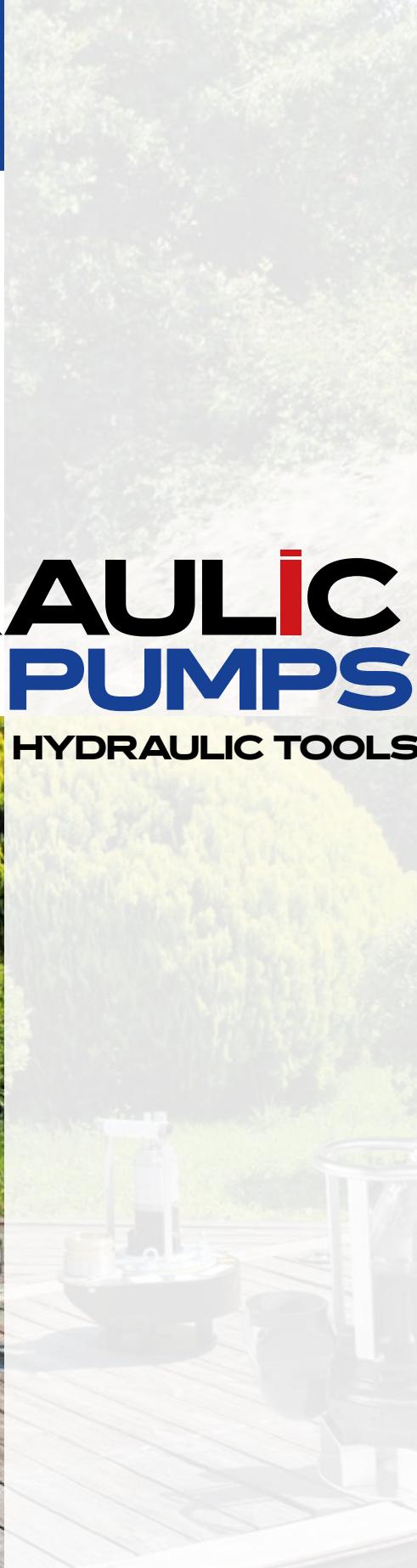


WATER
PUMPS

HYDRAULIC WATER PUMPS

HYDRAULIC TOOLS







THE ADVANTAGE OF DOA HYDRAULIC PUMP



GREAT POWER WEIGHT
AND DIMENSION RATIO



COMPACT AND
EASY TO CARRY



OEM AND SPECIAL
APPLICATIONS



CAN RUN DRY
WITHOUT DAMAGE



CAN PUMP HIGH
TEMPERATURE LIQUIDS



NO ELECTRICITY



MINIMAL MAINTENANCE NEEDED



CAN PUMP AGGRESSIVE FLAMMABLE
AND PETROLEUM BASED LIQUIDS





Extremely robust and reliable, with minimal maintenance requirements

Simplified construction that ensures reliability, long lasting life and minimal maintenance requirements

Can run dry without damage

The maximum circumference of only 22 cm allows easy insertion even in narrow manholes and very small excavation sites

It can be operated by small power packs or by the hydraulic circuit of mini excavators, tractors, etc

Hydraulic motor equipped with a one-way valve that prevents accidental oil leaks if connected in the wrong hydraulic port

Available with "Viton" hydraulic motor seals for pumping high temperature fluids

TECHNICAL CHARACTERISTICS	SP20
discharge mouth	2" bsp female
dimension LxH (mm)	220x300
weight	8 KG
flow	800 l/min
water head	35 mt max
pumpable solids	3 cm
impeller material	chromium cast iron
pump body material	stainless steel
impeller type	open centrifugal
motor type	gears group 2
oil flow	15 - 30 l/min
ideal flow	20 l/min
oil pressure	100 - 210 bar
backpressure	17 bar max

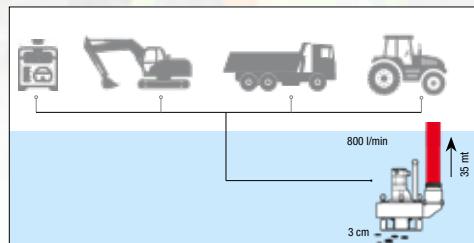
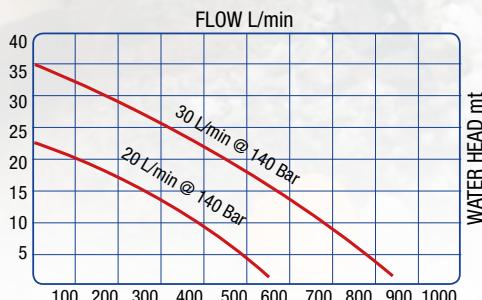


