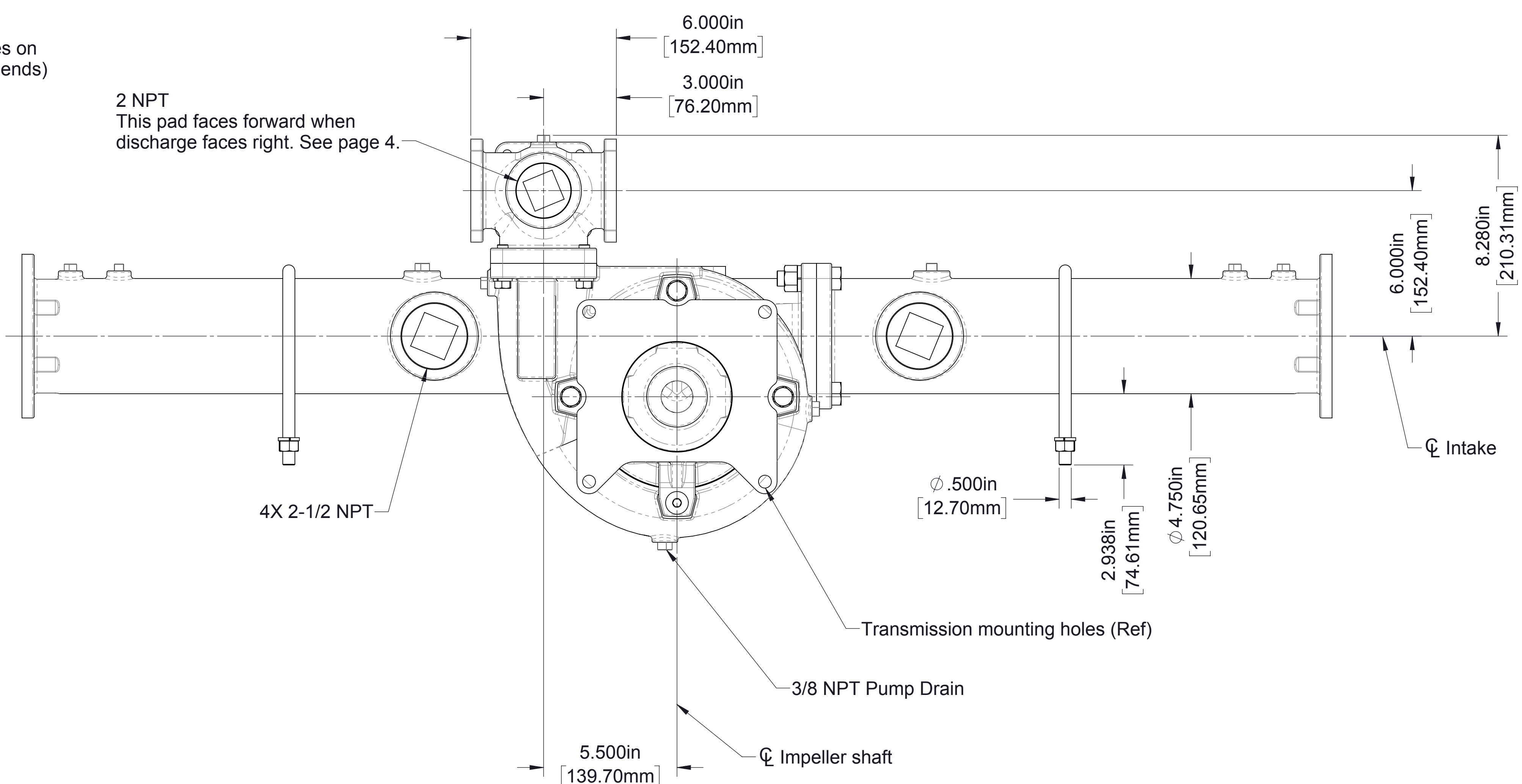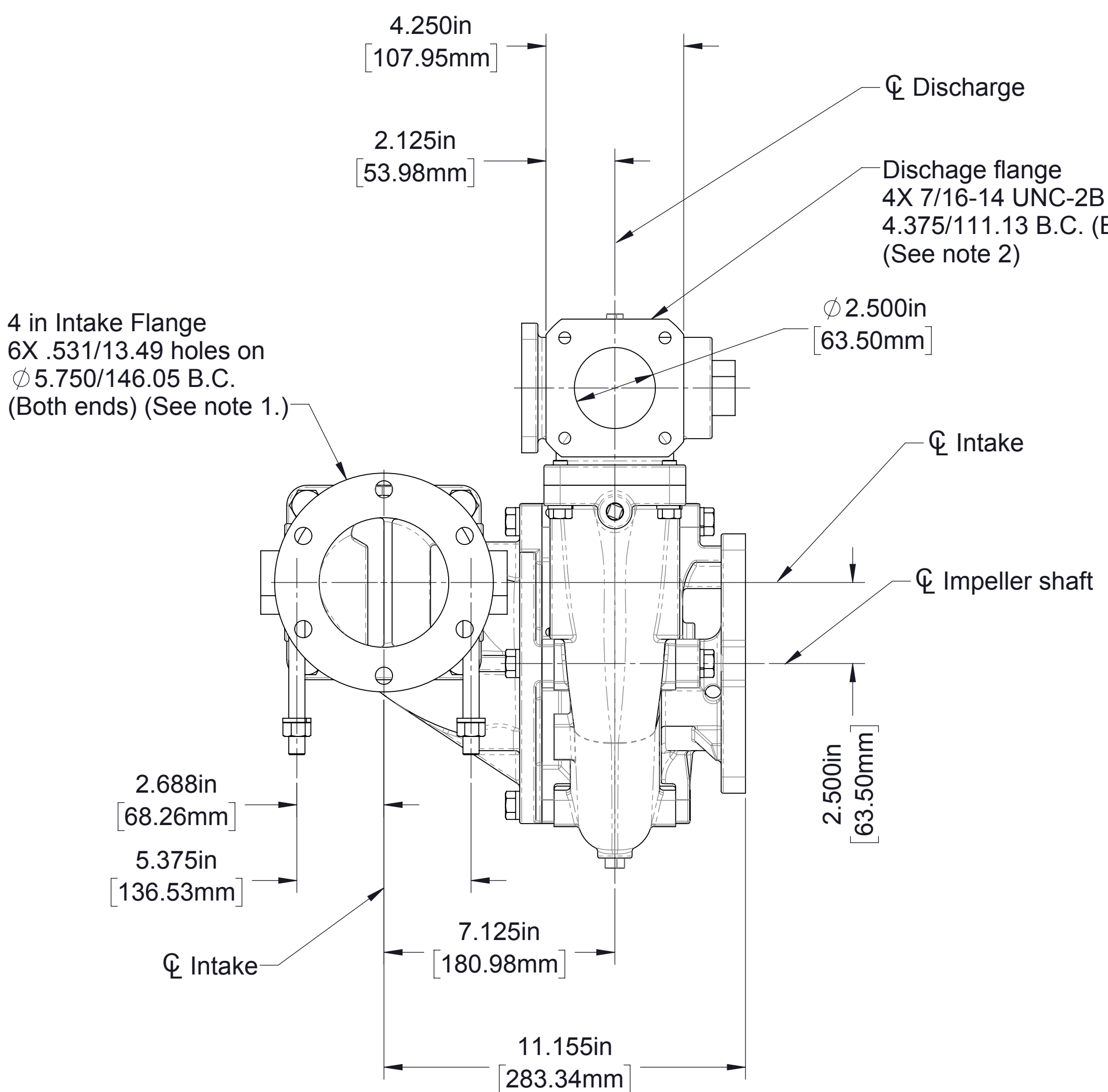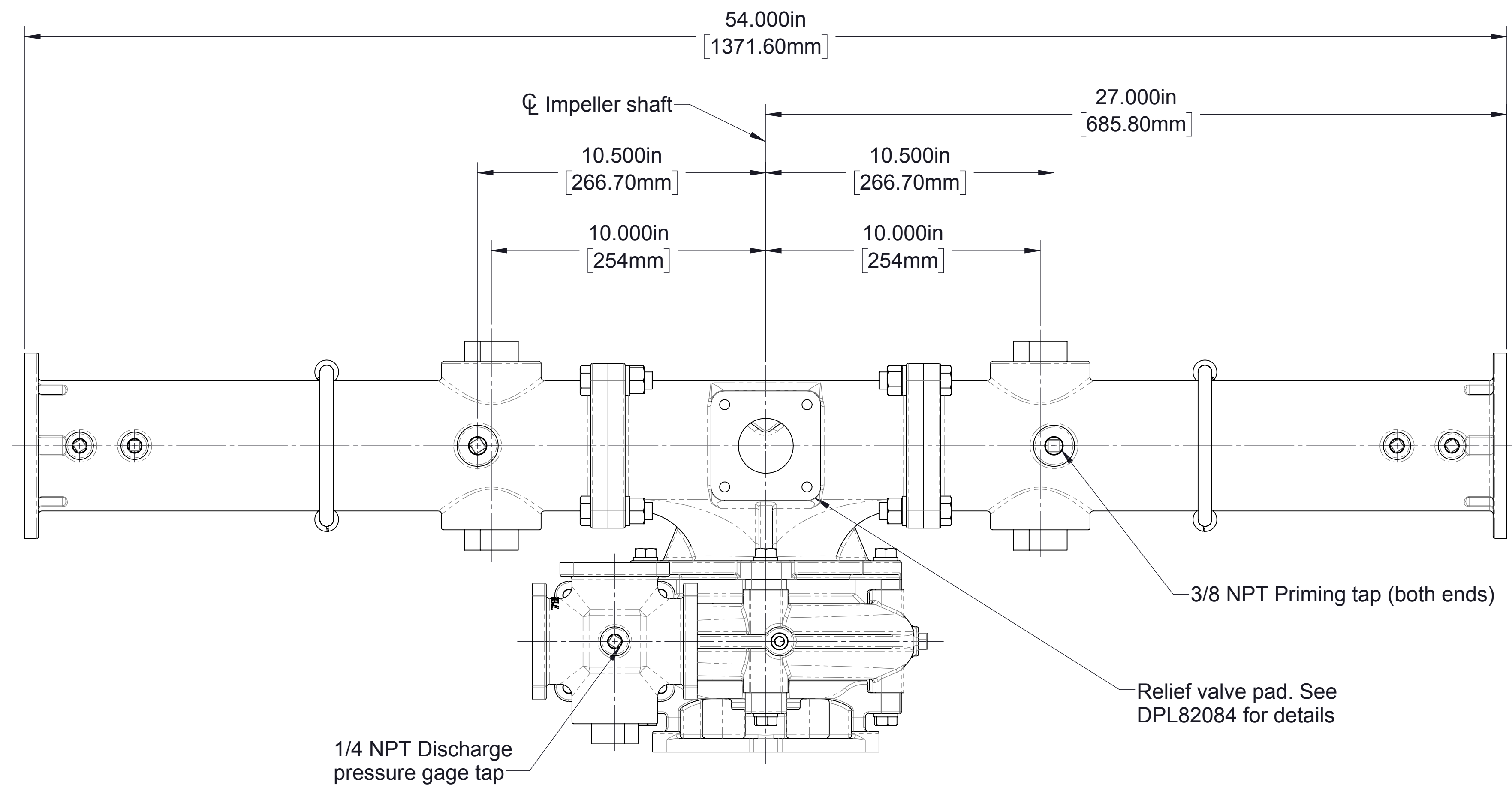

