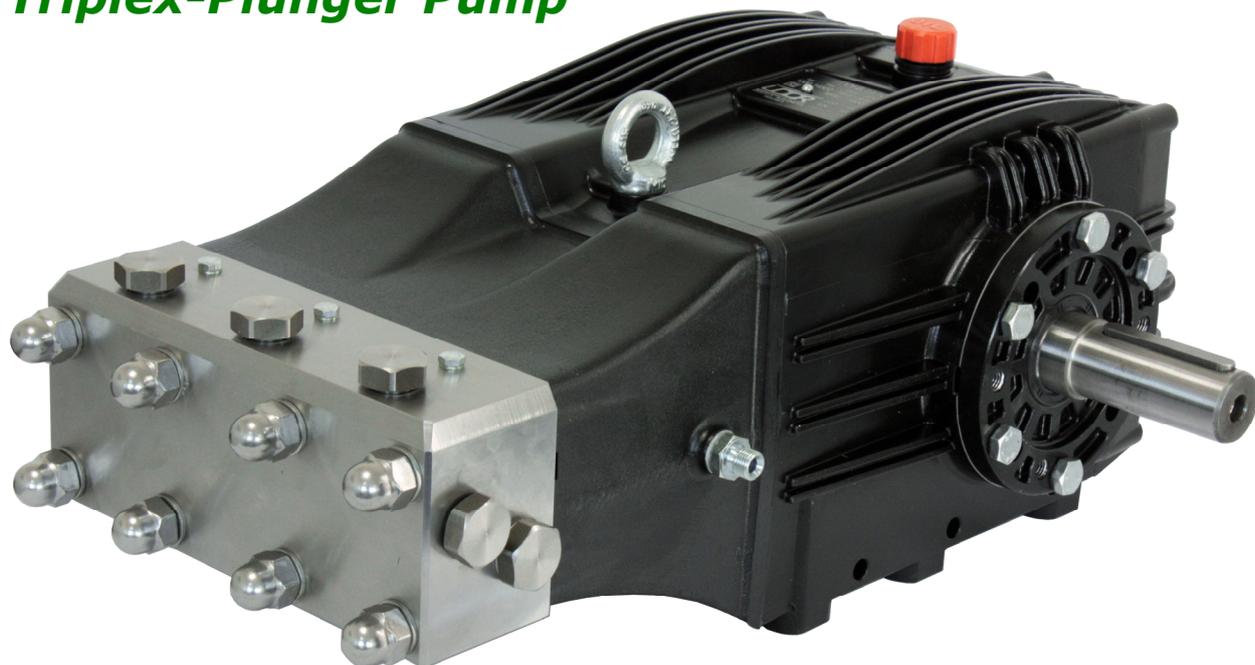


UDOR[®]

USA

Pompa a Tre Pistoni
Triplex-Plunger Pump



VY *series*

USE AND MAINTENANCE MANUAL

Assembly Instructions

COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =

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Please carefully read this manual before using the Pump, in particular follow the safety information. UDOR declines any responsibility for damage resulting from not observing the instructions indicated in this manual. Store in a suitable place to keep it unaltered.

1. GENERAL INFORMATION

1.1 SAFETY SYMBOLS

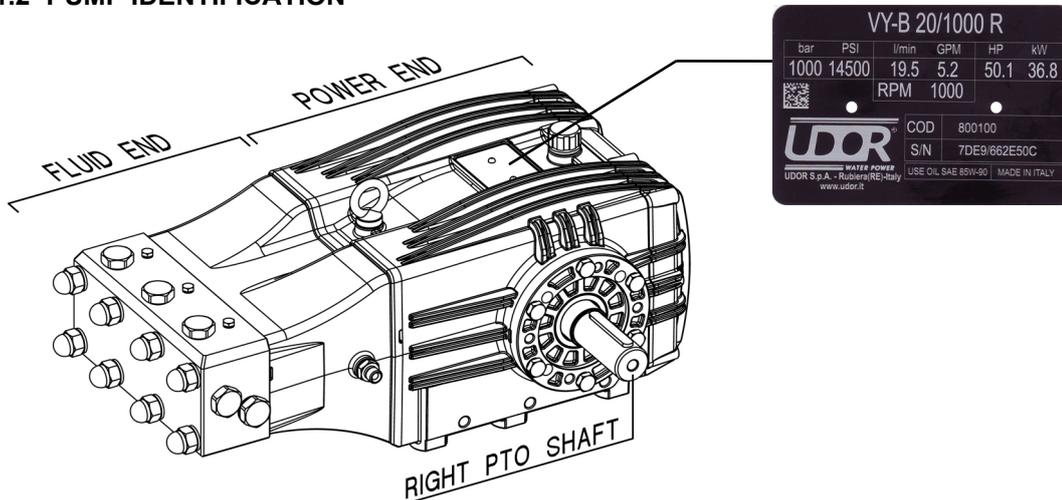
The “**WARNING**” symbol here at the side draws the operator’s attention to situations and/or problems related to the correct **operation of the Pump**.



The “**DANGER**” symbol here at the side draws the operator’s attention to situations and/or problems that could compromise **the safety of people**.



1.2 PUMP IDENTIFICATION



The Label on the Pump bears the Model, the Code, the Serial Number and the main technical specifications with the maximum operational values of the product. The specimen at the side is an example of a Label and its position on the Pump.

Fig.1

1.3 WARRANTY

UDOR guarantees its products for 12 (twelve) months from the date of shipment.

Warranty covers the replacement of parts or products which, to the sole and undisputable judgement of UDOR, are considered to be defective from the date of shipment. Expenses for labour and transport are to the charge of the buyer. The product shall only be returned to UDOR following authorization from the latter, free of charge to the warehouse of UDOR and complete with every single original component, without any sign of tampering.

Replaced products or components pass over to the ownership of UDOR.

Warranty of a product is void if the buyer fails to observe the payment terms of the product.

Warranty does not cover the following damages:

- Direct and indirect damages of any kind.
- Damages deriving from the failed observance of safety instructions and standards.
- Damages to products due to: incorrect use, dropping, incorrect installation, exposure to freezing conditions, failed maintenance, carelessness and negligence during use.
- Damages to parts subject to normal wear and tear.
- Damages to products in the case of the use of non-original parts or parts that are not explicitly approved by UDOR.

