

# wright flow

## TECHNOLOGIES

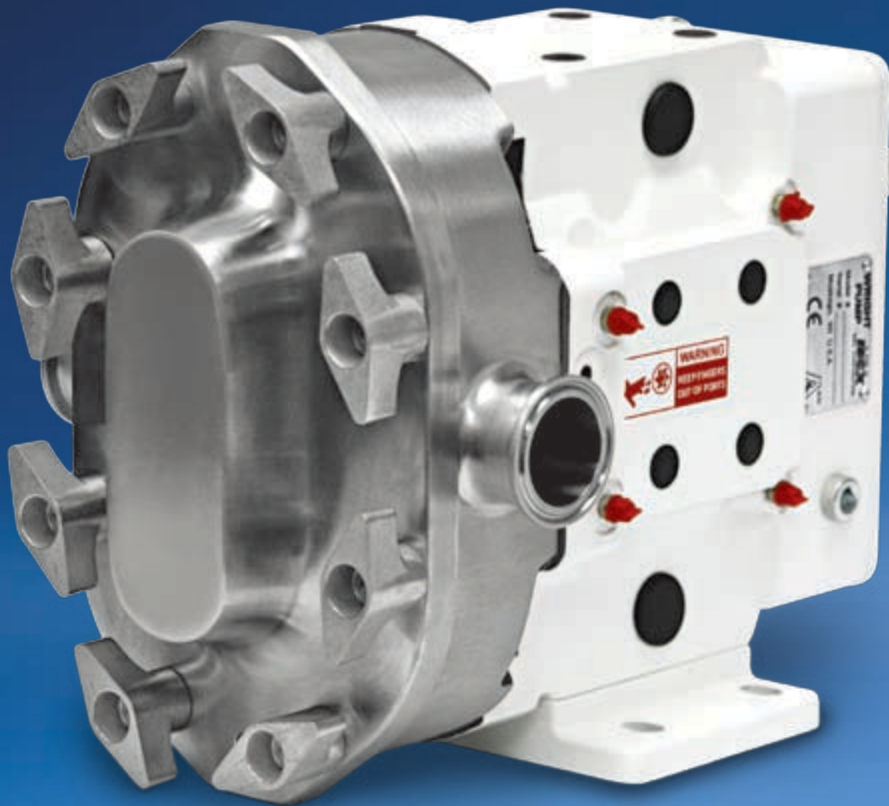


Capacity to 450 GPM/102 M<sup>3</sup>/hr

Pressure to 200 PSI/14 Bar (Model 0450 to 400 PSI/27 Bar)

Viscosity to 910,000 SSU (200,000 cPs)

Temperature -40° to 300° F (-40° to 150° C)



### SANITARY POSITIVE DISPLACEMENT PUMPS

#### TRA®10 Series



## TRA<sup>®</sup> 10 Pump Series



### Typical Applications



- ▶ **Dairy:** milk, cream, curds, butter, soft cheese, yogurt, butter, margarine, ice cream
- ▶ **Bakery:** yeast, dough, fruit filling, icing, fats and oils
- ▶ **Meats:** sausage filling, fats, broths, gelatins, pet food
- ▶ **Canned Foods:** potato salad, baby food, soups, stews, tomatoes, relishes, pudding, dressings, mayonnaise, jams and jellies
- ▶ **Beverages:** beer, mash, wort, fruit juices, fruit concentrate
- ▶ **Candy:** sugars, chocolate, cocoa butter, corn syrup, gelatin
- ▶ **Flavorings:** syrups and concentrates
- ▶ **Dressings:** Mayonnaise and other prepared sauces
- ▶ **Cosmetics:** creams, lotions, jellies, shampoos, emulsions, toothpaste
- ▶ **Industrial:** automotive paints, inks, latex, polymers

The reliability of Wright Flow Technologies positive displacement circumferential piston pumping principle has been proven over many decades. Its robust design and easy cleanability make it applicable for all sanitary fluids.