Note: Pump must be installed in accordance with Waterous Installation Instructions.

54.000in
[1371.60mm]

27.000in
[685.80mm]

℄ Impeller shaft

10.500in
[266.70mm]

10.500in
[266.70mm]

10.000in
[254mm]

10.000in
[254mm]

Relief valve pad. See
DPL82084 for details

3/8 NPT Priming tap (both ends)

1/4 NPT Discharge
pressure gage tap

4.250in
[107.95mm]

2.125in
[53.98mm]

℄ Discharge

Dischage flange
4X 7/16-14 UNC-2B holes on
4.375/111.13 B.C. (Both ends)
(See note 2)

4 in Intake Flange
6X .531/13.49 holes on
⌀ 5.750/146.05 B.C.
(Both ends) (See note 1.)

⌀ 2.500in
[63.50mm]

℄ Intake

℄ Impeller shaft

2.688in
[68.26mm]

5.375in
[136.53mm]

℄ Intake

7.125in
[180.98mm]

2.500in
[63.50mm]

11.155in
[283.34mm]

5.500in
[139.70mm]

6.000in
[152.40mm]

3.000in
[76.20mm]

2 NPT
This pad faces forward when
discharge faces left. See page 4.

℄ Impeller shaft

8.280in
[210.31mm]

6.000in
[152.40mm]

℄ Intake

4X 2-1/2 NPT

⌀ .500in
[12.70mm]

Transmission mounting holes (Ref)

3/8 NPT Pump Drain

2.938in
[74.61mm]

⌀ 4.750in
[120.65mm]

