

wright flow

TECHNOLOGIES®

Revolution®

Increase your expectations!



PATENT PENDING



TYPICAL APPLICATIONS

Food, Beverage, Pharmaceuticals, Bio-Pharmaceuticals, Personal Care, Chemical, and other demanding industries

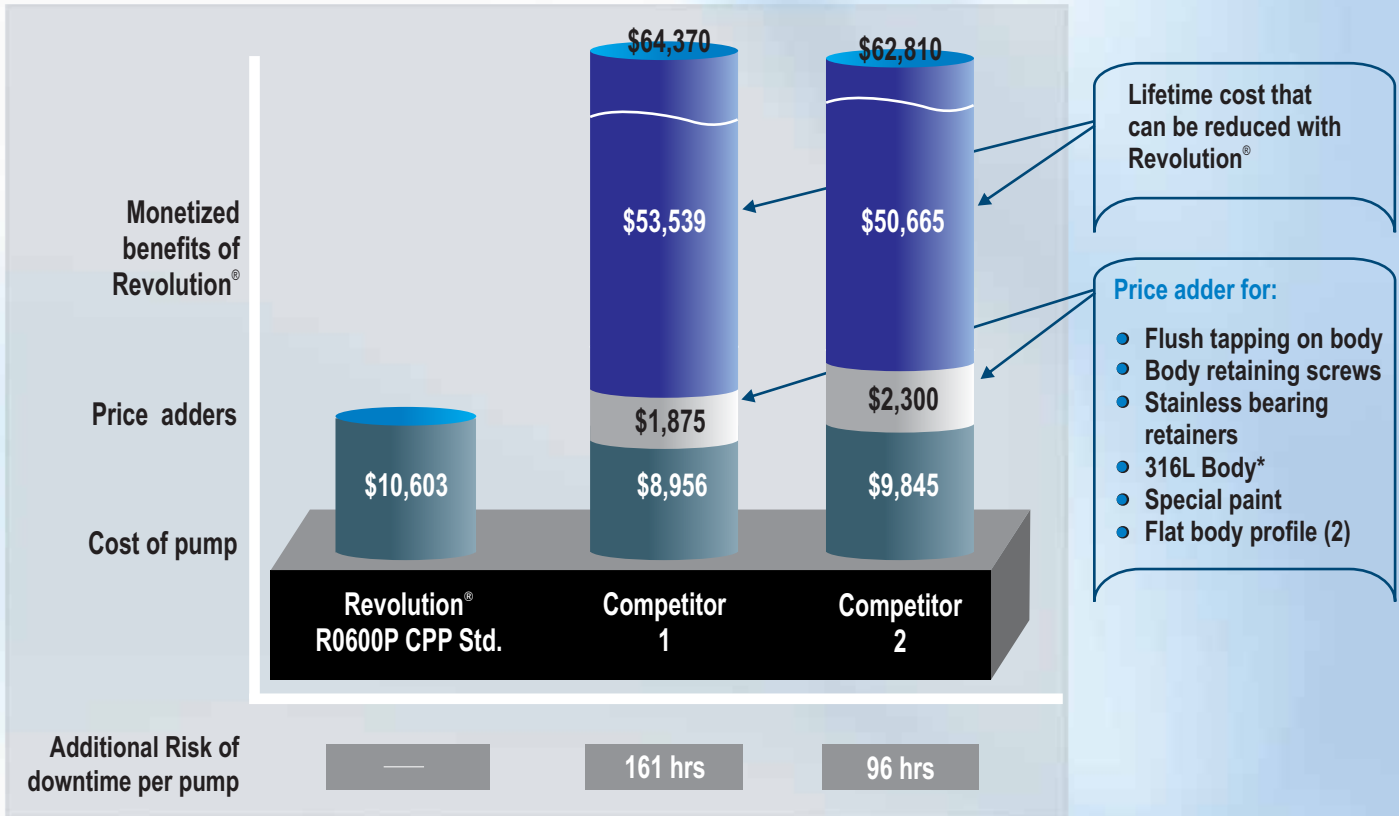


Save on ownership cost by upgrading your process

The Revolution® is the latest innovation in Positive Displacement Pumps for the sanitary and industrial markets, merging the benefits of competing technologies into one platform: Rotary Lobe (RLP) & Circumferential Piston (CPP).

If you are interested in lowering your total ownership cost by **up to \$50,000 USD* per pump** and avoiding **up to 160 hrs of downtime per pump**, we encourage you to find out more about how Wright Flow Technologies new Revolution® can help you achieve your productivity goals.

Monetized example of Revolution® R0600P vs. Competitors



Notes:

A customized scenario needs to be adapted to fit each customer's application and operating parameters.