UDOR may add, at any time, any modifications considered necessary to improve the product without having to apply such modifications to products that have already been sold or that are ready for shipment.

The warranty herein is the only one valid and replaces all other forms of warranty or guarantee conditions.

Any controversies will be dealt with according to Italian law by the competent court of Reggio Emilia.

2. INTRODUCTION

The horizontal VY Series Plunger Pump of UDOR are designed and manufactured to pumps or transfer **clean water**. The pump consists of two main sections (see fig.1): a “Power End” and a “Fluid End”.

In the “Power End”, the moving components are in contact with the lubricant and transform the rotary motion of the power take-off of the shaft into the alternating horizontal motion of the pistons inside the “Fluid End”, whose other components are in contact with the water used in the system.

The Pumps are supplied standard with the power take-off of the shaft on the right (see fig.1); on request, all models can be supplied with power take-off on the left.

The Pumps are generally driven by: electric motors, endothermic petrol or diesel engines and hydraulic motors, tractor or truck P.T.O. Couplings may be fulfilled by means of transmission shaft, direct flanging, reduction unit or multiplier, joints, pulleys and belts.



The Pump is supplied to be installed on a more complex machine or plant; the manufacturer of such machine or plant shall add all the information related to safety of the assembled machine/plant fulfilled.

3. INTENDED USE

UDOR Plunger Pumps are designed to be used in machines or systems for transferring pressurized water, such as the following for example: High Pressure Cleaning, High Pressure Descaling, Chemical Process.
The temperature of the workplace shall be between: Min. 0°C (32°F) - Max.40°C (104°F)
The Pump cannot be used submerged under any type of liquid.

4. OPERATIONAL RESTRICTION

The specifications of the liquid to be used are described in detail herewith: do not use for different liquids; in particular, it is NOT possible to use UDOR Pumps in the following conditions:



- In the presence of water with high salt content, such as seawater for example; for this type of use, you are recommended to use UDOR Pump stainless steel series.
- In workplaces where there is a corrosive or explosive atmosphere.
- In the presence of any liquid that is not compatible with the constructional material of the Pump.
- To pump paint, solvents, fuel and any flammable liquid (not suitable for ATEX workplaces).
- To foodstuffs.
- To wash people, animals, live electrical or electronic equipment.
- To wash the Pump itself.

5. GENERAL WARNINGS



- Never start the Pump under pressure.
- Constantly check the state of wear of the pipes and relevant fittings, especially those under pressure. Pipes with signs of abrasion or that do not guarantee a perfect seal shall be replaced.
- The Pump must never run dry/without any liquid while in use.



- Protect rotating parts with a cover to prevent contact.
- The Pump is designed to be integrated in a machine or system, with various supply systems, which may make the noise level vary, even quite substantially. The manufacturer of such machine or system shall assess the level of noise emitted by the assembled machine or system and inform the user appropriately, also in relation to the use of suitable personal protection equipment.

6. BEFORE START UP

6.1 LIQUIDS TO BE PUMPED

The Pump is designed and manufactured to transfer clean liquid or non-aggressive watery solutions.
The liquid intaken must be free from sand or other solid particles in suspension.
The liquid intaken shall have viscosity and density similar to water.
The maximum temperature of the liquid to be pumped: 35°C (95°F).
Any other use is not admitted unless authorized in writing by the Engineering Department of UDOR.

6.2 INLET, OUTLET AND PORTS OF THE PUMP

The UDOR pumps of the VY series (see fig. 2) are equipped with the following fittings:

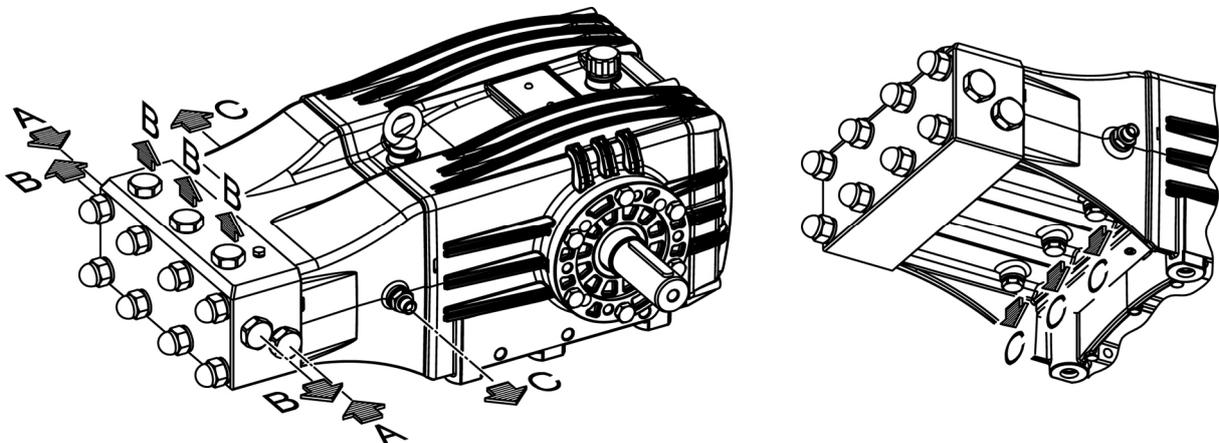


Fig. 2

- A. No. 2 G 1/2" Inlets (also called In-take or Supply fittings); by removing or inverting the sealing caps, they can be used indifferently on the right or left part of the head of the Pump or they can both be used.

- B. No. 5 G 1/2" Outlets (also called Delivery fittings); by removing or inverting the sealing caps, they can all be used indifferently, as fittings for regulator and maximum pressure valves, gauges, pipes of spray guns or other high pressure components. The seal between the sealing caps and head is guaranteed by a special stainless steel seat with double taper; the caps and head are machined so that they couple perfectly with this special seat.



The Inlet and Outlet of the Pump CANNOT be inverted..

- C. No. 5 G 1/4" outlet fittings, for collecting the water of the internal "Cooling System", which consists in deviating a small amount of supply water into the pump to cool and keep the pistons and high and low pressure seals clean, thus increasing their service life. These five fittings can be used in two different configurations: the standard configuration envisages the use of just one collection pipe of the cooling water, which must be positioned at the side, opposite the Inlet port used, inverting the position of the male-male nipple G1/4" and opposite sealing cap if necessary. The second possibility of use envisages closing both side outlets and using three different collection pipes of the cooling water, to be positioned under the central casing of the Pump.