Notes:
1. See drawing DPL81867 for optional intake fittings
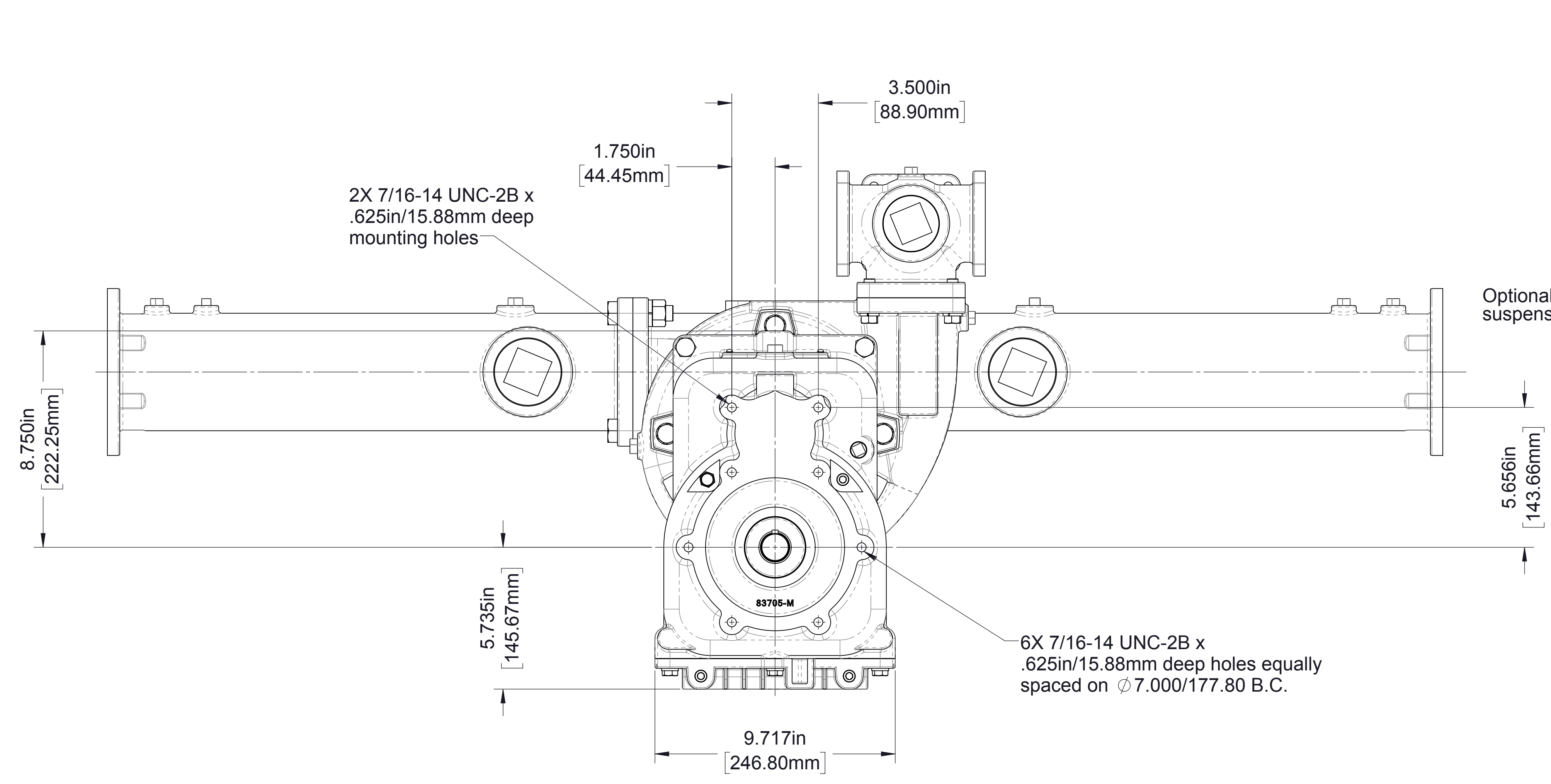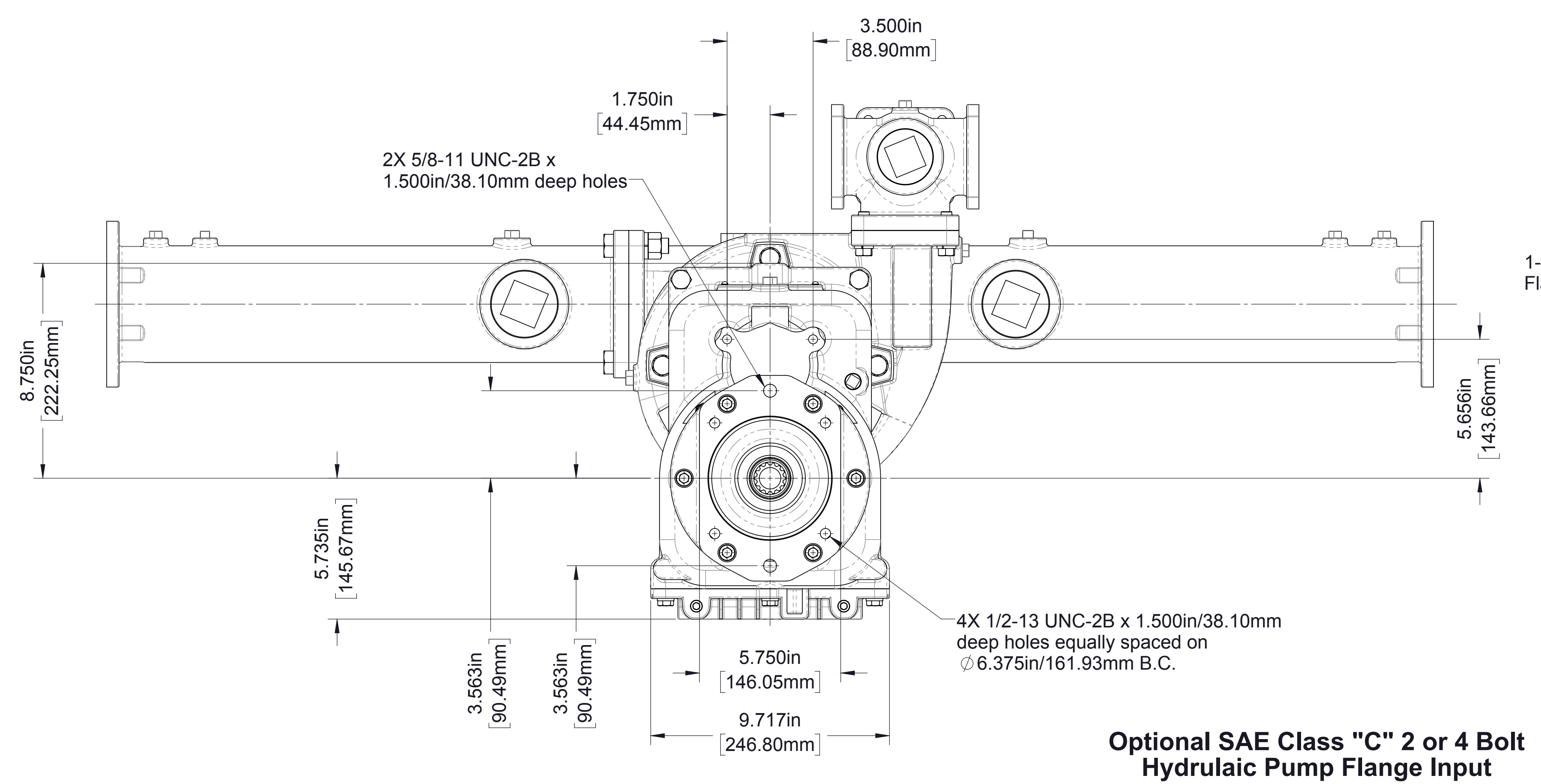