Wright Flow Technologies gentle action on shear-sensitive liquids, or slurries with soft solids, makes them the preferred technology for all areas of food processing, beverage and cosmetic manufacturing, worldwide.

### Construction

- ▶ Pump casing is 316 Stainless Steel, interior finished to 3-A standards.
- ▶ Rotors are special "Wright Flow Technologies 808<sup>®</sup>" non-galling, nickel-based alloy. Wright Flow Technologies manufactures this material in its own foundry for maximum quality control.
- ▶ Twin wing rotors are standard, with single wing rotors for large solids optional.
- ▶ One-piece 316L stainless steel shafts standard on models 0060, 0150 & 0180. High-strength 17-4 PH shafts standard on models 0300, 0450, 0600, 1300, 2200 & 3200.
- ▶ Powder-coated gear case standard (FDA white, RAL 9003). Stainless steel gear case optional on models 0060, 0150, 0180, 0300, 0450, 0600 & 1300.
- ▶ Helical timing gears minimize operating noise.
- ▶ Seal options include single O-ring seal, single mechanical seal, double O-ring seal with flush, or double mechanical seal with flush.
- ▶ Four-way mounting allows horizontal or vertical porting and provides mounting flexibility.



Pumps available  
with CE mark.

## TRA®10 Pump Performance

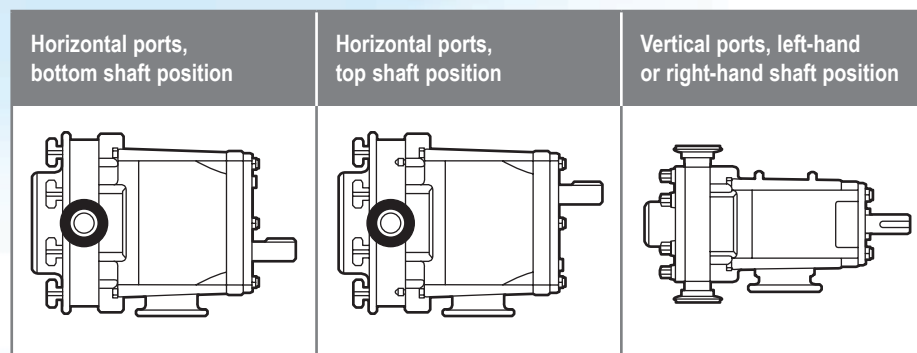
TRA®10 Model	Nominal Capacity		Displacement per Revolution		Maximum Pressure		Temperature Range		Standard Ports		Optional Ports		Maximum Speed (RPM)
	GPM	M <sup>3</sup> /hr	Gal.	Liter	PSI	Bar	Deg. F	Deg. C	in.	mm	in.	mm	
0060	6.0	1.3	0.008	0.030	200	14	-40° to 300°	-40° to 150°	1.5	38	1.0	25.4	800
0150	9.0	2.0	0.014	0.052	200	14	-40° to 300°	-40° to 150°	1.5	38	—	—	700
0180	17.0	3.8	0.03	0.11	200	14	-40° to 300°	-40° to 150°	1.5	38	2.0	51.0	600
0300	36.0	8.2	0.06	0.23	200	14	-40° to 300°	-40° to 150°	1.5	38	2.0	51.0	600
0450*	59.0	13.3	0.10	0.38	400	27	-40° to 300°	-40° to 150°	2.0	51	—	—	600
0600	90.0	20.4	0.15	0.58	200	14	-40° to 300°	-40° to 150°	2.5	64	3.0	76.0	600
1300	150.0	34.1	0.25	0.96	200	14	-40° to 300°	-40° to 150°	3.0	76	4.0	102.0	600
2200	310.0	70.4	0.52	1.98	200	14	-40° to 300°	-40° to 150°	4.0	102	—	—	600
3200	450.0	102.0	0.75	2.85	200	14	-40° to 300°	-40° to 150°	6.0	152	—	—	600



(Example of Rectangular Flange model)

