

Universal I Series Pumps

Rotary Positive Displacement Pumps



Setting the standard of performance for the sanitary industry for over 50 years.

For more than half a century, Waukesha Cherry-Burrell has been a leader in the design, manufacturing and application of external circumferential piston (ECP) style, rotary positive displacement pumps. Waukesha Cherry-Burrell PD pumps are in service around the world in food, dairy, canning, bakery, beverage and pharmaceutical processing, as well as difficult chemical and industrial applications.

Users of Waukesha Cherry-Burrell PD pumps benefit from decades of continuing product improvement. Steady advances in design, metallurgy and fabrication techniques have yielded progressively higher levels of performance and service life.

Sanitation features

- t 316 stainless steel body, cover, and shaft.
- t Easy disassembly for COP cleaning.
- t Elastomers that comply with FDA requirements.
- t Aseptic models available.
- t Meets 3A sanitary standards.

Long-life features

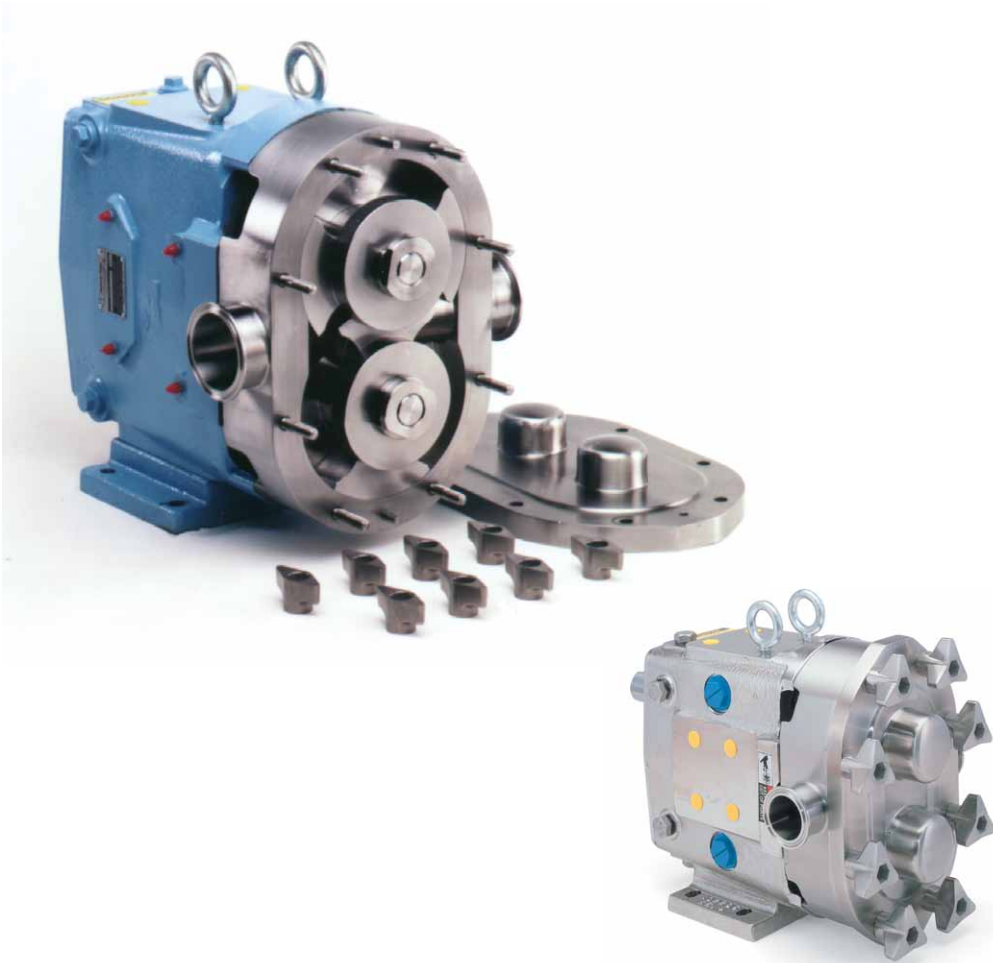
- t Up to 200 (13.8 bar) psi pressure capability.*
- t No bearings in product zone.
- t Heavy duty bearing frame with large diameter shafts.
- t Grease lubed bearings for positive lubrication of all bearing over entire speed, temperature and pressure range.
- t Exclusive, non-galling Waukesha "88" alloy rotors standard; permits running at tighter clearances and pumping a wide range of viscosities.
- t Remanufacturing and Inspect and Advise programs to extend life and reduce costs.