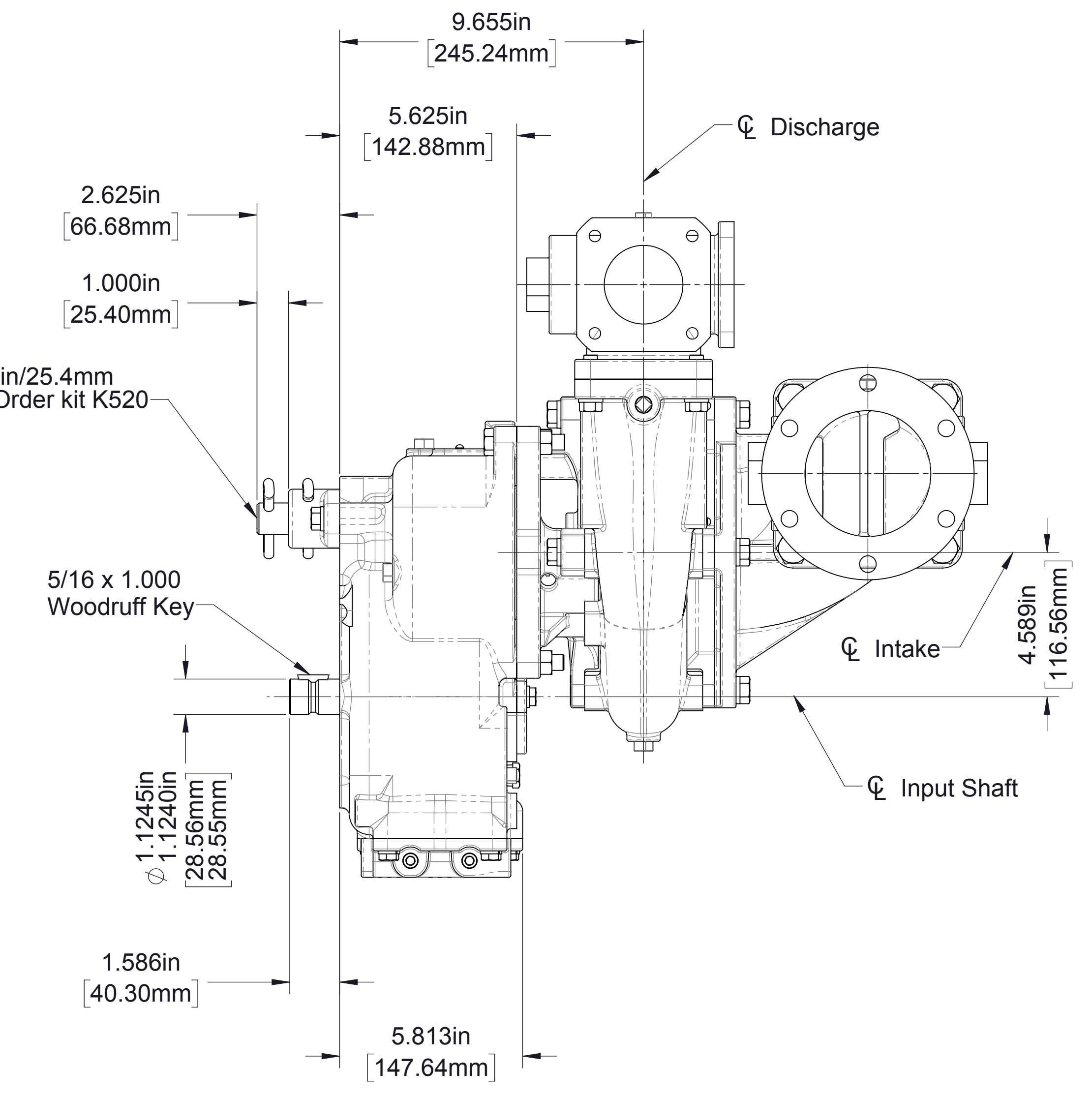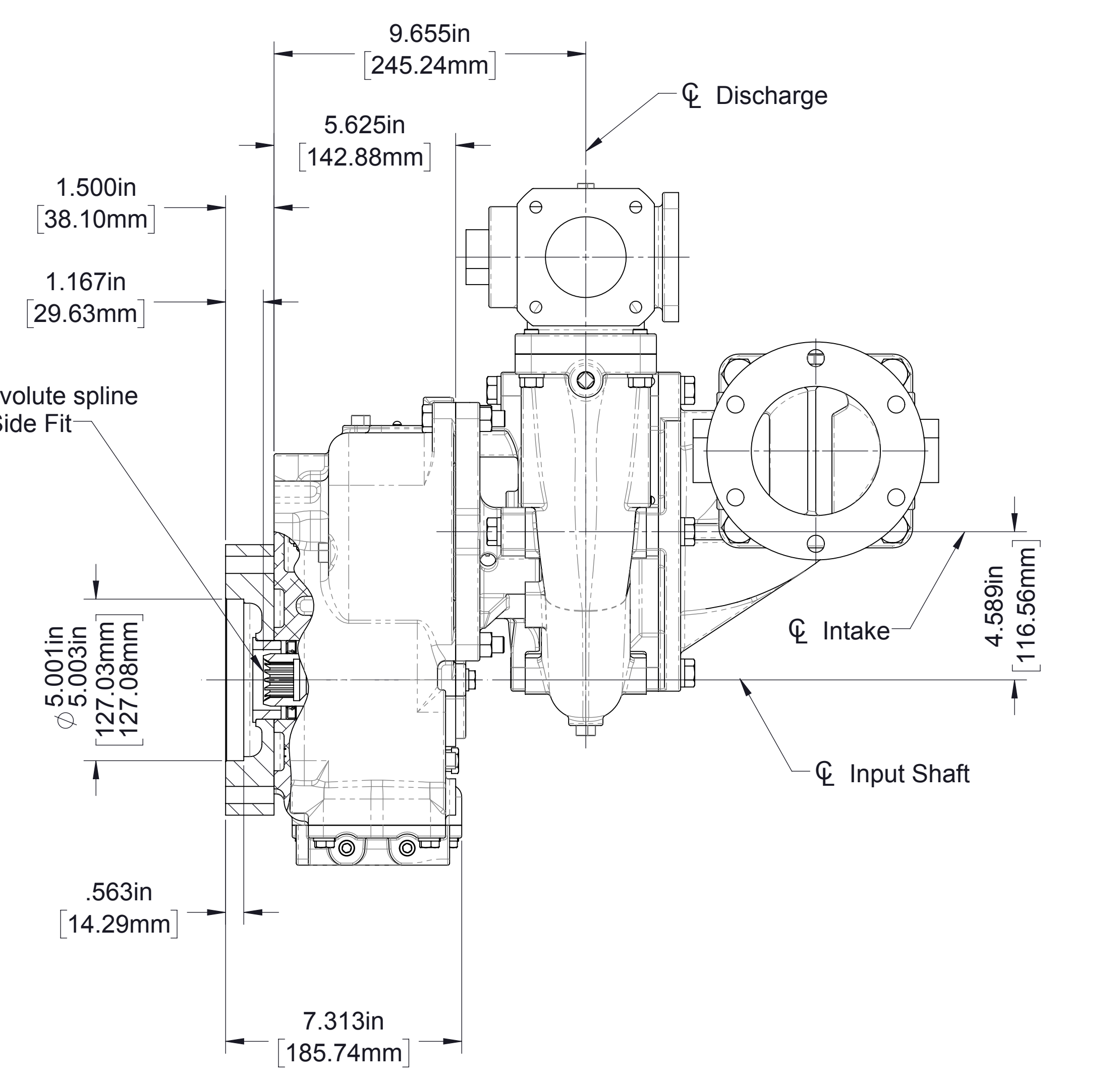2. See drawing DPL82085 for information on 2-1/2 in discharge fittings