In both cases, the water that comes out of the "Cooling System" must be conveyed on the inlet line of the pump, before the booster pump, or into a dedicated tank.

6.3 INLET CONDITIONS (SUCTION)

The UDOR pumps of the VY series must be supplied at an inlet pressure between 2 and 6 bar (0.2 MPa and 0.6 MPa - 29 and 87 PSI). If a Booster Pump is used, which is to be started before the UDOR pump, it shall have a minimum flow rate at least double the flow rate of the model of pump of the VY series used; this minimum flow rate must be supplied at the booster pressure used.

- Avoid any turbulence near the Pump inlet; the discharge of the pressure regulator valve must not be connected to the supply line of the pump.

- Turbulence must be absolutely avoided near the outlet of the supply tank (inlet line of the Booster Pump).

The inlet pipeline must comply with the following requirements:

- Any point of the inlet pipeline cannot be smaller than the internal diameter of the Pump inlet.

- Be absolutely leak-proof to avoid any air infiltration.

- Not have 90° bends near the Pump inlet.

- Not have contractions or restrictions.

- Avoid any turbulence near the Pump inlet; the discharge of the pressure regulator valve must not be connected to the supply line of the pump.

- Turbulence must be absolutely avoided near the outlet of the supply tank (inlet line of the Booster Pump).

Any other use is not admitted unless authorized in writing by the Engineering Department of UDOR.

6.4 FILTERING

The **filter** must be installed as close as possible to the pump inlet and it must allow 3 times greater than the flow required by the Pump, it must not cause any contraction or any pressure drop and **should be cleaned on a regular basis to ensure its proper functionality**.

The recommended filtration degree is 150 mesh – 100 micron.

6.5 OUTLET CONDITIONS

- A safety valve must be installed on the delivery line of the system.

- Make sure the delivery line and all the accessories are connected correctly, secured firmly, hermetically sealed and that the pipes are sized appropriately.

- All pressurized pipes must be marked durably with the maximum admitted pressure, which must never be less than the maximum working pressure of the Pump, written on the Label.

- If there are excessive pulsations in the system where the Pump is fitted, install a correctly sized pulsation damper (accumulator).

6.6 SPEED AND ROTATION DIRECTION



The rotation speed of the shaft of the Pump must never exceed the RPM written on the Label of the actual Pump.

The minimum RPM admitted is 700 RPM.

The rotation direction of the shaft of UDOR Pumps may be clockwise or counterclockwise.

7. CONTROLS ON SYSTEM

7.1 PRESSURE REGULATOR

A pressure regulator valve must be installed to avoid the pressure exceeding the maximum limit indicated on the Label of the Pump.



Use of the Pump, even for a short period, with a pressure higher than such limit would damage the Pump itself.

The regulator valve shall be compatible with the maximum pressure, flow rate and temperature values written on the Label.



Incorrect installation of the pressure regulator valve could cause serious personal injuries and damage to property as well as seriously damaging the actual Pump.

The circuit must be equipped with another safety valve to prevent the maximum pressure from being exceeded in the case of anomalies in the pressure regulator valve.

7.2 NOZZLE

A deteriorated nozzle could cause a drop in pressure; in this case, do not adjust the pressure regulator valve in the attempt to increase the pressure of the system because when the delivery line closes, this would cause a boost in pressure, which could damage the Pump.

If the pressure drops, it is advisable to replace the nozzle and adjust the system's pressure again.

7.3 PRESSURE GAUGE

Install a gauge on the Pump or as near as possible to the outlet of the Pump because the maximum pressure written on the Pump's Label refers to the pressure detected on the head of the Pump and not on the nozzle or on other accessories.



All the components of the machine or of the circuit must have technical specifications compatible with the data written on the Pump's Label.

8. INSTALLATION, START UP AND SWITCHING OFF

8.1 POSITIONING

The pump is to be handled using exclusively the specific eyebolt supplied, hooking it to a rope or chain with the specific hook and using suitable lifting equipment.

If the Pump is used in a particularly dirty workplaces or is exposed to atmospheric agents, you are recommended to protect it, respecting the ventilation conditions.

8.2 ASSEMBLY

Fit the Pump on a rigid surface keeping the power take-off and support feet horizontal to ensure correct drainage in the case of leakage of water or oil. The Pump must be secured firmly on a base, which must be perfectly aligned with the transmission components. In the case of belt transmission, make sure the pulleys are aligned and check the tension of the belts.



- In the operational phase, the maximum admitted inclination of the pump is 10°; if you should tilt it more, this could cause insufficient lubrication of some of the components in the "Power End".

- The power take-off of the pump shaft must not be connected to the drive unit by means of rigid components.

Use appropriately sized hoses, both on the inlet and outlet of the Pump, according to the technical specifications written on the Label.

8.3 START UP

Before starting, check the following:

- **Replace the RED cap on the Pump Crankcase with the Oil Vented Plug in the kit of accessories supplied.**



- Check the level of oil through the dedicated clear level indicator on the rear cover or via the level rod of the oil vent cap; top-up if necessary (see paragraph 9.3).

- Make sure all the pipes are connected properly.

- The pressure regulator valve must be set at "0" pressure to favour intake.

- Start the Booster Pump or open the line connected to the Pump inlet, respecting the minimum and maximum supply pressure values (see paragraph 6.3).

Attention: the pump must never run dry!

Start and run the Pump until all the liquid has discharged from the delivery line without air bubbles.



The presence of air inside the pump during use under pressure could seriously damage the pump itself.

Once the suction cycle has been completed correctly:

- Adjust the pressure regulator valve and take the system to a pressure of approximately 100 bar (10 MPa - 1450

PSI).

- Let the pump run in these conditions for a couple of minutes, checking that the pipes, connections and components of the system are in perfect working conditions and making sure there are no leaks or drips of water.
- At the end of this settling-in and inspection cycle, the system can be taken to the required pressure, without ever exceeding the maximum pressure written on the nameplate of the pump itself.

8.4 SWITCHING OFF AND STORAGE

Switching off:

1. Let the system work for a couple of minutes, setting the pressure regulator valve at "0".
2. Stop the Pump drive.
3. Switch the booster pump off or close the pressurized supply line.

