

WATEROUS PRODUCT LINE

THE FORCE BEHIND THE FIGHT

THE GLOBAL LEADER IN FIRE SUPPRESSION SINCE 1886





In 1886, a private development company offered the Waterous brothers free land in South St. Paul, Minnesota, U.S.A. to build a new factory along the Mississippi River.

A RICH HISTORY IN FIRE SUPPRESSION TECHNOLOGY.

Since our humble beginnings in 1886, Waterous has remained committed to developing products that meet the demands of our fellow firefighters. Our dedication has made Waterous one of the most trusted designers and manufacturers of fire pumps and waterworks equipment worldwide. From creating the first-frost shield hydrant and steam-powered, horse-drawn fire pump, to creating today's most advanced CAFS, Waterous sets the global standard when it comes to quality, development and performance.

THE THREAT OF FIRE KNOWS NO BOUNDARIES.

From the dry bush of the Australian outback to the damp coastal communities of England, fire is an international threat. To combat the flames wherever they arise, Waterous maintains a global presence with products specified to the needs of the global firefighting industry with unmatched service and customer care. For over 130 years, departments and brigades worldwide have confronted fire with Waterous by their side. Our full line of field-proven, technologically advanced fire suppression tools gives them the advantage.

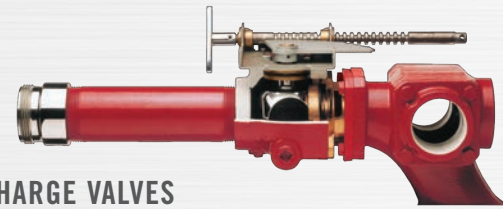


After over 130 years of expansion, and – ironically – two tragic fires that burned the factory to the ground – Waterous still resides today at the South St. Paul location along the Mississippi where the Waterous brothers built their first factory.

THE WORLD'S MOST TECHNICALLY ADVANCED FIRE PUMPS.

Fire hasn't changed - but the methods for fighting it have. At Waterous, we not only embrace this change, we propel it. We push the limits to improve the effectiveness of firefighting equipment. Whether that's delivering more knockdown power from a fire pump, or leading the charge in CAFS development and deployment, Waterous provides the firefighting industry with revolutionary tools that meet the demands of a hero, and maintains a global presence with products specified to each region's firefighting needs in Europe, North and South America, the Middle East, Asia, Australia, New Zealand and Africa.





DISCHARGE VALVES

- Chromium-plated bronze valve ball
- Spring-loaded floating seal assembly
- Multi-purpose drainport
- Manual, push/pull, twist lock (2.5") mechanism with panel-mounted "T" handle lock
- Optional electric actuator complies with NFPA requirements for slow actuation



DISCHARGE RELIEF VALVE

- Controls discharge pressure by bypassing flow from discharge back to suction
- Control discharge pressure up to 300 psi (20 bar)
- Available in three sizes, up to 2250 GPM (8500 l/min)



OVERHEAT PROTECTION MANAGER

- Opens when water inside the pump reaches 140° F (60° C)
- Flashing warning light on pump panel is triggered when water reaches 180° F (82° C)
- Water is released to ground



MONARCH™ INTAKE VALVE

- Manual, electric or pneumatic operation
- Stainless steel Wafer-Sphere® element
- Polymeric flexible lip seal
- Provision for pre-butterfly relief valve



INTAKE RELIEF VALVE

- Pilot-operated for improved performance
- Pressure scale markings
- Panel-mounted strainer



PRIMING PUMPS

- VPO oil-free primer
- Fast, dependable priming
- Electrically driven
- Operates independently from the pump
- Lubrication option (requires priming tank)



PRIMING VALVES

- Vacuum Activated Priming (VAP) Valve
- Stainless steel valve stem
- Opens automatically during pump priming
- Closes automatically when primer is deactivated



PNEUMATIC SHIFT

- Spring-loaded locking control
- Dual-action cylinder

TOP 10 REASONS TO CHOOSE WATEROUS.

1 - AMERICAN MADE

We can proudly say we build our pumps in the USA using USA content and advanced engineering.



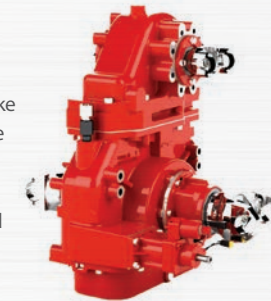
2 - FLAME-PLATED IMPELLER HUBS AND LABRYINTH-STYLE WEAR RINGS

Flame-plating, a Waterous exclusive, provides four times the life expectancy compared to the competition. Labryinth-style wear rings appreciably reduce performance-robbing recirculation.



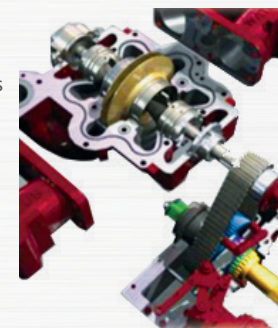
3 - CHAIN-DRIVE PUMP TRANSMISSION

Best In-Class Power Transfer. Quiet, efficient and strong characteristics make the chain-drive pump transmission the best option in power transfer. Positive shifting, no gear whining, no cooling required and less horsepower required that enhances the efficiency of the apparatus.



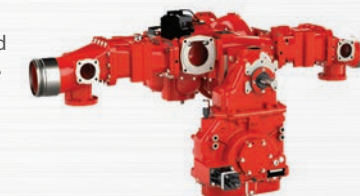
4 - DESIGN FEATURES

A separable impeller shaft provides easier maintenance, and o-rings offer easier replacement. Sealed outboard bearings require no maintenance and the product features timely parts availability (see #8), comprehensive maintenance instructions and a parts list.



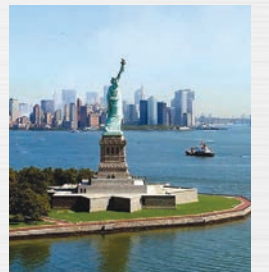
5 - PRODUCTS

Offering pumps, CAFS and foam systems, we provide the most comprehensive product offerings in the industry.



6 - RELIABILITY AND INDUSTRY STANDING

Waterous is in the largest fire departments in North America. Over 130 years of manufacturing in North America.



7 - BEST IN CLASS SERVICE & SUPPORT

Experienced sales, technical and manufacturing staff bring you trusted service and support. Our highly trained global network of sales, engineering and service support helps your department get the most out of your Waterous fire suppression equipment.

8 - ACCURATE AND TIMELY

On time and accurate parts orders (95% on-time delivery and a 99% order accuracy rate). All products are serialized. We have a record of every pump we've ever built.



9 - CAPABILITIES

Waterous has a 210,000 sq. ft. facility with 25 CNC machines and a union workforce with an average of 25 of years experience. We have 10 product engineers. We have reinvested over \$38 million dollars in capital investments over the last 11 years.



10 - ISO 9001 CERTIFIED COMPANY

Our entire facility and manufacturing processes meet or exceed ISO standards and compliance requirements. This means we deliver nothing but the most trustworthy, effective and advanced fire suppression equipment to firefighters worldwide.



Waterous



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TABLE OF CONTENTS

SPLIT-SHAFT PUMPS PAGE 5

CSC20	S101 COMPACT
CSUC20	S100C20
CMC20	CXC20
CMUC20	CXSC20

PTO-DRIVEN PUMPS PAGE 8

CPK-2	CLK	CMK
CPK-3	CLPA	CMPA
CPK-4	CSK	CMUK
CGK	CSPA	CMUPA
CGPA	CSUK	HLUK
CXK	CSUPA	
CXPA		

INTERNATIONAL REAR-MOUNT PUMPS PAGE 13

HL400	HL200
HL300	PASSPORT S200

DIRECT-ENGINE MOUNTED PUMPS PAGE 15

CPT-2	CGT
CPT-3	CXT
CPT-4	CLT

REAR-MOUNT PAGE 17

CMD	CSUD
CMUD	HLUD
CSD	S100D

ECLIPSE™ CAFSYSTEMS PAGE 19

ECLIPSE™
 ECLIPSE™ ES
 ECLIPSE™ GEN 2.0
 ECLIPSE™ GEN 2.0 MODULAR SLIDE-INS

PORTABLE/SLIDE MODULAR SLIDE-IN PAGE 21

70-35-GP PORTABLE SLIDE-IN
 100-50-DS MODULAR SLIDE-IN
 200-100-DS MODULAR SLIDE-IN

INTEGRATED PUMPS / COMPRESSORS PAGE 23

250-100-P	500-120-P
250-120-P	500-150-P
500-100-P	750-1000-10-P

PTO-DRIVEN AIR COMPRESSOR KITS PAGE 23

80-P
 140-P
 200-P

FOAM SYSTEMS PAGE 24

AQUIS™ 1.5
 AQUIS™ 3.0
 AQUIS™ 6.0
 FOAMFILL™



SPECIAL APPLICATIONS PAGE 25

ARFF PUMPS PAGE 27

CPK-5	CZ
CR	CZU
CRU-1	CX

PORTABLE AND MOTOR PUMPS PAGE 28

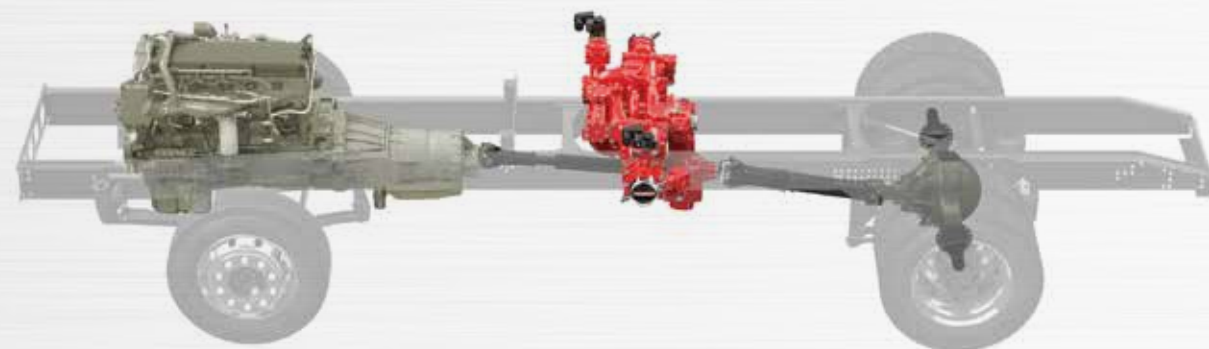
PB18-4025B	E501
PB18-2515	E511
PB18-3030	
PB18-G2015	

FIRE PUMP ACCESSORIES PAGE 29

DISCHARGE VALVES
 OVERHEAT PROTECTION MANAGER
 PRIMING PUMPS
 PRIMING VALVES
 PRESSURE GOVERNOR
 MONARCH™ INTAKE VALVE
 INTAKE RELIEF VALVE
 PNEUMATIC SHIFT



PUMP PERFORMANCE GUIDE



SPLIT-SHAFT PUMPS PAGE 5

GPM	l/min	PUMP MODEL - TYPE
500 - 750	2000 - 2750	CGV - Single-Stage
750 - 1250	3000 - 5000	CS - Single-Stage
500 - 1500	3000 - 6000	CX - Single-Stage CXS - Single-Stage
1500 - 2250	6000 - 9000	CSU - Single-Stage

GPM	l/min	PUMP MODEL - TYPE
1250 - 2000	5000 - 7500	S100 - Single-Stage S101 - Single-Stage
750 - 1250	3000 - 5000	CM - Two-Stage
1500 - 2250	6000 - 9000	CMU - Two-Stage