CLS Body Dimensions

CW Impeller rotation

54.000in
[1371.60mm]

℄ Impeller shaft

27.000in
[685.80mm]

10.500in
[266.70mm]

10.500in
[266.70mm]

10.000in
[254mm]

10.000in
[254mm]

3/8 NPT Priming tap (both ends)

Relief valve pad. See
DPL82084 for details

1/4 NPT Discharge
pressure gage tap

4.250in
[107.95mm]

2.125in
[53.98mm]

℄ Discharge

Dischage flange
4X 7/16-14 UNC-2B holes on
4.375/111.13 B.C. (Both ends)
(See note 2)

∅ 2.500in
[63.50mm]

4 in Intake Flange
6X .531/13.49 holes on
∅ 5.750/146.05 B.C.
(Both ends) (See note 1.)

℄ Intake

℄ Impeller shaft

2.688in
[68.26mm]

5.375in
[136.53mm]

℄ Intake

7.125in
[180.98mm]

2.500in
[63.50mm]

11.155in
[283.34mm]

6.000in
[152.40mm]

3.000in
[76.20mm]

2 NPT
This pad faces forward when
discharge faces right. See page 4.

8.280in
[210.31mm]

6.000in
[152.40mm]

℄ Intake

4X 2-1/2 NPT

∅ .500in
[12.70mm]

2.938in
[74.61mm]

∅ 4.750in
[120.65mm]

Transmission mounting holes (Ref)

3/8 NPT Pump Drain

5.500in
[139.70mm]

℄ Impeller shaft

CLS Body Dimensions

CCW Impeller rotation

Notes:
1. See drawing DPL81867 for optional intake fittings
2. See drawing DPL82085 for information on 2-1/2 in discharge fittings

DPL82067

Keyed Input (top left)

2X 7/16-14 UNC-2B x .625in/15.88mm deep mounting holes

1.750in [44.45mm]

3.500in [88.90mm]

8.750in [222.25mm]

5.656in [143.66mm]

5.735in [145.67mm]

83705-M

6X 7/16-14 UNC-2B x .625in/15.88mm deep holes equally spaced on ⌀7.000/177.80 B.C.

9.717in [246.80mm]

Keyed Input

Top right

9.655in [245.24mm]

5.625in [142.88mm]

Ȼ Discharge

2.625in [66.68mm]

1.000in [25.40mm]

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

5/16 x 1.000 Woodruff Key

4.589in [116.56mm]

Ȼ Intake

Ȼ Input Shaft

⌀ 1.1245in / 1.1240in [28.56mm / 28.55mm]

1.586in [40.30mm]

5.813in [147.64mm]

Bottom left

2X 5/8-11 UNC-2B x 1.500in/38.10mm deep holes

1.750in [44.45mm]

3.500in [88.90mm]

8.750in [222.25mm]

5.656in [143.66mm]

5.735in [145.67mm]

3.563in [90.49mm]

3.563in [90.49mm]

5.750in [146.05mm]

4X 1/2-13 UNC-2B x 1.500in/38.10mm deep holes equally spaced on ⌀6.375in/161.93mm B.C.

9.717in [246.80mm]
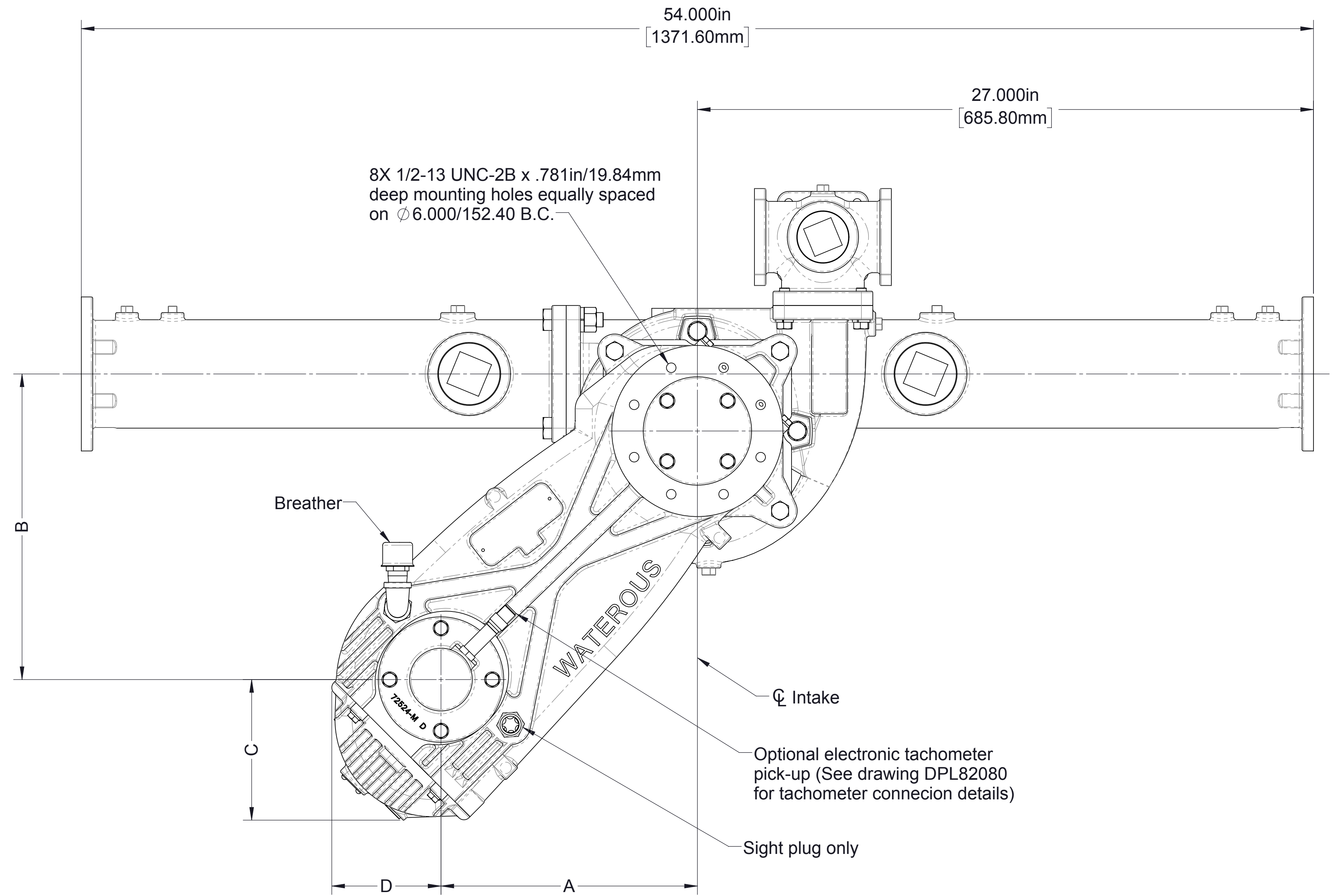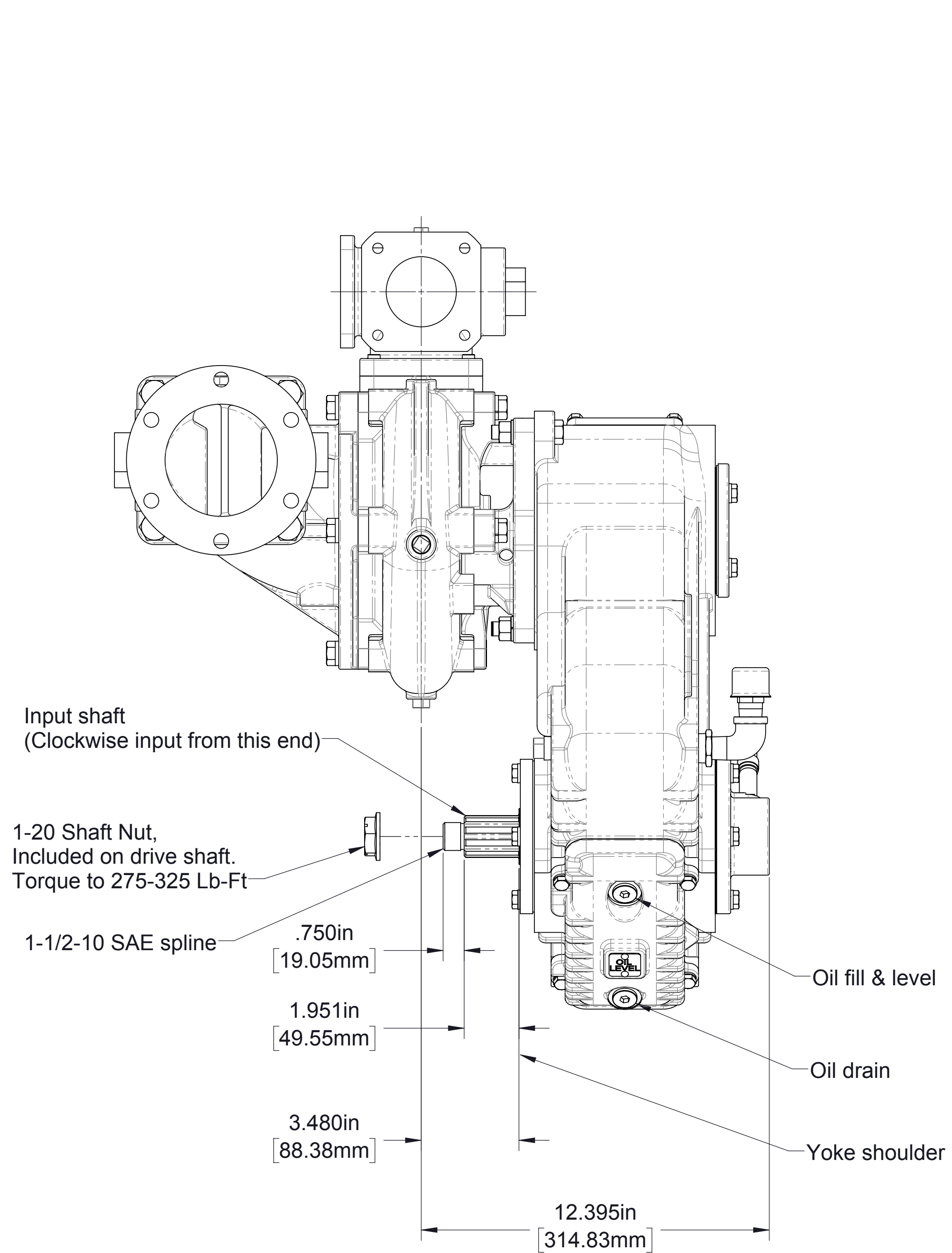
Optional SAE Class "C" 2 or 4 Bolt Hydrulaic Pump Flange Input