If stored away or not used for a long period of time, follow the instructions given in points 1, 2 and 3, then:

4. Disconnect the supply pipe from the inlet port of the Pump, letting all the water in the Pump's head drain out.
5. Disconnect the delivery pipe from the outlet port of the Pump and also the pipe or pipes of the "Cooling System".
6. Start the Pump drive and switch it off after 5 seconds so that all the water left inside the pump is expelled.
7. Put some grease on the threads of the Pump where there are no longer any pipes connected.



Do not wash the Pump externally: water could get into the Pump crankcase, for example through the oil vented plug.



After switching off, the Pump could remain very hot for some time.



Do not throw the liquid used to wash the Pump outdoors but observe current standards.

8.5 PRECAUTIONS AGAINST FREEZING

If shutdown during winter or in the case of places and seasons subject to frost, once the Pump has finished working, run it for the time required to Pump an emulsion of 50% of clean water and 50% of antifreeze fluid through it in order to prevent freezing and damage to the Pump.



The Pump must not be used to Pump antifreeze fluid that is not mixed with water.

In the presence of ice or very cold temperatures at the workplace, the Pump must never be started, otherwise the Pump could be seriously damaged. To start the system, the whole circuit must be completely defrosted.



9. MAINTENANCE



- **Maintenance operations must be carried out by qualified and authorized personnel.**

- **Use appropriate tools to disassemble and assemble the various components of the pump. Each tool must be specific for the individual job to be done. The use of unsuitable tools could damage the pump irreparably.**

9.1 ROUTINE MAINTENANCE

If the Pump is used for light-duty purposes, the following routine maintenance jobs are advised:

- After the first 50 hours of use and every 250 hours: Check the torque setting of the blind locking nuts of the head (see paragraph 13).
- Every 500 hours: Check or replace water packing seals
- Every 1000 hours: Check or replace the valves.

For heavy-duty purposes, carry out the maintenance jobs more often.

9.2 MAINTENANCE GUIDE

See Chapter 16.

9.3 LUBRICATION

The Pump comes supplied with the correct amount of lubrication oil which, in the case of pump series VY, is 3.4 Kg (7.5 Lbs.) - 3.8 L. (1.0 Gal.)

Check the oil level inside the pump daily via the clear level indicator on the rear cover or via the level rod of the oil vent cap.

The following oil changes are recommended:

- After the first 50 hours of use.
- Every 500 hours of use.
- In any case, the oil has to be changed once a year.

Use **OIL type CLP 220** or an alternative **Gear Oil type SAE 85W-90**. Here are some recommended types of oil:

BRAND	TYPE
AGIP	F.1 Supermotoroil 15W-40
BP	Vanellus C 15W-40
CASTROL	GTX 15W-40
ESSO	Uniflo 15W-40
MOBIL	Super M 15W-40
SHELL	Rimula R4 15W-40 / Helix Super 15W40
TOTAL	Rubia 15W-40 / Quartz 5000 15W-40

The oil is to be changed by draining it through the dedicated bottom discharge cap and strictly with the Pump stopped.

Every time you unscrew the oil drain plug we suggest to replace its gasket.



DO NOT START THE PUMP IF THERE IS NO OIL IN THE PUMP!



During maintenance, you are recommended to:

- Use and wear suitable personal protection equipment (i.e. gloves).
- Wait for the machine to cool down and to have stopped completely.



During maintenance, do not throw residues outdoors but observe current standards.



If the Pump is to be scrapped:

1. Separate the various parts depending on their type (i.e. plastic, harmful fluids, metal etc.).
2. Use public or private waste disposal systems envisaged by local law to dispose of waste.
3. This device could contain harmful substances: improper use or incorrect disposal could have negative effects on human health and on the environment.

10. TROUBLESHOOTING

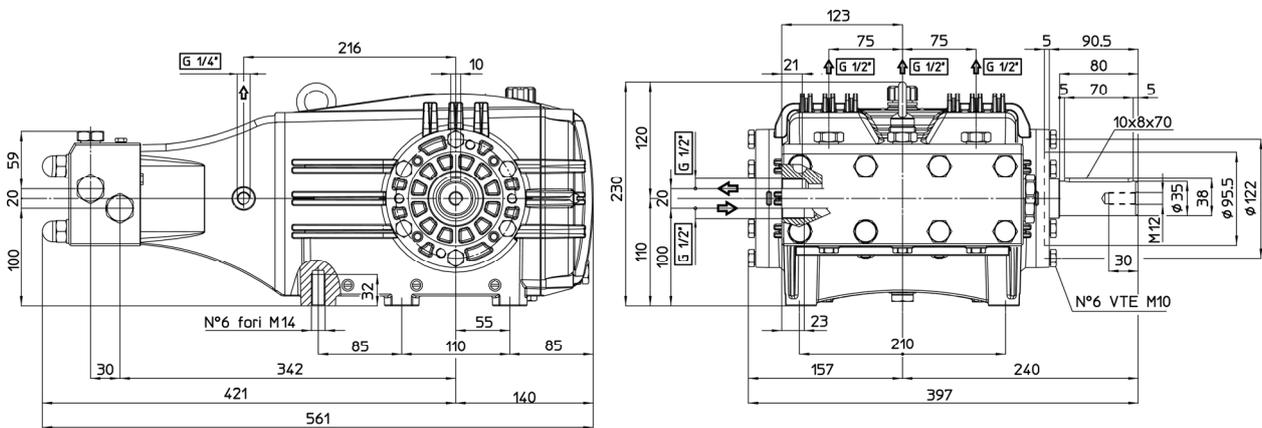
PROBLEMS	PROBABLE CAUSES	SOLUTIONS
The Pump does not make any noise after starting its drive.	The pump is not supplied correctly and is running dry.	Switch the pump off immediately! Check the pressurized supply line and the correct operation of the booster pump.
	The valves are blocked.	Inspect the valves.
	The delivery line is obstructed and is stopping the air inside the pump from being let out of the system.	Clear any obstructions on the delivery line.
The Pump overheats.	Excessive running speed.	Respect the maximum running speed (RPM) written on the nameplate of the Pump.
	Excessive working pressure.	Respect the maximum pressure written on the nameplate of the Pump.
	The belts of the pulleys are too tight.	Tension the belts correctly.
	The power take-off of the pump shaft is not perfectly aligned with that of the drive.	Align the power take-off of the pump shaft perfectly with that of the drive.
	Not enough oil inside the pump.	Check the oil level; top-up if necessary.
	An unsuitable type of oil has been put in the pump.	Use nothing but the recommended types of oil.
	The oil has deteriorated due to oxidation.	Change the oil.

