

CIRCUMFERENTIAL PISTON PRODUCT LINE: STAINLESS STEEL PUMPS

TRA®20 Series

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SERIES DESCRIPTION

The TRA®20 Series hygienic pump is the ideal solution for Food and dairy, bakery, and meat processing, and more due to its cleanability and efficiency.

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

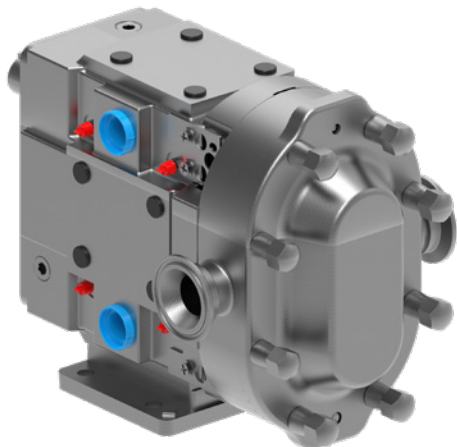
It can handle flows up to 450 GPM (102 m³/h).



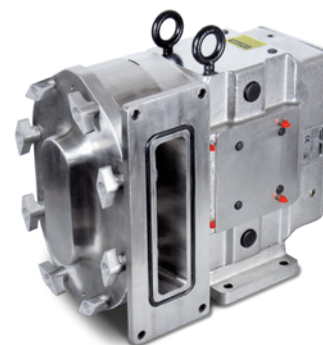
RELATED PRODUCTS

Stainless Steel, Revolution® Series: Catalog Section 1726

Stainless Steel, TRA®10 Series: Catalog Section 1722



TRA®20



(shown with rectangular ports)

OPERATING RANGE

SERIES	NOMINAL FLOW		MAXIMUM PRESSURE		TEMPERATURE		VISCOSITY RANGE	
	GPM	m³/h	PSI	Bar	°F	°C	SSU	cSt
TRA®20	0 - 450	0 - 102	500	34	to 300	to 150	to 910,000	to 200,000

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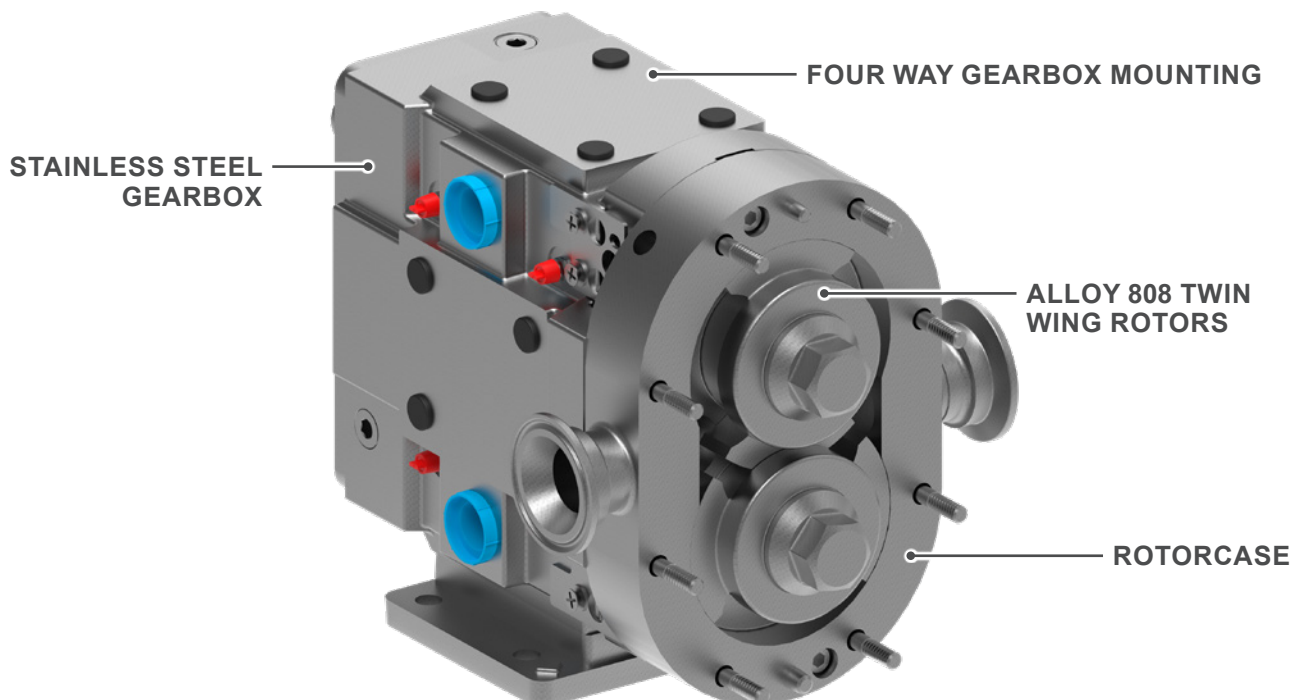
FEATURES & BENEFITS