TRA®10 Rectangular Flange Model	Nominal Capacity		Displacement per Revolution		Maximum Pressure		Temperature Range		Inlet (W x L)		Outlet		Maximum Speed (RPM)
	GPM	M <sup>3</sup> /hr	Gal.	Liter	PSI	Bar	Deg. F	Deg. C	in.	mm	in.	mm	
0240	11.6	2.5	0.03	0.11	200	14	-40° to 300°	-40° to 150°	1.31 x 4.93	33.27 x 125.22	1.5	38.1	400
0340	24.0	5.4	0.06	0.22	200	14	-40° to 300°	-40° to 150°	1.75 x 6.75	44.50 x 171.45	2.0	50.8	400
0640	60.0	13.6	0.15	0.57	200	14	-40° to 300°	-40° to 150°	2.24 x 8.82	56.90 x 224.03	2.5	57.2	400
1340	100.0	22.7	0.25	0.96	200	14	-40° to 300°	-40° to 150°	2.97 x 9.25	75.44 x 234.95	3.0	76.2	400
2240	200.0	45.4	0.52	1.97	200	14	-40° to 300°	-40° to 150°	3.87 x 11.00	98.30 x 279.40	4.0	101.6	400

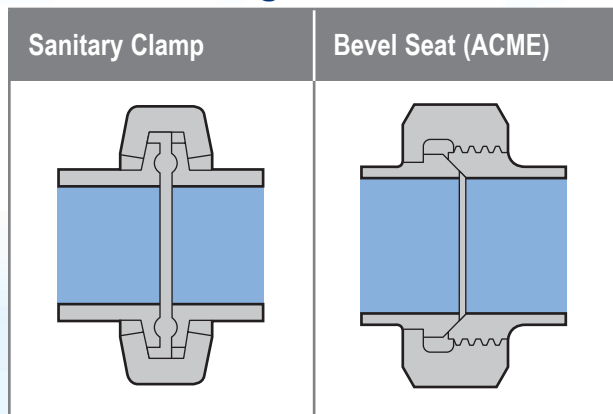
## Installation Positions 4-Way Mounting



## Performance Range

- ▶ **Capacity Range:** 0.1 to 450 gpm (0.02 to 102 m<sup>3</sup>/hr)
- ▶ **Pressure Range:** to 200 PSI/14 Bar  
\* Model 0450 to 400 PSI/27 Bar
- ▶ **Temperature Range:** -40°F to +300°F (-40°C to +150°C)  
*Note: Hot clearances required for high temp operation.*
- ▶ **Viscosity Range:** 28 to 910,000 SSU (1 to 200,000 cPs)  
*Note: Consult factory for applications greater than 910,000 SSU/200,000 cSt. Chocolate clearances available.*

