

CIRCUMFERENTIAL PISTON PRODUCT LINE: STAINLESS STEEL PUMPS

TRA®10 Series

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SERIES DESCRIPTION

The TRA®10 Series hygienic pump is the ideal solution for Food and dairy, bakery, meat and pet food processing, and more due to its cleanability and efficiency.

US 3-A, European CE, UKCA and ATEX compliant models and specifications are available.

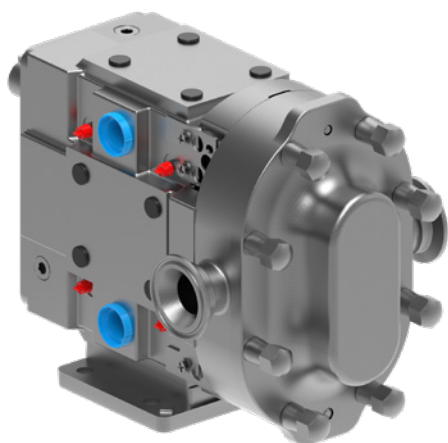
It can handle flows up to 450 GPM (102 m³/h).



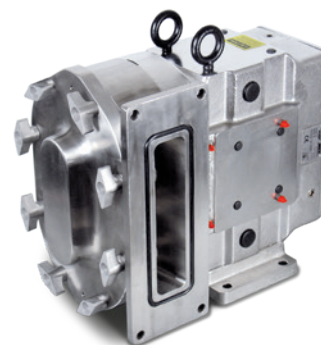
RELATED PRODUCTS

Stainless Steel, TRA®20 Series: Catalog Section 1721

Stainless Steel, Revolution® Series: Catalog Section 1726



TRA®10



(shown with rectangular ports)

OPERATING RANGE

SERIES	NOMINAL FLOW		MAXIMUM PRESSURE		TEMPERATURE		VISCOSITY RANGE*	
	GPM	m³/h	PSI	Bar	°F	°C	SSU	cSt
TRA®10	0 - 450	0 - 102	400	27	-40 to 300	-40 to 150	to 910,000	to 200,000

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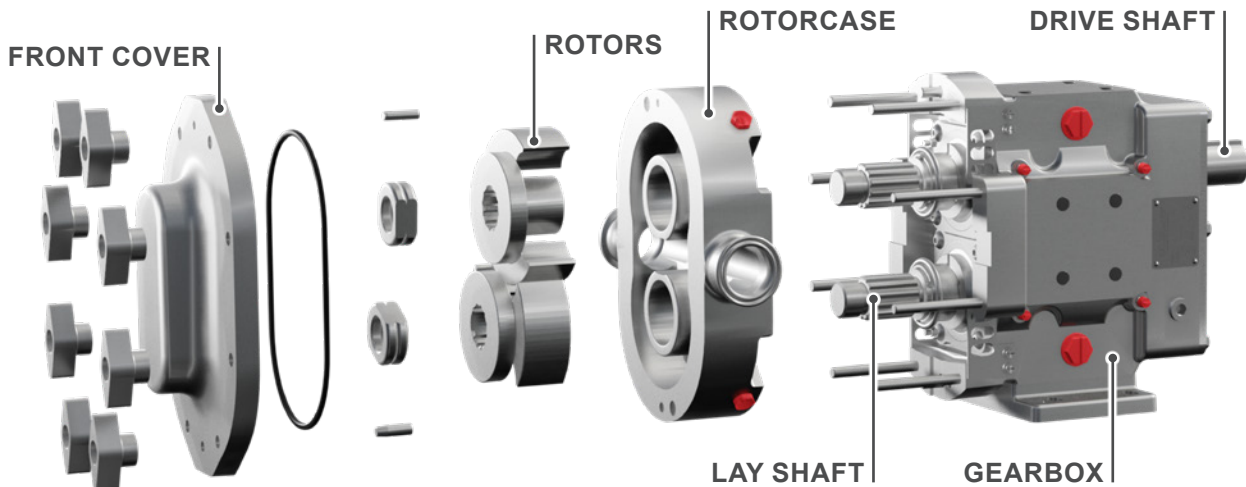
FEATURES & BENEFITS