The accuracy of the calculated savings depends predominantly on the accuracy of the customer's supplied data.



Product features and examples of customer benefits:

| | Value of benefits | Customized savings | Comments |
|---|-------------------|--------------------|------------------------------|
| Increase product yield | | | |
| <ul style="list-style-type: none"> Gentle solids handling through improved rotor geometry, additional displacements & elimination of cavities and chamber features | \$14,400 | | Over 20,000 hrs of operation |
| Increase equipment lifetime & process uptime - | | | |
| <ul style="list-style-type: none"> Front loading seals in balanced execution last two to three times longer than conventional seals | \$500 | | One time savings |
| <ul style="list-style-type: none"> Heavy duty shafts, pump is able to handle higher pressures and greater loads with less deflection | \$1,023 | | One time savings |
| <ul style="list-style-type: none"> Gamma seal provides additional protection to the gearbox from pressure washers or product entering the gearbox through front oil lip seals (optional) | \$2,082 | | One time savings |
| Online Cleanability | | | |
| <ul style="list-style-type: none"> Designed for Clean in Place (CIP) as standard, in compliance with stringent sanitary requirements <ul style="list-style-type: none"> Enhanced rotor case geometry enables self draining. This minimises risk of contamination & maximizes product yield. No dead zones in front cover enables proper cleaning Rotor design improves liquid access to seal and eliminates dead legs present in competitor products | \$2,600 | | Yearly savings |
| | \$2,080 | | Yearly savings |
| Reduce installation & maintenance expense | | | |
| <ul style="list-style-type: none"> Reduce inventory with common gear boxes to fit CPP and RLP, simplifies stock and spares. Customers can now stock modules and reduce the complexity of inventory | \$900 | | Yearly savings |
| <ul style="list-style-type: none"> Eliminate the risk of rotor holding nuts becoming loose with improved rotor retainer design | \$1,050 | | One time savings |
| <ul style="list-style-type: none"> Generous seal access facilitates front loading and removal of all seal variations, saving time and money when routine maintenance is required | \$175 | | Yearly savings |
| <ul style="list-style-type: none"> Maintenance free lubrication eliminates the need to control and change lubricant (optional). It also reduces risk of contamination through breather plug | \$150 | | Yearly savings |
| <ul style="list-style-type: none"> Front and back rotor clearance adjustment is performed externally to the gearbox, simplifying maintenance | \$100 | | Yearly savings |
| Reduce system costs | | | |
| <ul style="list-style-type: none"> Reduce the systems' procurement costs through increased pressure ratings, optimized displacements, and the extension of the range of capacities | \$12,700 | | One time savings |



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Times are changing – Increase your expectations!

- Innovative chamber geometry improves efficiency
- Rotor case is self-draining with vertical ports. This reduces risk of contamination & maximizes product yield



- Heavy duty shafts enable up to 50% longer lifetime. Benefit \$1,023.
- Improved rotor to shaft involute drive spline handles higher torques and optimizes alignment.



- 100% of Gearbox components are identical for all combinations within a gearbox size. Benefit \$900/yr
- Helical gears have approximately double the life than spur gears, and better load carrying capabilities. Benefit \$150
- Maintenance free lubrication eliminates need to control & change lubricant (optional). Benefit \$150/yr
- Larger bearings increase pressure capability and bearing lifetime by up to 50%. Benefit \$746
- Gearbox Gamma seal provides additional protection to the gear box (optional). Benefit \$2,082

- New CIP design eliminates need to strip clean. Benefit \$2,600/yr.
- No Dead Zones on front cover
- Eliminate the risk of rotor retainers loosening. Benefits \$1,050



- Designed for CIP/SIP with minimum back pressure < 1 Bar (15 Psi)
- Front mounting seals last two to three times longer than conventional seals by design, as a result of improved fluid access to seals, elimination of dead legs and use of centrifugal forces. Benefit \$500
- Seals are balanced and can be flushed at low and/or high pressure -allows appropriate seal selection



- All seals are front loading- this means ease of maintenance and reduced service time. Benefit \$175/yr
- Seal designed with no dead legs and dynamic leak path. Benefit \$2,080/yr

- Rotor Case as standard in AISI 316L or its cast equivalent. Benefit \$904
- Stainless Steel 304 Feet to eliminate corrosion (std on selected sizes)



- External shimming of Rotor back and front clearance. Benefit \$100/yr.