HYDRAULIC TRASH PUMP

SP20 is a compact and powerful immersion pump designed for handling trash and muddy waters and for heavy fluids in general, compact and light provides a flow rate up to 800 L/min and maximum water head of 35 meters, can pump solid particles with dimensions up to 3 cm. It can run dry without damage. Compact and safe, the **SP20** is ideal for emergency services, for the maintenance of urban gas and water networks, the field operators can work with their feet immersed in the same water in which the pump is operating, it is also available in the **ATEX** variant for pumping works in explosive environments.



Also available
in configuration



HYDRAULIC TRASH PUMP



Extremely robust and reliable, minimal maintenance requirements,, can run dry without damaging it

- The pump housing can be open in few minutes without tools for inspection of the impeller and the pumping chamber
- Can be operated by small power packs or by the hydraulic circuit of mini excavators, vans, tractors, work vehicles, etc
- The perforated round base allows pumping in just few cm deep of water, ideal in basements and tunnel floors
- Hydraulic motor equipped with a one-way valve that prevents accidental oil leaks in the wrong port
- Available with "Viton" hydraulic motor seals for pumping of high temperature fluids
- The pump housing can be flanged for external mounting (not submerged) on water tanks

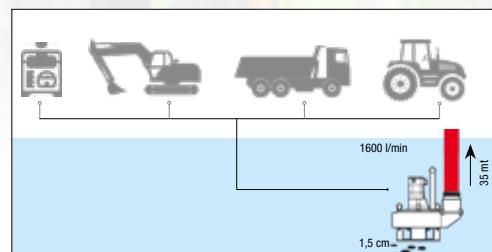
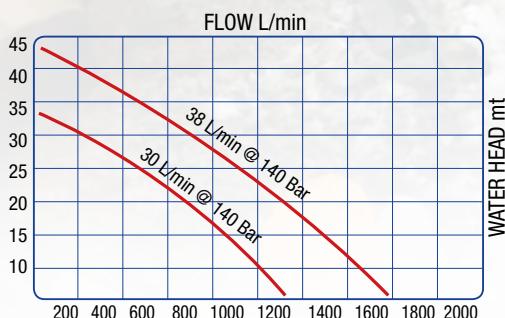
TECHNICAL CHARACTERISTICS	WP25
discharge mouth	3" bsp female
dimension LxH (mm)	300x300
weight	13 KG
flow	1600 l/min
water head	45 mt max
pumpable solids	1,5 cm
impeller type	open centrifugal
pump body material	aluminium
impeller material	chromium cast iron
motor type	gears group 2
oil flow	15 - 38 l/min
ideal flow	30 l/min
oil pressure	100 - 210 bar
backpressure	17 bar max



HYDRAULIC TRASH PUMP

WP 25 is a professional hydraulic submersible pump designed for pumping clear water, excavation water or moderately muddy fluids, it can pump solid particles in suspension with dimensions up to 2 cm. High performances : 1.600 L/min flow rate and water head up to 45 meters, the hydraulic pumping operation guaranteed maximum safety for the field operators that can work with their feet immersed in the same water in which the pump is operating.

WP 25 is ideal for maintenance work on urban networks, pumping large volumes of water, flooding, civil protection and forest fire protection services and road works in general.



HYDRAULIC TRASH PUMP



Extremely robust and reliable, minimum maintenance required, can run dry without damage indefinitely.

- The pump housing can be open in few minutes without tools, for inspection of the impeller and the pumping chamber.
- Can be operated by small power packs or by the hydraulic circuit of mini excavators, vans, tractors, work vehicles etc.
- Hydraulic motor equipped with a one-way valve that prevents accidental oil leaks if connected in the wrong hydraulic port
- Available with "Viton" hydraulic motor seals for pumping high-temperature fluids.
- The single-channel impeller (without vanes) has a minimal mechanical effect on the fluid this limits the formation of emulsions and foams.
- Important feature in pumping spills of oils and oil products from "skimmers" into the sea and lakes.