- **Cleanability**
 - » Easy disassembly for easy COP (Clean Out of Place)
 - » Designed to 3A standards
- **Performance**
 - » Efficient handling for low & high viscosity applications
 - » Exclusive, non-galling Viking 808 alloy rotors standard; permits running at tighter clearances
 - » High strength 17-4 PH single piece shaft standard on 0300 and larger
 - » Helical gears, improving load carrying capabilities
- **Ease of Maintenance**
 - » Drop-in-place with TRA®20 & comparable manufacturer models
 - » Interchangeable service parts with comparable manufacturer models
 - » Easy disassembly

STANDARD MATERIALS OF CONSTRUCTION

Component	Standard Material
Rotors	Alloy 808
Rotorcase	316 Stainless Steel
Shafts	316 Stainless Steel
Front Cover	316 Stainless Steel
Rotor Retainer	316 Stainless Steel
Bearing Housing	304 Stainless Steel (220 Cast Iron on Model 3200 Only)

EXPLODED VIEW & PUMP FEATURES



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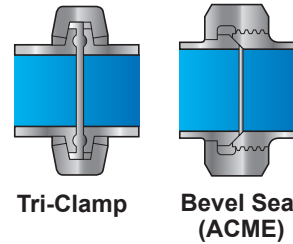
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MODEL NUMBER KEY

3 2 0 0 - T R A 1 0

Model	Size:	Pump Range
0060	0340	1340
0150	0450	2200
0180	0600	2240
0300	0640	3200
	1300	

PORT CONFIGURATIONS



Other port configuration options include:

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

SPECIFICATIONS

Model Number	Standard Port Size		Displacement		Maximum Pressure		Maximum Capacity			Liquid Temperature Range*		Approx. Shipping Weight with Grease	
	In	mm	USG/rev.	l/rev.	PSIG	BAR	GPM	m³/h	RPM	°F	°C	Lbs.	Kg.
0060	1.5	38	0.008	0.030	200	14	6.0	1.3	800	-40° to 300°	-40° to 150°	53	24
0150	1.5	38	0.014	0.052	200	14	9.0	2.0	700	-40° to 300°	-40° to 150°	53	24
0180	1.5	38	0.03	0.11	200	14	17.0	3.8	600	-40° to 300°	-40° to 150°	53	24
0300	1.5	38	0.06	0.23	200	14	36.0	8.2	600	-40° to 300°	-40° to 150°	99	45
0450	2.0	51	0.10	0.38	400	27	59.0	13.3	600	-40° to 300°	-40° to 150°	290	132
0600	2.5	64	0.15	0.58	200	14	90.0	20.4	600	-40° to 300°	-40° to 150°	290	132
1300	3.0	76	0.25	0.96	200	14	150.0	34.1	600	-40° to 300°	-40° to 150°	312	142
2200	4.0	102	0.52	1.98	200	14	310.0	70.4	600	-40° to 300°	-40° to 150°	555	252
3200	6.0	152	0.75	2.85	200	14	450.0	102.0	600	-40° to 300°	-40° to 150°	1050	477

* Hot clearances required for high temperature operation.

SPECIFICATIONS - RECTANGULAR FLANGE MODELS

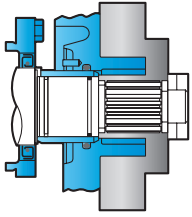
Model Number	Displacement		Maximum Pressure		Maximum Capacity			Liquid Temperature Range		Inlet (W x L)		Outlet	
	USG/rev.	l/rev.	PSIG	BAR	GPM	m³/h	RPM	°F	°C	In	mm	In	mm
0240	0.03	0.11	200	14	11.6	2.5	400	-40° to 300°	-40° to 150°	1.31 x 4.93	33.27 x 125.22	1.5	38.1
0340	0.06	0.22	200	14	24.0	5.4	400	-40° to 300°	-40° to 150°	1.75 x 6.75	44.50 x 171.45	2.0	50.8
0640	0.15	0.57	200	14	60.0	13.6	400	-40° to 300°	-40° to 150°	2.24 x 8.82	56.90 x 224.03	2.5	57.2
1340	0.25	0.96	200	14	100.0	22.7	400	-40° to 300°	-40° to 150°	2.97 x 9.25	75.44 x 234.95	3.0	76.2
2240	0.52	1.97	200	14	200.0	45.4	400	-40° to 300°	-40° to 150°	3.87 x 11.00	98.30 x 279.40	4.0	101.6