Model Flow Rate at 150 PSI (10 bar) Pressure

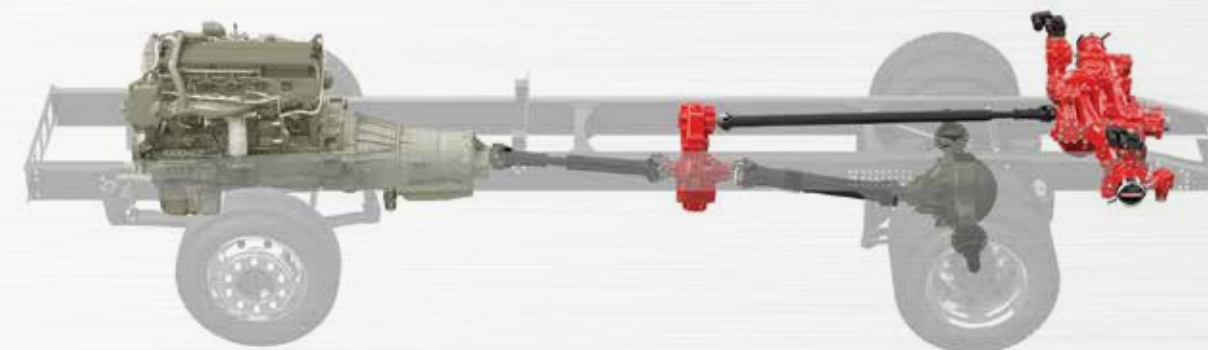


PTO-DRIVEN PUMPS PAGE 8

GPM	l/min	PUMP MODEL - TYPE
300	1000	CPK-2 - Single-Stage
500	1900	CPK-3 - Two-Stage CLVK - Single-Stage CLVPA - Single-Stage
600	200	CPK-4 - Four-Stage
750	3000	CGVK - Single-Stage CGVPA - Single-Stage

GPM	l/min	PUMP MODEL - TYPE
750 - 1250	3000-5000	CSK - Single-Stage CSPA - Single-Stage CMK - Two-Stage CMPA - Two-Stage CXVK - Single-Stage CXVPA - Single-Stage
1500	6000	CXSK - Single-Stage CXSPA - Single-Stage CSUK - Single-Stage CMUK - Two-Stage

Model Flow Rate at 150 PSI (10 bar) Pressure



INTERNATIONAL REAR-MOUNT PUMPS PAGE 13

GPM	l/min	PUMP MODEL
100 - 1000	400 - 4000	HL400
100 - 750	400 - 3000	HL300
100 - 500	400 - 2000	HL200
500 - 750	2000 - 3000	PASSPORT S200

High Model Flow Rate at 600 PSI (40 bar) Pressure
Low Model Flow Rate at 150 PSI (10 bar) Pressure

REAR-MOUNTED PUMPS PAGE 17

GPM	l/min	PUMP MODEL - TYPE
750 - 2250	3000 - 9000	CSD / CSUD - Single-Stage CMD / CMUD - Two-Stage
750 - 1500	3000 - 5500	CXD (Includes CXSD Model) - Single-Stage
1000 - 1500 (100 low)	4000 - 5600 (400 low)	HLUD - Simultaneous High and Low Pressure
1250 - 2000	5000 - 7500	S100D / S101D - Single-Stage

Model Flow Rate at 150 PSI (10 bar) Maximum Pressure

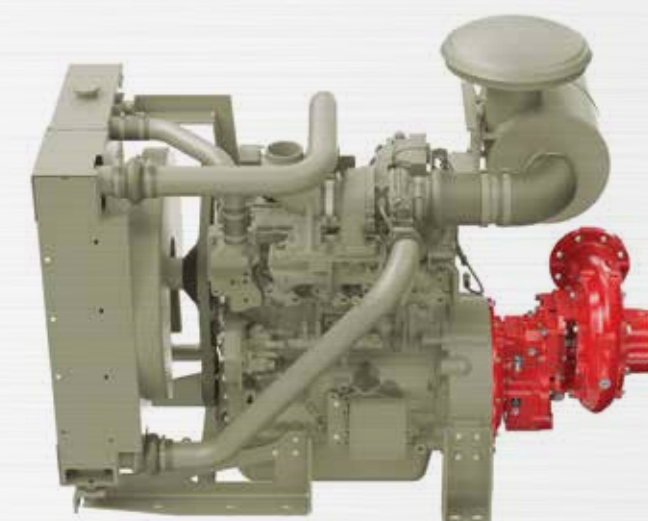
DIRECT-ENGINE MOUNTED PUMPS PAGE 15

GPM	l/min	PUMP MODEL - TYPE
300	1000	CPT-2 - Single-Stage
500	1900	CPT-3 - Two-Stage CLVT - Single-Stage
60	200	CPT-4 - Four-Stage
500 - 750	2000 - 2750	CGVT - Single-Stage
750 - 1250	3000 - 5000	CXVT - Single-Stage

Model Flow Rate at 150 PSI (10 bar) Pressure

3000	11000	CRU-1 - End Suction
4000	15000	CRU-2 - End Suction

Model Flow Rate at 100 PSI (9.6 bar) Pressure
See Pages 25 and 26





SPLIT-SHAFT PUMPS

A SPLIT-SHAFT FIRE PUMP FOR EVERY APPLICATION.

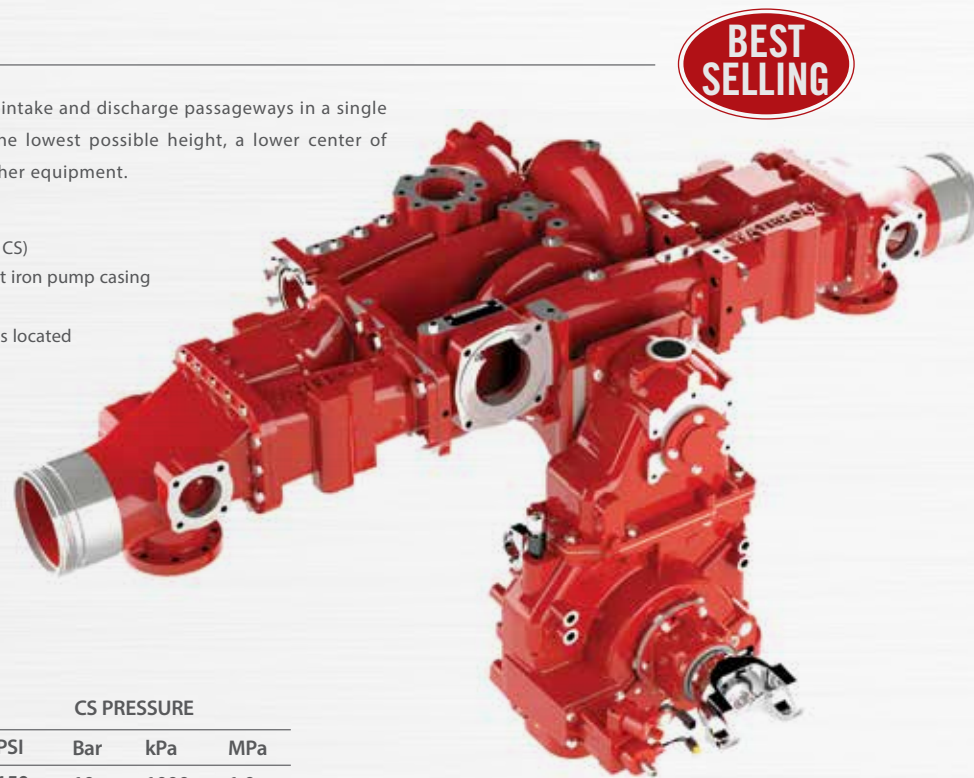
Waterous split-shaft pumps provide fire industry professionals with easy-to-operate systems that offer the most efficient water delivery system on the market. Admired for their craftsmanship and exclusive design features, Waterous split-shaft pumps have become the primary firefighting tools of fire departments around the globe.

SPLIT-SHAFT PUMP

CS / CSU

Designed with a two-piece, horizontally split body with intake and discharge passageways in a single casting and on the same level. This design provides the lowest possible height, a lower center of gravity, and more room for hose reels, hose beds and other equipment.

- Flame-plated impellers (standard on CSU, optional on CS)
- Two-piece, horizontally-split, high-tensile strength cast iron pump casing
- Optional bronze/gunmetal pump casing
- All deep-groove oil and grease lubricated ball bearings located outside the pump casing
- Bronze double-hubbed accurately balanced impeller
- Stainless steel separable impeller shaft
- Replaceable bronze impeller rings
- Flinger rings mounted on impeller shaft
- Adjustable BFG packing standard (spring-loaded mechanical seal available)
- C20 Transmission consisting of an aluminum case and chain-driven for silent operation
- Maximum Pump Pressure: 400 PSI (34 bar)



CS FLOW	
GPM	750, 1000, 1250
l/min	3000, 4000, 5000
l/sec	50, 65, 80

CS PRESSURE			
PSI	Bar	kPa	MPa
150	10	1000	1.0

CSU FLOW	
GPM	1500, 1750, 2000, 2250
l/min	6000, 7000, 8000, 9000
l/sec	100, 115, 130, 150

CSU PRESSURE			
PSI	Bar	kPa	MPa
150	10	1000	1.0

SPLIT-SHAFT PUMPS

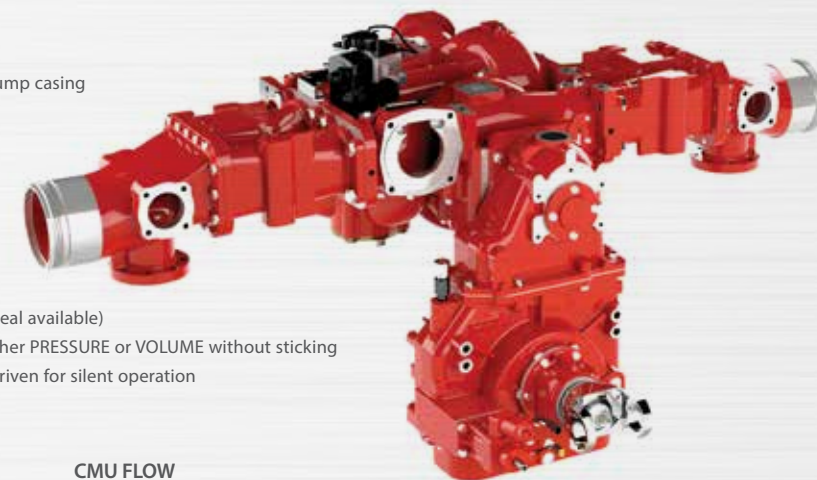
SPLIT-SHAFT PUMP

CM / CMU

The low profile split-shaft two-stage series/parallel pump with ball-type transfer valve allows you to switch from pressure to volume smoothly and easily.