Available options

*High strength 17-4 PH shafts and hex cover nuts for higher pressure applications.

- t Stainless steel gear case.
- t Stainless steel bearing retainers.
- t Bearing isolators protect bearings from contamination.
- t Body retaining screws.
- t Steel-It paint.
- t Single wing rotors for minimum damage of particulates.
- t Jacketed or vented covers.
- t Rectangular flange inlet for high viscosity products
- t Tru-Fit™ close coupled pump design.





Shown with optional stainless steel gearcase

Installation flexibility

JEJSFDUJPOBM nPX Rotors, locked with double jam nuts, rotate securely in either direction.

/P nPX EJSFDUJPO TIBGU QPTJUJPO TQFDJmDBUJPOT

7FSTBUJMF 8BZ NPVOUJOH of gear case, including vertical alignment of ports

6QQFS PS MPXFS TIBGU QPTJUJPO

&BTZ UP JOTUBMM PS DPOWFSU single O-ring to mechanical seals.

*OUFSDIBOHFBCMF JOTUBMMBUJPO EJNFOTJPOT with Universal Lobe PD pumps.

Typical product applications

Bakery

Batters
Flavorings
Frostings
Fruit Fillings
Fats & Oils
Sweeteners
Yeast Slurry

Beverage

Beer, Wort, Yeast
Soft Drinks
Juice
Fruit Concentrates
Fruit Drinks
Wine
High Fructose Corn Syrups (HFCS)

Canning

Baby Foods, Soups, Stews
Tomato Paste/Sauces
Fruit Puree
Vegetables, Diced, Slurries
Puddings, Jams, Jellies
Salad Dressings, Mayonnaise

Confectionery

Syrups
Cream Fillings
Chocolate

Cosmetics

Face Creams & Lotions
Hair Styling Gels & Liquids
Essential Oils
Dyes & Alcohols
Shampoos

Dairy

Cream, Milk, Butter
Cheese Curd & Whey
Cottage Cheese
Yogurt

Meat Packing

Meat-Emulsions
Ground Meats
Pet Foods
Puffins & Canine
Mechanically Deboned Meat (MDM)

Pharmaceutical/Health Care

Pill Pastes
Syrups
Extracts
Emulsions
Slurries
Tooth Paste

Aseptic

Tomato Pastes
Puddings



Universal I Models

Rectangular Flange Models

Aseptic Models

Time-tested Waukesha Cherry-Burrell rotary pump; external circumferential piston (ECP) operating principle.

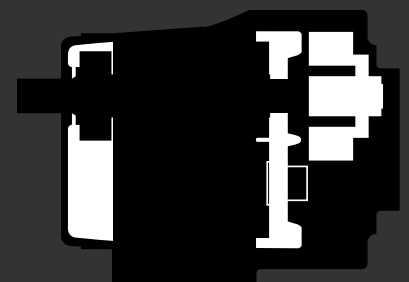
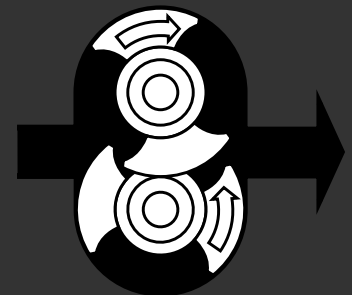
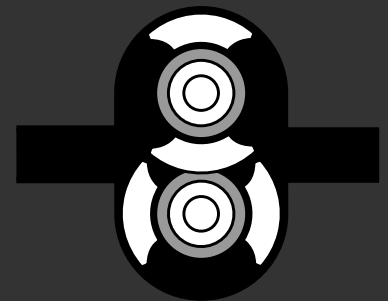
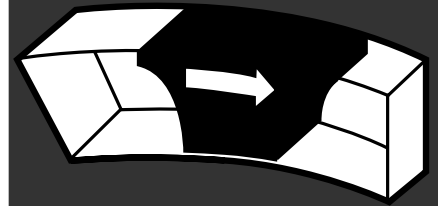
In the Waukesha Cherry-Burrell design, arc-shaped “pistons” (rotor wings) travel in annular-shaped cylinders machined in the pump body; the resulting long sealing path reduces slippage and produces a smooth flow of product without destructive pulses or pressure peaks and without valves or complex parts.

Exclusive Waukesha Cherry-Burrell design features

'PS -PX 7JTDPTJUZ 'MVJET rotors, made of exclusive Waukesha “88” alloy, c run with close clearance to the 316 stainless steel fluid head, without galling or seizing should inadvertent pressure surges cause contact. The close clearances combined with the rotor geometry, which gives a long sealing path between the pump inlet and outlet, means low slip operation. As a result, you achieve: high volumetric efficiency, good priming ability, metering capability and good flow control.

