



**Capacity** to 300 GPM (70 M<sup>3</sup>/hr)

**Pressure** to 135 PSI (9.3 Bar)

**Viscosity** to 2,700 SSU (600 cPs)

**Temperature** to 380° F (195° C)



## SANITARY CENTRIFUGAL PUMPS

**TRA<sup>®</sup>400 Series**



**A  
3**

**WRIGHT PUMP**

**ICEX**  
IDEX CORPORATION

# The TRA<sup>®</sup>400 Series



TRA<sup>®</sup>401 High Purity construction with patent pending true Zero Dead-Leg drain shown.



## Typical Applications

- ▶ **Pharmaceutical and biotech:** water for injection (WFI), RO, DI, process water
- ▶ **Dairy:** concentrated milk, cream, buttermilk, ice cream mix, milk, whey up to 50% concentration
- ▶ **Food:** soups, broth, flavorings, syrup, vinegar
- ▶ **Beverages:** high fructose corn syrup, single strength fruit juices, fruit concentrates, beer, water, liquors
- ▶ **CIP:** solutions, caustics, enzyme cleaners
- ▶ **Personal Care:** mouthwash, cologne, after shave
- ▶ **Oils:** cooking, frying, salad
- ▶ **Candy:** sugar solutions, chocolate, corn syrup
- ▶ **Cosmetics:** shampoo, lotions

The reliability of Wright Pump's TRA<sup>®</sup>400 series centrifugal design has been proven over many decades. Its robust design and high quality materials of construction make it the right choice for both high purity and sanitary fluid transfer.

The Wright Pump centrifugal is available in many options to meet the needs of all areas of food processing, beverage, cosmetic biotech and pharmaceutical manufacturing worldwide.

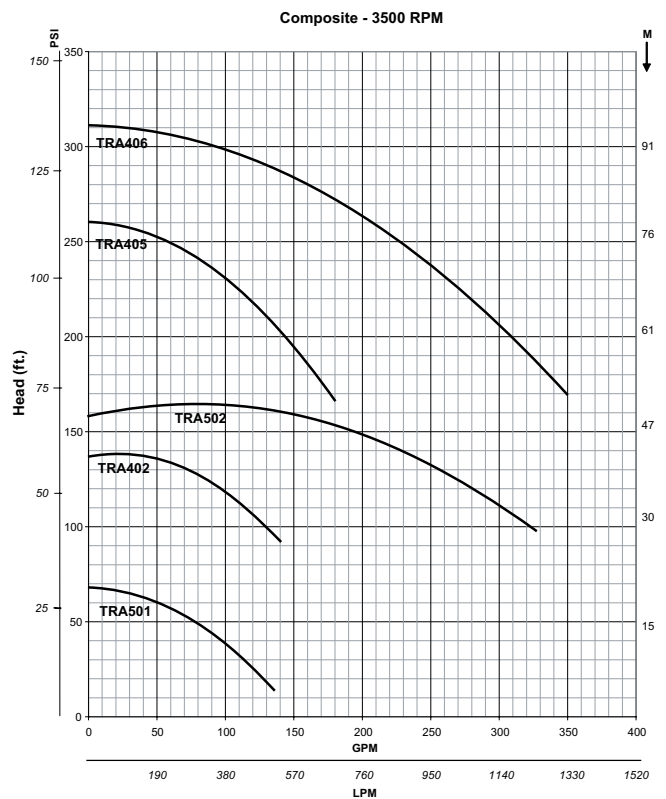
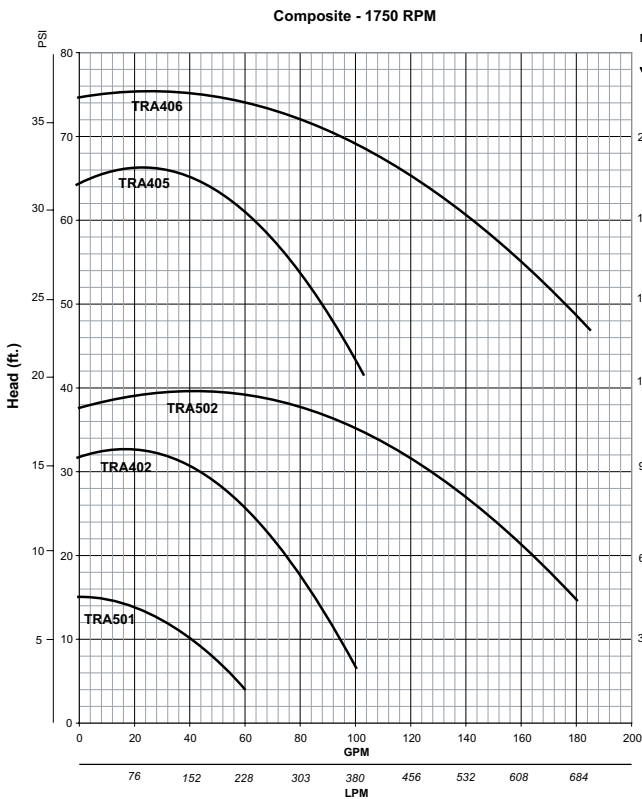
## Construction