- **Cleanability**
 - » CIP (Clean In Place) design optional
 - » Free draining cover with flat body profile option
 - » Sealed shaft with o-ring on rotor & rotor nut
- **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
 - » Improved load carrying capabilities
- **Ease of Maintenance**
 - » Drop-in-place with TRA®10 & comparable manufacturer models
 - » Interchangeable service parts with comparable manufacturer models
 - » Stainless steel bearing retainers standard, prevent rusting

STANDARD MATERIALS OF CONSTRUCTION

Component	Standard Material
Rotors	Alloy 808
Rotorcase	316 Stainless Steel
Shafts	17/4PH
Front Cover	316 Stainless Steel
Rotor Retainer	316 Stainless Steel
Bearing Housing	304 Stainless Steel (220 Cast Iron on Model 2100 & 3200 Only)

COVER OFF VIEW & PUMP FEATURES



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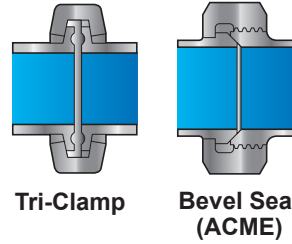
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MODEL NUMBER KEY

3 2 0 0 - T R A 2 0

Model Size:				Pump Range			
0060	0300	0640	2100				
0150	0340	1300	2200				
0180	0450	1340	2240				
0240	0600	1800	3200				

PORT CONFIGURATIONS



Other port configuration options include:

- DIN 11851
- RJT
- NPT
- SMS
- 150# or 300# 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	1.0	25.4	0.008	0.03	300	21	8	1.8	1000	-40° to 300°	-40° to 150°	53	24
0150	1.5	38.0	0.014	0.052	250	17	11	2.5	800	-40° to 300°	-40° to 150°	53	24
0180	1.5	38.0	0.029	0.108	200	14	20	4.5	700	-40° to 300°	-40° to 150°	53	24
0300	1.5	38.0	0.06	0.227	250	17	36	8.2	600	-40° to 300°	-40° to 150°	99	45
0450	2.0	51.0	0.096	0.366	450	31	58	13.2	600	-40° to 300°	-40° to 150°	290	132
0600	2.5	64.0	0.15	0.568	300	21	90	20.4	600	-40° to 300°	-40° to 150°	290	132
1300	3.0	76.0	0.25	0.946	200	14	150	34.1	600	-40° to 300°	-40° to 150°	312	142
1800	3.0	76.0	0.383	1.45	450	31	230	52.2	600	-40° to 300°	-40° to 150°	528	238
2100	4.0	102.0	0.5	1.89	500	34	300	68.1	600	-40° to 300°	-40° to 150°	870	395
2200	4.0	102.0	0.516	1.95	300	21	310	70.4	600	-40° to 300°	-40° to 150°	555	252
3200	6.0	152.4	0.75	2.85	300	21	450	102.2	600	-40° to 300°	-40° to 150°	890	404

* Hot clearances required for high temperature operation.

