



PRECISION PUMPING, ENGINEERED FOR HIGH PRESSURE.

www.utpumps.com



Single Screw Pumps

Single screw pumps are progressive cavity pumps featuring a metallic helical rotor and an elastomer stator, delivering smooth, low-pulsation flow.

They handle neutral to aggressive media across a wide viscosity range and are ideal for fluids with solids or fibrous content.

UT Pumps offers four horizontal models - EH, ER, EL, and ES Series - each tailored for specific industrial needs. The EU Series, with its vertical design, is specially built for decanting large containers and wells.

APPLICATIONS

Water & wastewater, sewage sludge, gritty mine water, slurries, viscous oils, cellulose, corrosive liquids, ceramic & abrasive slurries, molasses, jam & jelly, syrup melt, magma, mud, massecuite, industrial waste, etc.

MATERIALS OF CONSTRUCTION



Wetted Parts - Cast iron, stainless steel & carbon steel



Rotors - Stainless steel, carbon steel, hard chrome plated, nitrided steel & tool steel



Stators - Elastomer options NBR, HNBR, EPDM, FKM & other special materials



Seals - Gland packing, single & double mechanical, and API 682 compliant mechanical seals

SPECIAL FEATURES

- API 676 compliant
- Low initial starting torque
- Higher mechanical efficiency
- Capability to handle large proportions of solids
- Small radial thrust
- Low axial velocity
- Less wear
- Lower axial thrust
- Quieter operation

PRINCIPLE OF OPERATION

Single screw pumps are valve-less, self-priming positive displacement pumps equipped with two key components: an eccentric metallic helical rotor and an elastomer stator. The stator features a double helical profile with twice the pitch of the rotor.

As the rotor turns, it forms self-contained tandem chambers that maintain their volume even when the pump is stationary enabling smooth, low-pulsation flow.

The rotor and stator maintain two continuous lines of contact along the pump axis, ensuring effective sealing. Typically installed in a horizontal configuration, these pumps allow reversible flow by simply changing the direction of rotation.

They can be driven via direct coupling or V-belt/pulley arrangements, offering flexibility across various installation setups.

INDUSTRIES

- Oil & Gas
- Manufacturing
- Chemicals & Petrochemicals
- Water & Wastewater Treatment
- Nuclear Energy
- Agrochemicals
- Metallurgy
- Food Processing & Dairy
- Distilleries & Breweries
- Ceramics
- Industrial Explosives
- Pharmaceuticals
- Paper & Pulp

EH series

Standard design horizontal pumps with flanged suction and discharge suitable for all general applications and industries specially in effluent treatment plants, paper industries, etc.



Model	Max Speed	Capacity	Pressure (bar)		
	RPM	m³/h	Stage		
			I	II	IV
164	1250	4	6	12	24
236	1000	9	6	12	24
375	630	13	6	12	24
600	560	18	6	12	24
1024	550	30	6	12	24
1500	500	60	6	12	24
1900	400	88	6	12	24
2650	280	95	6	12	24
4500	280	180	5	10	-
6300	270	245	5	10	-

EL series

The EL Series features a close-coupled, compact design with no bearing housing. The pump is directly mounted to the driver, eliminating the need for a separate base plate. This results in a shorter, lighter assembly ideal for space-saving installations.



Model	Max Speed	Capacity	Pressure (bar)		
	RPM	m³/h	Stage		
			I	II	IV
164	1250	4	6	12	24
236	1000	9	6	12	24
375	630	13	6	12	24
600	560	18	6	12	24
1024	550	30	6	12	24
1500	500	60	6	12	24
1900	400	88	6	12	24

ES series

Crafted entirely from stainless steel, this pump is designed for easy disassembly and reassembly, allowing thorough cleaning of every component. This, along with compatibility for Cleaning-in-Place (CIP) and Sterilization-in-Place (SIP) processes, makes it an ideal choice for the food, pharmaceutical, and cosmetic industries.