TECHNICAL CHARACTERISTICS	SP35
discharge mouth	3" bsp female
dimension LxH (mm)	350x370
weight	10 KG
flow	1600 l/min
water head	50 mt max
pumpable solids	5 cm
impeller type	mono canal closed
impeller material	stainless steel
pump body material	stainless steel
motor type	gears group 2
oil flow	15 - 38 l/min
ideal flow	30 l/min
oil pressure	100 - 210 bar
back pressure	17 bar max

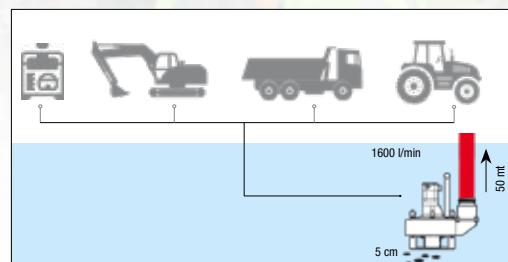
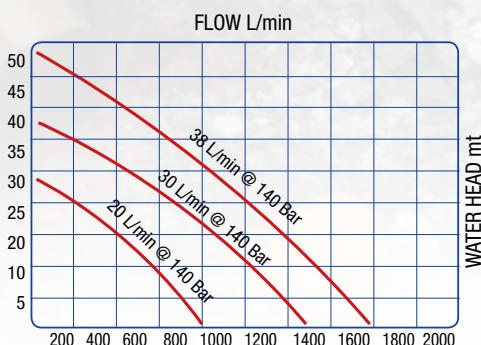


HYDRAULIC TRASH PUMP

SP35 is a 3 "hydraulic waste pump for clear and heavily loaded liquids, impeller and shell are made in stainless steel. The pump produce high performance thanks to hydraulic power and the exclusive closed single channel impeller which allows very high efficiency with flow rates up to 1600 L / min, head up to 50 meters and the possibility of pumping dense or very muddy water with suspended solid bodies up to 50 mm in diameter. **SP35** is ideal for maintenance work urban networks, which pump very dense liquids, against floods in civil protection services and road works in general.



monocanal
closed impeller



Extremely robust and reliable, minimum maintenance required, can run dry without damage indefinitely

- The pump housing can be open in few minutes without tools for inspection of the impeller and the pumping chamber
- Can be operated by small control units or by the hydraulic circuit mini excavators, vans, tractors, work vehicles etc.
- Hydraulic motor equipped with a one-way valve that prevents accidental oil leaks if connected in the wrong hydraulic port
- Available with "Viton" hydraulic motor seals for pumping high-temperature fluids
- With the accessory "Dredging Kit" mounted on the impeller base, act as a floor vacuum for directly suction of sand, light mud and solid melted suspended material



TECHNICAL CHARACTERISTICS	SP45
discharge mouth	4" bsp female
dimension LxH (mm)	400x500
weight	28 KG
flow	3000 l/min
water head	16 mt max
pumpable solids	7 cm
impeller type	open centrifugal
impeller material	chromium cast iron
pump body material	stainless steel
motor type	gears group 2
oil flow	30 - 40 l/min
ideal flow	38 l/min
oil pressure	140 - 210 bar
backpressure	17 bar max

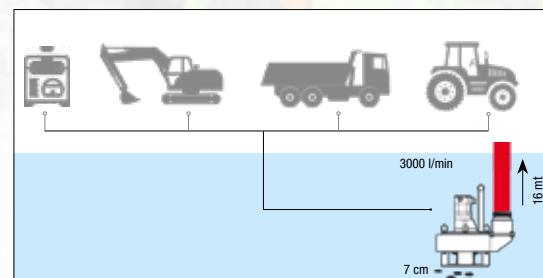
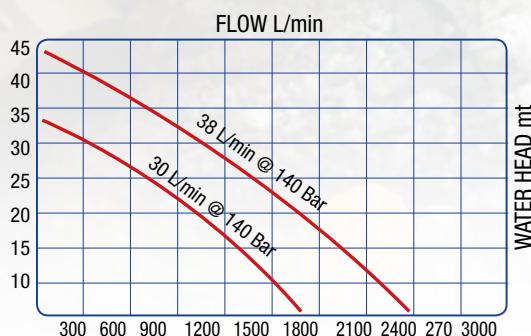