## Port Configurations

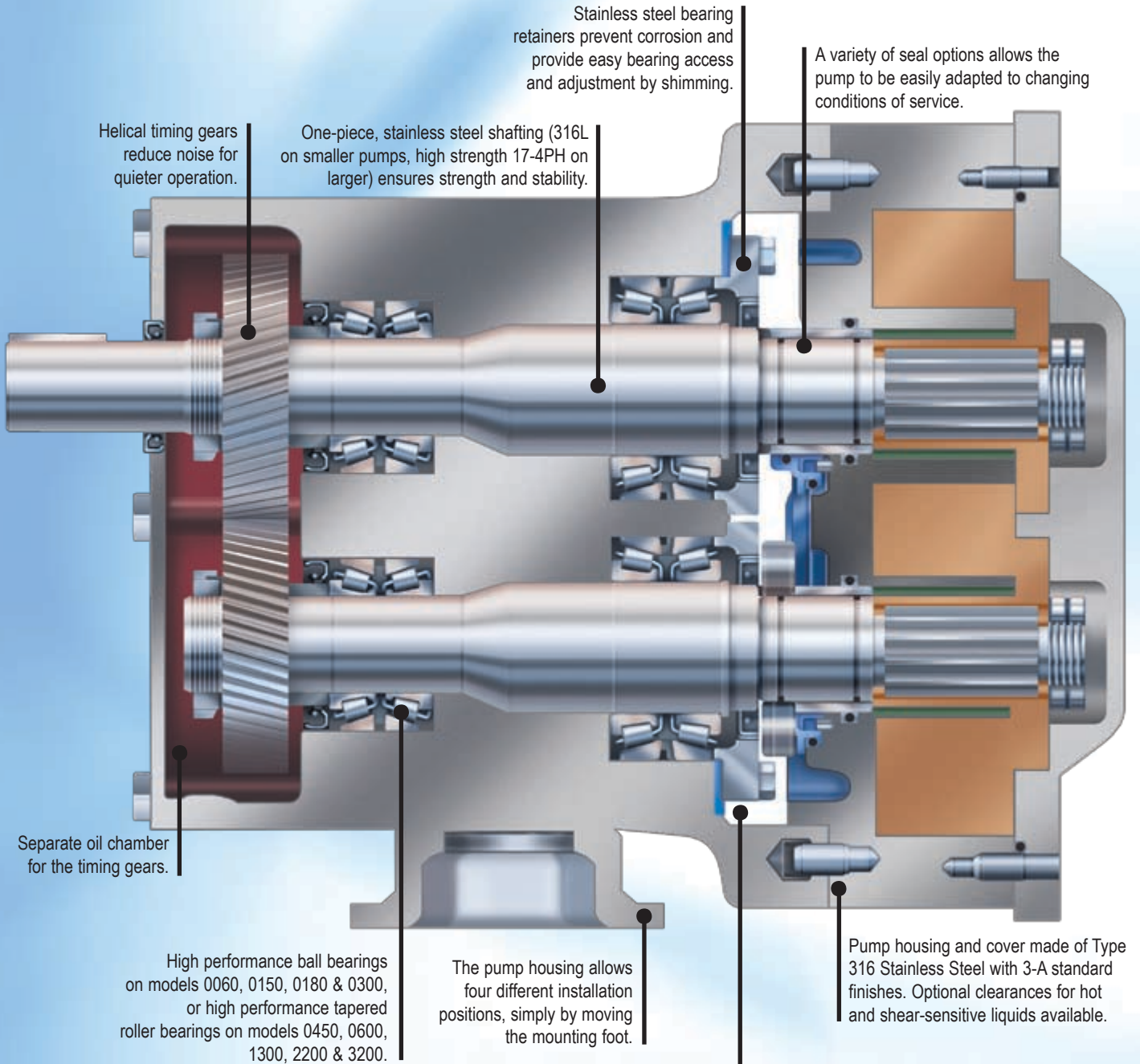


Other port configuration options include:

- ▶ DIN 11851
- ▶ RJT
- ▶ NPT
- ▶ SMS
- ▶ 150# or 300# flange
- ▶ Rectangular inlet flange

## Wright Flow Technologies TRA<sup>®</sup> 10 Features

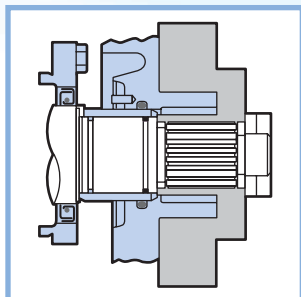
- ▶ Time tested and proven circumferential piston design.
  - ▶ Exceptional engineering and manufacturing quality.
  - ▶ Parts interchangeable with other major CPP manufacturer's pumps. Contact your local authorized Wright Flow Technologies distributor for details.
  - ▶ Helical timing gears instead of spur gears.
  - ▶ SiC/SiC seals instead of Carbon/Ceramic.
  - ▶ Powder coated casing (FDA white, RAL 9003), instead of painted iron.
  - ▶ Pump housing dowel pinned and bolted to gear case, instead of dowel pinned only, to protect seals on disassembly and simplify cleaning.
- Wright Flow Technologies offers added value, standard:**
- ▶ One-piece stainless steel shafts instead of welded bi-metal.