Bottom right

9.655in [245.24mm]

5.625in [142.88mm]

Ȼ Discharge

1.500in [38.10mm]

1.167in [29.63mm]

1-1/4-14 Involute spline Flat Root Side Fit

⌀ 5.001in / 5.003in [127.03mm / 127.08mm]

4.589in [116.56mm]

Ȼ Intake

Ȼ Input Shaft

.563in [14.29mm]
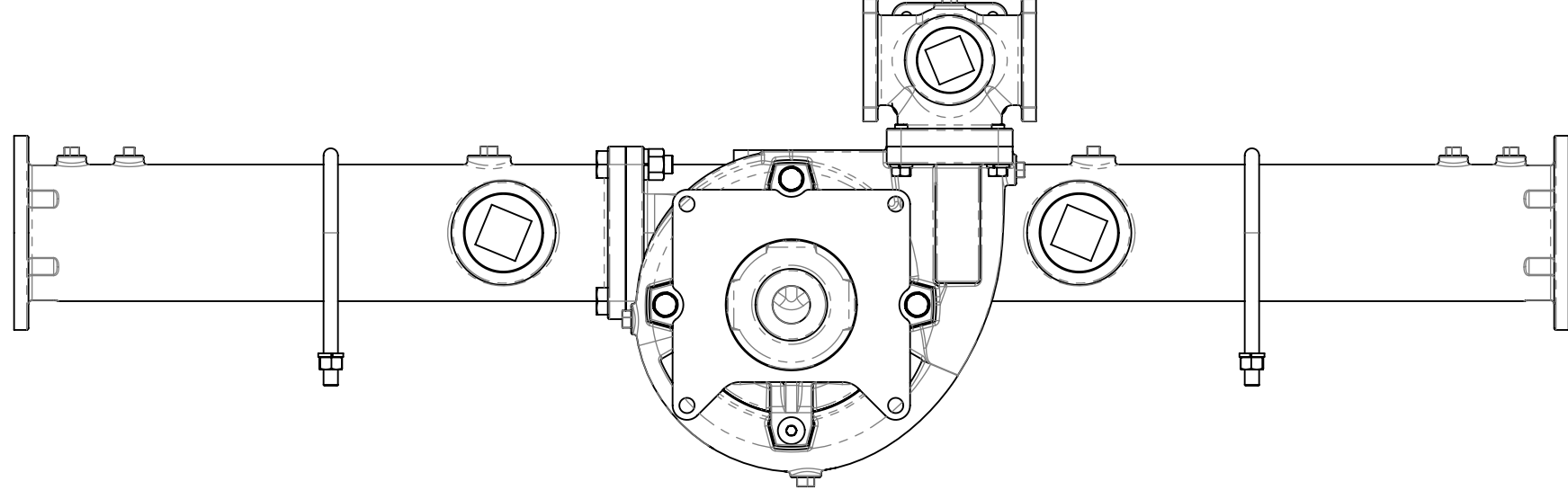
7.313in [185.74mm]