HYDRAULIC TRASH PUMP

SP45 is a professional 4" trash pump designed for pumping trash or very loaded fluids with a concentration of sludge in the liquid up to 20%, it can pump suspended solid bodies with dimensions of 70 mm. The performances are very high: flow rate up to 3000 L/min and a water head up to 16 meters. The pump body is constructed in stainless steel with polyurethane polyether shielding plates, materials that ensure unbeatable qualities of sturdiness, resistance to abrasion to impact and rust. Hydraulic function is an implicit guarantee of safety due to the impossibility of causing electric shock injuries. It can run dry without damage indefinitely. It is ideal for the pumping of large volumes of clear and dirty water, for the maintenance of underground gas and water networks, against flooding and natural disasters in the disposal of biological pits and in water purification plan.



Possibility to install the **SG4** mixer accessory which makes it possible to make liquids that are very dense or with a dry surface more fluid and therefore pumpable.



EVERYTHING is digested!

- Pump everything! The shearing impeller can shred and pump branches, algae, rags, ropes, bags and solid objects with dimensions up to 50 mm
- High performance, weight / size / power ratio unmatched by other types of pump - long working life, minimal maintenance
- No electricity means safety, it can be used while standing in the water close to the pump (*a situation forbidden by law with electro pumps*)
- The piston engine guarantees maximum efficiency and the possibility of running the pump dry without damaging it.
- Possibility to install the SG4 mixer accessory with the function of liquified liquids that are very dense or dry into more fluid liquids and therefore pumpable.

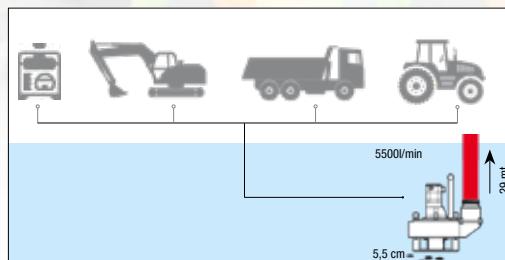
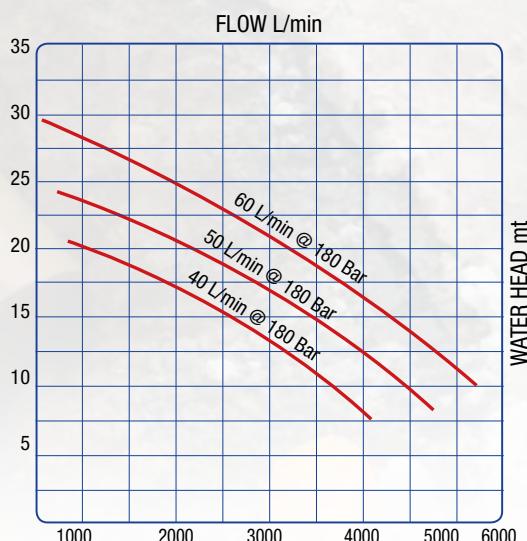


TECHNICAL CHARACTERISTICS	SP55
discharge mouth	5" bsp female UNI 70
dimension LxH (mm)	500x800
weight	95 KG
flow	5500 l/min
water head	29 mt max
pumpable solids	5,5 cm
impeller type	open with shearing effect
impeller material	high tensile steel
pump body material	ductile piston
motor type	piston type
oil flow	50 - 100 l/min
ideal flow	75 l/min
oil pressure	150 - 350 bar
back pressure	17 bar max
oil house dimension	3/4" minimum size



HYDRAULIC TRASH PUMP

SP55 is a powerful submersible trash pump with hydraulic piston motor with a 5 "discharge port, ideal for pumping large volumes of clear and dirty water, in emergency interventions in civil protection, in the military sector and in the movement of large volumes of charged fluids. The maximum capacity is 5500 L / min with water head up to 29 meters - pumpable solids 5.5 cm. The particular impeller with cutting knives allows cutting and pumping also of suspended solids such as leaves, branches, algae, ropes or even large linear fibers. The hydraulic powering offers a long series of safety, operational and performance advantages that can not be obtained from traditional priming or electropumps. A typical application is that the pump is mounted on the excavator arm instead of the bucket, transforms the excavators into very powerful water scoops.