Forward bearings are protected from high fluid temperatures by the cooling air space between the pump head and gear case. This space also allows visual inspection of seal integrity.

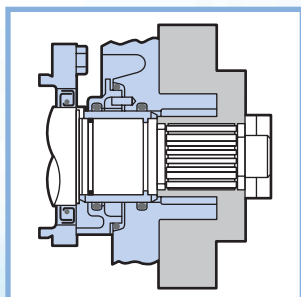
## Shaft Sealing Options

...for different liquids and conditions of service



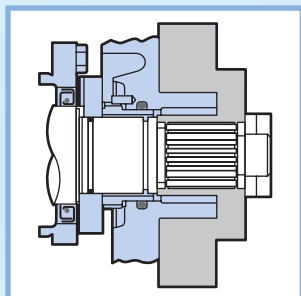
### Single O-Ring Seals

- ▶ Standard O-rings and Cover Seals: Buna
- ▶ Optional O-rings and Cover Seals: FKM, EPDM, Silicone



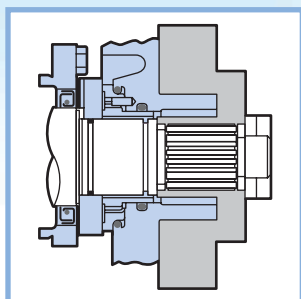
### Double O-Ring Seals with Flush

- ▶ Standard O-rings and Cover Seals: Buna
- ▶ Optional O-rings and Cover Seals: FKM, EPDM, Silicone



### Single Mechanical Seals

- ▶ Standard Seal Faces: SiC/SiC
- ▶ Standard O-rings and Cover Seals: Buna
- ▶ Optional Faces: Carbon, Ceramic or Chrome Oxide
- ▶ Optional O-rings and Cover Seals: FKM, EPDM, Silicone



### Double Mechanical Seals with Flush

- ▶ Standard Seal Faces: SiC/SiC
- ▶ Standard O-rings and Cover Seals: Buna
- ▶ Optional Faces: Carbon, Ceramic or Chrome Oxide
- ▶ Optional O-rings and Cover Seals: FKM, EPDM, Silicone

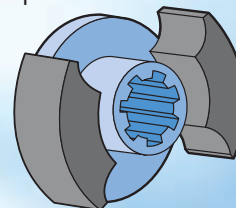
## Remanufacturing Value

We offer unrivaled value by remanufacturing worn Wright Flow Technologies® and Waukesha® circumferential piston pumps to like-new condition providing you with increased efficiency and reduced slip for enhanced productivity. Wright Flow Technologies will replace all parts except the cover, rotor case, gear case in their remanufacturing process, and provide you a one-year warranty on the work. Machined in 0.020" increments as required by wear, the rotor case and cover are outfitted with corresponding oversized rotors. The TRA®10/Waukesha® U1 can be remanufactured up to 4 times, and the TRA®20/Waukesha®

## Rotors

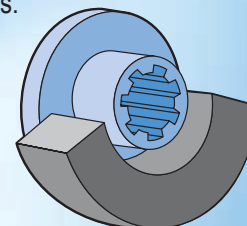
### Twin Wing Rotors Standard.

Suitable for all liquids, provides minimum pulsation.



### Single Wing Rotors Optional.

Provides reduced shear on shear-sensitive fluids or large solids such as fruit pieces, nut kernels, cheese curds or meats.



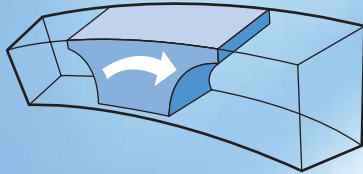
U2 up to three times for unmatched savings and a better bottom-line. Wright Flow Technologies remanufacture and complete factory tests to ensure your pumps perform from day one and beyond. Best of all, having your Waukesha® pumps remanufactured by Wright Flow Technologies gets you all of our improved features such as:

- ▶ One-piece stainless steel shafts
- ▶ Helical timing gears for higher load carrying and quieter operation
- ▶ Stainless steel bearing retainers for increased corrosion resistance