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
The Pump doesn't reach required pressure.	Incorrect or worn or plugged nozzle.	Change to proper size nozzle; replace nozzle or clean nozzle.
	Belt slippage.	Tighten or replace belt.
	Air leak in inlet plumbing.	Check or replace hoses or fittings.
	Inlet suction strainer clogged or improper size.	Check and clean, use adequate size.
	Worn seals. Abrasives in Pumped fluid; severe cavitation; inadequate water supply.	Install and maintain proper filter. Replace seals.
	Pressure gauge is broken or not registering accurately.	Check with new gauge; replace worn or damaged gauge.
	Relief / unloader valve stuck, partially plugged or improperly adjusted.	Adjust or repair or replace relief / unloader valve.
	Dirty or worn inlet or outlet valves.	Check and clean or replace valves.
Pump is noisy.	Leaky outlet hose.	Check or replace discharge hoses or fittings.
	Air leak in inlet plumbing.	Check or replace hoses or fittings.
	Inlet strainer clogged or improper size or insufficient supply of water to the Pump.	Check and clean, use adequate size; increase water supply if not sufficient.
	Dirty or worn inlet or outlet valves.	Check and clean or replace valves.
	Worn seals or o-rings.	Replace seals or o-rings.
	Plugged inlet filter or improper size.	Clean or replace filter.
	Pulley loose on crankshaft or worn key.	Check pulleys and key.
Water leakage between head and body.	Broken or worn bearings.	Replace bearings.
	Worn low pressure seal or o-ring.	Replace seal or o-ring.
Water in crankcase. Oil is changing color into white.	Cracked plunger.	Install new plunger.
	High humidity in air (condensing).	Change oil every 250 hours instead of 500.
	Worn crankcase oil seal.	Replace crankcase oil seal.
Oil leak between crankcase and head.	Worn low pressure seal.	Replace seal.
	Worn crankcase oil seal.	Check plunger rod. Replace crankcase oil seal.
Oil leak in the area of crankshaft.	Worn crankshaft oil seal.	Replace crankshaft oil seal.
	Worn bearing case o-ring.	Replace bearing case o-ring.
	Bad bearings.	Replace bearings.
Oil leak at the rear end of the Pump.	Damaged or improperly installed sight glass or crankcase cover seal or drain plug.	Replace sight glass, plug or seals.
Frequent or premature failure of the packing.	Scored plungers.	Replace plungers.
	Over pressure in inlet manifold.	Reduce inlet pressure.
	Abrasive material in the fluid being Pumped.	Install proper filter on Pump inlet plumbing.
	Corrosive additives in the fluid being Pumped.	Use clean water or contact UDOR Technical Service Department for more informations.
	Running Pump dry.	Do not run Pump without fluid.
Excessive vibrations.	Air leak in inlet plumbing.	Check or replace hoses or fittings.
	Pulsation damper pressure too low.	Check and repressure.
	Pump – Drive connection not suitable.	Check and modify the Pump – Drive connection if necessary.
	Dirty or worn inlet or outlet valves.	Check and clean or replace valves.

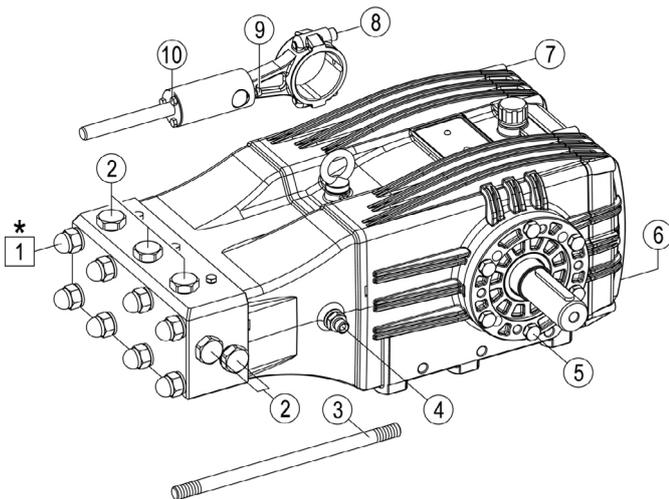
11. TECHNICAL CHARACTERISTICS

MODEL	RPM	FLOW		PRESSURE			POWER		WEIGHT Kg.
		l/min	GPM	bar	MPa	PSI	HP	kW	
VY-B 15/1000 R-L	1000	14.6	3.9	1000	100	14500	37.4	27.9	61.5
VY-B 14/1250 R-L	1000	14.1	3.7	1250	125	18130	45.2	33.7	61.5
VY-B 20/800 R-L	1000	20.0	5.3	800	80	11600	41.0	30.6	60.0
VY-B 20/1000 R-L	1000	19.5	5.2	1000	100	14500	50.0	37.3	61.5
VY-B 25/800 R-L	1000	24.5	6.5	800	80	11600	50.3	37.5	60.0
VY-F 15/1000 R-L	1200	15.0	4.0	1000	100	14500	38.4	28.7	61.5
VY-F 15/1250 R-L	1200	14.5	3.8	1250	125	18130	46.4	34.6	61.5
VY-F 20/800 R-L	1200	20.0	5.3	800	80	11600	41.0	30.6	60.0
VY-F 20/1000 R-L	1200	19.5	5.2	1000	100	14500	50.0	37.3	60.0
VY-C 15/1000 R-L	1450	15.0	4.0	1000	100	14500	38.5	28.7	61.5
VY-C 19/1000 R-L	1450	18.6	4.9	1000	100	14500	47.7	35.6	61.5
VY-D 15/1000 R-L	1750	15.5	4.1	1000	100	14500	39.8	29.7	61.5
VY-D 18/1000 R-L	1750	18.1	4.8	1000	100	14500	46.4	34.6	61.5
VY-D 24/800 R-L	1750	24.0	6.3	800	80	11600	49.2	36.7	61.5