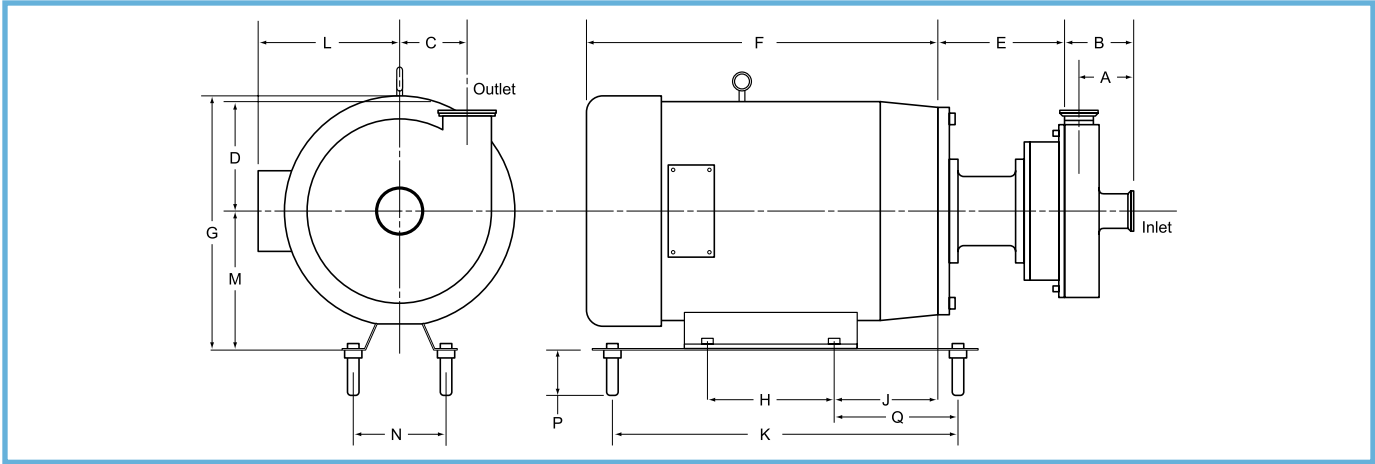
- ▶ High purity centrifugal – wetted parts entirely machined from solid 316L forged bar and plate or other high quality alloys (includes extensive materials documentation).
- ▶ No castings – very low ferrite to reduce or eliminate rogue formation in high purity water systems.
- ▶ Stainless steel flange adapters (motor to pump connection) are standard – no painted steel or cast iron.
- ▶ Interior finishes to <15 RA available.
- ▶ Fully adjustable head orientation for installation flexibility.
- ▶ Seal options include single, double, internal and external (commercial seals available upon request).
- ▶ Full material traceability.
- ▶ Exterior surfaces are machined or polished – no “as cast” surfaces.