SPECIFICATIONS - RECTANGULAR FLANGE MODELS

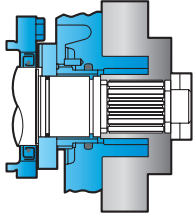
Model Number	Displacement		Maximum Pressure		Maximum Capacity			Liquid Temperature Range		Inlet (W x L)		Outlet	
	USG/rev.	l/rev.	PSIG	BAR	GPM	m³/h	RPM	°F	°C	In	mm	In	mm
0240	.03	.11	200	14	11.6	2.5	400	-40° to 300°	-40° to 150°	1.31 x 4.63	33.27 x 125.22	1.5	38.1
0340	.06	.23	200	14	24.0	5.4	400	-40° to 300°	-40° to 150°	1.75 x 6.75	44.50 x 171.45	1.5	38.1
0640	.15	.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	57.15
1340	.25	.95	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	.52	1.95	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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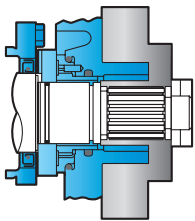
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SEALING



- Single 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*

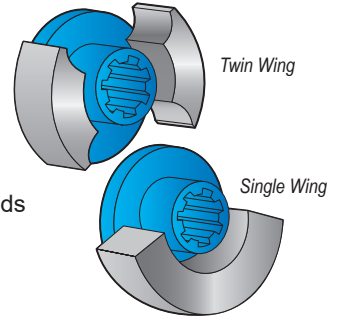
GEAR BOX

- 304 stainless steel standard on 0060 - 1800 & 2200 models
- Powder coated cast iron standard on 2100 & 3200 models

ROTOR & CASING OPTIONS

- 316 stainless steel pump casing standard w/ interior finished to 3-A standards
- Non-galling WFT 808® nickel alloy rotors standard or 316 stainless steel rotors optional
- Optional clearances: front face, hot, high temperature/high viscosity (chocolate)
- Clean In Place (CIP) & flat body profile available

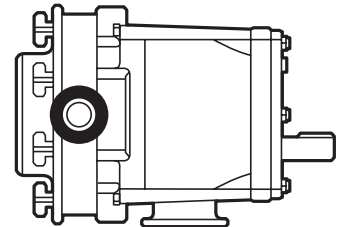
- Twin Wing Rotors Standard
 - » Suitable for all liquids, provides minimum pulsation
- Single Wing Rotors Optional
 - » Standard Provides reduced shear on shear sensitive fluids or large solids such as fruit pieces, nut kernels, cheese curds or meats