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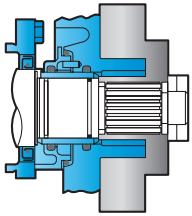
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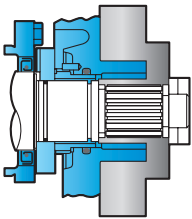
SEALING



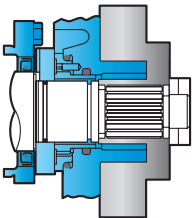
- Single O-ring
 - » Standard O-rings & Cover Seals: *Buna/FDA*
 - » Optional O-rings & Cover Seals: *FKM, EPDM, Silicone*



- Double O-ring with Flush
 - » Standard O-rings & Cover Seals: *Buna/FDA*
 - » Optional O-rings & Cover Seals: *FKM, EPDM, Silicone*



- Single Mechanical
 - » Standard Seal Faces: *SiC/SiC*
 - » Standard O-rings & Cover Seals: *Buna/FDA*
 - » Optional Faces: *Carbon, Ceramic or Chrome Oxide*
 - » Optional O-rings & Cover Seals: *FKM, EPDM, Silicone*



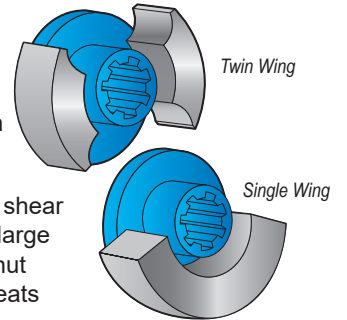
- Double Mechanical with Flush
 - » Standard Seal Faces: *SiC/SiC/C*
 - » Standard O-rings & Cover Seals: *Buna/FDA*
 - » Optional Faces: *Carbon, Ceramic or Chrome Oxide*
 - » Optional O-rings & Cover Seals: *FKM, EPDM, Silicone*

GEAR BOX

- 304 stainless steel standard on 0060 - 2240 models
- Powder coated cast iron standard on 3200 model

ROTOR & CASING OPTIONS

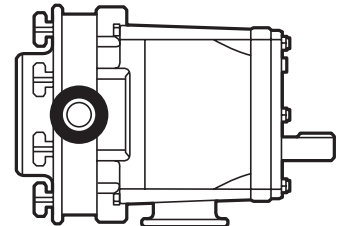
- 316 stainless steel pump casing standard w/ interior finished to 3-A standards
- Non-galling Viking 808 nickel alloy rotors standard or 316 stainless steel rotors optional
- Optional clearances: front face, hot, high temperature/high viscosity (chocolate)
- Twin Wing Rotors Standard
 - » Suitable for all liquids, provides minimum pulsation
- Single Wing Rotors Optional
 - » Standard Provides reduced shear on shear sensitive fluids or large solids such as fruit pieces, nut kernels, cheese curds or meats



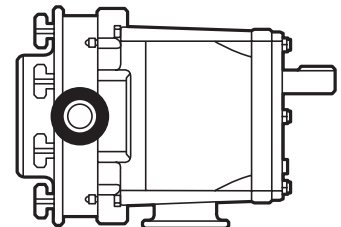
MOUNTING

- **4-way Mounting:** A gear case that can be mounted in any of four positions allows for horizontal or vertical porting, flexibility in drive shaft positioning to match reducer or gear motor input & improved access to grease fittings