# Pump Flow Ratings

Model	Flow Range 1750 RPM	Flow Range 3500 RPM	Pressure Range
TRA®451	to 50 GPM	to 120 GPM	to 68 PSI
	to 11.7 M³/hr	to 28 M³/hr	to 4.5 BAR
TRA®402	to 70 GPM	to 120 GPM	to 60 PSI
	to 16 M³/hr	to 28 M³/hr	to 4.1 BAR
TRA®452	to 150 GPM	to 300 GPM	to 70 PSI
	to 34 M³/hr	to 70 M³/hr	to 4.8 BAR
TRA®405	to 90 GPM	to 150 GPM	to 112 PSI
	to 21 M³/hr	to 34 M³/hr	to 7.7 BAR
TRA®406	to 150 GPM	to 290 GPM	to 137 PSI
	to 34 M³/hr	to 67 M³/hr	to 9.2 BAR

# Performance Curves





## Dimensions: Pump

Model	Dimensions	Impeller Diameter	Inlet	Outlet	A	B	C	D
TRA <sup>®</sup> 451	Inches	4.10	2.00	1.50	1.94	2.87	2.63	4.25
	cm	10.40	5.08	3.81	4.93	7.28	6.68	10.79
TRA <sup>®</sup> 402	Inches	5.70	2.00	1.50	2.06	2.63	3.13	7.25
	cm	14.50	5.08	3.81	5.23	6.68	7.95	18.42
TRA <sup>®</sup> 452	Inches	6.20	2.50	2.00	2.20	3.00	3.50	5.06
	cm	15.70	6.35	5.08	5.58	7.62	8.89	12.85
TRA <sup>®</sup> 405	Inches	8.00	2.50	2.00	2.45	2.94	3.75	7.63
	cm	20.30	6.35	5.08	6.23	7.47	9.53	19.38
TRA <sup>®</sup> 406	Inches	8.00	2.50	2.00	2.45	3.50	3.75	7.63
	cm	20.30	6.35	5.08	6.23	8.89	9.53	19.38