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Revolution® Construction and technical details:

Gear Box

- Std: Powder coated Cast Iron
- Opt: Stainless Steel 304
- Opt: Gamma seal protection for gear box oil seals

Rotor Case Internal Surface Finish

- Std: 0.8 µm (32 µin)
- Opt: internal finishes:m/c to 0.6µm (24 µin)
- Opt: Mech. polish to 0.5µm (20 µin) or better
- Optional for non hygienic applications
1.6µm internals & as cast externals (64 µin)

Rotor Case Materials

- Std: AISI 316L¹⁾
- Opt: Hastelloys and other alloys
- Opt: Cast Iron for low/non-hygienic applications
- Opt: Abrasive resistant coatings

Rotor Materials / Options

- AISI 316L¹⁾: Std. for RLP optional for CPP
- Wright 808® non-galling, nickel-based alloy for CPP
- Opt: Cast iron for low/non-hygienic applications
- Opt: Hastelloys and other alloys
- Opt: Abrasive resistant coating

Rotor Forms:

- Trilobe for RLP (4 Lobe on Size 1)
- Twin & single wing for CPP

Rotor Temperature rating:

- RLP: 70°C (160°F), 150°C (302°F) Option
- CPP: 90°C (200°F), 150°C (302°F) Option
- Opt: Front face & chocolate for CPP

Shaft Seal Arrangements

- Std: Single mechanical
- Opt: Double mechanical
- Opt: Single & double o-ring running on a replaceable sleeve

Single Seal:

- Std: Carbon(S1)²⁾ vs Silicon Carbide (R)³⁾
- Opt: Silicon Carbide vs Silicon Carbide

Double Seal

- Std: Carbon (S1)²⁾ Silicon Carbide (R)³⁾ Carbon(S2)²⁾
- Opt: Silicon Carbide (S1)²⁾ Silicon Carbide (R)³⁾ Carbon (S2)²⁾
- Other options available

Port Connections

- Complete range of sanitary clamp, screw, flange and industrial screw, etc.
- Optional: Range of enlarged / hopper inlets.

Heating / Cooling Options

- 4.0 Bar operating pressure
- -20°C (-4°F) to +150°C (302°F)
- All pumps may be fitted with front cover and rotor case jackets when required



¹⁾AISI 316L or its cast equivalent

²⁾S: Static Seal Face

³⁾R: Rotary Seal Face

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Revolution® Sizes & Specifications