Model	Max Speed	Capacity	Pressure (bar)	
	RPM	m³/h	Stage	
			I	II
164	1000	3.4	6	12
236	800	7	6	12
375	550	11	6	12
600	500	18	6	12
1024	450	24	6	12
1500	400	48	6	12
1900	300	66	6	12

EU series

Vertical installation pumps are equipped with specially designed housings and joint shafts suited to specific applications and are typically mounted directly above the well or drum that requires emptying for operational efficiency.



Model	Max Speed	Capacity	Pressure (bar)		
	RPM	m³/h	Stage		
			I	II	IV
164	600	2	6	12	24
236	600	5	6	12	24
375	400	8	6	12	24
600	400	13	6	12	24
1024	350	18	6	12	24
1500	300	35	6	12	24
1900	300	60	6	12	24
2650	200	75	6	12	24

ER series

These horizontal pumps incorporate a hopper-style inlet and a conveyor screw, making them ideal for transferring highly viscous, pasty, or otherwise challenging media. The design also handles media with solid content, supporting dryness levels up to 60%.



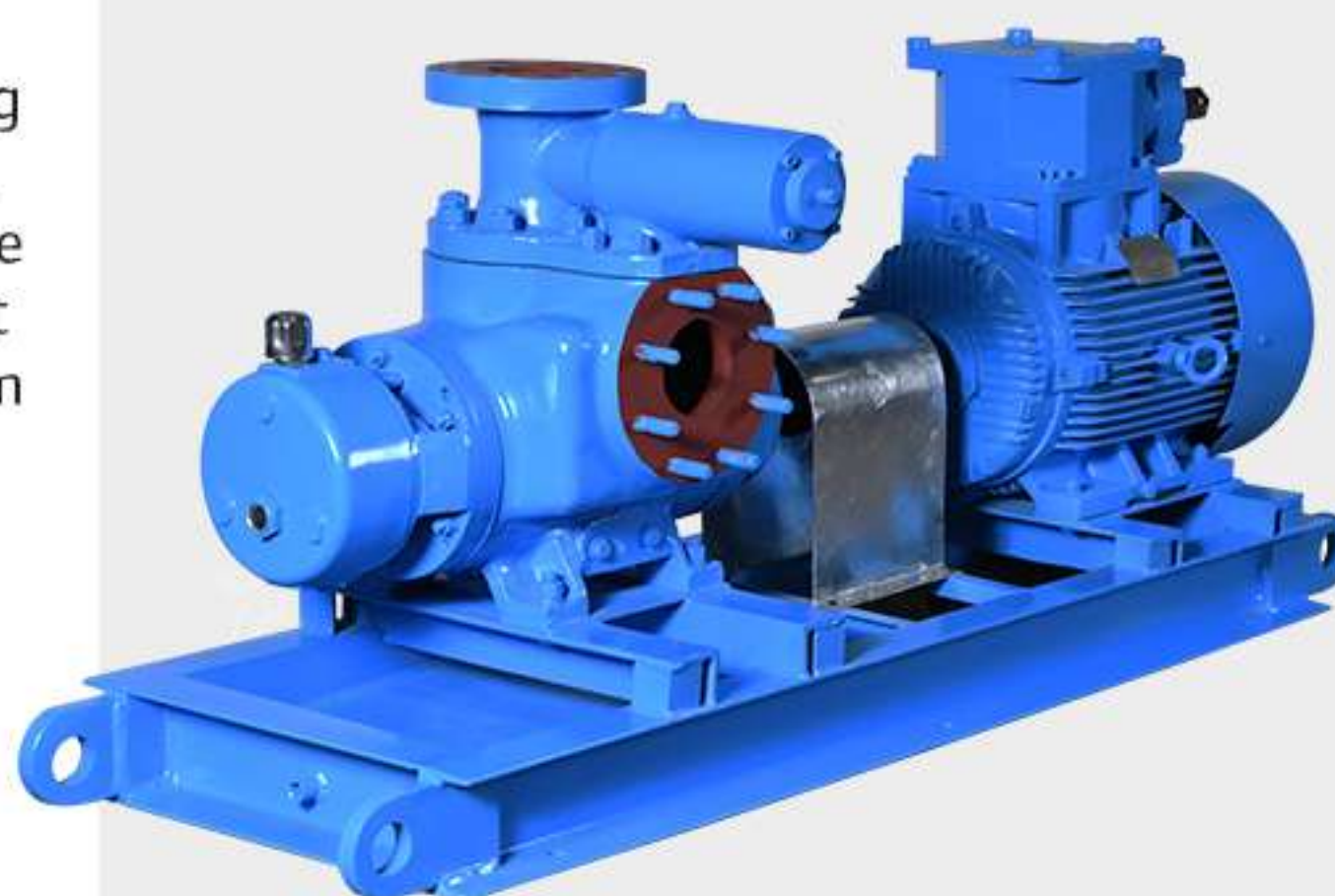
Model	Max Speed	Capacity	Pressure (bar)		
	RPM	m³/h	Stage		
			I	II	IV
236	250	2	6	12	24
375	250	5	6	12	24
600	200	6.5	6	12	24
1024	200	10	6	12	24
1500	200	22	6	12	24
1900	200	42	6	12	24
2650	175	65	6	12	-
4500	150	90	5	10	-