ONLY PUMP TO PASS NEW YORK ACCEPTANCE TEST

- Flame-plated impellers (standard on CMU, optional on CM)
- Two-piece, horizontally-split, high-tensile strength cast iron pump casing
- Optional bronze/gunmetal pump casing
- All deep-groove oil and grease lubricated ball bearings located outside the pump casing
- Bronze double-hubbed accurately balanced impellers
- Stainless steel separable impeller shaft
- Replaceable bronze impeller rings
- Flinger rings mounted on impeller shaft
- Adjustable BFG packing standard (spring-loaded mechanical seal available)
- Bronze ball-type transfer valve provides smooth transfer to either PRESSURE or VOLUME without sticking
- C20 Transmission consisting of an aluminum case and chain-driven for silent operation
- Maximum Pressure: 600 PSI (41 bar)



CM FLOW	
GPM	750, 1000, 1250
l/min	2000, 3000, 4000, 5000
l/sec	30, 50, 65, 80

CMU FLOW	
GPM	1500, 1750, 2000, 2250
l/min	6000, 7000, 8000, 9000
l/sec	100, 115, 130, 150

CM PRESSURE			
PSI	Bar	kPa	MPa
150	10	1000	1.0

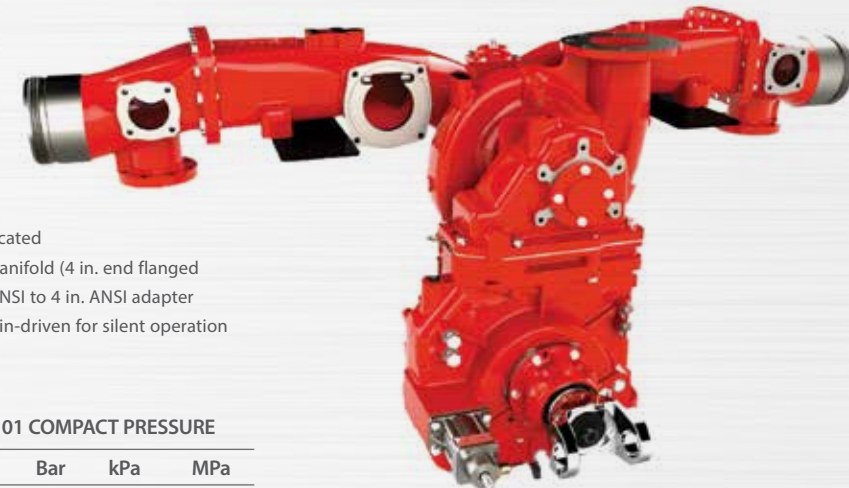
CMU PRESSURE			
PSI	Bar	kPa	MPa
150	10	1000	1.0

SPLIT-SHAFT PUMP

S101 COMPACT

With a smaller footprint than other larger, midship mounted fire pumps, the S101 Compact measures 26" from the front of the ram's horn intake to the rear of the C20 Transmission, which saves on compartment space for those important tools needed when fighting a fire.

- Cast ductile iron body
- Dual stripping edge volute
- Passive lubrication system
- Dual Intake Wye (Ram Horn)
- Self-adjusting mechanical seal
- Mechanically and hydraulically balanced impeller
- Replaceable bronze wear rings
- All deep-groove anti-friction ball bearings, oil-splash lubricated
- Discharge: 5 in. ANSI flange or an optional 21st Century Manifold (4 in. end flanged manifold with (8) 2-1/2 in. side pads or an optional 5 in. ANSI to 4 in. ANSI adapter
- C20 Transmission consisting of an aluminum case and chain-driven for silent operation



S101 COMPACT FLOW	
GPM	1250, 1500, 1750, 2000
l/min	5000, 6000, 7000, 7500
l/sec	80, 100, 115, 125

S101 COMPACT PRESSURE			
PSI	Bar	kPa	MPa
150	10	1000	1.0

SPLIT-SHAFT PUMPS

SPLIT-SHAFT PUMP

S100

Get the power and performance of a traditional midship fire pump in a compact, lightweight design.



- Cast ductile iron body
- Dual stripping edge volute
- Passive lubrication system
- Self-adjusting mechanical seal
- Mechanically and hydraulically balanced impeller
- Replaceable bronze wear rings
- All deep-groove anti-friction ball bearings, oil-splash lubricated
- 5-inch ANSI flange or optional end flanged discharge manifold
- C20 Transmission consisting of an aluminum case and chain-driven for silent operation

S100 FLOW		S100 PRESSURE			
GPM	1250, 1500, 1750, 2000	PSI	Bar	kPa	MPa
l/min	5000, 6000, 7000, 7500	150	10	1000	1.0
l/sec	80, 100, 115, 125				

SPLIT-SHAFT PUMP

CX / CXS Series

The most versatile pump offered by Waterous. When you need the performance of a larger split-shaft pump, but just don't have the compartment space, the CX/CXS is the answer.



- Cast ductile iron body
- Dual stripping edge volute
- Passive lubrication system
- Self-adjusting mechanical seal
- Mechanically and hydraulically balanced impeller
- Replaceable bronze wear rings
- All deep-groove anti-friction ball bearings, oil-splash lubricated
- 5-inch ANSI flange or optional end flanged discharge manifold
- C20 Transmission consisting of an aluminum case and chain driven for silent operation

CXC20 / CXSC20 FLOW		CX / CXS PRESSURE			
GPM	750, 1000, 1250, 1500*	PSI	Bar	kPa	MPa
l/min	3000, 4000, 5000, 5500*	150	10	1000	1.0
l/sec	50, 65, 80, 92*				

**Using both sides of the "Ram Horn" style intake fitting (CXSC20 Models Only)

SPLIT-SHAFT PUMP

CG Series

The single stage design with vertically-split volute and pump transmission provides simple operation, easy maintenance and high reserve capacity.



- High-tensile, close-grained gray iron (bronze/gunmetal optional), two-piece, vertically-split volute body
- 17-4 stainless steel, heat treated impeller
- Self-adjusting mechanical seal
- Fully-enclosed, bronze, double-hubbed impeller with flame-plated hubs
- Victaulic®, threaded or flanged intake connections
- C20 Transmission consisting of an aluminum case and chain driven for silent operation

CG PERFORMANCE							
	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	750	2750	46	150	10	1000	1.0
MAXIMUM PRESSURE	80	300	5	350	24	2400	2.4



PTO-DRIVEN PUMPS

PUMPING ON THE GO.

Provide true "pump and roll" capability while reducing transmission wear on your apparatus by adding a PTO fire pump to your firefighting arsenal. Available in multiple sizes and styles, Waterous has a PTO fire pump to fit your requirements and apparatus set-up perfectly.

PTO-DRIVEN PUMP

CPK-2

The CPK-2 is driven by a transmission side-mounted PTO and is able to accommodate multiple lines for straight stream or fog nozzles.



- High tensile, close-grained gray iron casing (bronze/gunmetal optional), one-piece volute body
- 17-4 stainless steel, heat-treated impeller shaft (monel shaft optional)
- Bronze double-hubbed precision-balanced impeller
- 3-inch (76.2mm) NPT or BSP intake; 2-inch (50mm) NPT or BSP discharge (BSP threads available straight or tapered)
- Multiple gearbox mounting positions (horizontally, vertically or inverted)
- Seven optional speed-increasing transmission ratios
- Crown-shaved, carburized and hardened helical cut, constant-mesh quiet gears
- K Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears

CPK-2 PERFORMANCE							
	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	300	1100	18	150	10	1000	1.0
MAXIMUM PRESSURE	60	200	3	400	28	2800	2.8

PTO-DRIVEN PUMP

CPK-3

A compact two-stage pump with "pump and roll" capability making it ideal for extinguishing grass and brush fires.



- High tensile, close-grained gray iron casing (bronze/gunmetal optional), one-piece volute body
- Bronze double-hubbed, precision-balanced impellers
- Separable impeller shaft for ease of serviceability
- Push-pull manual bronze transfer valve
- Available in either rotation of input shaft
- 4-inch (101.4mm) NPT tee adapter intake; two 2-inch (50mm) or 2.5-inch (64mm) NPT tee adapter (or 2.5-inch (64mm) tapped flange) discharge
- K Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears
- Seven optional speed-increasing transmission ratios

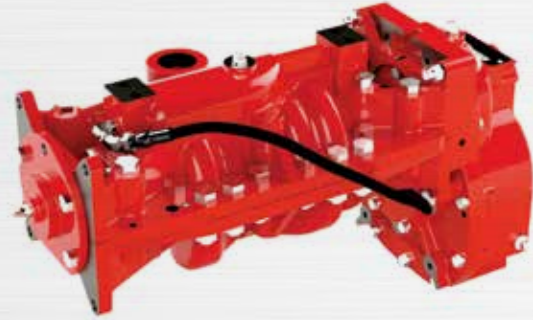
CPK-3 PERFORMANCE							
	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	500	1900	32	150	10	1000	1.0
MAXIMUM PRESSURE	60	200	3	800	55	5500	5.5

PTO-DRIVEN PUMPS

PTO-DRIVEN PUMP

CPK-4

An ultra high-pressure, lightweight, 4-stage centrifugal pump. Able to produce high-pressure fog while the pumper is in motion or stationary.



- High-tensile, close-grained gray iron (bronze/gunmetal optional), two-piece, horizontally-split volute body
- Ni-resist; special "stepped" designed wear rings reduce internal leakage and increase efficiency
- Bronze, hydraulically and mechanically balanced impellers
- Impeller hubs are "stepped" to minimize internal bypass
- Adjustable braided flexible graphite (BFG) packing
- Available with either clockwise or counter-clockwise rotation of input shaft
- K Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears

CPK-4 PERFORMANCE

GPM	L/min	L/sec	PSI	Bar	kPa	MPa
60	200	3	1000	70	7000	7.0

PTO-DRIVEN PUMP

CGK / CGPA

The single stage design with vertically-split volute and pump transmission provides simple operation, easy maintenance and high reserve capacity.



- High-tensile, close-grained gray iron (bronze/gunmetal optional), two-piece, vertically-split volute body
- 17-4 stainless steel, heat-treated impeller shaft
- Fully-enclosed, bronze, double-hubbed impeller with flame-plated hubs
- Victaulic®, threaded or flanged intake connections
- Self-adjusting corrosion- and wear-resistant mechanical seals
- Available with K Series or PA Series Transmissions
- K Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears
- PA Series consists of an aluminum case and is chain driven for silent operation

CGK / CGPA PERFORMANCE

	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	750	2750	46	150	10	1000	1.0
MAXIMUM PRESSURE	80	300	5	350	24	2400	2.4



PTO-DRIVEN PUMPS

PTO-DRIVEN PUMP

CXK / CXPA - CXSK / CXSPA

The CX series is a single-stage, end-suction pump that can be driven by a transmission side-mounted PTO or gear-case transmission.



- High-tensile, close-grained gray iron (bronze/gunmetal optional), two-piece, vertically-split volute body
- 17-4 stainless steel, heat-treated impeller shaft
- Fully-enclosed, bronze, double-hubbed, precision-balanced impeller
- Bronze replaceable wear rings
- Self-adjusting corrosion- and wear-resistant mechanical seals
- Optional crosspipe intake fitting allows for maximum flow of 1500 GPM (5700 L/min)
- Available with K Series or PA Series Transmissions
 - K Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears
 - PA Series consists of an aluminum case and is chain driven for silent operation

CXK / CXPA PERFORMANCE

	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	1500	5500	92	150	10	1000	1.0



PTO-DRIVEN PUMP

CLK / CLPA

One-piece design featuring intake and discharge arrangements in a wide variety of options to meet your requirements.