# Wright Flow Technologies Positive Displacement Circumferential Piston Pumping Principle

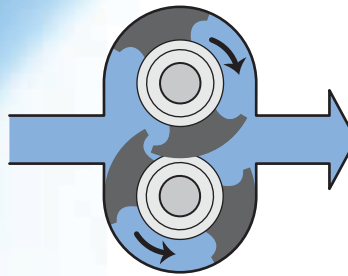


Wright Flow Technologies rotor wings (pistons) rotate around the circumference of the channel in the pump casing. This continuously generates a partial vacuum at the suction port as the rotors unmesh, causing fluid to enter the pump. The fluid is transported around the channel by the rotor wings, and is displaced as the rotor wings re-mesh, generating pressure at the discharge port. Pump output is directly proportional to speed, and direction of flow is reversible.



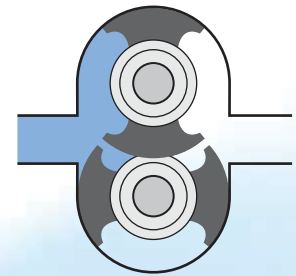
A

The deep channels in which the rotors travel provide large voids to minimize shear and bruising of solids.



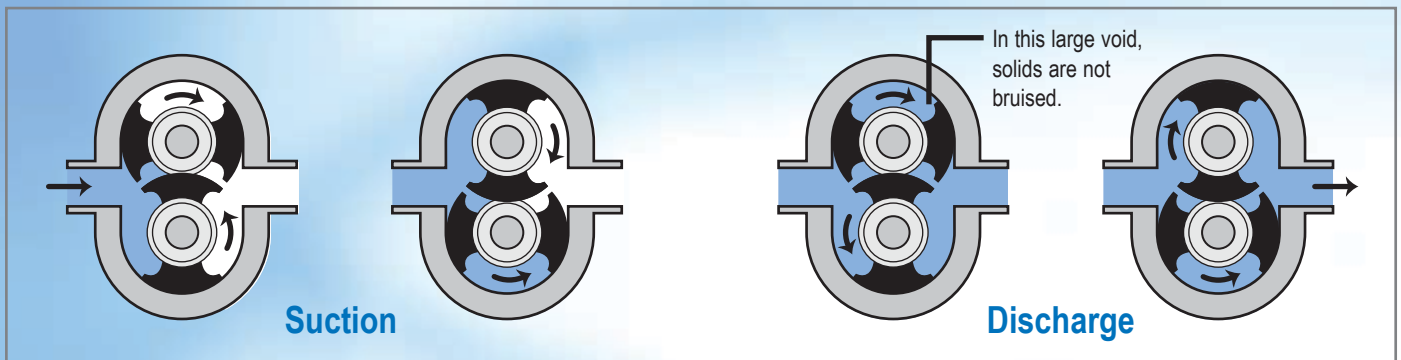
B

The rotors are made of "Wright Flow Technologies 808®" non-galling alloy, allowing extremely tight clearances between rotating and stationary surfaces, which ensures high efficiency and metering accuracy, even on thin liquids.



C

The forward part of each non-galling rotor rotates in a recess in the pump head to minimize deflection even at high discharge pressures.