Twin Screw Pumps

UT pumps' twin screw series are self-priming, double ended positive displacement pumps with external gears and bearings. The design provides complete axial balancing of the rotating elements and eliminates all metal-to-metal contact within the pump. This feature makes them ideal for dry running for a short period and can be operated at low RPM. The pump is equipped with in-built balance pressure relief valve for safety. Customers can choose to heat the casing either through a heated base or via steam jacketing, depending on their application needs.

- Flow: Up to 450 m³/h
- Pressure: Up to 30 bar
- Temperature: Up to 250 °C
- Viscosity: Above 40,000 cP

TWIN SCREW PUMP



APPLICATIONS

Loading/unloading, transfer and process application for handling acids, bitumen, crude oil, chemical & corrosive fluids, dairy products, gasoline, glue, hydrocarbons, hydraulic controls, mineral oil, molasses, marine fuel oil, sea water, vegetable oil, very low & highly viscous liquid, liquid with entrained gases, etc.

INDUSTRIES

- | | |
|------------------------------|---------------------------|
| - Oil & Gas | - Power Generation |
| - Manufacturing | - Edible Oils |
| - Chemicals & Petrochemicals | - Food Processing & Dairy |
| - Nuclear Energy | - Marine & Shipping |
| - Agrochemicals | |
| - Metallurgy | |

PRINCIPLE OF OPERATION

Twin screw pumps utilize two intermeshing screws that rotate in opposite directions. During operation, the rotation of these screws forms cavities that trap and transport fluid from the pump inlet to the discharge outlet.

The fluid moves smoothly along the screw length, ensuring consistent flow. Timing gears synchronize the screws, preventing contact between them and allowing the pump to handle fluids with varying viscosities and particulates without damage.

The pumps' design allows for axial balance, reducing wear and enabling dry running capabilities. Twin screw pumps are highly versatile, capable of handling a wide range of fluids—including abrasive, corrosive, and solid-laden types—making them ideal for diverse industrial applications.