- High-tensile, close-grained gray iron (bronze/gunmetal optional), one-piece volute body
- 17-4 stainless steel, heat-treated impeller shaft
- Bronze, double-hubbed, precision-balanced impeller
- Maintenance-free, self-adjusting shaft seal
- Choice of 4-inch (101.4mm) NH or BSP threaded-end intake
- Available with K Series or PA Series Transmissions
 - K Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears
 - PA Series consists of an aluminum case and is chain driven for silent operation

CLK / CLPA PERFORMANCE

	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	500	1900	32	150	10	1000	1.0

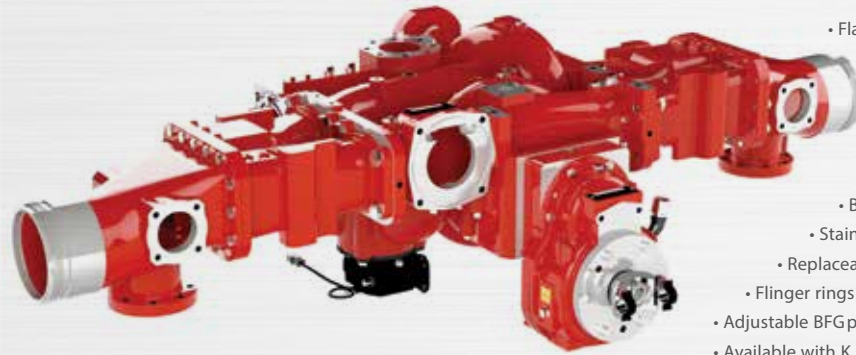


PTO-DRIVEN PUMPS

PTO-DRIVEN PUMP

CSK / CSUK - CSPA / CSUPA

The leading single-stage split-shaft fire pump on the market today provides efficient use of power and performance. Designed with a two-piece, horizontally split body with intake and discharge passageways in a single casting and on the same level, this pump provides the lowest possible height, a lower center of gravity, and more room for hose reels, hose beds and other equipment.



- Flame-plated impellers (standard on CSU, optional on CS)
- Two-piece, horizontally-split, high-tensile strength cast iron pump casing
- Optional bronze/gunmetal pump casing
- All deep-groove oil and grease lubricated ball bearings located outside the pump casing
- Bronze double-hubbed accurately balanced impeller
- Stainless steel separable impeller shaft
- Replaceable bronze impeller rings
- Flinger rings mounted on impeller shaft
- Adjustable BFG packing standard (spring-loaded mechanical seal available)
- Available with K Series or PA Series Transmissions
 - K Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears
 - PA Series consists of an aluminum case and is chain driven for silent operation

CS FLOW

GPM	750, 1000, 1250
l/min	3000, 4000, 5000
l/sec	50, 65, 80

CS PRESSURE

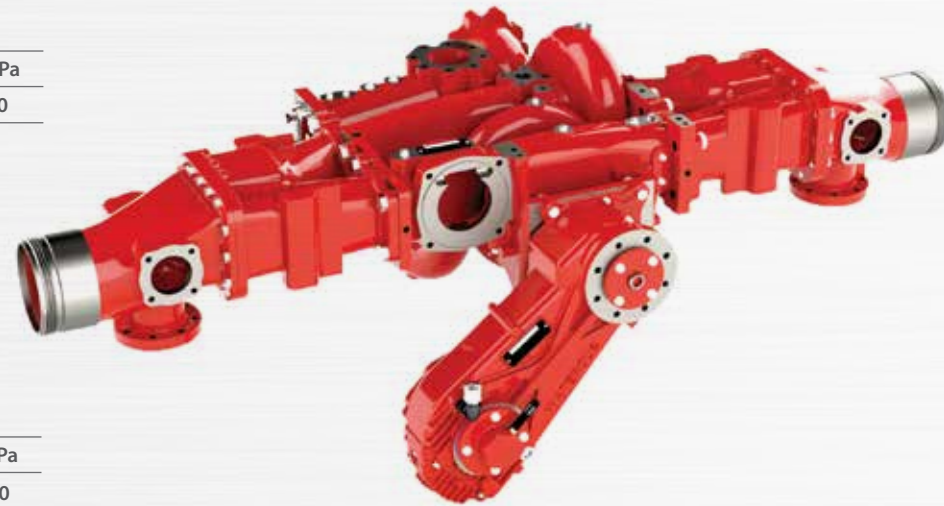
PSI	Bar	kPa	MPa
150	10	1000	1.0

CSU FLOW

GPM	1500
l/min	6000
l/sec	100

CSU PRESSURE

PSI	Bar	kPa	MPa
150	10	1000	1.0

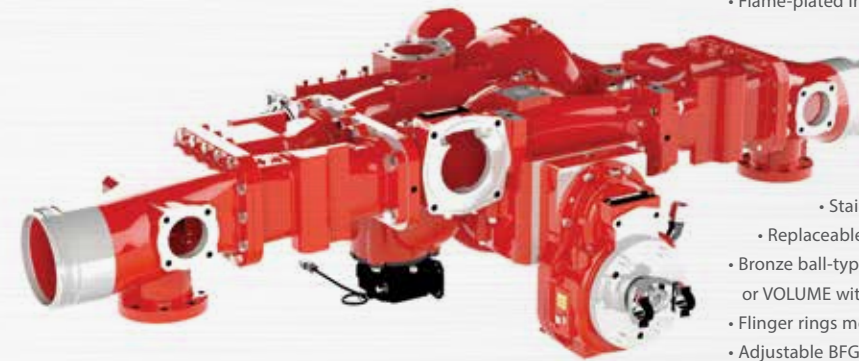


PTO-DRIVEN PUMPS

PTO-DRIVEN PUMP

CMK / CMUK / CMPA

The low profile two-stage series/parallel pump with ball-type transfer valve allows you to switch from pressure to volume smoothly and easily.



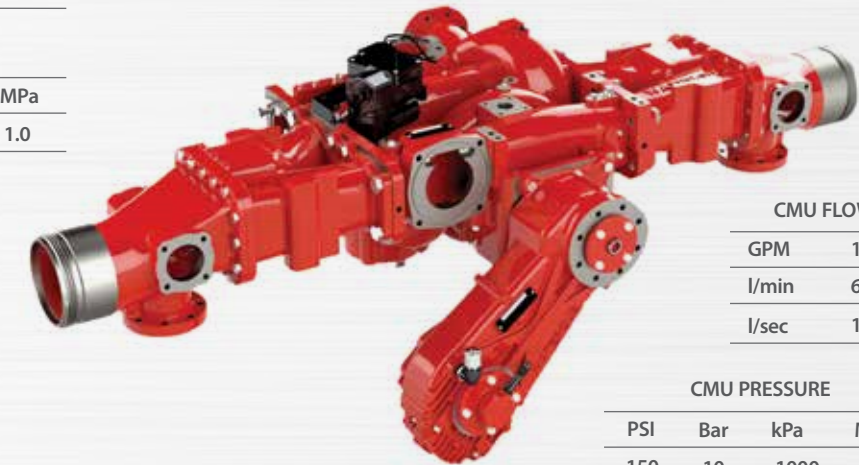
- Flame-plated impellers (standard on CMU, optional on CM)
- Two-piece, horizontally-split, high-tensile strength cast iron pump casing
- Optional bronze/gunmetal pump casing
- All deep-groove oil and grease lubricated ball bearings located outside the pump casing
- Bronze double-hubbed accurately balanced impellers
- Stainless steel separable impeller shaft
- Replaceable bronze impeller rings
- Bronze ball-type transfer valve provides smooth transfer to either PRESSURE or VOLUME without sticking
- Flinger rings mounted on impeller shaft
- Adjustable BFG packing standard (spring-loaded mechanical seal available)
- Available with K Series or PA Series Transmissions
 - K Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears
 - PA Series consists of an aluminum case and is chain driven for silent operation

CM FLOW

GPM	750, 1000, 1250
l/min	3000, 4000, 5000
l/sec	30, 50, 65, 80

CM PRESSURE

PSI	Bar	kPa	MPa
150	10	1000	1.0



CMU FLOW

GPM	1500
l/min	6000
l/sec	100

CMU PRESSURE

PSI	Bar	kPa	MPa
150	10	1000	1.0

PTO-DRIVEN PUMP

HLUK

The compact, simultaneous High/Low pressure series pump from Waterous is ideal for an urban interface vehicle or wildland firefighting.



- Corrosion-resistant anodized aluminum pump body
- Wear-resistant anodized aluminum low pressure impeller with flame-plated hubs
- Bronze high pressure impeller
- Stainless steel impeller shaft
- Bronze wear rings
- Maintenance-free mechanical seal
- Anodized aluminum intake
- Anodized aluminum discharge manifold with six (6) discharge outlets
- External High Pressure Relief Valve (EHPRV):
 - EHPRV is standard equipment. OEM may choose to use their own high pressure relief valve.
 - K Series Transmission consists of an aluminum casing with constant-mesh, stainless steel helical gears

HLUK LOW PRESSURE

GPM	1000, 1250, 1500
l/min	4000, 5000, 5600
l/sec	65, 80, 95

PSI	Bar	kPa	MPa
150	10	1000	1.0

HLUK HIGH PRESSURE

GPM	100
l/min	400
l/sec	6.5

PSI	Bar	kPa	MPa
600	40	4000	4.0



INTERNATIONAL REAR-MOUNT FIRE PUMPS

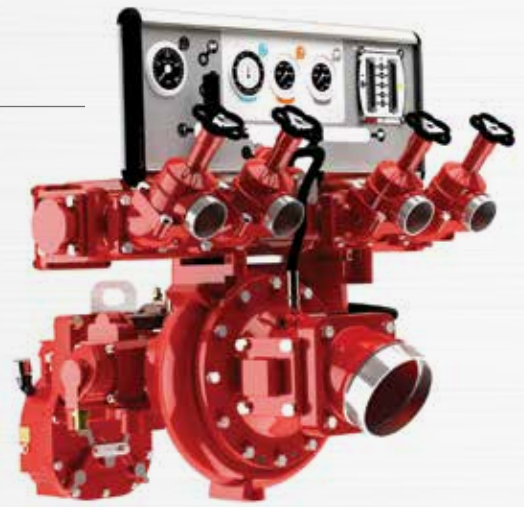
THE LITTLE PUMPS THAT PACK A MIGHTY PUNCH.

Specifically designed for international-style fire vehicles, the compact, rear-mounted simultaneous High/Low pressure series pumps feature built-in high-pressure relief valves for enhanced safety.

REAR-MOUNT FIRE PUMP

HL400

- Corrosion-resistant anodized aluminum or bronze body (gunmetal)
- Wear-resistant anodized aluminum, flame-plated hubs low pressure impeller
- Bronze high pressure impeller
- Stainless steel impeller shaft
- Bronze wear ring
- Maintenance-free mechanical seal
- Available with K gear drive transmission
- Available in clockwise or counterclockwise rotation (not available on bronze models)
- Constructed of anodized aluminum, the pedestal supports the Waterous automatic piston primer and main bearings.
- Anodized aluminum or bronze Intake with 30° droop, two auxiliary 4" side flanges
- HL400 available with 6 in. BSP, 5 in. Victaulic® connection, 150 mm Storz® or 4 in. BSP dual intake
- Anodized aluminum or bronze discharge manifold with six discharge outlets
 - (2) Anodized aluminum non-return discharge valve (low pressure)
- Interstage crossover valve: The valve incorporates both a built-in high pressure relief valve and a removable strainer for the high pressure stage inlet
- 275 lbs (125 kg).



	HL400 FLOW			HL400 PRESSURE			
	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
HIGH	100	400	6.5	600	40	4000	4.0
LOW	1000	4000	65	150	10	1000	1.0

REAR-MOUNT FIRE PUMP

HL300



- Available in mid-mount configuration
- Optional round-the-pump foam system
- Optional operator's panel
- Optional Storz fittings
- Bronze/gunmetal construction available
- Available with K Series gear-drive transmission
- Available in clockwise or counterclockwise rotation (not available on bronze models)
- 245 lbs (111 kg)

	HL300 FLOW			HL300 PRESSURE			
	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
HIGH	100	400	6.5	600	40	4000	4.0
LOW	750	3000	60	150	10	1000	1.0

INTERNATIONAL REAR-MOUNT FIRE PUMPS

REAR-MOUNT FIRE PUMP

HL200



- Available in mid-mount configuration
- Optional round-the-pump foam system
- Optional operator's panel
- Optional Storz fittings
- Bronze/gunmetal construction available
- Available with K Series gear-drive transmission
- Available in clockwise or counterclockwise rotation (not available on bronze models)
- 235 lbs (107 kg)

	HL200 FLOW			HL200 PRESSURE			
	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
HIGH	100	400	6.5	600	40	4000	4.0
LOW	500	2000	33	150	10	1000	1.0

PASSPORT S200 MODEL

The S200 fire pump was designed by Waterous engineers to provide the utmost quality and reliability that comes with the Waterous name. With the goal of reaching international standards, the S200 accomplished that goal by meeting EN 1028, NFPA 1901 (North America) and CCC in China. The S200 is quieter, lighter and more flexible than any other fire pump on the market today.



