



High & Ultra High Pressure Technology

Water Jetting



# Water Jetting Solutions



**Main Picture:** Stripping concrete from formwork at 2500 bar **Inset:** Surface preparation, shiprepair at 3000 bar

## Hughes Pumps

With extensive experience in the design & manufacture of High Pressure (HP) & Ultra High Pressure (UHP) plunger pumps and Water Jetting equipment since 1970, Hughes Pumps is justifiably proud of its product range and offers a flexible approach to the changing needs of a worldwide customer base.

Every pump & unit we manufacture is function tested and certificated for performance prior to despatch from our UK works.

Whether you need a bespoke Water Jet Cleaning or Cutting System, a standard Water Jetting Unit, a bareshaft pump or a nozzle, Hughes Pumps has the Water Jetting Solution.

## The Pump Range

**Our range of pumps operate at pressures from 70 to 3000 bar (1,000 to 43,500 psi) and flow rates to 806 lpm (177 igpm / 213 usgpm) with ratings from 30 to 375 kW (40 to 500 hp).**

The pumps are ruggedly constructed and produced in six frame sizes, each including a range of plunger sizes. This allows selection of the ideal pump for the job.

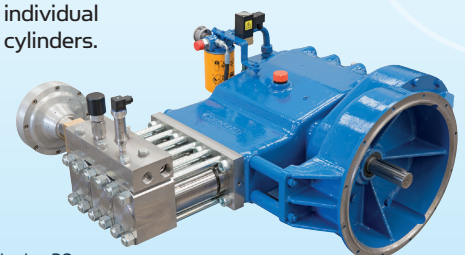
Close-coupled reduction gearbox drives are available, with a choice of gear ratio to suit most prime mover speeds. Also available are SAE engine adaptor housings allowing the pumps to be flange mounted to diesel engines, ensuring perfect alignment and making installation simple.

The power end of the pump features cast iron casings with splash or pressure

lubrication and oil cooling, according to the application.

Pump heads are manufactured from stainless steel as standard. The in-line valve arrangement prevents the adverse effects of cyclic stress within the head block, while allowing all working components to be easily removed on site for service. Solid ceramic plungers extend the life of the self adjusting plunger seals.

The Ultrabar range of UHP pumps include design features that allows seals and valves to be monitored without tools and maintenance on individual cylinders.



Ultrabar 30 pump,  
30 lpm at 3000 bar



## Water Jetting Units

Skid, site or road trailer and truck mounted units are available with or without sound reduction enclosures, driven by a choice of diesel engines (non-emissions or Tier 4) or electric motors for use in safe or hazardous areas (ATEX compliant where required). All fabrications are grit blasted and high quality powder coated for a durable finish. For offshore applications fully certified crashframes or containers are available with paint finishes to customer specification.

Every unit manufactured by Hughes is robust, simple to operate and maintain, and designed for longevity. Diesel engines and electric motors are sourced from world leading manufacturers and comply with the latest international

standards. Simple control panels are used throughout the product range avoiding the need for PLC systems, ensuring reliability & easy trouble shooting.

High capacity water filters and stainless steel suction line fittings are used as standard and boost pumps fitted for higher pressure applications. Shutdown switches are fitted where necessary to monitor various pump and prime mover functions.



Robotic cleaning of skids at automotive plant - 900 bar.



Concrete cutting - 1000 bar



Heat exchanger cleaning - 800 bar



Ultra-Bar 30 DRT(4), 24lpm at 3000bar

## Typical Applications

- Heat exchanger tube cleaning
- Water & abrasive blasting
- Surface preparation (coatings & corrosion removal)
- Pipe cleaning & de-scaling
- Tank & vessel cleaning
- Hydrodemolition
- Sub-sea cleaning & cutting
- Pressure Testing
- Cold cutting
- Floor, road & runway cleaning
- Road re-texturing & white line removal

## Accessories

To complement the pump sets, a comprehensive range of water jetting accessories is available to cover every application:

- Hand held jetting guns - land and underwater
- Foot control valves
- Unloader and diverter valves
- Surface cleaning jets - pencil, fan and rotating
- Pipe and tube cleaning jets - fixed and rotating
- Heat exchanger cleaning - manual and automatic
- Tank cleaning heads
- Floor, road and runway cleaning
- Water abrasive blasting
- High pressure hoses, flexible and rigid lances



## Worldwide Support

Backed by a comprehensive spares stockholding, we have dedicated Service Engineers who travel nationally and internationally keeping our pumps running round the clock. We also work closely with our overseas agents who have been trained in the selection, operation and maintenance of our product range ensuring they can provide the vital after sales service demanded by today's fast moving industry.



Ultra-Bar 10, ATEX compliant Zone 2 unit, 8 lpm at 2100



## Water Jetting Pumps Overview



Comprehensive stock levels of accessories & spares



New Hughes Pumps factory constructed in 2004

Pump Model	Plunger dia mm	Nominal Power Rating		Nominal Flow Rate			Pressure	
		kW	hp	lpm	igpm	usgpm	bar	psi
HPS400	14	30	40	16	3.6	4.4	1,000	14,500
	35			103	22.6	27.2	160	2,320
HPS650	18	48	65	27	6	7.2	1,000	14,500
	35			103	22.6	27.2	250	3,625
HPS1000	20	75	100	28	6.2	7.5	1,400	20,300
	50			177	38.9	46.8	220	3,190
HPS2200	24	160	220	53	11.7	14.1	1,400	20,300
	55			279	61.3	73.9	310	4,495
HPS3000	30	225	300	84	18.5	22.3	1,400	20,300
	75			484	106.4	128.2	250	3,625
HPS5000	30	375	500	141	31	37.3	1,400	20,300
	75			806	177.4	213.7	250	3,625
Ultrabar 10	11	48	65	10.3	2.3	2.8	2,600	38,000
Ultrabar 15	14	75	100	13.8	3	3.7	2,750	40,000
Ultrabar 30	18	160	220	30	6.6	8	3,000	43,500
	22			45	9.8	11.8	2,000	29,000

The chart above shows extreme pressure/flow combinations with smallest & largest plungers fitted. All pumps have a range of plunger sizes other than the Ultrabar 10 & 15.



DNV 2.7-1 containerised units

Represented by:



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