'PS)JHI 7JTDPTJUZ 'MVJET, the large fluid cavities of the rotors ... plus the lar entry anti-cavitation ports ... allow efficient pumping of high viscosity fluids, slurries or even liquids with large chunks or particles.

'PS /PO -VCSJDBUCSHTJWIE "MVJET, the unique Waukesha Cherry-Burrell design has no bearings in the fluid being pumped, no sliding or rolling contact and no rotor-to-rotor contact. This produces MAXIMUM SERVICE LIFE even under severe operating conditions.



Time-Tested Waukesha Cherry-Burrell Rotary Pump.

The Waukesha Cherry-Burrell Universal I Series gives you...

) J H I Q S F T T V S F D B Q B C J M J U Z
up to 200 psi/13.8 bar*.

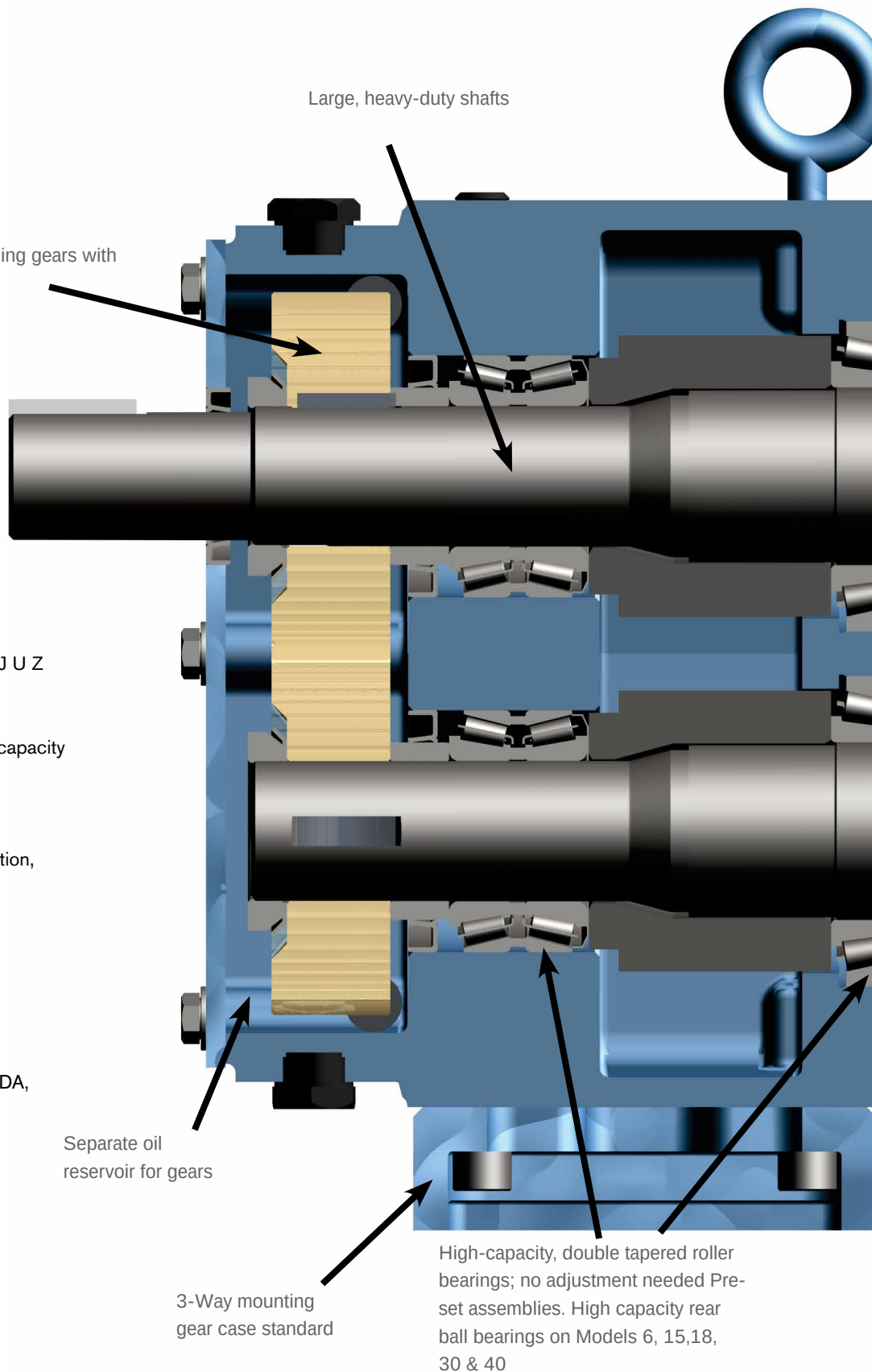
- P O H T F S W J D F M J G F High capacity
components for long trouble-free
service.