	PASSPORT (S200) PERFORMANCE						
	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
NFPA 1901,	500	2000	33	150	10	1000	1.0
EN1028 and	500	2000	33	225	15	1500	1.5
CCC Ratings	750	3000	50	150	10	1000	1.0
	750	3000	50	225	15	1500	1.5

Key Factors:

- Maintenance-free (oil-free primer and self-lubricated bearings)
- Built-in automatic primers
- Weighs less than 200 lbs. (91 kg).

Volute Body and Head:

Bronze with lightweight composite materials

Impeller:

Bronze impellers are standard

Impeller Shaft:

Consists of an impeller mounted on a stainless steel shaft with self-lubricated sealed bearings.

Shaft Seal:

The mechanical seal consists of a flat, highly polished (lapped), self-adjusting (spring-fed) carbon ring that is sealed in the pump body. The carbon ring presses against a highly-polished rotating ring that is sealed to and rotates with the impeller. Mechanical seal is retained in and easily removable seal housing.

Pedestal (Primer Housing):

The pedestal is constructed of anodized aluminum and supports the piston primers and main bearings. Contains no oil. Maintenance is not required.

Priming:

Integrated, fully automatic, oil and maintenance-free piston primer with 50% more capacity than a typical piston primer. All components are constructed of corrosion-resistant materials.

Thermal Relief Valve:

The thermal relief valve opens as the temperature of the water inside the pump reaches 49° C. The valve opens and diverts water to one of the following locations:

- To the holding tank, vehicle tank or to atmosphere (ground).

Bearings:

The main pump shaft uses long-life, double-row angular contact ball bearing and a single-row ball bearing that are self-lubricated, double-sealed and require no maintenance.

DIRECT-ENGINE MOUNTED PUMPS

DIRECT-ENGINE MOUNTED PUMPS

CPT-2

The CPT-2 is powered by directly mounting to an engine using an SAE bellhousing. Pumps are also able to accommodate multiple lines for straight stream or fog nozzles.



- High tensile, close-grained gray iron casing (bronze/gunmetal optional), one-piece volute body
- 17-4 stainless steel, heat-treated impeller shaft (monel shaft optional)
- Bronze double-hubbed precision-balanced impeller
- 3-inch (76.2mm) NPT or BSP intake; 2-inch (50mm) NPT or BSP discharge (BSP threads available straight or tapered)
- T Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears
- Multiple gearbox mounting positions (horizontally, vertically or inverted)
- Several optional speed-increasing transmission ratios

CPT-2 PERFORMANCE

	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	300	1100	18	150	10	1000	1.0
MAXIMUM PRESSURE	60	200	3	400	28	2800	2.8

DIRECT-ENGINE MOUNTED PUMPS

CPT-3

A compact two-stage pump with "pump and roll" capability making it ideal for extinguishing grass and brush fires.



- High tensile, close-grained gray iron casing (bronze/gunmetal optional), one-piece volute body
- Bronze double-hubbed, precision-balanced impellers
- Separable impeller shaft for ease of serviceability
- Push-pull manual bronze transfer valve
- Available in either rotation of input shaft
- 4-inch (101.4mm) NPT tee adapter intake; two 2-inch (50mm) or 2.5-inch (64mm) NPT tee adapter (or 2.5-inch (64mm) tapped flange) discharge
- T Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears
- Several optional speed-increasing transmission ratios

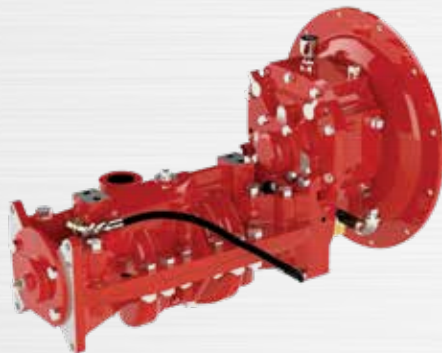
CPT-3 PERFORMANCE

	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	500	1900	32	150	10	1000	1.0
MAXIMUM PRESSURE	60	200	3	800	55	5500	5.5

DIRECT-ENGINE MOUNTED PUMPS

CPT-4

An ultra high-pressure, lightweight, 4-stage centrifugal pump. Able to produce high-pressure fog while the pumper is in motion or stationary.



- Ni-resist; special "stepped" designed wear rings reduce internal leakage and increase efficiency
- Bronze, hydraulically and mechanically balanced impellers
- Impeller hubs are "stepped" to minimize internal bypass
- High-tensile, close-grained gray iron (bronze/gunmetal optional), two-piece, horizontally-split volute body
- Adjustable braided flexible graphite (BFG) packing
- Available with either clockwise or counter-clockwise rotation of input shaft
- T Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears

CPT-4 PERFORMANCE

GPM	L/min	L/sec	PSI	Bar	kPa	MPa
60	200	3	1000	70	7000	7.0

DIRECT-ENGINE MOUNTED PUMPS

DIRECT-ENGINE MOUNTED PUMPS

CGT

The single stage design with vertically-split volute and pump transmission provides simple operation, easy maintenance and high reserve capacity.



- High-tensile, close-grained gray iron (bronze/gunmetal optional), two-piece, vertically-split volute body
- 17-4 stainless steel, heat-treated impeller shaft
- Fully-enclosed, bronze, double-hubbed impeller with flame-plated hubs
- Victaulic®, threaded or flanged intake connections
- Self-adjusting corrosion- and wear-resistant mechanical seals
- T Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears

CGT PERFORMANCE

	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	750	2750	46	150	10	1000	1.0
MAXIMUM PRESSURE	80	300	5	350	24	2400	2.4

DIRECT-ENGINE MOUNTED PUMPS

CXT

A single-stage end suction pump that is direct-engine mounted via a T Series Transmission.



- High-tensile, close-grained gray iron (bronze/gunmetal optional), two-piece, vertically-split volute body
- 17-4 stainless steel, heat-treated impeller shaft
- Fully-enclosed, bronze, double-hubbed, precision-balanced impeller
- Bronze replaceable wear rings
- Self-adjusting corrosion- and wear-resistant mechanical seals
- Optional crosspipe intake fitting allows for maximum flow of 1500 GPM (5700 L/min)
- T Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears

CXT PERFORMANCE

	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	1250	5000	80	15	10	1000	1.0

DIRECT-ENGINE MOUNTED PUMPS

CLT

One-piece design featuring intake and discharge arrangements in a wide variety of options to meet your requirements.



- High-tensile, close-grained gray iron (bronze/gunmetal optional), one-piece volute body
- 17-4 stainless steel, heat-treated impeller shaft
- Bronze, double-hubbed, precision-balanced impeller
- Maintenance-free, self-adjusting shaft seal
- Choice of 4-inch (101.4mm) NH or BSP threaded-end intake
- T Series Transmission consists of an aluminum case and constant-mesh, stainless steel helical gears

CLT PERFORMANCE

	GPM	L/min	L/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	500	1900	32	150	10	1000	1.0



REAR-MOUNTED PUMPS

A FIRE PUMP FOR EVERY APPLICATION.

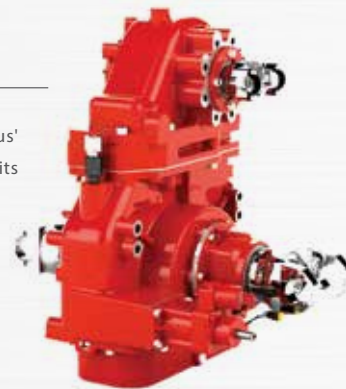
Waterous rear-mounted pumps provide fire industry professionals with easy-to-operate systems that offer the most efficient water delivery system on the market. Coupled with a TC20 Series PTO, you can drive a variety of Waterous pumps at the rear of the apparatus.

REAR MOUNTED PUMPS

TC20

TC20 PTO enables a fire pump to be rear mounted in an apparatus. The TC20 transmits power from the apparatus' automatic transmission to the drive axle of the vehicle when in ROAD mode or when shifted to PTO mode, transmits power to the rear-mounted pump via a PTO drive shaft.

- Chain: High-strength, silent chain
- Passive lubrication system
- Power shift
- High-strength aluminum case
- Output: Single to front or rear or dual to both front and rear.
- Driveline: 2.35 inch, 46-tooth involute, 16,000 LB-FT (21,760 N.m) torque rating



REAR MOUNTED PUMPS

CSD / CSUD

The leading single-stage split-shaft fire pump on the market today is available as a direct drive pump providing efficient use of power and performance. Designed with a two-piece, horizontally split body with intake and discharge passageways in a single casting and on the same level, this pump provides the lowest possible height, a lower center of gravity, and more room for hose reels, hose beds and other equipment.



- Flame-plated impellers (standard on CSU, optional on CS)
- Two-piece, horizontally-split, high-tensile strength cast iron pump casing
- Optional bronze/gunmetal pump casing
- All deep-groove oil and grease lubricated ball bearings located outside the pump casing
- Bronze double-hubbed accurately balanced impeller
- Stainless steel separable impeller shaft
- Replaceable bronze impeller rings
- Flinger rings mounted on impeller shaft
- Adjustable BFG packing standard (spring-loaded mechanical seal available)

CS FLOW			
GPM	750, 1000, 1250		
l/min	3000, 4000, 5000		
l/sec	50, 65, 80		
CS PRESSURE			
PSI	Bar	kPa	MPa
150	10	1000	1.0

CSU FLOW			
GPM	1500, 1750, 2000, 2250		
l/min	6000, 7000, 8000, 9000		
l/sec	100, 115, 130, 150		

CSU PRESSURE			
PSI	Bar	kPa	MPa
150	10	1000	1.0

REAR-MOUNTED PUMPS

REAR MOUNTED PUMPS

CMD / CMUD

The low profile midship two-stage series/parallel pump with ball-type transfer valve allows you to switch from pressure to volume smoothly & easily.



- Flame-plated impellers (standard on CMU, optional on CM)
- Two-piece, horizontally-split, high-tensile strength cast iron pump casing
- Optional bronze/gunmetal pump casing
- All deep-groove oil and grease lubricated ball bearings located outside the pump casing
- Bronze double-hubbed accurately balanced impellers
- Stainless steel separable impeller shaft
- Replaceable bronze impeller rings
- Bronze ball-type transfer valve provides smooth transfer to either PRESSURE or VOLUME without sticking
- Flinger rings mounted on impeller shaft
- Adjustable BFG packing standard (spring-loaded mechanical seal available)

CMD FLOW	
GPM	750, 1000, 1250
l/min	3000, 4000, 5000
l/sec	30, 50, 65, 80

CMD PRESSURE			
PSI	Bar	kPa	MPa
150	10	1000	1.0

CMUD FLOW			
GPM	1500, 1750, 2000, 2250		
l/min	6000, 7000, 8000, 9000		
l/sec	100, 115, 130, 150		

CMUD PRESSURE			
PSI	Bar	kPa	MPa
150	10	1000	1.0

REAR MOUNTED PUMPS

S100 / S100D

Get the power and performance of a traditional midship fire pump in a compact, lightweight direct-engine mounted pump. Made of ductile iron, the S100D is nearly 35% lighter, and yet 25% stronger than identical pumps made with gray iron.