12. OVERALL DIMENSIONS



13. TORQUE SPECIFICATIONS



***** Dadi Ciechi / Blind Nuts

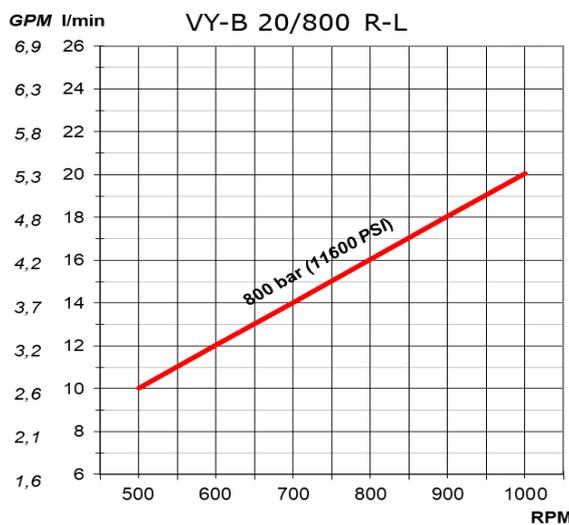
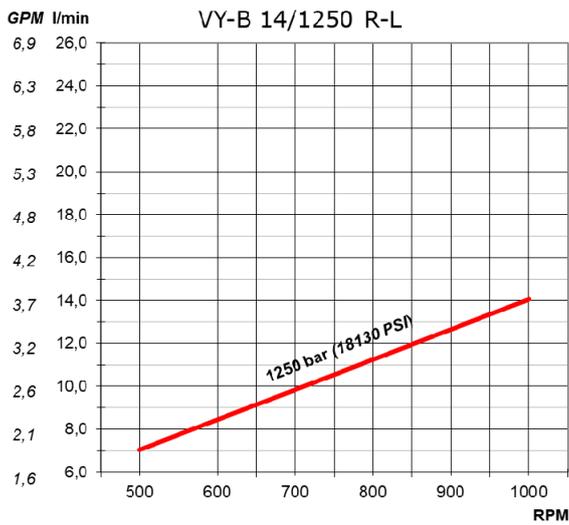
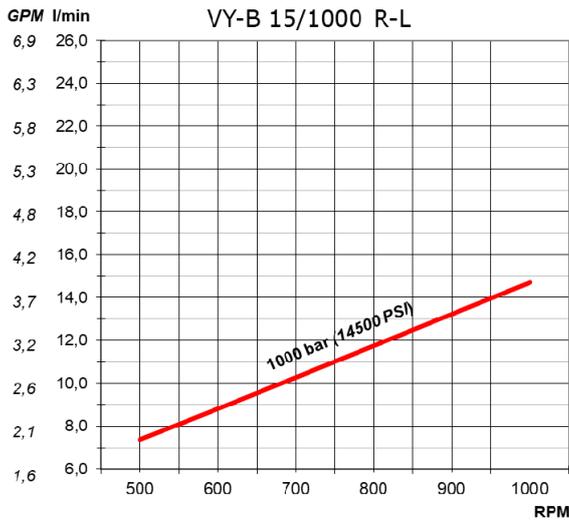
Testata Pompa / Pump Head

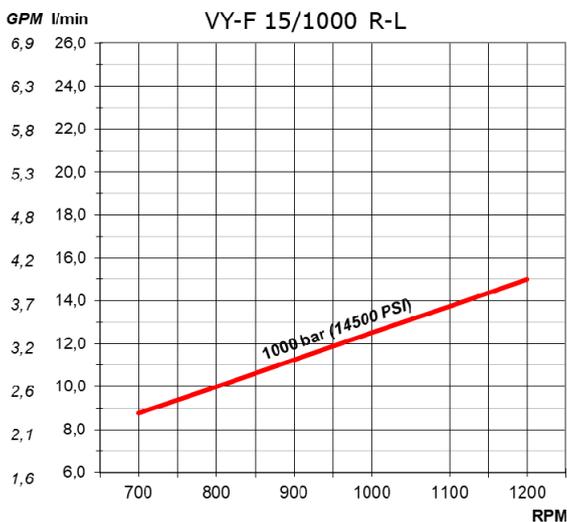
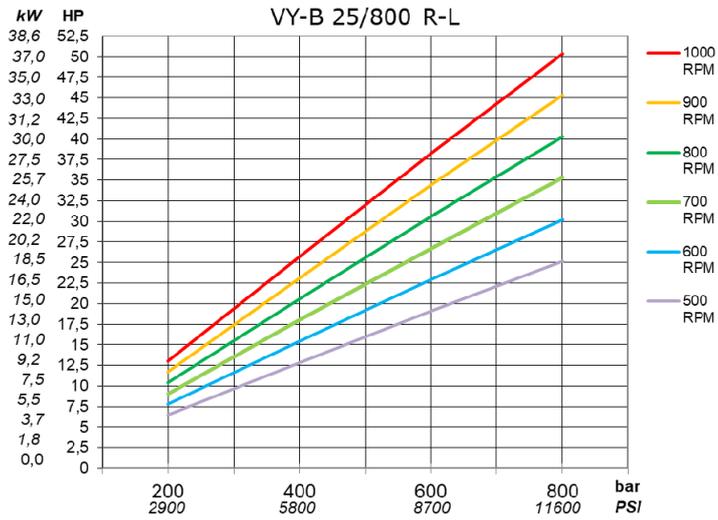
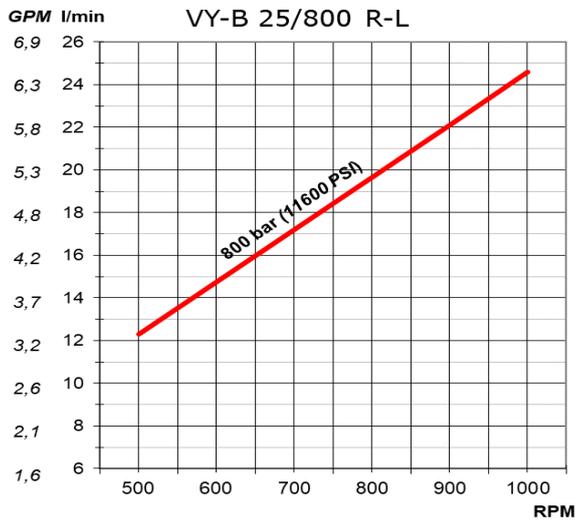
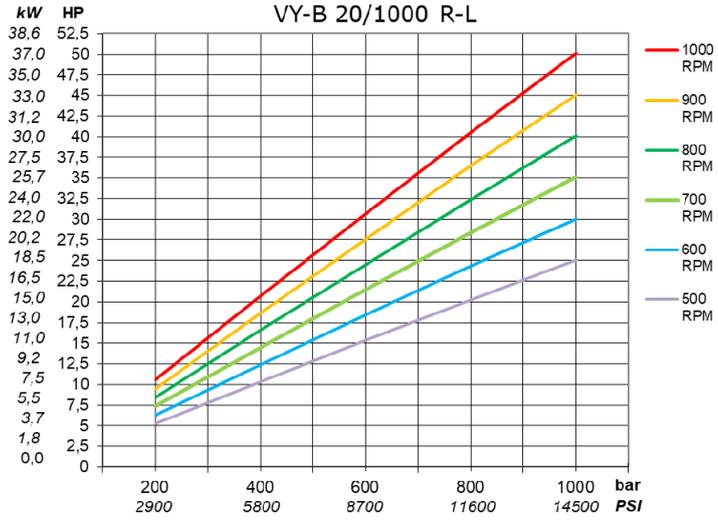
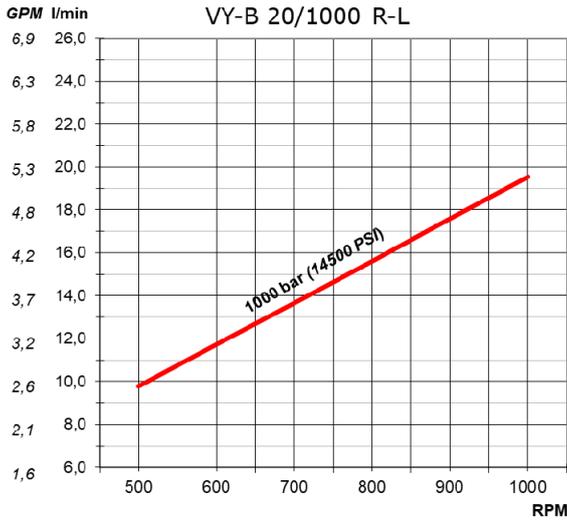
I dadi ciechi di fissaggio delle Testata devono essere serrati in questo ordine:
The blind locking nuts of the head must be tightened in the following order:
1 - 2 - 3 - 4 - 1 - 5 - 6 - 7 - 8 - 5