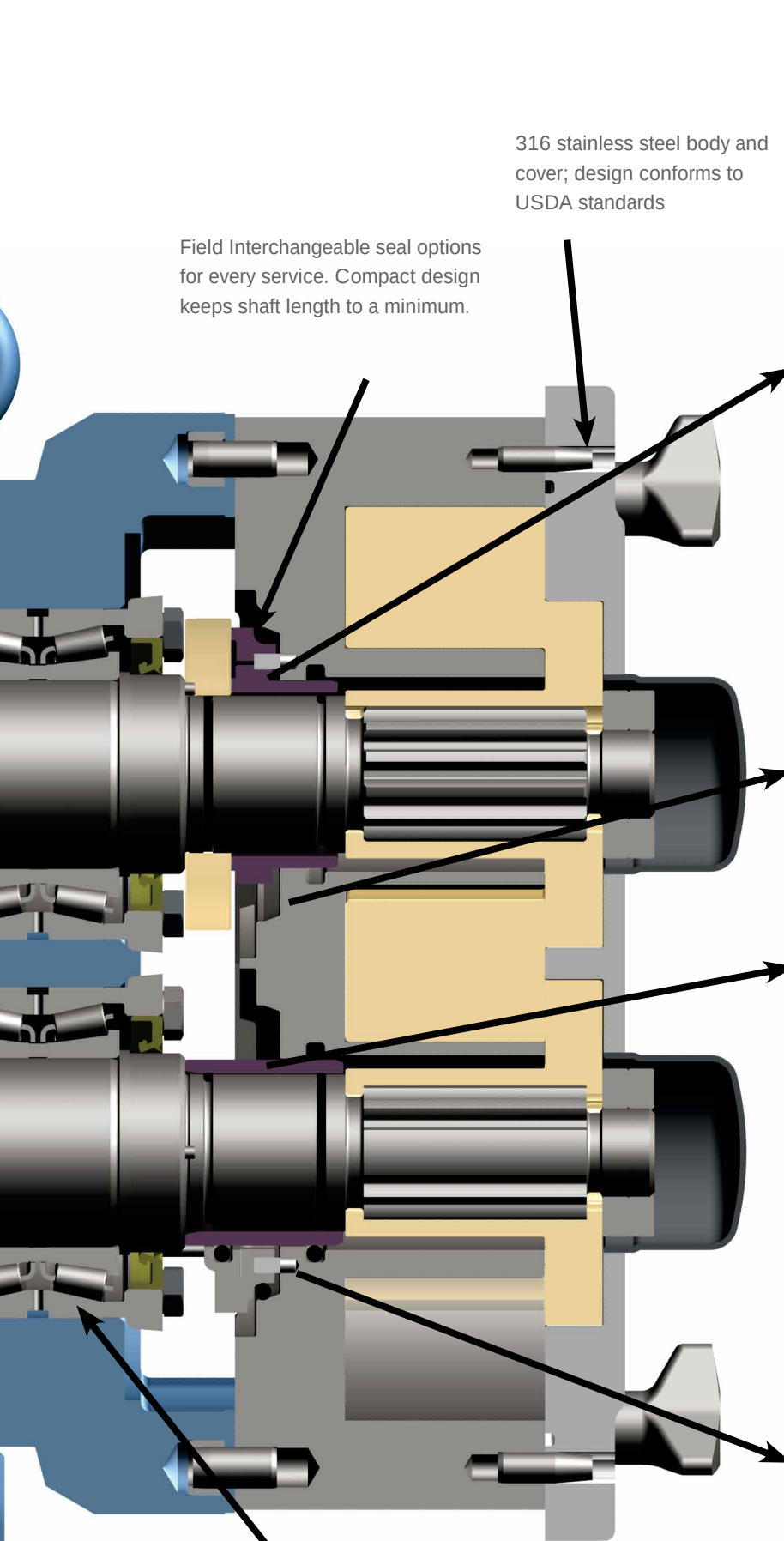
5 I F S J H I U T F B M for every application,
plus easy interchangeability when
needed.

. F U B M S P U P S Waukesha "88"
non-galling alloy, for close running
clearance.

% F T J H O D P O G P S N T to 3A, USDA,
ISO 9001:2000 and CE standards.