S100D

- Cast ductile iron body
- Dual stripping edge volute
- Passive lubrication system
- Self-adjusting mechanical seal
- Mechanically and hydraulically balanced impeller
- Replaceable bronze wear rings
- All deep-groove anti-friction ball bearings, oil-splash lubricated
- 5-inch ANSI flange or optional end flanged discharge manifold

S100 FLOW	
GPM	1250, 1500, 1750, 2000
l/min	5000, 6000, 7000, 7500
l/sec	80, 100, 115, 125

S100 PRESSURE			
PSI	Bar	kPa	MPa
150	10	1000	1.0

REAR MOUNTED PUMPS

HLUD

The compact, simultaneous High/Low pressure series pump from Waterous is ideal for an urban interface vehicle or wildland firefighting.

- Corrosion-resistant anodized aluminum pump body
- Wear-resistant anodized aluminum low pressure impeller with flame-plated hubs
- Bronze high pressure impeller
- Stainless steel impeller shaft
- Bronze wear rings
- Maintenance-free mechanical seal
- Anodized aluminum intake
- Anodized aluminum discharge manifold with six (6) discharge outlets
- External High Pressure Relief Valve (EHPRV):
 - EHPRV is standard equipment. OEM may choose to use their own high pressure relief valve.
- Anodized aluminum pedestal

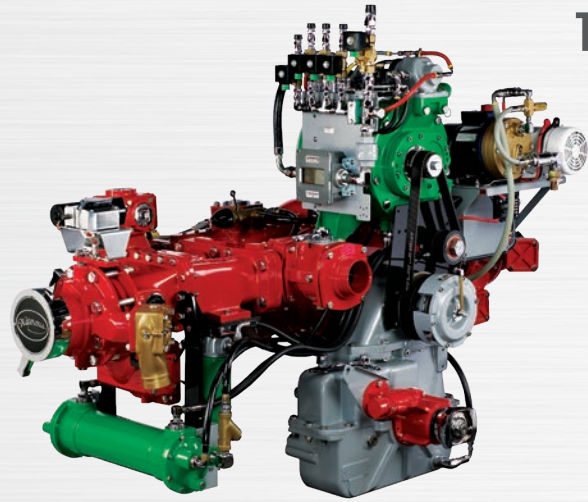
HLUD LOW PRESSURE				
GPM	1000, 1250, 1500	PSI	Bar	kPa
l/min	4000, 5000, 5600	150	10	1000
l/sec	65, 80, 95			1.0

HLUD HIGH PRESSURE				
GPM	100	PSI	Bar	kPa
l/min	400	600	40	4000
l/sec	6.5			4.0



WATEROUS CAFSystems™

CAFSystems™ ECLIPSE™



THE WORLD'S MOST TRUSTED CAFS.

Used by more fire departments around the world than any other CAFSystem, the Eclipse™ CAFSystem from Waterous is easy to operate, incredibly efficient and a proven performer. The Eclipse™ CAFSystem buttresses your attack capabilities with big flow rates up to 2,250 GPM, high pressure up to 150 PSI and impressive suppression results.

CS FLOW		CS PRESSURE			
GPM	750, 1000, 1250	PSI	Bar	kPa	MPa
l/min	3000, 4000, 5000	150	10	1000	1.0
l/sec	50, 65, 80				

CSU FLOW		CSU PRESSURE			
GPM	1500, 1750, 2000, 2250	PSI	Bar	kPa	MPa
l/min	6000, 7000, 8000, 9000	150	10	1000	1.0
l/sec	100, 115, 130, 150				

CMU FLOW		CMU PRESSURE			
GPM	1500, 1750, 2000, 2250	PSI	Bar	kPa	MPa
l/min	6000, 7000, 8000, 9000	150	10	1000	1.0
l/sec	100, 115, 130, 150				

- Encapsulated compressor with fewer hose, less noise and the ability to shift in and out as needed while the pump is in use
- Electric Auto-Sync balancing system to match air and water pressure
- Available with AQUIS™ foam proportioner
- Free onsite product orientation

CAFSystems™ ECLIPSE™ ES



BIG SUPPRESSION. SMALL PACKAGE.

The Eclipse ES™ compressed air foam system is proof that you can still get serious power out of a tiny package. Unmatched in the industry for performance and versatility, the Eclipse ES™ is available in multiple configurations to fit your needs while providing unmatched fire extinguishing capabilities.

S100 FLOW		S100 PRESSURE			
GPM	1250, 1500, 1750, 2000	PSI	Bar	kPa	MPa
l/min	5000, 6000, 7000, 7500	150	10	1000	1.0
l/sec	80, 100, 115, 125				

CX FLOW		CX PRESSURE			
GPM	750, 1000, 1250, 1500*	PSI	Bar	kPa	MPa
l/min	3000, 4000, 5000, 5500*	150	10	1000	1.0
l/sec	50, 65, 80, 92*				

- Available in three different models
- Compatible w/ S100, CX and TC20 Series PTO



ECLIPSE™ GEN 2.0 CAFSystems

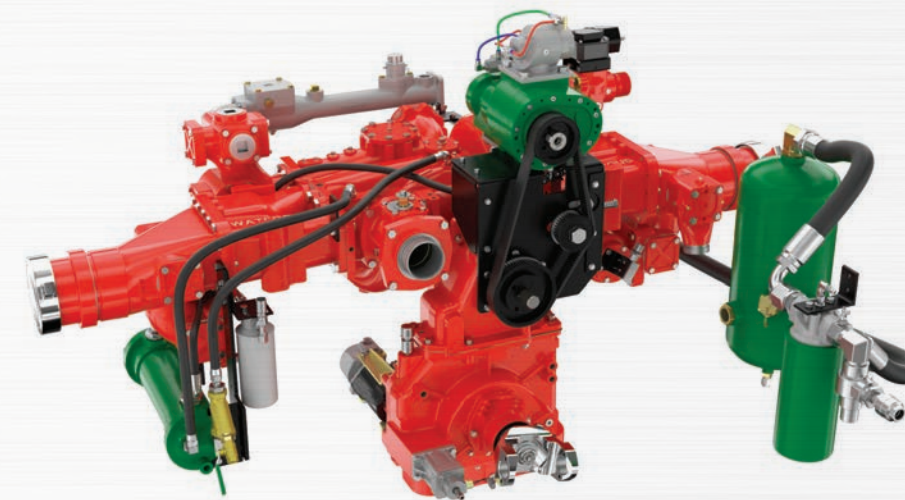
PERFECT FOAM. EVERY TIME.

WATEROUS ECLIPSE™ CAFSystem 2.0

Waterous engineers have developed the new ECLIPSE™ GEN 2.0 CAFSystem to easily produce compressed air foam without the complicated settings needed in other cafsystems. ECLIPSE™ GEN 2.0 incorporates a powerful integrated midship-mounted air compressor system and the patent-pending Waterous Foamulator to produce a bubble stream that keeps the water from separating from the foam practically eliminating slug flow. Each ECLIPSE™ GEN 2.0 CAFSystem has pre-set flow and pressure rates for air and water eliminating the need for the operator to perform time consuming adjustments.

ECLIPSE™ GEN 2.0 CAFSystems

150-ECL



- 80% OF WATER CONTENT IN THE FOAM IS EFFECTIVELY USED FOR FIRE FIGHTING
- IMPROVED FIREFIGHTER SAFETY
- FASTER KNOCKDOWN TIME
- LESS PROPERTY DAMAGE
- LESS WATER USED

AQUIS™ 3.0 FOAM PROPORTIONER

- 3.0 GPM (9.5 l/min) @ 150 PSI (10 bar)
- Exceeds NFPA 1901 requirements for proportioning accuracy
- Pre-plumbed and pre-mounted



WATEROUS SPLIT-SHAFT PUMP

The ECLIPSE™ GEN 2.0 CAFSystem is currently available on Waterous CS, CSU, CMU and CX midship pumps with split-shaft transmissions.

150-OS RAND AIR COMPRESSOR

- 150 SCFM (4.25 m³/min)
- Quiet, efficient and dependable rotary screw air compressor
- Toothed-belt drive requires no lubrication or maintenance

ECLIPSE™ GEN 2.0 FOAMULATOR

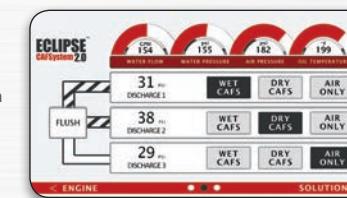
A characteristic of each ECLIPSE™ GEN 2.0 CAFSystem is the pre-set flow rate and pre-set pressure for water and air. The operator does not have to adjust flows and pressures.

ECLIPSE™ GEN 2.0 CAFSystem uses a stand-alone FOAMULATOR for each operated discharge outlet. Three 2" FOAMULATORS are standard. The patent-pending, Waterous engineered FOAMULATORS develop the foam extinguishing agent by mixing turbulent air into the foam solution. The FOAMULATORS include the following items:

- Volume flow regulation of water and air
- Volume flow limitations of water and air
- Non-return valves for water and air
- Mixing chamber
- Wet-dry changeover



- Engages the ECLIPSE™ GEN 2.0 CAFSystem
- Select from Dry or Wet Foam
- Monitor Intake and Discharges
- Monitor Engine / Pump Performance



ECLIPSE™ GEN 2.0 CAFSystems MODULAR SLIDE-IN

WATEROUS ECLIPSE™ CAFSystem 2.0

- PRE-SET FLOW RATE
- PRE-SET PRESSURE FOR WATER AND AIR
- NO OPERATOR ADJUSTMENTS NEEDED DURING OPERATION

ECLIPSE™ GEN 2.0 Modular Slide-In

100-50-ECL

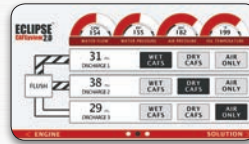
- Deutz 29.9 HP (22.4 kW) diesel engine
 - Waterous CPD-2 Pump
 - Waterous ECLIPSE™ GEN 2.0 CAFSystem Two 1-1/2" FOAMULATORS
- ECLIPSE™ GEN 2.0 CAFSystem is the pre-set flow rate and pre-set pressure for water and air. The operator does not have to adjust flows and pressures during operation.
- Easily select Wet or Dry Foam
 - Rand 50 sCFM (1.4 m³/min) compressor
 - Stainless Steel Frame
 - Aquis 1.5 Foam Proportioner

100-50-ECL FLOW

GPM	100
l/min	400
l/sec	6.5
SCFM	50
M ³ /min	1.42

100-50-ECL PRESSURE

	PSI	Bar	kPa	MPa
WATER	150	10	1000	1.0
AIR	125	8.6	860	.86



Tellurus™

- 7" Tellurus™
- One button engages fire pump, foam proportioner and CAFSystem

ECLIPSE™ GEN 2.0 Modular Slide-In

200-100-ECL

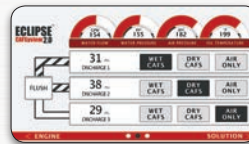
- Duetz 60.6 HP (45.2 kW) diesel-fueled engine
 - Waterous CPD-2 Pump
 - Waterous ECLIPSE™ GEN 2.0 CAFSystem Three 1-1/2" FOAMULATORS
- ECLIPSE™ GEN 2.0 CAFSystem is the pre-set flow rate and pre-set pressure for water and air. The operator does not have to adjust flows and pressures during operation.
- Easily select Wet or Dry Foam
 - Rand 100 sCFM (2.83 m³/min) compressor
 - Stainless Steel Frame
 - Aquis 1.5 Foam Proportioner