| Size | Pump Type | Model | Port Size | Displacement | Displacement | Differential Pressure | Differential Pressure | Max. Speed | Maximum Displacement | Maximum Displacement |
|--------|-----------|--------|-----------|--------------|--------------|-----------------------|-----------------------|------------|----------------------|----------------------|
| | | | Inches | l/rev | USG/rev | Bar | PSI | RPM | m3/hr | USG/min |
| Size 1 | CPP | R0035X | 0.75 | 0.017 | 0.005 | 21 | 305 | 800 | 0.8 | 3.7 |
| | RLP | R0035X | 0.75 | 0.021 | 0.005 | 15 | 218 | 1000 | 1.2 | 5.5 |
| | CPP | R0065X | 1 | 0.035 | 0.009 | 14 | 203 | 800 | 1.7 | 7.4 |
| | RLP | R0065X | 1 | 0.041 | 0.011 | 7 | 102 | 1000 | 2.5 | 11.0 |
| Size 2 | CPP | R0150X | 1.5 | 0.055 | 0.014 | 21 | 305 | 800 | 2.6 | 11.6 |
| | RLP | R0150X | 1.5 | 0.061 | 0.016 | 15 | 218 | 1000 | 3.6 | 16.0 |
| | RLP | R0160L | 1.5 | 0.081 | 0.021 | 10 | 145 | 1000 | 4.9 | 21.4 |
| | CPP | R0180P | 1.5 | 0.110 | 0.029 | 14 | 203 | 800 | 5.3 | 23.2 |
| | RLP | R0180L | 1.5 | 0.110 | 0.029 | 7 | 102 | 1000 | 6.6 | 29.1 |
| Size 3 | CPP | R0200X | 1.5 | 0.16 | 0.04 | 21 | 305 | 800 | 8 | 34 |
| | RLP | R0200X | 1.5 | 0.18 | 0.05 | 14 | 203 | 1000 | 11 | 47 |
| | CPP | R0300X | 1.5 | 0.23 | 0.06 | 17 | 247 | 800 | 11 | 48 |
| | RLP | R0300X | 1.5 | 0.25 | 0.07 | 9 | 131 | 1000 | 15 | 66 |
| | CPP | R0400X | 2 | 0.29 | 0.08 | 14 | 203 | 800 | 14 | 62 |
| | RLP | R0400X | 2 | 0.33 | 0.09 | 7 | 102 | 1000 | 20 | 86 |
| Size 4 | CPP | R0450X | 2 | 0.4 | 0.1 | 31 | 450 | 600 | 15 | 67 |
| | RLP | R0450X | 2 | 0.5 | 0.1 | 15 | 218 | 800 | 22 | 95 |
| | CPP | R0600P | 2.5 | 0.6 | 0.2 | 21 | 305 | 600 | 21 | 92 |
| | CPP | R0800X | 2.5 | 0.8 | 0.2 | 17 | 247 | 600 | 28 | 122 |
| | RLP | R0800X | 2.5 | 0.8 | 0.2 | 9 | 131 | 800 | 39 | 173 |
| | CPP | R1300X | 3 | 1.0 | 0.3 | 14 | 203 | 600 | 36 | 159 |
| | RLP | R1300X | 3 | 1.1 | 0.3 | 7 | 102 | 800 | 51 | 226 |
| Size 5 | CPP | R1800X | 3 | 1.5 | 0.4 | 31 | 450 | 600 | 53 | 231 |
| | CPP | R1830X | 3 | 1.5 | 0.4 | 31 | 450 | 600 | 53 | 231 |
| | RLP | R1800X | 3 | 1.6 | 0.4 | 15 | 218 | 600 | 56 | 246 |
| | CPP | R2200X | 4 | 2.0 | 0.5 | 21 | 305 | 600 | 71 | 313 |
| | CPP | R2230X | 4 | 2.0 | 0.5 | 21 | 305 | 600 | 71 | 313 |
| | RLP | R2200X | 4 | 2.1 | 0.6 | 8 | 116 | 600 | 76 | 333 |
| | CPP | R2600P | 4 | 2.5 | 0.7 | 14 | 203 | 600 | 91 | 399 |
| | CPP | R2630P | 4 | 2.5 | 0.7 | 14 | 203 | 600 | 91 | 399 |
| Size 6 | RLP | R3000L | 4 | 2.9 | 0.8 | 15 | 218 | 500 | 87 | 383 |
| | CPP | R3200P | 6 | 3.0 | 0.8 | 21 | 305 | 600 | 108 | 476 |
| | CPP | R3230P | 6 | 3.0 | 0.8 | 21 | 305 | 600 | 108 | 476 |
| | CPP | R3800P | 6 | 3.8 | 1.0 | 14 | 203 | 600 | 138 | 606 |
| | CPP | R3830P | 6 | 3.8 | 1.0 | 14 | 203 | 600 | 138 | 606 |
| | RLP | R3800L | 6 | 3.8 | 1.0 | 8 | 116 | 500 | 114 | 504 |
| | CPP | R3900P | 6 | 4.8 | 1.3 | 8 | 116 | 600 | 173 | 761 |
| | CPP | R3930P | 6 | 4.8 | 1.3 | 8 | 116 | 600 | 173 | 761 |
| | Size 7 | RLP | R4000L | 6 | 5.2 | 1.4 | 15 | 218 | 400 | 126 |
| CPP | | R4200P | 6 | 6.2 | 1.6 | 28 | 400 | 400 | 148 | 652 |
| CPP | | R4230P | 6 | 6.2 | 1.6 | 28 | 400 | 400 | 148 | 652 |
| RLP | | R5000L | 8 | 7.2 | 1.9 | 8 | 116 | 400 | 173 | 761 |
| CPP | | R5200P | 8 | 9.0 | 2.4 | 14 | 200 | 350 | 190 | 836 |
| CPP | | R5230P | 8 | 9.0 | 2.4 | 14 | 200 | 350 | 190 | 836 |



Notes: Models marked with X use same rotor case for Lobe & Circumferential Piston Rotors
 RLP: Rotary Lobe, with four lobe rotors on size 1 and three lobe on rest
 CPP: Circumferential Piston, with Twin Wing or Single Wing Rotors
 Except for new sizes, all models are dimensionally interchangeable with WFT TRAs as well as Waukesha® pumps

*Models ending with 30 are Aseptic Models

Wright Flow Technologies

Our products are used across all process industries in applications as diverse as paper & pulp through to ultra-hygienic Bio-Pharma applications. We manufacture rotary lobe, centrifugal, circumferential piston, air operated double diaphragm and dosing pumps, all produced and designed with hygiene, cleanability, affordability and robustness in mind.

These pumps, coupled with our range of hygienic turbine and magnetic flow meters, plus our powder mixing technology, give a complete package for the modern high-tech process industries of today.

Remanufacturing in Europe and North America

Wright Flow Technologies offers remanufacturing services in Europe and North America for Waukesha® Universal I and Universal II series pumps, as well as Wright Flow Technologies TRA10 and TRA20 series pumps. The new Revolution® (as CPP) can also be remanufactured up to three times.

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.



Revolution®
Increase your expectations!



For more information, contact your local authorized Wright Flow Technologies Distributor or contact us at:



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