Suction

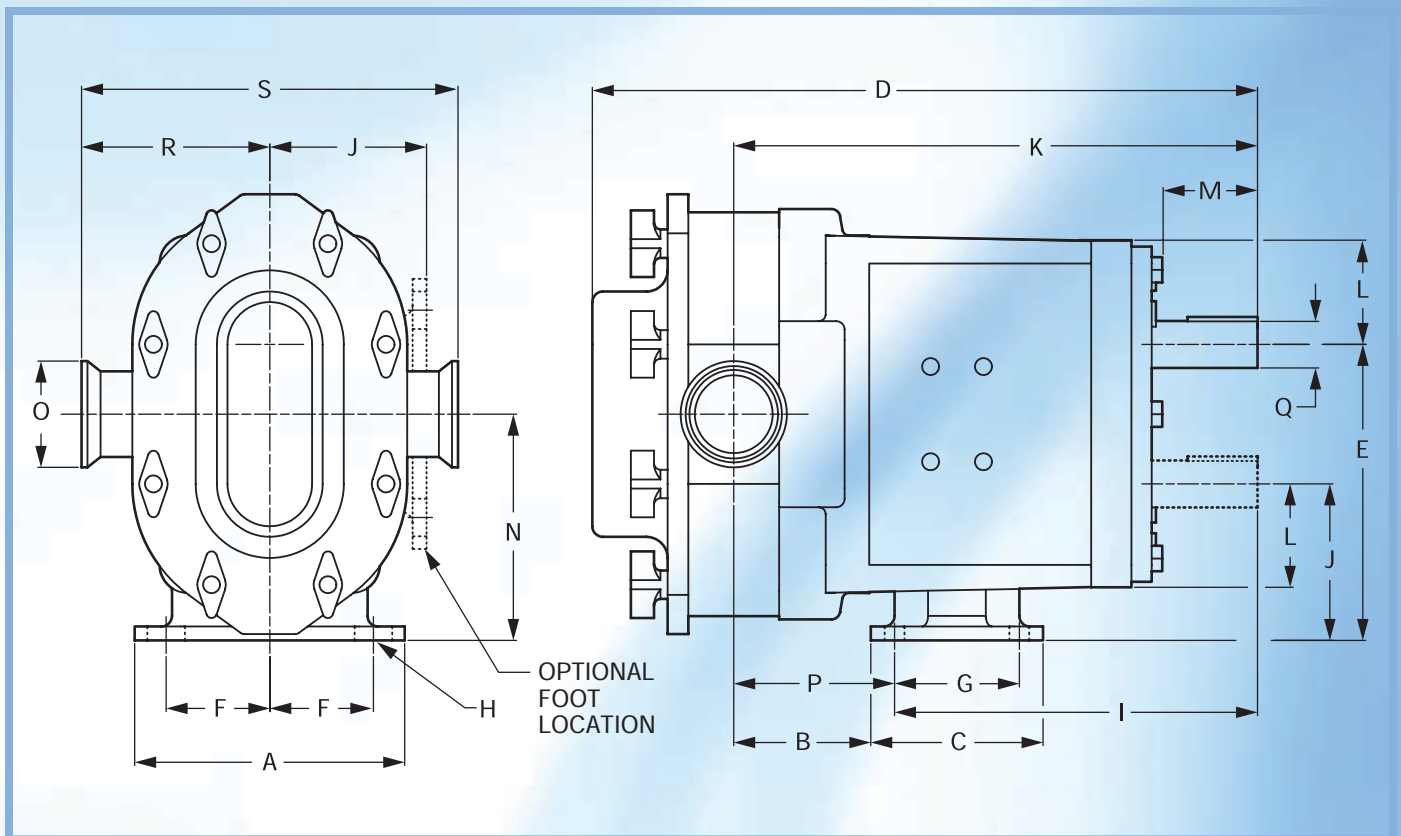
Discharge

## Unique Cleaning and Maintenance Features

- ▶ Designed for easy strip cleaning, the pump casing is independently fastened to the gearbox to prevent damage to the seals when the cover is removed, and to allow the rotors to be turned while spraying down the fluid chamber.
- ▶ Bearing retainers are stainless steel, not carbon steel, ensuring longer life under harsh cleaning conditions.
- ▶ Grease fittings are threaded, not pressed in, to prevent accidental removal during greasing.

