



TRIDENT & HYDROBOX

Hydraulic multipower group for trucks and vans

Hydraulic, electric, pneumatic energies from your truck



**electricity
&
welding**



**hydraulic
energy**



**air
compressor**



TRIDENT is a hydraulic accessory for trucks and vans formed by three parts that allows to obtain at low cost and everywhere. electric, pneumatic and hydraulic energies from the engine of the vehicles exploiting the hydraulic primary energy produced by the vehicles engines.

TRIDENT is a hydraulic group formed and divisible in three compact modules that can be easily installed on board the trucks transforming them from normal transportation vehicles into real working equipment powerful, quiet, versatile, economical and with minimal maintenance needs.

With **TRIDENT** will be possible to power all electric, pneumatic and hydraulic tools like drills, grinders, water pumps, breakers, disc saws, ventilators, tower lights, welding and pipe fusion welding machines, impact wrenches and the majority of the equipment normally used in the outdoor maintenance works.

What is TRIDENT ?

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TRIDENT is formed and divisible in three compact modules that can be easily installed on board transforming the truck from a simple transportation vehicles into a professional working equipment powerful, quiet, versatile, economical and with minimal maintenance needs.



Typical applications

TRIDENT is ideal in all external maintenance activities:

- maintenance of gas and water networks - municipalities
- service vehicles – mobile workshops – towing trucks
- military and civil protection vehicles
- vehicles used for operations in remote areas
- excavators and earth moving, agricultural and mining machinery



- The three modules can be installed in different positions or separated, are connected by flexible hydraulic hoses, a electric wiring 12 V completes the installatio

How it is made?

TRIDENT is formed by three modules:

1 · THE HYDRAULIC MODULE

Cod. K0173

Gives the hydraulic energy to the other two components and is formed by: the oil tank, diverter oil ON/OFF valve, pressure relief valve, oil radiator with electric fan, oil filter, quick couplers and the electric control panel with selection switches for the three functions and emergency arrest button. This module can be installed as single part to obtain hydraulic energy only for hydraulic hand tools like breakers, water pumps, disc saws etc

Minimum hydraulic power needed 35 L/min @180 bar

Hydraulic power given to hydraulic tools 30 – 38 L/min @150 bar



2 · THE GENERATOR/WELDER MODULE

Cod. K0178

Optional part, power and characteristics available in more power configurations tri/single phase to be chosen. Available also only as generator 10 KVA without welder.

Electric power: 10 KWA in tri-phase - 4,5 KWA in single phase

Welding power: 250 Ampere

Type of generator and welder: rotative electro mechanical



3 · THE AIR COMPRESSOR MODULE

Cod. K0180

Optional part
(different air flow and characteristics also on request)

Air flow max: 1000 L/min air delivered

Air pressure: 10 Bar



*The use of the three functions (one at the time !!)
can be chosen by acting on the selection switches on control panel.*

How it works?

On the truck gear box must be installed a power take off and a hydraulic gear pump (these are accessories produced by different companies or can be ordered at the truck manufacturers with the new vehicle

- see fig. 1 at page 4)

Then must be installed in convenient position the primary hydraulic module that has to be hydraulically connected by two hoses (suction and pressure) to the hydraulic gear pump.

The operator, with hand brake engaged, set the engine speed at the recommended RPM, then activate the hydraulic pump by pressing a button, when pump is connected to engine oil pressure is given (in free circulation) to the primary hydraulic module, then oil goes to the other two modules and back again to the primary hydraulic module, in this state the engine makes no effort as nothing is working.

The group is ready to work, the operator can select one of the three uses by pushing the electric switch located on the primary module and use the tool, (one tool at the time), in this mode the truck engine goes a little under load and can be felt a small engine speed decrease but the engine speed control automatically keep the speed stable as needed.

The operator can now work with hydraulic or electric or pneumatic tools !!

SEE VIDEO ON www.doa.it



Hydraulic tools



Hydraulic tools



Electricity and welding



Pneumatic tools

What are the advantages?