MATERIALS OF CONSTRUCTION



Pump Casing

Carbon steel, cast iron, and stainless steel



Shaft & Screw

Stainless steel and alloy steel



Seals

Gland packing, single mechanical, and API 682 compliant mechanical seals

SPECIAL FEATURES

- API 676 compliant
- Separate screw and shaft assembly design offer many advantages
- Extremely good suction capability
- Compact design and rugged construction
- Various combinations of materials available
- Partial/full heating jacket available in various designs
- Customizable sealing and casing designs
- Low Net Positive Suction Head (NPSH) requirement
- Low maintenance cost

TWIN SCREW ROTOR

SPECIFICATIONS



Model	Nozzle Size (mm)		Flow Rate	Pressure
	Suction	Discharge	m³/h	bar
2	40	40	9	10
3	50	50	21	10
4	80	80	39	15
5	100	100	60	20
6	150	150	108	25
7	200	200	210	30
7T	250	250	450	30

Triple Screw Pumps

UT Pumps' triple screw pumps are self-priming, positive displacement pumps available in both horizontal and vertical configurations, with options for internal or external bearings.

Designed for high-pressure applications, these pumps comply with API 676 standards and are built for reliable, continuous-duty performance across a wide range of industries.

- Flow: Up to 110 m³/h
- Temperature: Up to 150 °C
- Pressure: Up to 60 bar
- Viscosity: Up to 10,000 cP

PDT MODEL

Vertical Tank Top Mounted



APPLICATIONS

Loading/unloading, transfer and pressurizing application for handling bitumen, crude oil, hydrocarbons, mineral oil, marine fuel oil. Ideally suited for hydraulic controls, circulating & pressure rising, power packs, lubrication systems, and turbine governing systems.

INDUSTRIES

- | | |
|------------------------------|--------------------------|
| – Oil & Gas | – Power Generation |
| – Manufacturing | – Industrial Machinery |
| – Chemicals & Petrochemicals | – PU Manufacturing |
| – Nuclear Energy | – Marine & Shipping |
| – Agrochemicals | – Cement |
| – Metallurgy | – Construction Machinery |

PRINCIPLE OF OPERATION

Triple screw pumps operate using a set of three intermeshing screws - one drive screw and two driven screws - housed within a precision-machined casing.

As the main screw rotates, it forms sealed transfer chambers that move fluid axially from the suction to the discharge side in a smooth, continuous flow. This design ensures minimal pulsation and high suction lift.

Axial thrust generated by the drive screw is fully balanced, while the driven screws are supported at the discharge end by bearings or balancing bushes.

Suction pressure equalizes forces within the seal housing and compensating pistons, enhancing operational stability.

To manage excess pressure, these pumps typically include a built-in relief valve that redirects flow back to the suction chamber. Alternatively, a return valve can be used to send excess pressure to a separate tank.

Since the screws are in contact with each other and the casing, the pumped medium must have lubricating properties to prevent wear. The viscosity of the fluid also influences the maximum pressure the pump can achieve.

SPECIAL FEATURES

- Internal or external bearing options
- Low NPSH requirement
- Replaceable cartridge construction
- Orientation of inlet / outlet to meet specific requirement
- Choice of casing materials and sealing types
- Flexible mounting configurations
- Driven by direct coupling to a motor or engine
- Heating of casing for handling liquid at high temperature
- Continuous duty cycle
- API 676 compliant

Model	Nozzle Size (mm)		Flow Rate m ³ /h	Pressure (bar)		
	Suction	Discharge		G	N	K
25	25	25	2	10	15	60
32	32	25	5	10	15	60
38	65	50	10	10	15	60
45	65	50	13	10	15	60
52	80	65	20	10	15	60
60	100	80	32	15	20	60
70	125	100	66	15	20	60
80	125	100	78	15	20	60
90	150	125	109	15	20	60
100	150	125	78	15	15	60
110	200	150	102	15	30	40

Note: Screw types: G = Large Pitch, N = Normal Pitch, K = Kral Type.

Flow rate: Models 25–90 at 2950 RPM; Models 100 & 110 at 1450 RPM

PDF MODEL

Horizontal/Vertical
Flange Mounted



PUMP MODELS

PDT

- Specially designed for vertical tank top mounting with submerged suction and discharge outside the tank.
- Option for internal or external bearings with replaceable cartridge assembly.
- Ideal for Hydro Turbine Governing Systems.