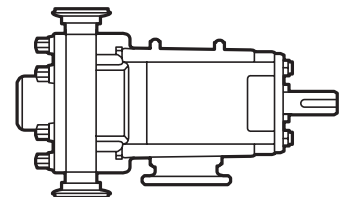
Horizontal ports,
bottom shaft position



Horizontal ports,
top shaft position



Vertical ports,
left-hand or right-hand
shaft position

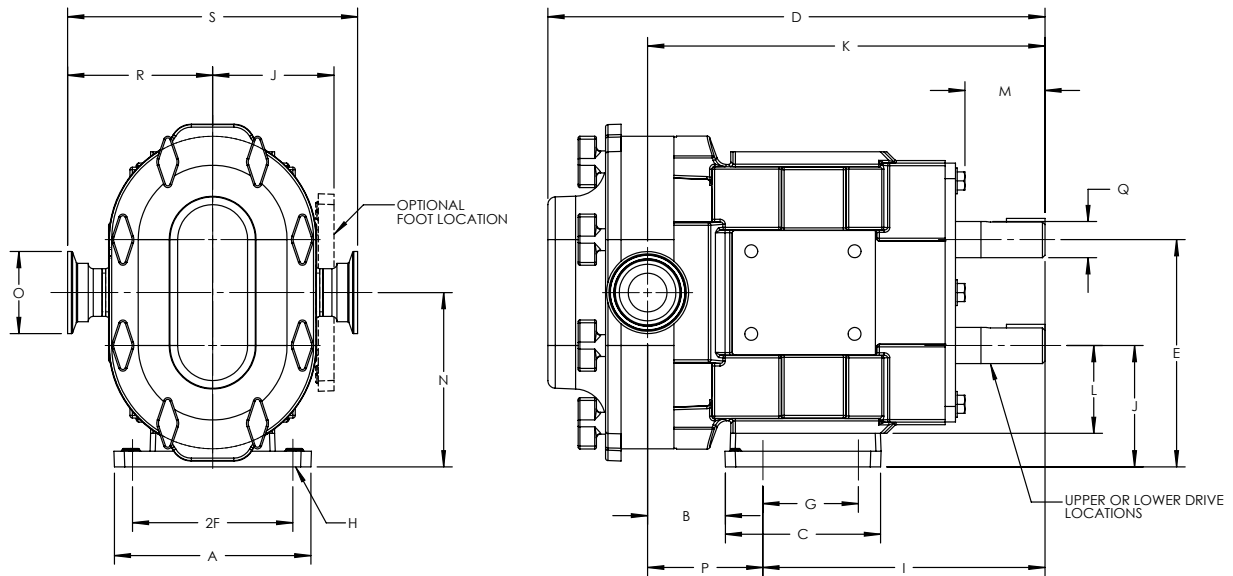


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DIMENSIONS – ALL MODELS – INCHES



Model	A	B	C	D	E	F	G	H	I
0060	4.75	2.34	3.20	12.04	5.50	1.94	2.31	0.375 x 0.31 (slot)	6.82
0150	4.75	2.34	3.20	12.04	5.50	1.94	2.31	0.375 x 0.31 (slot)	6.82
0180	4.75	2.34	3.20	12.46	5.50	1.94	2.31	0.375 x 0.31 (slot)	6.82
0300	6.25	2.78	4.25	14.52	6.86	2.42	2.56	0.438 x 0.44 (slot)	7.77
0450	8.25	4.14	5.87	18.91	9.56	3.50	4.12	0.56 x 0.50 (slot)	10.14
0600	8.25	4.14	5.87	18.73	9.56	3.50	4.12	0.56 x 0.50 (slot)	10.14
1300	8.25	4.79	5.87	19.66	9.56	3.50	4.12	0.56 x 0.50 (slot)	10.12
2200	8.50	5.07	9.0	23.29	12.38	3.75	7.25	0.56 x 0.19 (slot)	12.74
3200	12.00	4.12	11.63	30.17	13.88	5.25	8.00	0.66 Ø	16.55

Model	J	K	L	M	N	O	P	Q Ø	R	S
0060	2.93	9.61	1.81	2.00	4.21	1.50	2.79	0.875	3.49	6.97
0150	2.93	9.61	1.81	2.00	4.21	1.50	2.79	0.875	3.49	6.97
0180	2.93	9.84	1.81	2.00	4.21	1.50	3.02	0.875	3.55	7.09
0300	3.56	11.61	2.62	2.32	5.21	1.50	3.84	1.250	4.25	8.50
0450	5.06	15.42	3.50	2.15	7.31	2.00	5.28	1.625	5.38	10.75
0600	5.06	15.14	3.50	2.15	7.31	2.50	5.00	1.625	5.37	10.75
1300	5.06	15.77	3.50	2.15	7.31	3.00	5.65	1.625	5.37	10.75
2200	6.38	18.49	4.50	2.63	9.38	4.00	5.75	2.000	6.63	13.25
3200	6.88	21.92	5.06	4.06	10.38	6.00	5.37	2.375	8.00	16.00