## Dimensions: Motor

Motor HP (1750 RPM)	Motor HP (3500 RPM)	Motor Frame	Dimensions	E	F	G	H	J	K	L	M	N	(Adj.) P	Q
0.50	0.50	56C	Inches	4.44	9.31	6.88	3.00	2.75	10.25	5.00	3.50	4.88	4.0 to 4.5	4.0
			cm	11.23	23.65	17.48	7.62	6.99	26.04	12.7	8.89	12.4	10.2 to 11.4	10.16
0.75	0.75	56C	Inches	4.44	9.31	6.88	3.00	2.75	10.25	5.00	3.50	4.88	4.0 to 4.5	4.0
			cm	11.23	23.65	17.48	7.62	6.99	26.04	12.7	8.89	12.4	10.2 to 11.4	10.16
1.00	1.00	56C	Inches	4.44	9.31	6.88	3.00	2.75	10.25	5.00	3.50	4.88	4.0 to 4.5	4.0
			cm	11.23	23.65	17.48	7.62	6.99	26.04	12.7	8.89	12.4	10.2 to 11.4	10.16
1.50	1.50	56C	Inches	4.44	9.31	6.88	3.00	2.75	10.25	5.00	3.50	4.88	4.0 to 4.5	4.0
			cm	11.23	23.65	17.48	7.62	6.99	26.04	12.7	8.89	12.4	10.2 to 11.4	10.16
1.50	1.50	145TC	Inches	4.44	11.25	6.88	5.00	2.75	10.25	5.25	3.50	5.50	4.0 to 4.5	4.0
			cm	11.23	28.58	17.48	12.7	6.99	26.04	13.34	8.89	13.97	10.2 to 11.4	10.16
2.00	2.00	145TC	Inches	4.44	11.25	6.88	5.00	2.75	10.25	5.25	3.50	5.50	4.0 to 4.5	4.0
			cm	11.23	28.58	17.48	12.7	6.99	26.04	13.34	8.89	13.97	10.2 to 11.4	10.16
3.00	3.00	145TC	Inches	4.44	11.25	6.88	5.00	2.75	10.25	5.25	3.50	5.50	4.0 to 4.5	4.0
			cm	11.23	28.58	17.48	12.7	6.99	26.04	13.34	8.89	13.97	10.2 to 11.4	10.16
3.00	3.00	182TC	Inches	5.84	12.31	8.69	4.50	3.56	13.50	5.88	4.50	7.50	4.0 to 4.5	5.00
			cm	14.83	31.27	22.07	11.43	9.04	34.29	14.94	7.04	19.05	10.2 to 11.4	12.7
5.00	5.00	184TC	Inches	5.84	13.69	8.69	5.50	3.56	13.50	6.00	4.50	7.50	4.0 to 4.5	5.00
			cm	14.83	34.77	22.07	13.97	9.04	34.29	15.24	7.04	19.05	10.2 to 11.4	12.7
7.50	7.50	213TC	Inches	5.84	15.31	10.25	5.50	4.25	13.50	7.44	5.25	8.50	4.0 to 4.5	5.00
			cm	14.83	38.89	26.04	13.97	10.8	34.29	18.9	13.34	21.59	10.2 to 11.4	12.7
10.00	10.00	215TC	Inches	5.84	15.31	10.25	7.00	4.25	13.50	7.44	5.25	8.50	4.0 to 4.5	5.00
			cm	14.83	38.89	26.04	17.78	10.8	34.29	18.9	13.34	21.59	10.2 to 11.4	12.7
15.00	15.00	215TC	Inches	5.84	16.44	10.25	7.00	4.25	13.50	7.44	5.25	8.50	4.0 to 4.5	5.00
			cm	14.83	41.76	26.04	17.78	10.8	34.29	18.9	13.34	21.59	10.2 to 11.4	12.7
20.00	20.00	256TC	Inches	5.84	19.75	13.25	10.00	4.75	18.00	9.63	6.25	10.00	4.0 to 4.5	5.50
			cm	14.83	50.17	33.66	25.4	12.07	45.72	24.46	15.88	25.4	10.2 to 11.4	13.97
25.00	25.00	284TSC	Inches	5.84	23.00	14.19	9.50	4.75	18.00	13.13	7.00	11.00	4.0 to 4.5	5.50
			cm	14.83	58.42	36.04	24.13	12.07	45.72	33.35	17.78	27.94	10.2 to 11.4	13.97
30.00	30.00	286TSC	Inches	5.84	23.00	14.19	11.00	4.75	18.00	13.13	7.00	11.00	4.0 to 4.5	5.50
			cm	14.83	58.42	36.04	27.94	12.07	45.72	33.35	17.78	27.94	10.2 to 11.4	13.97

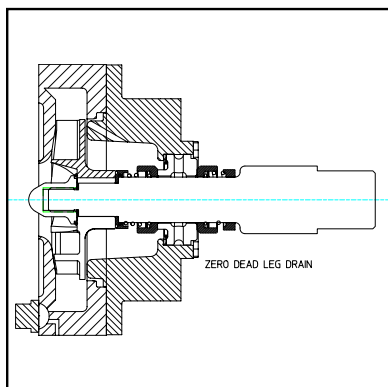
# About Wright Pump

Wright Pump was established in 1996 by a group of former sanitary pump executives. Wright first developed a line of replacement parts that were interchangeable with market leading circumferential piston pumps, and later manufactured complete pumps which were drop-in replacements, but with significant improvements standard like helical timing gears, powder-coated gear cases, four-way mounting, solid stainless steel shafts and bearing retainers.