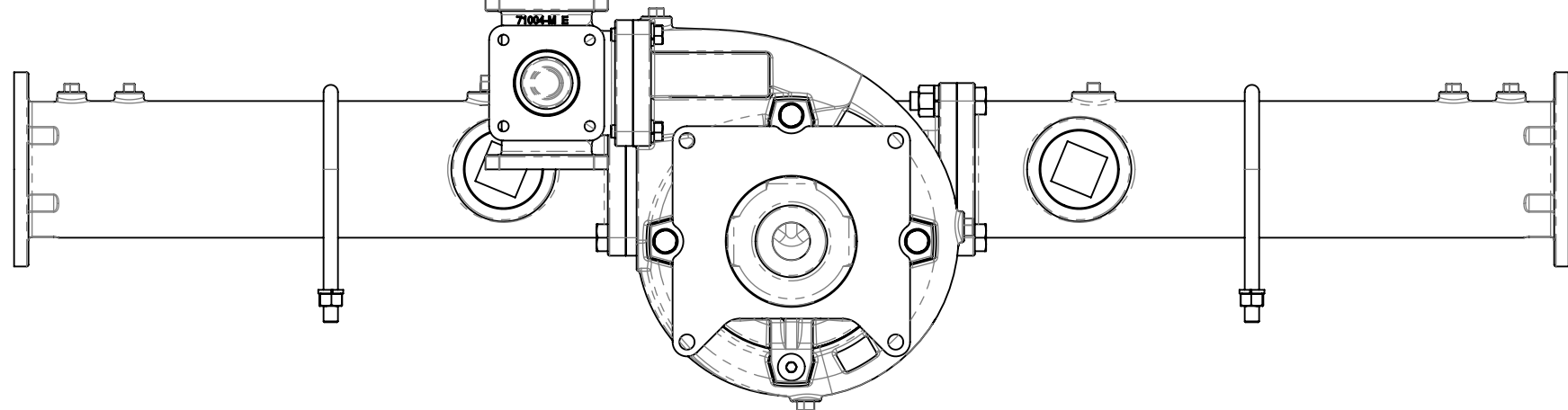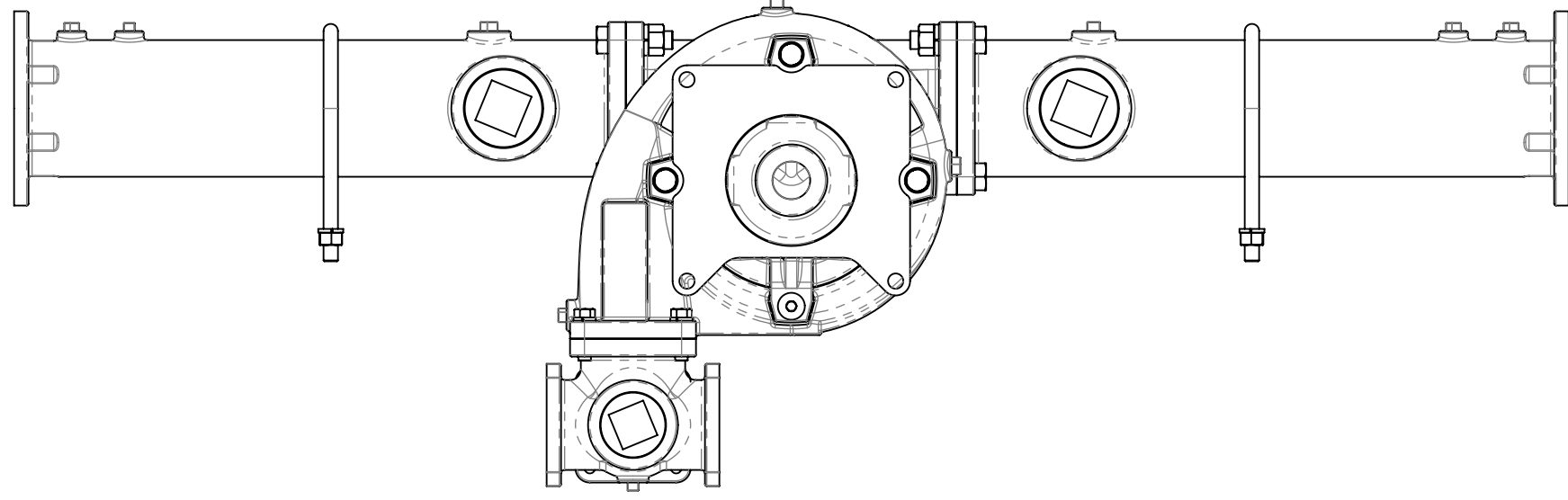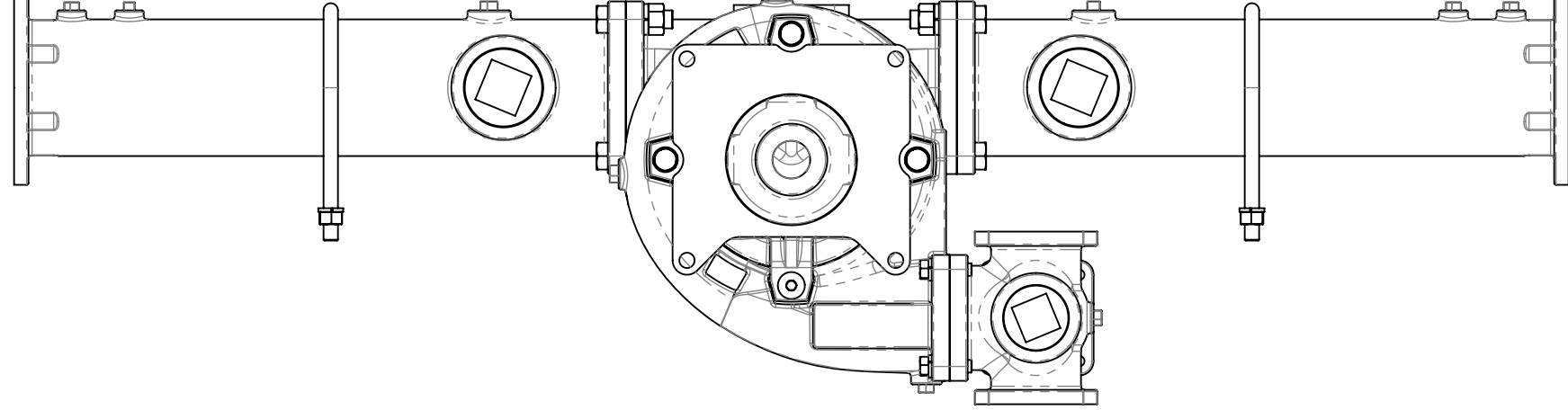## Bottom center title

Model CLS with K
Clockwise input shown
(CLSK in vertical mounting position shown, See page 7 for mounting positions)

54.000in
[1371.60mm]

27.000in
[685.80mm]

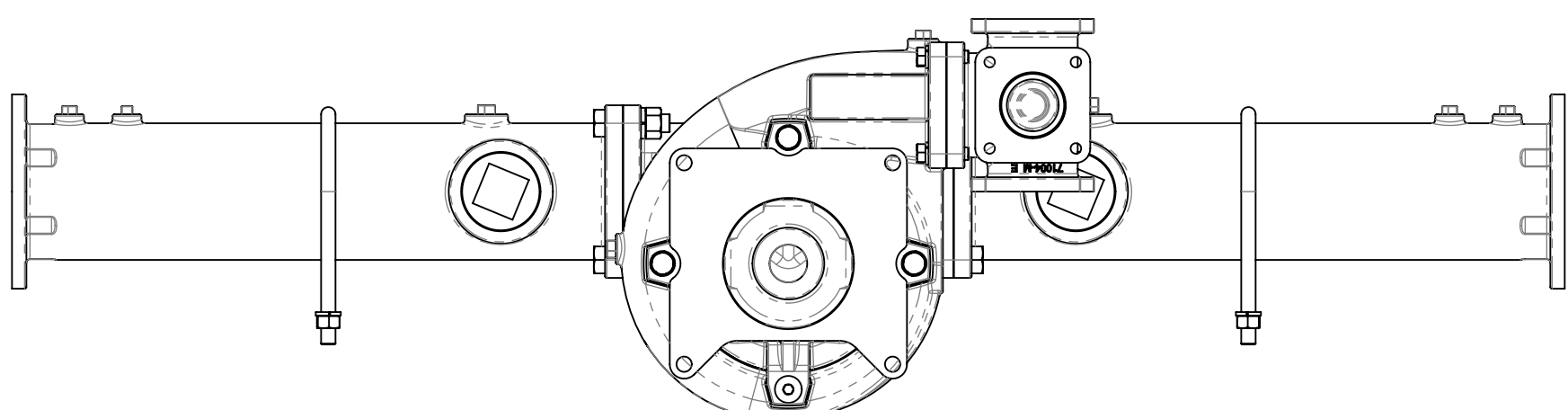8X 1/2-13 UNC-2B x .781in/19.84mm
deep mounting holes equally spaced
on ∅ 6.000/152.40 B.C.