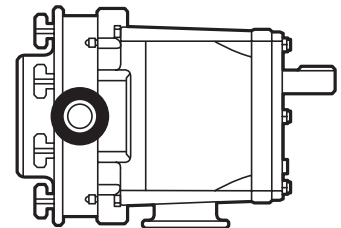
MOUNTING

- **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

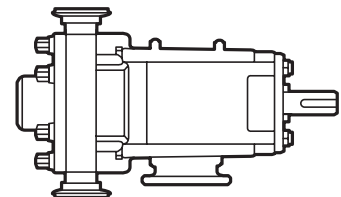
Horizontal ports,
bottom shaft position



Horizontal ports,
top shaft position



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

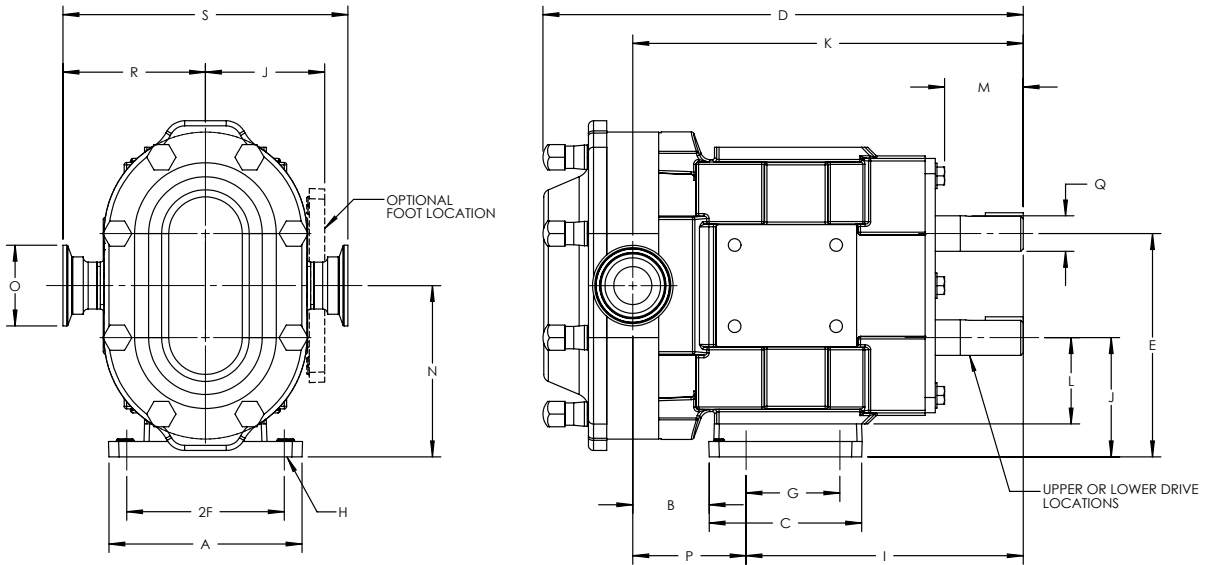


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DIMENSIONS – ALL MODELS – INCHES



Model	A	B	C	D	E	F	G	H	I
0060	4.75	1.95	3.75	11.71	5.50	1.94	2.31	0.375 x 0.31 (slot)	6.82
0150	4.75	1.95	3.75	11.71	5.50	1.94	2.31	0.375 x 0.31 (slot)	6.82
0180	4.75	2.18	3.75	12.37	5.50	1.94	2.31	0.375 x 0.31 (slot)	6.82
0300	6.25	2.78	4.25	14.49	6.86	2.31	2.56	0.438 x 0.44 (slot)	7.77
0450	8.25	3.86	5.87	18.59	9.56	3.50	4.12	0.56 x 0.50 (slot)	10.13
0600	8.25	4.14	5.87	19.14	9.56	3.50	4.12	0.56 x 0.50 (slot)	10.13
1300	8.25	4.78	5.87	20.15	9.56	3.50	4.12	0.56 x 0.50 (slot)	10.12
1800	8.50	3.45	9.00	23.26	12.38	3.75	7.25	0.56 x 0.50 (slot)	14.05
2100	12.00	3.45	11.63	27.08	13.88	5.25	8.00	0.66 Ø	16.54
2200	8.50	3.69	9.00	24.00	12.38	3.75	7.25	0.56 x 0.19 (slot)	14.05
3200	12.00	3.73	11.63	27.70	13.87	5.25	8.00	0.69	16.48

Model	J	K	L	M	N	O	P	Q Ø	R	S
0060	2.93	9.61	2.12	2.00	4.21	1.50	2.79	0.875	3.49	6.97
0150	2.93	9.61	2.12	2.00	4.21	1.50	2.79	0.875	3.49	6.97
0180	2.93	9.84	2.12	2.00	4.21	1.50	3.02	0.875	3.49	6.97
0300	3.56	11.61	2.62	2.32	5.21	1.50	3.84	1.250	4.25	8.50
0450	5.06	14.86	3.50	2.25	7.31	2.00	4.73	1.625	5.37	10.75
0600	5.06	15.14	3.50	2.25	7.31	2.50	5.01	1.625	5.37	10.75
1300	5.06	15.77	3.50	2.25	7.31	3.00	5.65	1.625	5.37	10.75
1800	6.38	17.75	4.50	2.75	9.38	3.00	4.20	2.000	6.53	13.06
2100	6.88	21.24	5.06	4.06	10.38	4.00	4.70	2.375	7.37	14.73
2200	6.38	18.49	4.50	2.75	9.38	4.00	4.44	2.000	6.63	13.25
3200	6.87	21.68	5.06	3.95	10.37	6.00	5.20	2.38	9.18	18.36