Many of the innovations used for high purity pumps have been

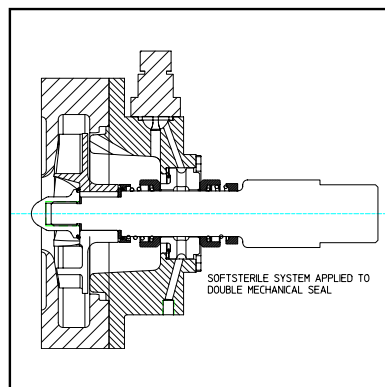
incorporated into the Wright sanitary centrifugal. Softwave staff came from the high end sanitary pump industry, and have over 40 years experience in the industry. Each Wright centrifugal is designed for interchangeability with market leading centrifugal pumps for "drop in" capability, but with significant improvements standard, like stainless steel flange adapters, integral inlet/outlet in the housing, polished exterior surfaces, and innovative accessories to fit your applications.

## Internal Flush and Drain Systems



### Zero Dead-Leg Drain

The patent pending Zero Dead-Leg drain allows for total purging of the Wright CFP casing which eliminates product accumulation and reduces the possibility of contamination. Utilizing a diaphragm valve machined directly into the casing removes the need for auxiliary components and piping.



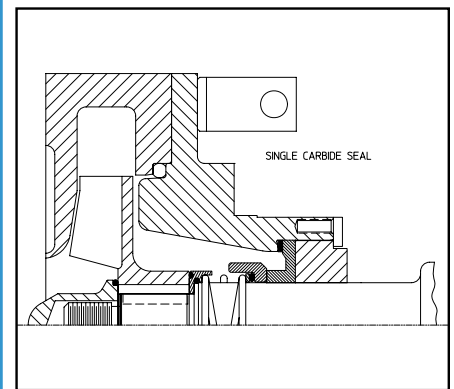
### Softsterile Internal Seal Flush

For high purity applications where double seals are required, the Softsterile™ patent pending system eliminates all external flush piping loops with their multiple connections, gaskets, elbows, compression fittings and tubes – all of which can be sources of contamination, misalignment, gasket extrusion and damage.

## Shaft Sealing Options

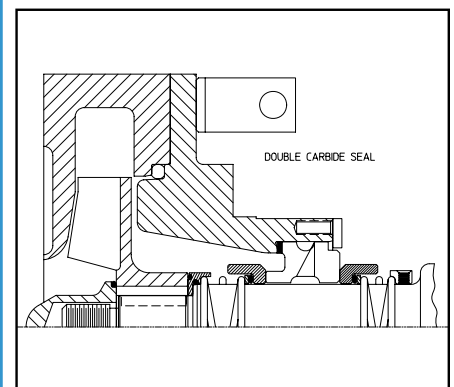
### Single Internal Mechanical Seal

- ▶ Front seal flushing internally with product
- ▶ Standard seal faces: SiC/SiC
- ▶ Standard elastomers: USP Class VI Viton®
- ▶ Optional faces: Chrome Oxide, Carbon
- ▶ Optional Elastomers: EPDM, PTFE, FKM



### Double Internal Mechanical Seal

- ▶ Front and rear seals flushed with product
- ▶ Standard seal faces: SiC/SiC
- ▶ Standard elastomers: USP Class VI Viton®
- ▶ Optional faces: Chrome Oxide, Carbon
- ▶ Optional Elastomers: EPDM, PTFE, FKM



External seals available upon request.

Viton® is a Registered Trademark of DuPont Performance Elastomers.

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

***WRIGHT PUMP***

The Right Alternative

***WRIGHT PUMP***

A Unit of IDEX Corporation

S84 W18693 Enterprise Drive  
Muskego, Wisconsin 53150-8789 USA

Tel: (262) 679-8000

Fax: (262) 679-2026

E-mail: [info.wright@idexcorp.com](mailto:info.wright@idexcorp.com)

[www.wrightpump.com](http://www.wrightpump.com)



WR-TRA400/Rev 08/2006

Litho In U.S.A.