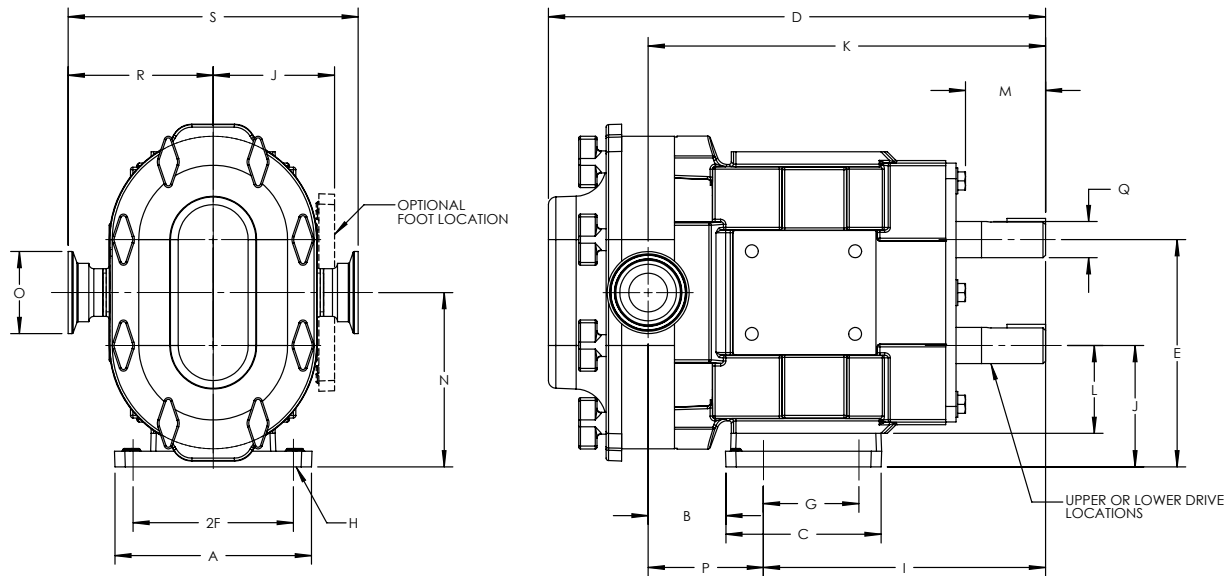
Dimensions given are for guidance only and should **not** be used for installation purposes. Certified dimensions will be supplied on request.

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DIMENSIONS – ALL MODELS – MILLIMETERS



Model	A	B	C	D	E	F	G	H	I
0060	121	59	81	303	140	49	59	9.5 x 8 (slot)	173
0150	121	59	81	303	140	49	59	9.5 x 8 (slot)	173
0180	121	59	81	316	140	49	59	9.5 x 8 (slot)	173
0300	159	71	108	369	174	61	65	11 x 11 (slot)	197
0450	210	105	149	480	243	89	105	14 x 13 (slot)	258
0600	210	105	149	480	243	89	105	14 x 13 (slot)	258
1300	210	122	149	499	243	89	105	14 x 13 (slot)	257
2200	216	129	229	592	314	95	184	14 x 5 (slot)	324
3200	305	105	295	766	353	133	203	16 Ø	420

Model	J	K	L	M	N	O	P	Q Ø	R	S
0060	74	244	46	51	107	38	71	22.23	89	177
0150	74	244	46	51	107	38	71	22.23	89	177
0180	74	250	46	51	107	38	77	22.23	90	180
0300	90	295	67	59	132	38	98	31.75	108	216
0450	129	392	89	55	186	51	134	41.28	136	273
0600	129	385	89	55	186	63	127	41.28	136	273
1300	129	401	89	55	186	76	144	41.28	136	273
2200	162	470	114	67	238	102	146	50.80	168	337
3200	175	557	129	103	264	152	136	60.45	203	406

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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.

NPSHR data is available in the Viking Pump Hygienic Pump Selector Tool.