200-100-ECL FLOW

GPM	200
l/min	800
l/sec	13
SCFM	100
M ³ /min	2.83

200-100-ECL PRESSURE

	PSI	Bar	kPa	MPa
WATER	150	10	1000	1.0
AIR	125	8.6	860	.86



Tellurus™

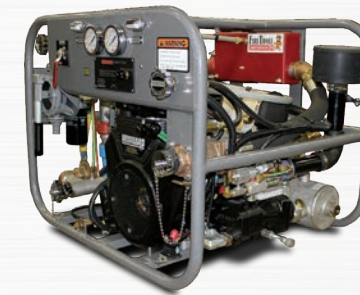
- 7" Tellurus™
- One button engages fire pump, foam proportioner and CAFSystem



WATEROUS CAFSystems™ MODULAR SLIDE-IN

Modular Slide-In

70-35-GP



- Briggs and Stratton Vanguard two-cylinder, air-cooled, four-cycle engine
- 23 HP (17.2 kW)
- Fire Troll 1.5 Foam Proportioner standard

70-35-GP FLOW

GPM	70
l/min	265
l/sec	4.4
SCFM	35
M ³ /min	.9

70-35-GP PRESSURE

	PSI	Bar	kPa	MPa
WATER	100	6.9	690	.69

Modular Slide-In

100-50-DS



- Duetz 29.9 HP (22.4 kW) diesel-fueled engine
- Waterous CPD-2 Pump
- Rand 50 sCFM compressor
- Stainless Steel Frame
- AQUIS™ 1.5 Foam Proportioner
- Rotary Dial Foam Proportioning Rate Panel
- Optional Operator Interface Terminal (OIT) for selecting foam proportioning rates

100-50-DS FLOW

GPM	100
l/min	400
l/sec	6.5
SCFM	50
M ³ /min	1.42

100-50-DS PRESSURE

	PSI	Bar	kPa	MPa
WATER	100	6.9	690	.69
AIR	125	8.6	860	.86

Modular Slide-In

200-100-DS



- Duetz 60.6 HP (45.2 kW) diesel-fueled engine
- Waterous CPD-2 Pump
- Rand 100 sCFM compressor
- Stainless Steel Frame
- AQUIS™ 1.5 Foam Proportioner
- Rotary Dial Foam Proportioning Rate Panel
- Optional Operator Interface Terminal (OIT) for selecting foam proportioning rates

200-100-DS FLOW

GPM	200
l/min	800
l/sec	13
SCFM	100
M ³ /min	2.83

200-100-DS PRESSURE

	PSI	Bar	kPa	MPa
WATER	150	10	1000	1.0
AIR	125	8.6	860	.86



INTEGRATED PUMP / COMPRESSOR SYSTEMS

INTEGRATED PUMP / COMPRESSOR SYSTEMS

500-80-P

Part pump, part compressor, all CAFS fire suppressing power. Waterous has several PTO-driven Integrated Pump/Compressor Systems available to meet your department's needs. These models deliver everything you'd expect in a CAFS unit, including the ability to discharge water, foam solution and compressed air for pneumatic tools. They also include a Rand rotary screw airend with poly-chain.



- CLVK water pump and transmission
- Auto Sync panel control
- Compressor temperature gauge
- 4-inch Victaulic intake
- 3-inch NPT discharge
- Rand rotary screw compressor

WATER FLOW			AIR FLOW		PRESSURE			
GPM	L/min	L/sec	s CFM	m ³ /min	PSI	Bar	kPa	MPa
500-80-P PERFORMANCE								
500	2000	33	80	2.3	150	10	1000	1.0
					125	8.6	860	.86
500-120-P PERFORMANCE								
500	2000	33	120	3.4	150	10	1000	1.0
					125	8.6	860	.86
500-150-P PERFORMANCE								
500	2000	33	150	4.25	150	10	1000	1.0
					125	8.6	860	.86

Additional models available:

INTEGRATED PUMP / COMPRESSOR SYSTEMS

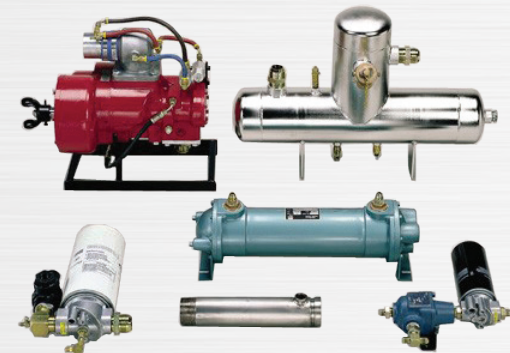
750-100-P / 1000-100-P / 1250-100-P - 750-150-P / 1000-150-P / 1250-150-P

- Waterous CXVK Pump
- Auto-Sync Control Panel
- Compressor Temperature Gauge
- 6-inch Victaulic Intake
- 4-inch ANSI Discharge
- Available with AQUIS™ Foam Proportioner
- 100 sCFM (2.83 m³/min) or 150 sCFM (4.3 m³/min)

PTO-DRIVEN AIR COMPRESSOR KITS

80-P / 140-P / 200-P

When you consider that a good PTO driven air compressor system is worth its weight in gold, it's hard to imagine the value of a Waterous PTO kit to your fire department. Waterous offers three models available as OEM installation or retrofit. These CAFSystems™ are water-cooled and designed to discharge water, foam solution or compressed air. They come with a Rand rotary screw airend with integral speed increasing gear set, a 1013 shaft yoke and free on-site orientation.



Premium Quality PTO-Driven Air Compressor Kits

AIR FLOW		PRESSURE			
s CFM	m ³ /min	PSI	Bar	kPa	MPa
80	2.3	125	8.6	860	0.86
140	3.9	125	8.6	860	0.86
200	5.6	125	8.6	860	0.86



FOAM PROPORTIONERS

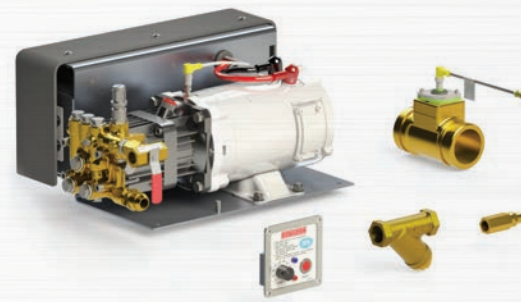


THE PERFECT BLEND OF PERFORMANCE AND VALUE.

It's not easy to properly proportion fire-suppressing Class A foam. To get the ratios right, you need to compensate for a number of variables. Doing so demands world-class engineering coupled with dependable flow meter technology. In other words, you need The AQUIS™ Foam Proportioner from Waterous. It delivers a level of performance and reliability typically reserved for more expensive Class A foam proportioners.

FOAM PROPORTIONERS

AQUIS™ 1.5



- Foam Pump: positive displacement plunger pump
- Pump Motor: 1/3 HP (.27 kW)

FOAM OUTPUT				PRESSURE			
GPM	L/min	L/sec		PSI	Bar	kPa	MPa
AQUIS	1.5	5.7	.1	150	10	1000	1.0
MAXIMUM OPERATING PRESSURE							
PSI	Bar	kPa	MPa				
450	32	3200	3.2				

FOAM PROPORTIONERS

AQUIS™ 3.0 & 6.0



- Foam Pump: positive displacement plunger pump
- AQUIS 3.0 Pump Motor: 1/2 HP (.40 kW)
- AQUIS 6.0 Pump Motor: 1 HP (.80 kW)

FOAM OUTPUT				PRESSURE			
GPM	L/min	L/sec		PSI	Bar	kPa	MPa
AQUIS	3.0	11.3	.18	150	10	1000	1.0
AQUIS	6.0	22.6	.36				
MAXIMUM OPERATING PRESSURE							
PSI	Bar	kPa	MPa				
450	32	3200	3.2				

FOAM PROPORTIONING SYSTEM

FIRE TROLL 150



The Waterous Fire Troll Foam Proportioning System can be inserted in a hose lay at any location, but most typically is inserted in the plumbing between the pump outlet and the live reel. Using the Fire Troll you'll maintain continuous flow up-to but not exceeding 1% foam concentration under varying water pressures and volumes.

Ideally suited to Type 3 engines and portable pumps with long hose lays. Fire Troll has been successfully used in hose lays of 1,000 feet (300 meters) or more and on moderate to steep slopes.



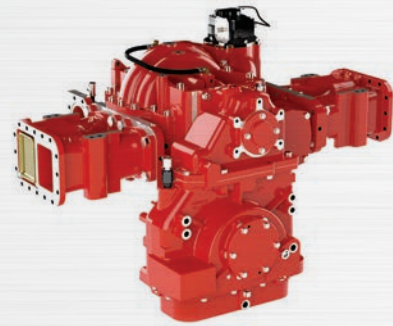
SPECIAL APPLICATIONS

SPECIAL INDUSTRY APPLICATIONS FROM WATEROUS.

DECOKING / DESCALING

CM / CMU SERIES

The continuous build-up of coke on the inner walls of fired heaters and heat exchange surfaces in oil refineries leads to reduced energy efficiency and shutdown of the affected unit. To clean the walls, a device called a pig is sent through the pipeline with high pressure water. The water that forces the pig through the pipeline is the CMU Series Pump. The CMU pump is the only centrifugal pump in the industry that can withstand the wear and tear of decoking/descaling.



CM FLOW		CM PRESSURE			
GPM	750, 1000, 1250	PSI	Bar	kPa	MPa
l/min	3000, 4000, 5000	150	10	1000	1.0
l/sec	30, 50, 65, 80				

CMU FLOW		CMU PRESSURE			
GPM	1500, 1750, 2000, 2250	PSI	Bar	kPa	MPa
l/min	6000, 7000, 8000, 9000	150	10	1000	1.0
l/sec	100, 115, 130, 150				

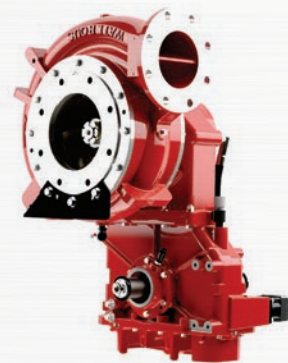
TRAILER-MOUNTED PUMPING UNITS

2000 TO 4000 GPM UNITS WITH CRU-2 HIGH-FLOW PUMP

Waterous manufactures Trailer Mounted Engine Driven Pumping Systems for the Nuclear Cooling Industry, large dewatering projects or stand-by fire protection. Equipped with a variety of engines and a high-flow CRU-2 pump that can produce up to 4000 GPM.



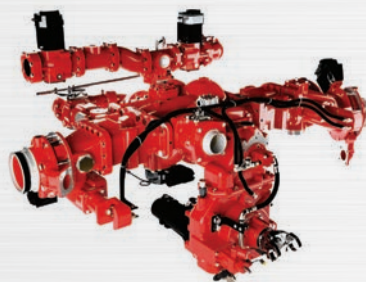
- Powerful T3 or T4 Compliant Diesel Engine
- CRU-2 High Flow Pump
- Three (3) 6" Pump Inlets with 6" NST Male Connection
- One (1) auxiliary intake with POU control 2.5" NST female swivel plug
 - Discharges: Four or Five (5) 4" LDH with POU control handwheel
 - QCT High-Strength Aluminum Transmission
 - Panel Mounted Controls
- Heavy-Duty Tandem Axle Trailer
 - Heavy-Duty Steel Constructed Skid Frame



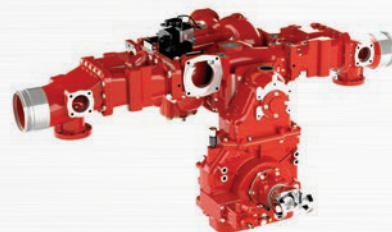
HIGH-RISE FIREFIGHTING PUMPS

CM/CGV - CMU/CGV SERIES HIGH-RISE FIREFIGHTING PUMPS

Over the past 130 years, Waterous has seen the rise of cities. With cities comes larger and taller buildings. Waterous saw the need for firefighting equipment that can be used to fight fires in those buildings. The High-Rise pump is a special pump that provides the necessary pump pressures and volume to fight fires on the upper floors of a high-Rise building. The CM/CGV and CMU/CGV pumps can operate as a stand-alone CM, CMU pump or adding the high pressure CGV pump in series provides the added performance needed to fight a high rise fire. The Waterous CMU pump also can provide High-Rise Firefighting needs by providing 600 GPM (2270 l/min) @ 600 psi (41.3 bar).