*For higher pressures, consult the factory.

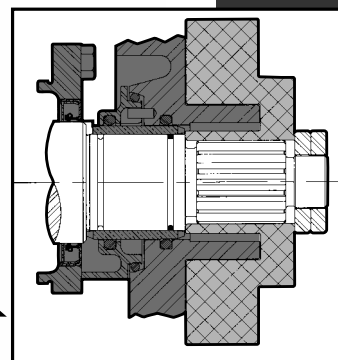
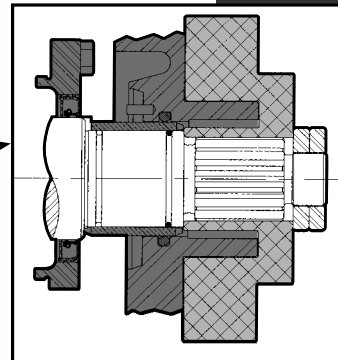
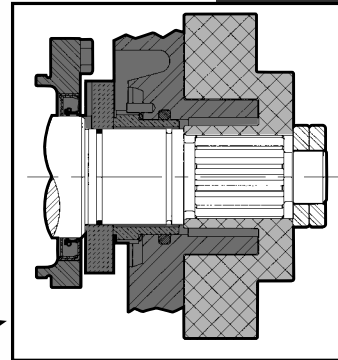
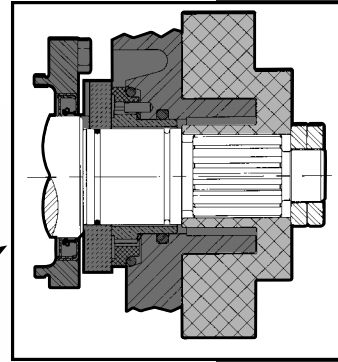




316 stainless steel body and cover; design conforms to USDA standards

Field Interchangeable seal options for every service. Compact design keeps shaft length to a minimum.

Front bearing fixed; rear bearing floating. Better control of thermal expansion when handling hot products



4FBM 0QUJPC

%PVCMF \$PODFOUS
.FDIBOJDBM 4FBM
Used with flushing fluid to cool, lubricate, flush away residue. Best arrangement for severe service.

4JOHMF .FDIBOJDBM
Longer life, wider pressure-temperature, and speed range than O-ring seal. Alternate materials available for abrasive service.

i0w 3JOH 4FBM
Waukesha Cherry Burrell's traditional general purpose seal. Low cost and easy to service.

%PVCMF i0w 3JOH 4
The double, flushed version of the "O" ring seal. Used with flushing fluid to cool, lubricate, flush away residue.

&MBTUPNFS DIPJDFT C
t Buna-N
t Fluoroelastomer (FKM)
t EPDM
t Silicone
t Perfluoroelastomer (FFKM)
t PTFE Encapsulated

*Not available for model 320

p .FDIBOJDBM TFBM NBUP
t Carbon
t Ceramic
t Silicon Carbide
t Tungsten Carbide

Standard & Options

Body

44 TUBOEBSE

Optional: t 'MVTI UBQT GPS GVUVSF EPVCMF TFBMT
t #PEZ SFUBJOJOH TDSFXT

Ports

4 -JOF TUBOEBSE

0QUJPOBM WFM 4FBU * -JOF 2 -JOF &VSPQFBO %*/ 4.4 PS 3
t .BMF /15 MC MC 'MBOHFT MC TUBOEBSE
t 3FDUBOHVMBS 'MBOHF *OMFU PS "TFQUJD QPSUT
t &YUFOEFE QPSUT
t 0QUJPOBM QPSU TJ[FT PO BOE .PEFMT

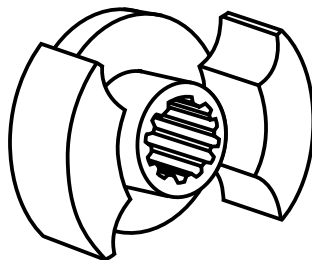
Covers

44 QMBJO DPWFS XJUI 8JOH DPWFS OVUT TUBOEBSE

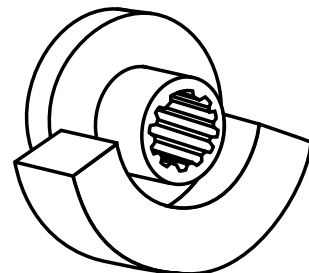
Optional: t 7FOU PS ESBJO DPOOFDUJPOT
t "TFQUJD KBDLFUFE PS WFOUFE
t)FY DPWFS OVUT