PDS

- Vertical pedestal-mounted with motor directly on casing flange.
- Lateral suction and discharge with reversible flange orientation.
- Available with heating cover/jacket for medium to high-temperature fluids.

PDH

- Horizontal foot-mounted design with lateral suction/discharge and reversible flange.
- Symmetrical casing allows flexible inlet/outlet orientation.
- Built-in relief valve for pressure control and re-circulation.

PDF

- Bell-mounted casing suitable for both horizontal and vertical installation.
- Flexible flange arrangement with 180° reversal option.
- Designed for high-temperature fluids with heating jacket support.

PDE

- Complete cartridge pump ready for direct installation — no external casing required.
- Special construction allows standalone operation without additional housing.
- Compact and ideal for machine or plant integration.

High Pressure Triplex Plunger Pumps

High pressure pump, fitted with unloader and safety valve is driven by electric motor or diesel engine. Complete pump unit with local control panel, instrumentation and safety controls is mounted on a vibration-free fixed base frame or towable trolley with solid / pneumatic wheels. Customers have the option to mount an overhead water tank directly on the pump frame, offering added convenience and space efficiency. Complete units can be custom-built for safe operation in hazardous zones, featuring flameproof electrical components.

APPLICATIONS

Cleaning of turbine blades, heat exchanger pipes and tubes, air-filters, pre-heaters, reactors, pressure vessels, silos, tanks, machined parts, sewage pipes, ship hull, ladles, etc.

Descaling of billets, blooms, plates, spring sheets, forgings, pipes, non-ferrous metals, etc.

Water jetting across a wide range of industrial applications—including water injection, accumulator charging, hydro testing, concrete cutting, paint stripping, rust removal, deburring, reverse osmosis, water hydraulics, and prop support systems.

SPECIAL FEATURES

- Compact, rugged, and designed for noiseless operation—built for durability and peak performance
- Forged stainless steel pump head, ultrasonically tested for high-pressure safety
- Smooth finish of ceramic/SS/carbide plungers ensures negligible wear and friction
- Valves and seats made from special high strength materials ensure long life
- Sealing with special packing material having no wear sensitive lip
- Adjust flow and pressure easily via quick-change conversion kits
- Cleans significantly faster than conventional systems—minimizing downtime
- Enables in-place cleaning—reducing maintenance costs
- Environment friendly process since no hazardous chemicals are involved



BASE FRAME MOUNTED
Triplex Plunger Pump



TROLLEY MOUNTED
Diesel Engine Driven Triplex
Plunger Pump



TROLLEY MOUNTED
Electric Motor Driven Pump



HIGH PRESSURE
Triplex Plunger Pump



UTPS 4500 SERIES - 650 RPM

Model	Flow Rate (m ³ /hr)	Power Input (kW)			
		22	30	37	45
		Pressure (bar)			
4518	1.5	485	665	805	940
4520	1.9	390	535	660	760
4522	2.2	330	450	555	630
4524	2.6	275	375	465	530
4526	3.1	235	320	395	450
4528	3.6	200	275	340	390
4530	4.1	175	230	285	340
4532	4.7	155	210	260	295
4536	5.9	115	155	195	235
4540	7.3	95	125	160	190
4545	9.3	75	105	125	150
4550	11.5	60	85	105	120
4555	13.9	50	70	85	100

UTPS 8000 SERIES - 530 RPM

Model	Flow Rate (m ³ /hr)	Power Input (kW)		
		45	55	75
		Pressure (bar)		
8018	1.7	790	965	1300
8020	2.1	650	800	1065
8022	2.5	525	650	900
8024	3.1	450	555	755
8026	3.7	385	475	645
8028	4.2	335	410	555
8030	4.8	280	345	470
8032	5.4	240	300	410
8036	6.9	190	235	325
8040	8.7	150	190	255
8045	10.5	120	150	200
8050	12.9	100	120	165
8055	16.8	80	100	135