# TRA<sup>®</sup>10 Dimensions

Model		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	Ø	R	S	Weight
0060	in.	4.75	2.34	3.20	12.04	5.50	1.94	2.31	0.375 x 0.31 (slot)	6.82	2.93	9.61	1.81	2.00	4.21	1.50	2.79	0.875	3.49	6.97	53 lb.	
	mm	121	59	81	303	140	49	59	9.5 x 8 (slot)	173	74	244	46	51	107	38	71	22.23	89	177	24 kg	
0150	in.	4.75	2.34	3.20	12.04	5.50	1.94	2.31	0.375 x 0.31 (slot)	6.82	2.93	9.61	1.81	2.00	4.21	1.50	2.79	0.875	3.49	6.97	53 lb.	
	mm	121	59	81	303	140	49	59	9.5 x 8 (slot)	173	74	244	46	51	107	38	71	22.23	89	177	24 kg	
0180	in.	4.75	2.34	3.20	12.46	5.50	1.94	2.31	0.375 x 0.31 (slot)	6.82	2.93	9.84	1.81	2.00	4.21	1.50	3.02	0.875	3.55	7.09	53 lb.	
	mm	121	59	81	316	140	49	59	9.5 x 8 (slot)	173	74	250	46	51	107	38	77	22.23	90	180	24 kg	
0300	in.	6.25	2.78	4.25	14.52	6.86	2.42	2.56	0.438 x 0.44 (slot)	7.77	3.56	11.61	2.62	2.32	5.21	1.50	3.84	1.250	4.25	8.50	99 lb.	
	mm	159	71	108	369	174	61	65	11 x 11 (slot)	197	90	295	67	59	132	38	98	31.75	108	216	45 kg	
0450	in.	8.25	4.14	5.87	18.91	9.56	3.50	4.12	0.56 x 0.50 (slot)	10.14	5.06	15.42	3.50	2.15	7.31	2.00	5.28	1.625	5.38	10.75	290 lb.	
	mm	210	105	149	480	243	89	105	14 x 13 (slot)	258	129	392	89	55	186	51	134	41.28	136	273	132 kg	
0600	in.	8.25	4.14	5.87	18.73	9.56	3.50	4.12	0.56 x 0.50 (slot)	10.14	5.06	15.14	3.50	2.15	7.31	2.50	5.00	1.625	5.37	10.75	290 lb.	
	mm	210	105	149	480	243	89	105	14 x 13 (slot)	258	129	385	89	55	186	63	127	41.28	136	273	132 kg	
1300	in.	8.25	4.79	5.87	19.66	9.56	3.50	4.12	0.56 x 0.50 (slot)	10.12	5.06	15.77	3.50	2.15	7.31	3.00	5.65	1.625	5.37	10.75	312 lb.	
	mm	210	122	149	499	243	89	105	14 x 13 (slot)	257	129	401	89	55	186	76	144	41.28	136	273	142 kg	
2200	in.	8.50	5.07	9.0	23.29	12.38	3.75	7.25	0.56 x 0.19 (slot)	12.74	6.38	18.49	4.50	2.63	9.38	4.00	5.75	2.000	6.63	13.25	555 lb.	
	mm	216	129	229	592	314	95	184	14 x 5 (slot)	324	162	470	114	67	238	102	146	50.80	168	337	252 kg	
3200	in.	12.00	4.12	11.63	30.17	13.88	5.25	8.00	0.66 Ø	16.55	6.88	21.92	5.06	4.06	10.38	6.00	5.37	2.375	8.00	16.00	1050 lb.	
	mm	305	105	295	766	353	133	203	16 Ø	420	175	557	129	103	264	152	136	60.45	203	406	477 kg	



**Note:** For dimensions on options such as flanged inlet port or vented covers, please contact factory.

*Dimensions are for guidance only. Please refer to our technical office if a certified drawing is required*

## **Sanitary Pumps, Parts, Remanufacturing & Accessories**

### ***Remanufacturing in Europe and North America***

*Wright Flow Technologies offers unique remanufacturing services in Europe and North America for Waukesha® Universal I and Universal II series pumps, as well as Wright TRA10 and TRA20 series pumps. Remanufacturing is a lower-cost alternative to buying a new replacement pump and it gets you all of Wright Flow Technologies improved features and benefits. Ask your distributor, or the factory for more details.*