Rotors

"MMPZXJO58JOH TUBOEBSE 4UBOEBSE DMFBSBODF GP
0QUJPOBM DMFBSBODF UP Ú '\$MFBSBODF BCPWF Ú 'P
t 4QFDJBM GSPOU GBDF DMFBSBODFT BOE TMPUUF
t 4JOHMF XJOH GPS BOE NPEFMT GPS NJO



Twin Wing



Single Wing

O-Rings

#VOB / 4UBOEBSE

Optional: Fluoroelastomer (FKM), EPDM, Silicone, Per Fluoroelastomer (FFKM),
FEP Encapsulates

Seals

4JOHMF #VOB / 0 3JOHT XJUI ;JSDPOJB TMFFWF JT TU

Optional:

- t 316 SS sleeve.
- t Double O-Ring Seal with Flush Connection.
- t Single Mechanical Seal with Carbon (One Piece) vs. Ceramic Seal Faces.
- t Double Mechanical Seal with outer Carbon Seal Face &
- t Flush Connections.
- t Chrome Oxide, Silicon Carbide, & Tungsten Carbide Seal Faces.
- t Two piece carbon inner seal.

\$BTU JSPO TQFDJBM QBSU CMVF FQPYZ QBJOU
UJPO JT 4UBOEBS

Options: t 4UBJOMFTT 4UFFM HFBSDBTF

t 4UFFM *U QBJOU

t 1) TIBGUT

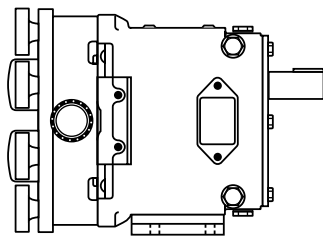
t -PXFS TIBGU QPTJUJPO

t #FBSJOH *TPMBUPST

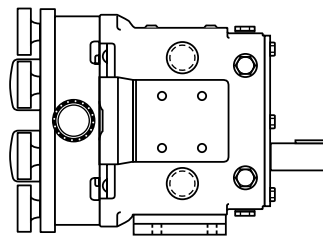
t 4UBJOMFTT 4UFFM CFBSJOH SFUBJOFTST

t 1FEFTUBM TIJNT GPS TJEF NPVOUFE QVNQT -FGU
QPTJUJPO TUBOEBS

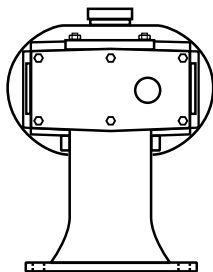
t 3JHIU IBOE TIBGU QPTJUJPO PO TJEF NPVOUFE HF



Top Shaft Position
Standard



Lower Shaft Position
Optional



Optional Side Mount Gear Case for vertical fluid entry

Standard left hand shaft
position shown (right
hand optional)

/ P U F Pedestal foot is optional on
Standard and Rectangular Flange
models. Various standard heights are
available and must be specified on
order.

'MBU QMBUF FQPYZ QBJOUFE XJUI BEKVTUBCMF
-PWFKPZ PS 8PPET DPVQMJOH TUBOEBS

Options: t 44 VOQPMJTIFE QMBUF CBTF XJUI BEKVTUBCM

t 1PSUBCMF CBTF XJUI SVCCFS XIFFMT

t 44 UVCVMBS CBTF

8\$# *43 *OUFHSBM 4QFFE 3FEVDFS 4J[FT BOE
%JSF DU DPOOFDUFE HFBS NPUPST

.FDIBOJDBM BOE &MFDUSPOJD 7BSJBCMF 4QFFE %
)ZESBVMJD .PUPS %SJWFT

\$MPTF DPVQMJOH 5QVNQ NPVOUFE PO &QPYZ QBJOUFE PQFO CBTF

Features:

- t No shaft alignment necessary. No coupling guard required.
- t Special base design enhances cleanability.
- t Reduces overall length of complete unit by an average of 20-25%.
- t Average of 20-25 gear ratios available per horsepower.
- t Separate oil sump for gear reducer and timing gears.

Options:

- t 304 SS unpolished plate base.
- t 304 SS polished plate base.
- t NEMA or IEC frames available. Right angle reducer also available for additional space savings.
- t 1/2 through 60 horsepower drive options available.
- t Horizontal or vertical porting.