EVERYTHING is digested!

- Pump everything! The shearing impeller can shred and pump branches, algae, rags, ropes, bags and solid objects with dimensions up to 50 mm
- High performance, weight / size / power ratio unmatched by other types of pump - long working life, minimal maintenance
- No electricity means safety, it can be used while standing in the water close to the pump (a situation forbidden by law with electro pumps)
- The piston engine guarantees maximum efficiency and the possibility of running the pump dry without damaging it.
- Possibility to install the SG4 mixer accessory with the function of liquified liquids that are very dense or dry into more fluid liquids and therefore pumpable.

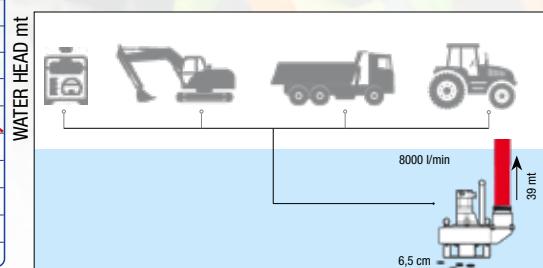
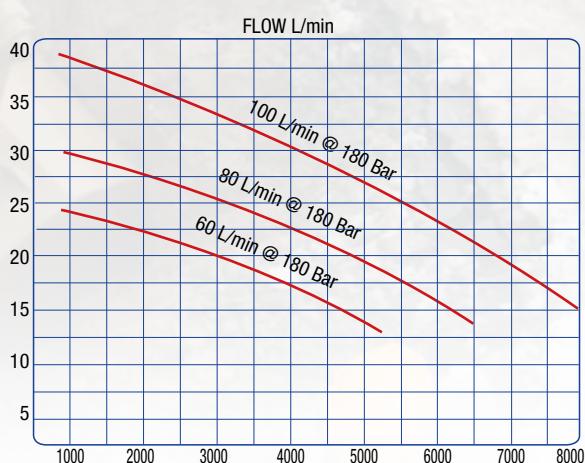


TECHNICAL CHARACTERISTICS	P65
discharge mouth	6" bsp female
dimension LxH (mm)	550x900
weight	135 KG
flow	8000 l/min
water head	39 mt max
pumpable solids	6,5 cm
impeller type	open with shearing effect
impeller material	high tensile steel
pump body material	ductile iron
motor type	piston type
oil flow	60 - 100 l/min
ideal flow	8 l/min
oil pressure	150 - 350 bar
back pressure	17 bar max
oil house dimension	3/4" minimum size



HYDRAULIC TRASH PUMP

SP65 is a powerful immersion trash pump for sewage water with hydraulic piston motor with a 6 "discharge port ideal for pumping clear and dirty water, in emergency interventions in civil protection, in the military sector and in the movement of large volumes of charged fluids. The maximum capacity is 8000 L / min with head up to 39 meters - pumpable solids 6.5 cm. **SP65** can work with oil pipes up to 60 meters long from the driving machines. The particular impeller with cutting knives allows cutting and pumping also suspended solids such as leaves, branches, rags, algae, ropes or even large linear fibers. The hydraulic operation offers a long series of safety, operational and performance advantages that can not be obtained from traditional priming or electropump pumps. A typical application is that of the pump mounted on the excavator arms instead of the bucket, transforms the excavators into very powerful water scoops.



Slurry Gate is an accessory for trash pumps DOA models SP45 - SP55 - SP65. The accessory is a set formed by:

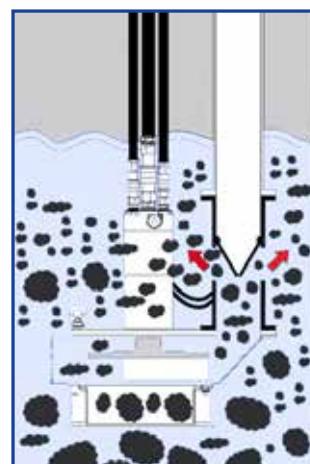
- **SG4 - SG6 body and cylinder, this element to be installed on the pump outlet mouth.**
- **Hydraulic control valve and hoses that can control the opening/ closing action of the slurry gate.**

The Slurry Gate is a “retrofit accessory” that can be installed on pumps, its action as mixer is necessary when the liquid to pump is very thick and have suspended solids (like sediments, mud balls or oil balls or other agglomerate of semi solid/ pasty liquids) the above must be disintegrated to become more fluid and pumped, is needed also to avoid choke at the pump inlet. After some minutes of this treatment the liquid can be pumped easier and the pump will run in its natural function. The length of the hydraulic pipe that connects the three-position valve to the mixer body must be prepared by the customer or ordered at DOA at the time of purchase.