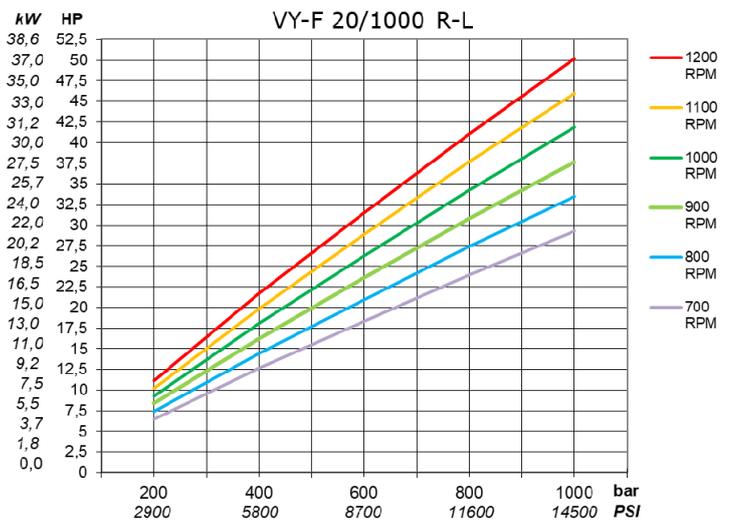
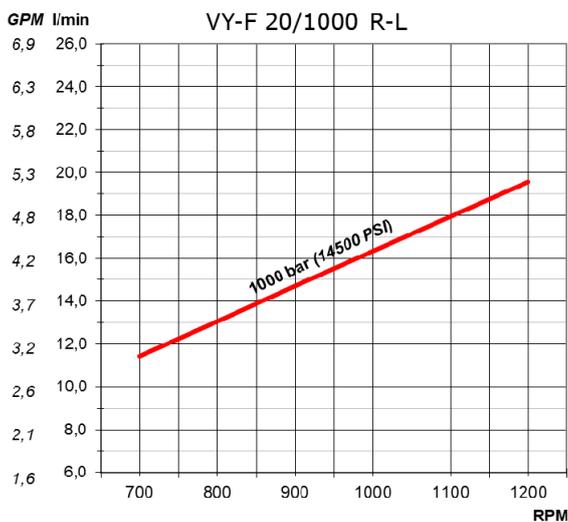
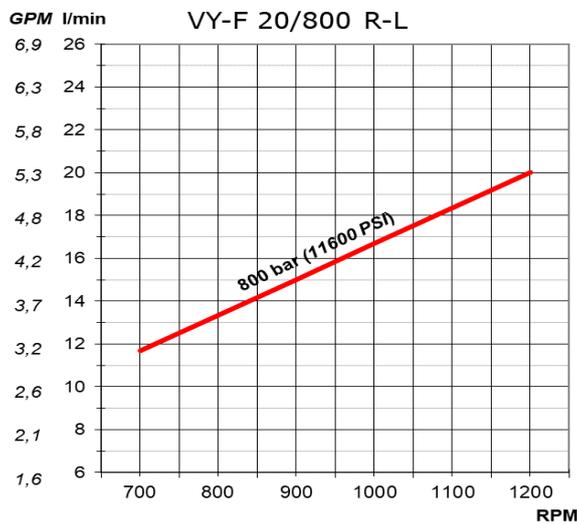
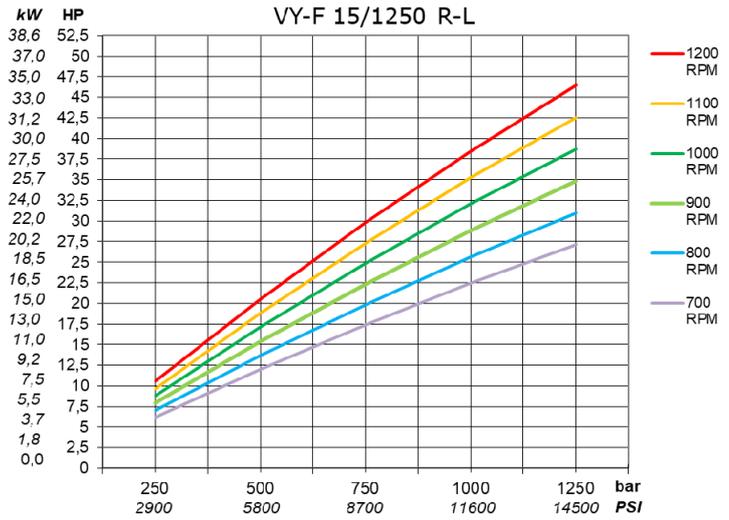
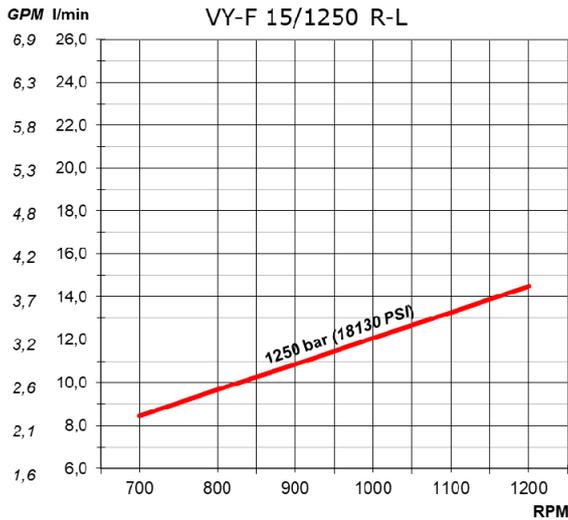
Eseguire una prima serie di pre-serraggi ad una coppia di 70 Nm (51.5 lbf•ft).
First, pre-tighten to a torque of 70 Nm (51.5 lbf•ft).