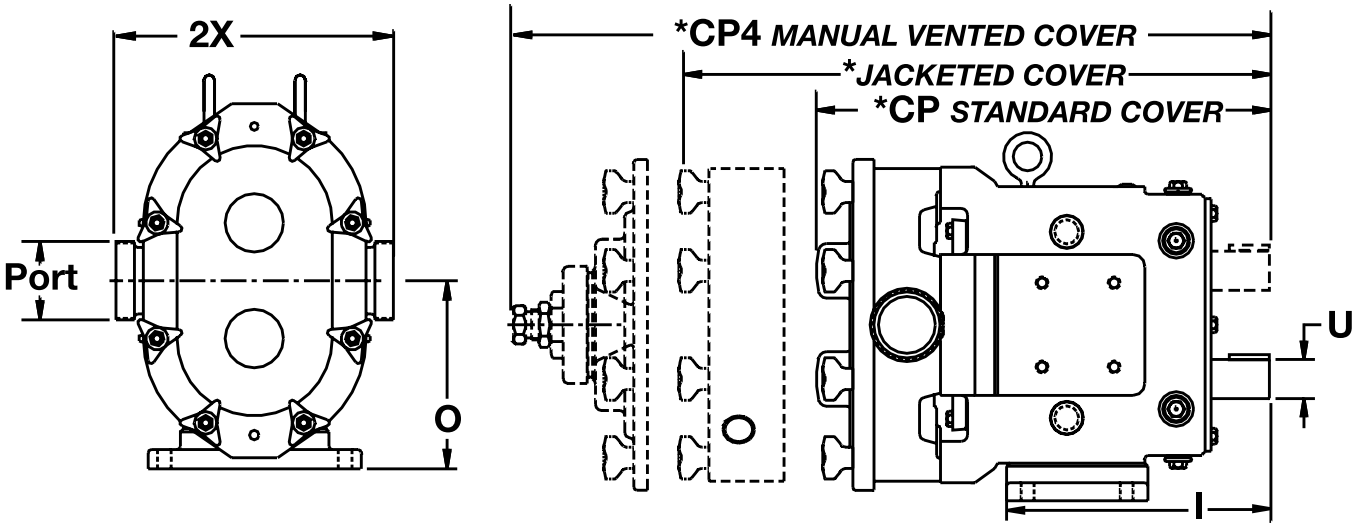
Gear Cases

Tru-Fit™

Bases

Drives

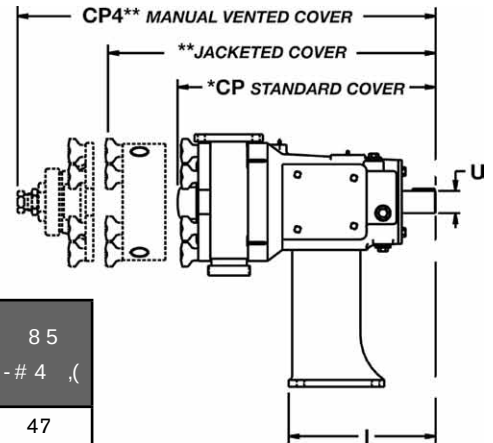
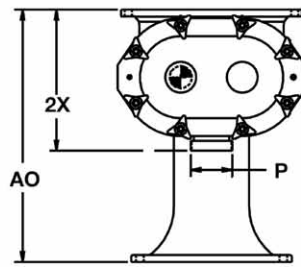
Dimensions



4 * ; & MODEL		CP	CP4	I	O	1035 4 * ; &	U	2X	85 - # 4 , (
006-U1	IN	12.04	15.25	7.66	4.21	1 1/2"	.875	6.97	52
	mm	306	387	194	107	---	22.23	177	24
015-U1	IN	12.04	15.25	7.66	4.21	1 1/2"	.875	6.97	52
	mm	306	387	194	107	---	22.23	177	24
018-U1	IN	12.46	15.67	7.66	4.21	1 1/2"	.875	7.09	54
	mm	316	398	194	107	---	22.23	180	24
030-U1	IN	14.58	17.67	8.83	5.21	1 1/2"	1.250	8.50	100
	mm	370	449	224	132	---	31.75	216	45
040-U1	IN	14.96	18.05	8.83	5.21	2"	1.250	8.62	106
	mm	380	458	224	132	---	31.75	219	48
060-U1	IN	18.91	22.07	10.99	7.31	2 1/2"	1.625	10.75	225
	mm	480	561	279	186	---	41.28	273	116
130-U1	IN	19.85	23.01	10.99	7.31	3"	1.625	10.75	260
	mm	504	584	279	186	---	41.28	273	118
220-U1	IN	23.37	27.87	14.80	9.38	4"	2.000	13.25	450
	mm	594	708	376	238	---	50.80	337	204
320-U1	IN	30.17	---	17.80	10.38	6" 150# FLG	2.375	16.00	795
	mm	766	---	452	264	---	60.45	406	361

/ 05 & % JNFOTJPO i 9w BQQMJFT GPS #FWFM 4FBU i4 \$MBNQw i2 \$MBNQw
/ 05 & CP4 is the maximum dimension for all vented and jacketed cover options.
Contact Application Engineering for Universal I Series Aseptic Models.