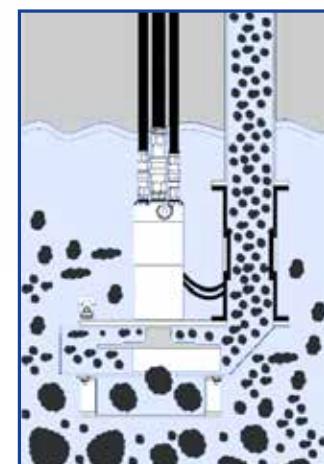


TECHNICAL CHARACTERISTICS	SG4	SG6
weight dry	9 KG	12 KG
fluid passage	equivalent at 5,5"	equivalent at 5,5"
total high	370 mm	420 mm
type cylinder	double effect	double effect
hydraulic valve	3 positions, open center	3 positions, open center

WINDOWS OPEN
Pump impeller is mincing suspended solids



WINDOWS CLOSED
Fluid is pumped up from outlet passage



HOW IT WORKS

Action of **SG4** is very simple: it is a flow diverter placed on the out let mouth of the pumps, that can direct the fluid in its natural “upward” pumping direction or divert it aside bypassing from the two openings and repumped in its bed. Once the fluid is shacked and minced at more liquid state and can be pumped, will be enough to close the side openings (by acting on the oil valve that is part of the set) and the pump can be used in the normal pumping action.







WHY HYDRAULIC TOOLS

POWER & PRODUCTIVITY

The power to weight ratio of hydraulic tools is unbeatable!A comparative test will immediately demonstrate this advantage that means increased productivity and less fatigue for the operators.

TRANSPORTABILITY & ECONOMY

The group power pack/tool is very compact and easy to transport, the fuel consumption of power packs is largely less than the one of aircompressor, the power pack is lighter and can easily be transported by the smallest vehicles, can be positioned on job site occupying minimal space and without troubling operations and traffic,it does not have the typical problems associated with air compressors such as needs of bra-kes, lighting, car plates, hooks, lifting , parking etc.

A BETTER WAY TO WORK IN TOTAL SAFETY

No other equipment either electric, gasoline, or pneumatic can solve together all the problems related to the urban maintenance of underground pipes. The modern utilities organisations require powerful, productive, reliable, easy transportable equipment that has to give maximum guarantee of safety for operators. Difficult to obtain all this from conventional equipment, hydraulics is the synthesis and the DOA range is the definitive "point by point solution". Hydraulics is implicitly free of electric shock hazard, often the operators work inside trenches with feet in the water and mud, this is a dangerous condition prohibited by law if are used electric single phase tools that in case of contact with water can cause fatal accidents, hydraulic tools can work in total immersion in water without problems of functionality and in total safety.

QUIETNESS - NO FROZEN MOISTURE IN WINTER

Absence of open exhaust gives a quietness that is unmatched by other tools type. In winter operations or at low temperatures hydraulic tools guarantee absence of frozen moisture , typical limit of the air tools. Hydraulics also give the advantage of not having pressure accumulation, being the oil incompressible it cannot cause explosions of tanks and hoses etc

VERSATILITY AND LONG OPERATIVE LIFE OF TOOLS

Hydraulic tools can be powered also by all vehicles with a sufficient hydraulic circuit and are ideal for crews that operates in the utilities maintenance. The tools "longevity" is another great advantage, hydraulic tools have a small number of components that are always bathed and lubricated by the oil, an hydraulic tool has a working life that is at least 20 times longer than other tools type.

THE RANGE

DOA has the largest range in its type, no one has the same number of tools and solutions designed for the maintenance of underground pipes and for general urban works, our catalogue is constantly increased with new tools anticipating the operators necessity guaranteeing safety and productivity.
DOA IS ALWAYS A STEP AHEAD !



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