- Obtain from a truck three energies at low cost and everywhere
- Possibility of having current tri/single phase up to 12 KVA
- Possibility of welding at 250 Amps .
- Possibility of generating Air Compressed up to 1000 L/min
- Possibility of powering all hydraulic tools at their maximum power (example the truck can become a dewatering pump to move up water to 3000 L/min flow)
- Reduction of weight loaded and space saving, no other equipment transported, high available power
- Maximum quietness – ideal in urban and night works
- Increased productivity and total utilisation of the vehicles
- Economy of running, minimal maintenance, easy use and no problem of continuous
- No thefts of equipment and fuel, no tiring and potentially dangerous loading/downloading operations of equipment from vehicles
- No problem of evacuations of smokes from engines used inside
- No need to have on board other fuels that can be dangerous
- The group can be reinstalled on other vehicles

NECESSARY PRIMARY HYDRAULIC POWER FROM VEHICLE

FLOW min - max	35 - 42 L/min
PRESSURE min - max	180 - 210 L/min

CHARACTERISTICS OF HYDRAULIC PARTS

OIL TANK CAPACITY	38 L
OIL RADIATOR	Radiator with electric fan 12 V
OIL FILTER	Cartridge Spin ON type
ON/OFF VALVOLE	3 ways, open center with relief valve
SELECTION OF FUNCTIONS	By electric buttons on control panel
HYDRAULIC MOTORS TYPE	Gear type group 2 with activation by solenoid 12 V

HYDRAULIC POWER TO HYDRAULIC TOOLS

FLOW	All hydraulic power available from primary circuit and proportional to engine speed
PRESSURE	Regulated at 150 Bar

CHARACTERISTICS WELDER AND GENERATOR

WELDER TYPE	Mod. FW2-DC with Volt meter and RCBO protection
WELDING POWER	Max 250 Amp regolable
GENERATOR POWER	10 KVA in tri phase - 4,5 KVA in single phase
WELDING POWER REGULATION	Yes by fine tuning knob

COMPRESSOR CHARACTERISTICS

AIR DELIVERED	Flow max 1000 L/min @ 7 Bar
AIR ASPIRED	1200 L/min
AIR PRESSURE	Max 10,5 Bar adjustable (on request up to 15 Bar)
AIR TANK CAPACITY	25 L (standard model) possibility to install larger size tanks
COMPRESSOR TYPE	2 stages with cast iron head for heavy duty applications
CONTROLS	2 pressure gauges (1 for the tank, and 1 for the output pressure regulation)

WEIGHT AND DIMENSION

DIMENSION standard module	mm 716 x 445 x H 500 the three modules have same dimension
WEIGHT hydraulic module	Kg 82 with oil
WEIGHT electric module	Kg 102
WEIGHT pneumatic module	Kg 102

DOA Srl reserves the right to make modifications or change configuration, function and characteristics at any time without previous notice. The above datas are referred to performances derived from the ideal realization of the complete hydraulic circuit and connection to vehicle.

TYPICAL EXAMPLE OF INSTALLATION

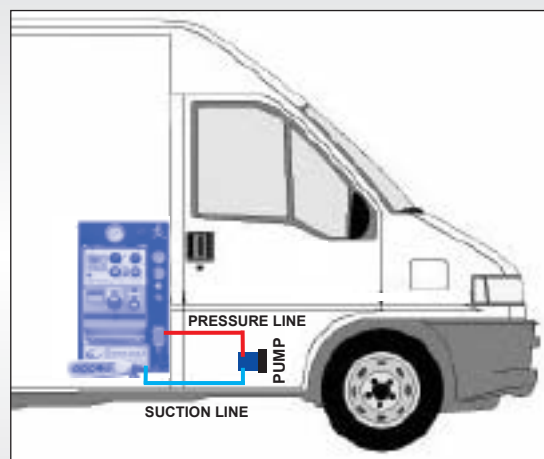
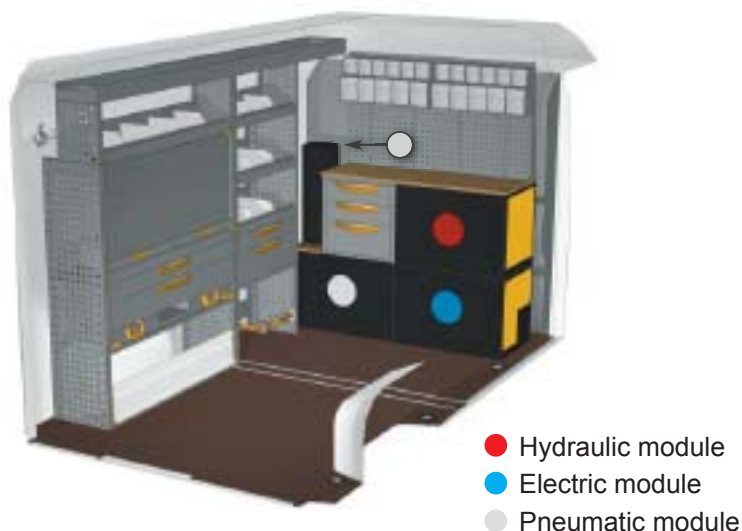