Universal I Series Rectangular Flange



4 * ; & MODEL		AO*	CP	CP4	I	1 0 3 5 4 * ; &	U	2X	8 5 - # 4 , (
014-U1	IN	12.50	12.04	15.25	7.66	1 1/2"	.875	7.11	47
	mm	318	306	387	195	---	22.23	181	21
024-U1	IN	12.50	12.46	15.67	7.66	1 1/2"	.875	7.11	49
	mm	318	316	398	195	---	22.23	181	22
034-U1	IN	14.25	14.58	17.67	8.49	2"	1.250	8.12	100
	mm	362	370	449	216	---	31.75	206	45
064-U1	IN	19.18	18.91	22.07	10.77	2 1/2"	1.625	10.31	255
	mm	487	480	561	274	---	41.28	262	116
134-U1	IN	19.18	19.85	23.01	10.77	3"	1.625	10.31	280
	mm	487	504	584	274	---	41.28	262	127
224-U1	IN	23.75	23.37	27.87	13.74	4"	2.000	12.87	505
	mm	603	594	708	349	---	50.80	327	229
324-U1	IN	36.00	30.17	---	16.86	6" 150# FLG	2.375	17.88	775
	mm	914	766	---	428	---	60.33	454	352

*NOTE: Dimension AO is with tallest pedestal. Optional heights are available.

**NOTE: CP4 is the maximum dimension for all vented and jacketed cover options.



Universal I Series Tru-Fit™

4 * ; & MODEL		A	AO	H	M	1 0 3 5 4 * ; &	N	O
006-U1	IN	12	13.25	18	27.60	1 1/2"	15.56	9.15
	mm	305	37	457	701	---	395	232
015-U1	IN	12	13.25	18	27.60	1 1/2"	15.56	9.15
	mm	305	37	457	701	---	395	232
018-U1	IN	12	13.25	18	28.02	1 1/2"	15.56	9.15
	mm	305	37	457	712	---	395	232
030-U1	IN	14	15.11	20	33.67	1 1/2"	18.65	10.02
	mm	356	384	508	855	---	474	255
040-U1	IN	14	15.11	20	34.04	2"	18.65	10.02
	mm	356	384	508	865	---	474	255
060-U1	IN	18	20.00	28	43.77	2 1/2"	22.02	12.00
	mm	457	508	711	1112	---	559	305
130-U1	IN	18	20.00	28	44.71	3"	22.02	12.00
	mm	457	508	711	1136	---	559	305
220-U1	IN	20	23.25	36	52.25	4"	27.68	14.50
	mm	508	591	914	1327	---	703	368

When it is time to repair ...

Waukesha Cherry-Burrell offers the following options, you pick the one that meets your needs.

' B D U P S Z 3 F N B S J N C E P H U S B N \$ # 8 U S B E J U J P O N B M Q S P H S B

- t No need to return your pump until you receive your new replacement pump.
- t Substantial savings over new pump.
- t All remanufactured pumps must pass a 25 point inspection process and undergo performance testing.
- t Only OEM genuine parts are used in the remanufacturing process and you receive a guaranteed warranty and quality certificate with each pump.
- t New pumps eligible for Remanufacturing Program twice.
- t See Bulletins FH-1728 for more details.

' B D U P S Z * O T Q E W U T S P H S B N

- t Return your pump for complete factory inspection.
- t Cost effective options to match your performance/budget needs.
- t Your pump body may be remachined up to 6 times.
- t Replacement rotors and parts available.
- t Factory warranty.
- t See Bulletin FH-1728 for more details.

8 \$ # \$ F S N U F E N Q 3 F Q B J S \$ F O U F S T

- t Local distributors with factory trained and certified service technicians.
- t 2 V J D M P S B T M Q P O T F
- t Genuine WCB parts.

Your local contact:

8 B V E T I B \$ I F S S Z # B S S B M O N U Z B

Seller warrants its products to be free from defects in materials and workmanship for a period of one (1) year from the date of shipment. This warranty shall not apply to products which require repair or replacement due to normal wear and tear or to products which are subjected to accident, misuse or improper maintenance. This warranty extends only to the original buyer. Products manufactured by others but furnished by seller are exempted from this warranty and are limited to the original manufacturer's warranty.



motralec

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