Breather

WATEROUS

℄ Intake

Optional electronic tachometer
pick-up (See drawing DPL82080
for tachometer connecion details)

Sight plug only

B

C

D

A

Input shaft
(Clockwise input from this end)

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]

3.480in
[88.38mm]

12.395in
[314.83mm]

Oil fill & level

Oil drain

Yoke shoulder

| 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	13.443in 341.45mm	6.111in 155.22mm	4.737in 120.32mm
		1.90	11.269in 286.24mm	13.424in 340.97mm	6.130in 155.70mm	4.755in 120.79mm
		2.10	11.239in 285.46mm	13.394in 340.21mm	6.160in 156.46mm	4.786in 121.56mm

Model CLS with PA
Clockwise input
See drawing DPL82080 for additional details of PA transmission

Discharge Position		Available with:	
		Transmission Series	
		K	PA
			Vertical
Up		Yes	Yes
Left		Yes	No
Down		Yes	No
Right		Yes	No
Clockwise (CW) Input rotation			

Discharge Position		Available with:	
		Transmission Series	
		K	PA
			Vertical
Up		Yes	No
Left		Yes	No
Down		Yes	No
Right		Yes	No
Counterclockwise (CCW) Input rotation			

**Available pump discharge positions as
viewed from transmission end of pump**

	Vertical	Inverted	Left	Right
K				

	Vertical (Transmision Input right of pump intake)
PA	
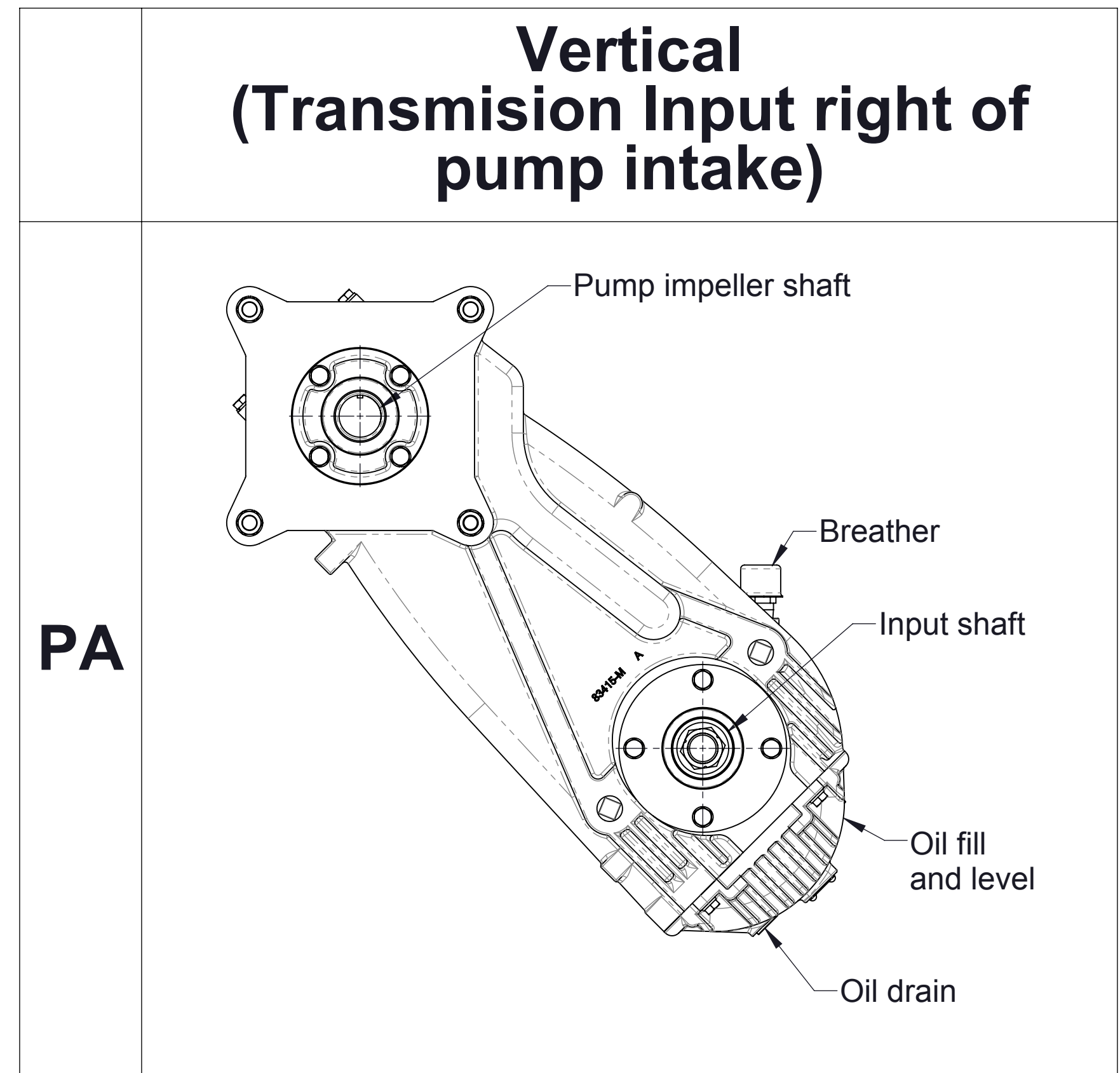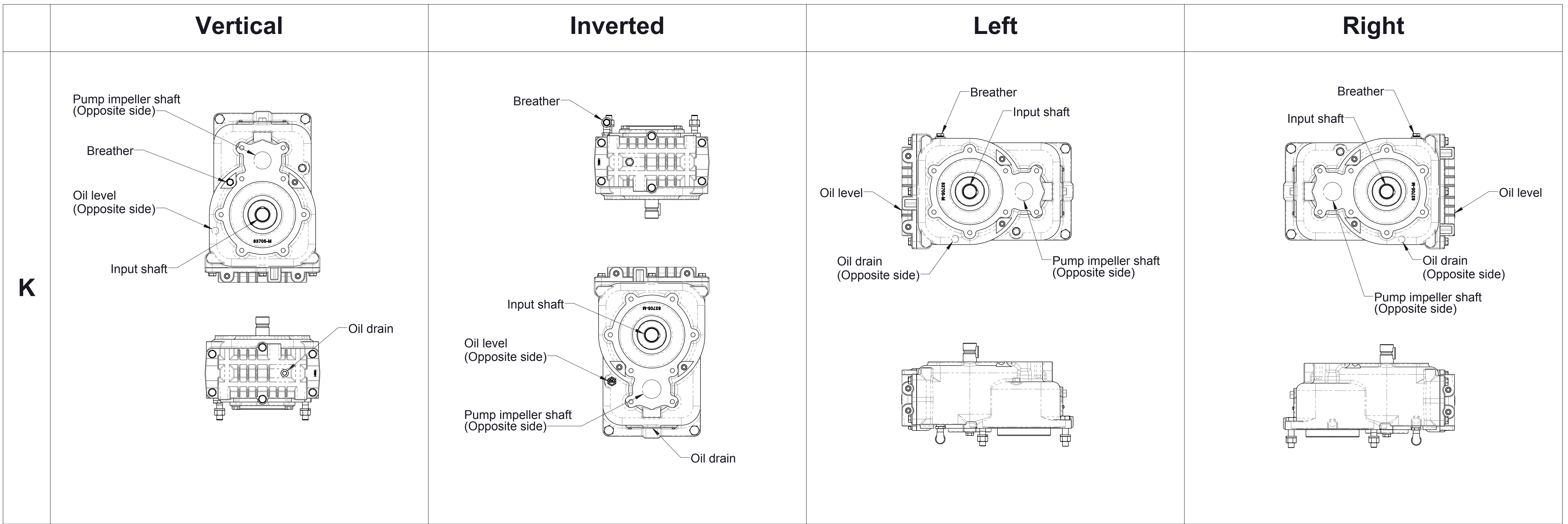
**Available transmission mounting positions
as viewed from transmission input shaft**