Figura 1

HYDROBOX

HYDRAULIC AUXILIARY GROUP FOR TRUCKS AND VANS

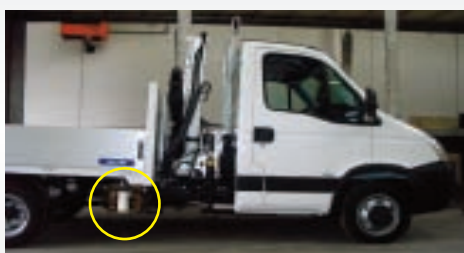
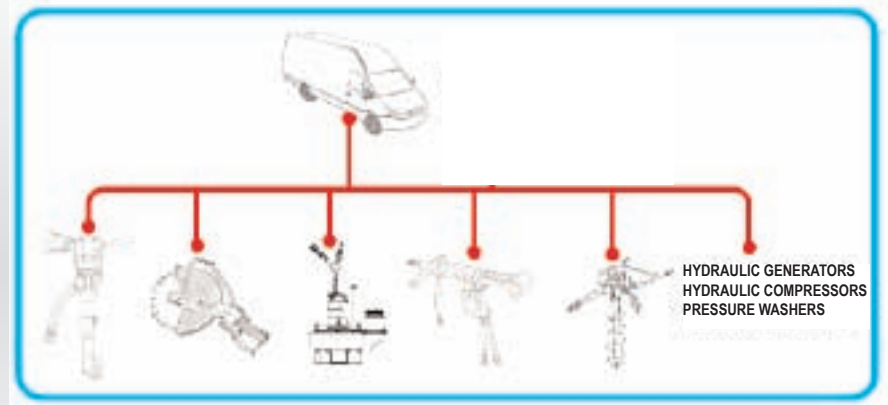
HYDROBOX is a compact hydraulic accessory for trucks and vans, service trucks, rescue vehicles and various working machinery and transforming them in powerful sources for hydraulic tools. The hydraulic power is generated by the engine force and **HYDROBOX** components control all the hydraulic functions (oil tank, ON/OFF valve, pressure control, filtration, oil radiator, etc.), all included in compact assembly that can easily be installed onboard in the more convenient position.

HYDROBOX exploits the hydraulic circuits of the vehicles eliminating the need to transport air compressors and generators allowing to power in autonomy and with incredible power a wide range of hydraulic tools used in all external maintenance works.

HYDROBOX is designed for professional use, occupies little space, can be installed on machines also under the loading surface (just like a tool box), does not require approvals or special permissions, for its installation is just required is the connection with two hoses to the hydraulic pump of the trucks that will be transformed from a transport vehicle into a versatile and efficient working power unit on wheels.



TECHNICAL CHARACTERISTICS	
WEIGHT with oil	38 kg
DIMENSION	480 x 300 x H 450 mm
HYDRAULIC CHARACTERISTICS	
TANK CAPACITY	15 L (possibility to have larger tanks capacity)
FLOW max	42 L/min (maximum flow handling)
PRESSURE max	210 Bar
RADIATOR	2 high efficiency radiators with centrifugal fan 12 Volt
VALVLE ON/OFF	3 ways, open center with relief valve



DOA S.r.l.

Via Cortiva, 5 - 22060 NOVEDRATE (CO) - Italy Tel. +39 031.792040 - Fax +39 031 791917

info@doa.it - www.doa.it



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