	CM / CGV - CMU / CGV PERFORMANCE			
	GPM	l/min	PSI	Bar
CM STAND ALONE	750-1250	3000-4750	150	11.3
CMU STAND ALONE	1250-2250	4750-8550	150	10.3
CM/CGV	750	3000	700	48
CMU/CGV	750	3000	700	48
CMU	600	2270	600	41.3



ARFF FIRE PUMPS

ARFF FIRE PUMPS

CPK-5



- Two-stage, ductile iron body
- Bronze replaceable wear ring
- Bronze impellers
- Self-adjusting mechanical seal
- 3-inch NPT intake
- 1.5-inch ANSI flanged discharge
- Extra Heavy Duty K Transmission

CPK-5 PERFORMANCE

GPM	l/min	l/sec	PSI	Bar	kPa	MPa
320	1200	20	1350	93	9300	9.3

ARFF FIRE PUMPS

CR / CRU



- Gray iron (bronze optional), vertically-split volute body
- 17-4 stainless steel impeller shaft
- Oil-splash lubricated ball bearings
- Bronze replaceable wear rings
- Fully-enclosed, bronze, double-hubbed precision-balanced impeller

CR / CRU / CRU-1 / CRU-2 PERFORMANCE

	GPM	l/min	l/sec	PSI	Bar	kPa	MPa
CR	2050	7800	130	250	17	1700	1.7
CRU	2640	10000	165	250	17	1700	1.7
CRU-1	3000	11000	180	100	6.8	680	0.68
CRU-2	4000	15000	250	100	6.9	690	0.69

ARFF FIRE PUMPS

CZ / CZU



- High-tensile gray iron (bronze optional), vertically-split casing
- 17-4 stainless steel impeller shaft
- Oil-splash lubricated ball bearings
- Fully-enclosed, bronze, double-hubbed precision-balanced impeller
- Bronze replaceable wear rings

CZ / CZU PERFORMANCE

	GPM	l/min	l/sec	PSI	Bar	kPa	MPa
CZ	950	3600	60	260	18	1800	1.8
CZU	1500	5700	95	250	17	1700	1.7

ARFF FIRE PUMPS

CPT-4UHP Ultra High Pressure



This ultra high-pressure performer is a lightweight four-stage centrifugal pump that delivers 90 GPM (350 l/min) at 1350 PSI (93 bar) to produce high-pressure fog, which can knock out fires quickly while the pumper is either in motion or stationary.

- Two-piece, horizontally-split gray iron body
- Ni-Resist wear rings to reduce internal leakage
- Bronze impellers
- Braided Flexible Graphite Packing
- Direct-Engine Mounted with SAE Bellhousing

CPT-4UHP PERFORMANCE

GPM	l/min	l/sec	PSI	Bar	kPa	MPa
90	350	6.0	1350	93	9300	9.3

ARFF FIRE PUMPS

CXK / CXPA - CXSK / CXSPA

See page 10 for description and picture.

PORTABLE AND MOTOR PUMPS

TAKE THE FIGHT TO THE FIRE.

Don't wait for fire to come to you. With fuel-powered portable and motor pumps from Waterous, you can take the fight to the fire. Waterous portable and motor pumps range from lightweight, easy-to-carry models to heavy-duty trailer/truck/skid mount models with plenty of fire suppressing power. No matter the location, Waterous has a portable pump for you.

PORTABLE AND MOTOR PUMPS

PB18-SERIES

The Waterous PB18 series features four portable pump models. Each PB18 is equipped with a Briggs & Stratton 18hp (13kW) V-Twin gasoline engine and is available with no base or rail base option. Fuel tank is 3-gallon (11 liter) fuel tank that meets the EPA evaporative requirement (40 CFR Part 1060).

PB18-4025B	GPM	l/min	l/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	250	950	16	70	4.8	480	0.48
MAXIMUM PRESSURE	150	550	9	90	6.5	650	0.65

• 143 lbs. (65.0 kg)

PB18-2515	GPM	l/min	l/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	150	550	9	90	6.5	650	0.65
MAXIMUM PRESSURE	75	275	4.5	135	9.3	930	0.93

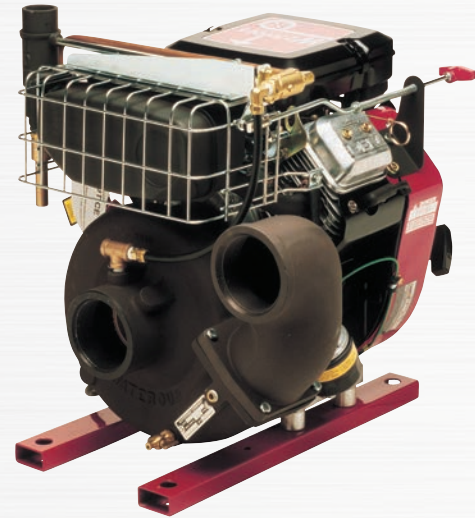
• 133 lbs. (60.5 kg)

PB18-3030	GPM	l/min	l/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	400	1500	25	15	1	100	0.1
MAXIMUM PRESSURE	100	375	6.25	110	7.6	760	0.76

• 135 lbs. (61.2 kg)

PB18-G2015	GPM	l/min	l/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	75	275	4.5	190	13	1300	1.3
MAXIMUM PRESSURE	20	75	1.25	320	22	2200	2.2

• 152.5 lbs. (64.6 kg)



Wrap-around base is only available on International orders.

PORTABLE AND MOTOR PUMPS

PORTABLE AND MOTOR PUMPS

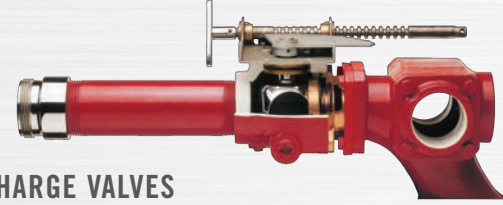
E501-C / E511-C

The E500 Series Motor Pump is specifically designed for mounting on specialized attack vehicles. Equipped with Kubota 899cc diesel engine and Waterous fire pump. Available in two models: E501 or E511:



E501-C	GPM	l/min	l/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	110	420	6.6	100	7	700	0.7
MAXIMUM PRESSURE	50	200	3.3	400	28	2800	2.8

E511-C	GPM	l/min	l/sec	PSI	Bar	kPa	MPa
MAXIMUM FLOW	275	1000	16.5	50	3.5	350	.35
MAXIMUM PRESSURE	100	400	6.5	190	13	1300	1.3



DISCHARGE VALVES

- Chromium-plated bronze valve ball
- Spring-loaded floating seal assembly
- Multi-purpose drainport
- Manual, push/pull, twist lock (2.5") mechanism with panel-mounted "T" handle lock
- Optional electric actuator complies with NFPA requirements for slow actuation



DISCHARGE RELIEF VALVE

- Controls discharge pressure by bypassing flow from discharge back to suction
- Control discharge pressure up to 300 psi (20 bar)
- Available in three sizes, up to 2250 GPM (8500 l/min)



OVERHEAT PROTECTION MANAGER

- Opens when water inside the pump reaches 140° F (60° C)
- Flashing warning light on pump panel is triggered when water reaches 180° F (82° C)
- Water is released to ground



MONARCH™ INTAKE VALVE

- Manual, electric or pneumatic operation
- Stainless steel Wafer-Sphere® element
- Polymeric flexible lip seal
- Provision for pre-butterfly relief valve



PRIMING PUMPS

- VPO oil-free primer
- Fast, dependable priming
- Electrically driven
- Operates independently from the pump
- Lubrication option (requires priming tank)



INTAKE RELIEF VALVE

- Pilot-operated for improved performance
- Pressure scale markings
- Panel-mounted strainer



PRIMING VALVES

- Vacuum Activated Priming (VAP) Valve
- Stainless steel valve stem
- Opens automatically during pump priming
- Closes automatically when primer is deactivated



PNEUMATIC SHIFT

- Spring-loaded locking control
- Dual-action cylinder

TOP 10 REASONS TO CHOOSE WATEROUS.

1 - AMERICAN MADE

We can proudly say we build our pumps in the USA using USA content and advanced engineering.



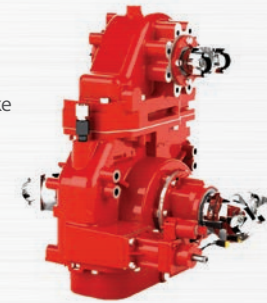
2 - FLAME-PLATED IMPELLER HUBS AND LABRYINTH-STYLE WEAR RINGS

Flame-plating, a Waterous exclusive, provides four times the life expectancy compared to the competition. Labryinth-style wear rings appreciably reduce performance-robbing recirculation.



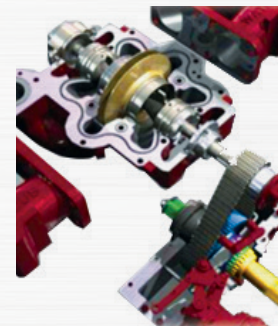
3 - CHAIN-DRIVE PUMP TRANSMISSION

Best In-Class Power Transfer. Quiet, efficient and strong characteristics make the chain-drive pump transmission the best option in power transfer. Positive shifting, no gear whining, no cooling required and less horsepower required that enhances the efficiency of the apparatus.



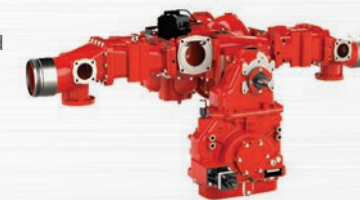
4 - DESIGN FEATURES

A separable impeller shaft provides easier maintenance, and o-rings offer easier replacement. Sealed outboard bearings require no maintenance and the product features timely parts availability (see #8), comprehensive maintenance instructions and a parts list.



5 - PRODUCTS

Offering pumps, CAFS and foam systems, we provide the most comprehensive product offerings in the industry.



6 - RELIABILITY AND INDUSTRY STANDING

Waterous is in the largest fire departments in North America. Over 130 years of manufacturing in North America.



7 - BEST IN CLASS SERVICE & SUPPORT

Experienced sales, technical and manufacturing staff bring you trusted service and support. Our highly trained global network of sales, engineering and service support helps your department get the most out of your Waterous fire suppression equipment.

8 - ACCURATE AND TIMELY

On time and accurate parts orders (95% on-time delivery and a 99% order accuracy rate). All products are serialized. We have a record of every pump we've ever built.



9 - CAPABILITIES

Waterous has a 210,000 sq. ft. facility with 25 CNC machines and a union workforce with an average of 25 of years experience. We have 10 product engineers. We have reinvested over \$38 million dollars in capital investments over the last 11 years.



10 - ISO 9001 CERTIFIED COMPANY

Our entire facility and manufacturing processes meet or exceed ISO standards and compliance requirements. This means we deliver nothing but the most trustworthy, effective and advanced fire suppression equipment to firefighters worldwide.