UTPS 13000 SERIES - 435 RPM

Model	Flow Rate (m ³ /hr)	Power Input (kW)				
		55	75	90	110	132
		Pressure (bar)				
13018	2	840	1125	1340	1630	2000
13020	2.5	695	920	1100	1305	1570
13022	3.1	540	730	850	1000	1260
13024	3.6	405	560	670	770	1100
13026	4.3	385	535	645	770	910
13028	5	355	485	580	665	780
13030	5.8	305	420	505	580	680
13032	6.6	270	370	445	505	600
13036	8.3	205	285	340	400	475
13040	10.2	165	225	270	325	390
13045	12.9	130	175	215	255	305
13050	16.1	105	145	170	205	245
13055	19.5	90	120	140	170	200
13060	23.2	70	100	120	145	170

UTPS 13000 SERIES - 475 RPM

Model	Flow Rate (m ³ /hr)	Power Input (kW)				
		55	75	90	110	132
		Pressure (bar)				
13018	2.3	760	1035	1235	1470	1750
13020	2.8	610	850	1010	1220	1430
13022	3.4	490	660	790	970	1140
13024	4.1	425	600	720	860	1000
13026	4.7	370	515	620	760	845
13028	5.5	315	445	530	655	730
13030	6.4	275	390	460	565	635
13032	7.2	240	340	410	500	560
13036	9.1	190	260	310	380	440
13040	11.3	155	205	245	300	355
13045	14.3	120	160	195	235	280
13050	17.6	100	130	155	190	225
13055	21.3	80	110	130	160	185
13060	25.4	70	95	110	135	156

UTPS 25000 SERIES - 450 RPM

Model	Flow Rate (m ³ /hr)	Power Input (kW)			
		132	160	200	250
		Pressure (bar)			
25026	5.2	815	990	1235	1540
25028	6	700	850	1060	1315
25030	6.8	610	740	925	1145
25032	7.8	535	650	815	1010
25036	9.9	425	515	645	800
25040	12.2	345	415	520	645
25045	15.5	270	330	410	510
25050	19.1	220	265	335	415
25055	23.1	180	220	275	340
25060	27.5	155	185	230	285
25065	32.2	130	160	200	245
25070	37.4	110	135	170	210
25075	42.9	100	120	150	185
25085	55.1	75	90	115	145
25095	68.9	60	75	90	115

Note: Technical data based on 100% volumetric efficiency, Ambient 20 °C, & 50Hz.

High-Pressure Cleaning Systems

For demanding industrial cleaning applications, UT Pumps offers advanced cold and hot water/steam high-pressure jet cleaning systems. Engineered for superior cleaning performance, these systems provide powerful flow and pressure levels to handle even the toughest cleaning challenges with efficiency and precision.



Technical Data for Models

Parameters	S-2000	S-1860	CW-1860	UT 500/22	Kid 200/15	Super Mini 100/8
Operating Pressure (bar)	200	50-150	50-150	100-500	50-200	50-100
Water flow rate (m3/h)	1.26	0.88 - 1.76	0.88 - 1.76	1.32	0.4-0.9	0.4 - 0.48
Water Temperature (°C)	Ambient to 150	Ambient to 150	Ambient	Ambient	Ambient	Ambient
Electric Load (kW)	8	8	7.5	2.2	5.5	1.8
Drive Motor (kW)	7.5	7.5	7.5	2.2	5.5	1.8
Fuel consumption (L/h)	8	11	-	-	-	-
Detergent tank capacity (L)	2 x 20	2 x 20	2 x 20	-	-	-
Fuel Tank Capacity (L)	45	45	-	-	-	-
Dimensions (mm)	1500 x 900 x 980	1500 x 900 x 980	1350 x 900 x 980	-	500 x 740 x 800	710 x 450 x 850
Weight approx. (kg)	350	375	205	500	90	70

Note: Technical data for 50Hz power supply. For S-2000 & S-1860, maximum temperature at minimum flow and minimum pressure applicable.