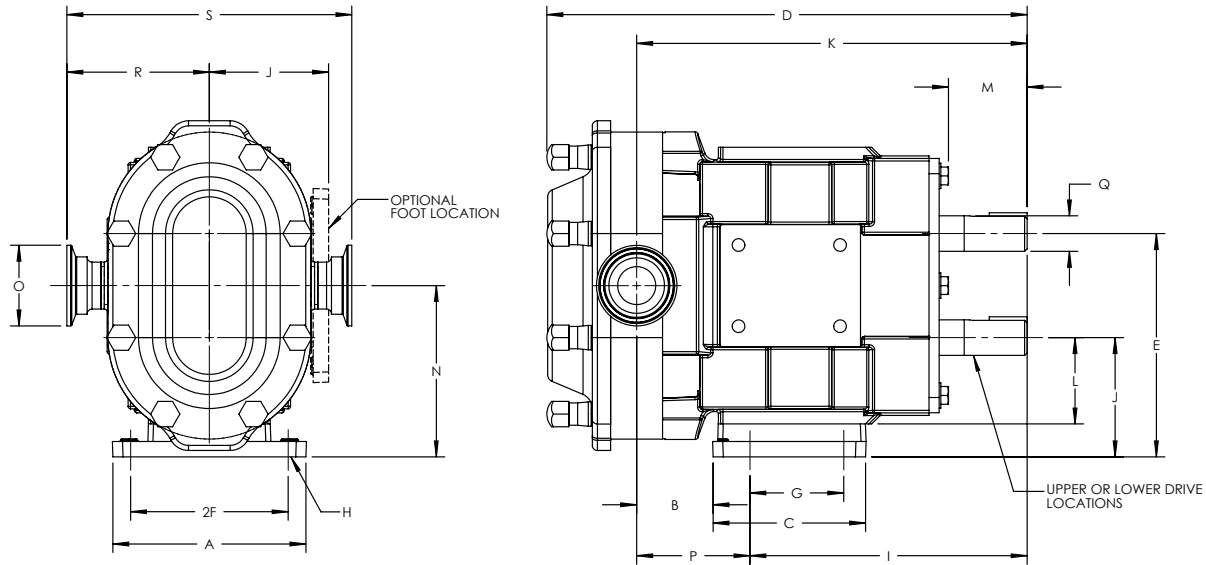
Dimensions given are for guidance only and should **not** be used for installation purposes. Certified dimensions will be supplied on request.

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DIMENSIONS – ALL MODELS – MILLIMETERS



Model	A	B	C	D	E	F	G	H	I
0060	121	50	95	297	140	49	59	9.5 x 8 (slot)	173
0150	121	50	95	297	140	49	59	9.5 x 8 (slot)	173
0180	121	55	95	314	140	49	59	9.5 x 8 (slot)	173
0300	159	71	108	368	174	59	65	11 x 11 (slot)	197
0450	210	98	149	472	243	89	105	14 x 13 (slot)	257
0600	210	105	149	486	243	89	105	14 x 13 (slot)	257
1300	210	121	149	512	243	89	105	14 x 13 (slot)	257
1800	216	88	229	591	314	95	184	14 x 13 (slot)	357
2100	305	88	295	688	353	133	203	16 Ø	420
2200	216	94	229	610	314	95	184	14 x 5 (slot)	357
3200	304.8	94.7	295.4	703.6	352.3	133.4	203.2	17.5	418.6

Model	J	K	L	M	N	O	P	Q Ø	R	S
0060	74	244	54	51	107	38	71	22.23	89	177
0150	74	244	54	51	107	38	71	22.23	89	177
0180	74	250	54	51	107	38	77	22.23	89	177
0300	90	295	67	59	132	38	98	31.75	108	216
0450	129	377	89	57	186	51	120	41.28	136	273
0600	129	385	89	57	186	63	127	41.28	136	273
1300	129	401	89	57	186	76	144	41.28	136	273
1800	162	450	114	70	238	76	107	50.8	166	332
2100	175	539	129	103	264	102	119	60.33	187	374
2200	162	470	114	70	238	102	113	50.80	168	337
3200	174.5	550.7	128.5	100.3	263.4	152.4	132.1	60.3	233.2	466.3

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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.