KEY FEATURES AND BENEFITS

- High-performance cleaning
- Continuous operation
- Versatile plunger options
- Precise pressure control
- Large fuel tank
- Dual cleaning agent tanks
- Compact & portable design
- Maintenance-friendly design



ADVANCED SYSTEM FOR MAXIMUM EFFICIENCY

Double Drive System

- Separate motors for the pump and burner
- Prevents unnecessary burner wear when operating with cold water
- Automatic shut-off for the fan, fuel pump, and burner when water supply is cut-off

Burner System

- Turbo fan and burner system for quiet, soot-free ignition
- Pre-ventilation of heat exchanger ensures efficient performance
- Low fuel consumption with high-output efficiency

Chemical Dosing System

- Precise selection and dosing valve for exact chemical application
- Dual cleaning material tanks with instant selection
- Self-flushing feature

Safety Features

- Built-in pressure switch and low water cut-off safety
- Integrated bypass valves ensure operational safety
- Triple safety unit shuts off fan, fuel pump, and solenoid valve upon reaching set temperature

APPLICATIONS

Our high-pressure jet cleaning systems are ideal for various industrial cleaning tasks, including:

- Railway track and platform cleaning
- Diesel shed cleaning
- Locomotive and engine cleaning
- A/C coil maintenance
- Grease and oil removal
- Earth-moving equipment cleaning
- Cleaning of casting and machined parts
- Cooling tower and air cooler maintenance
- Vehicle and container cleaning
- Conveyor belt maintenance
- Air handling unit fin cleaning
- Air pre-heater basket filter cleaning
- Heat exchanger maintenance
- Railway coach and toilet cleaning
- Restoration of stone and tile monuments
- Process filter cleaning



Jet Cleaning Machine Accessories

STANDARD ACCESSORIES

- High-pressure gun: 1 no.
- High-pressure nozzle: 2 nos.
- High-pressure hose (10 meters): 1 no.
- Jerry can: 2 nos.
- Single nozzle lance: 1 no.

FITTED ACCESSORIES

- Chemical selection & dosage valve
- 5M electric cable
- 3/4" water connecting coupling
- Pressure gauge, pressure regulator and safety valve
- Temperature controller & low water cut-off



TRIGGER OPERATED GUN

High Pressure Plunger Pump Accessories



FOOT OPERATED VALVE



HP HOSE



FLEXIBLE LANCE



HAND OPERATED GUN



NOZZLES

INDUSTRIES

- | | |
|--------------------------------|--------------------------------|
| – Automobile/Engineering | – Utilities & Infrastructure |
| – Breweries/Distilleries/Sugar | – Oil & Gas |
| – Cement | – Power Generation |
| – Chemicals & Petrochemicals | – Railways |
| – Construction | – Marine & Shipping |
| – Food Processing & Dairy | – Metallurgy |
| – Fire Protection | – Textiles |
| – Mining | – Water & Wastewater Treatment |

ABOUT

For over four decades, UT Pumps has been a trusted provider of industrial pumping solutions, renowned for engineering excellence and dependable performance in demanding environments. Specializing in the manufacture of high-quality screw pumps and high-pressure plunger pumps, we serve critical sectors including chemicals, water treatment, and food processing with precision-engineered systems tailored to industrial requirements.

Our commitment to quality, sustainability, and safety is reflected in our ISO 9001, ISO 14001, and ISO 45001 certifications, ensuring that every solution we deliver enhances productivity and operational efficiency.

As a brand of Hydro Prokav Pumps India Pvt. Ltd. and Ingersoll Rand, UT Pumps offers its customers the advantage of global expertise, expanded capabilities, and a commitment to innovation.



**HYDRO
PROKAV**

An Ingersoll Rand Business

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