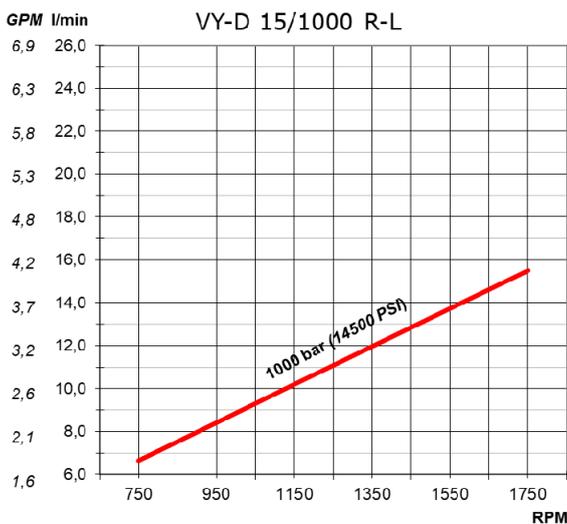
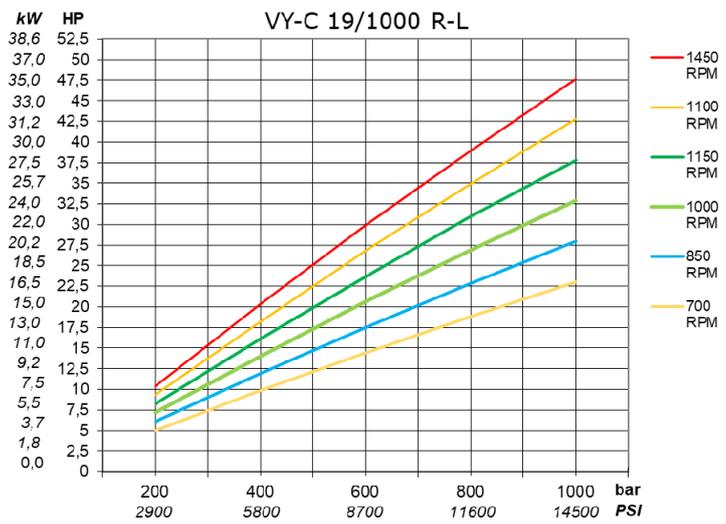
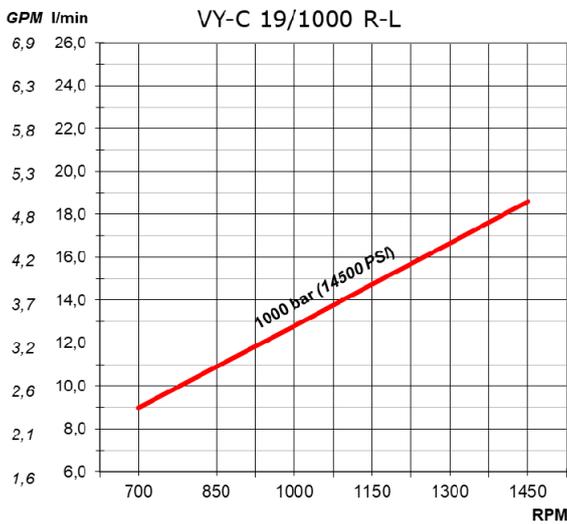
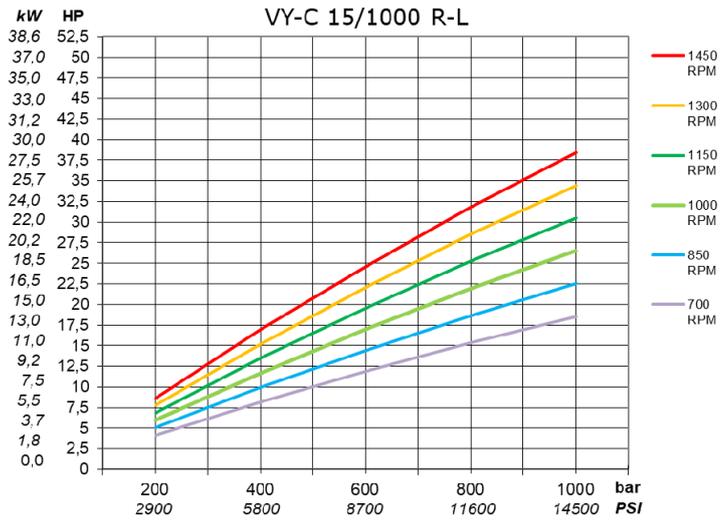
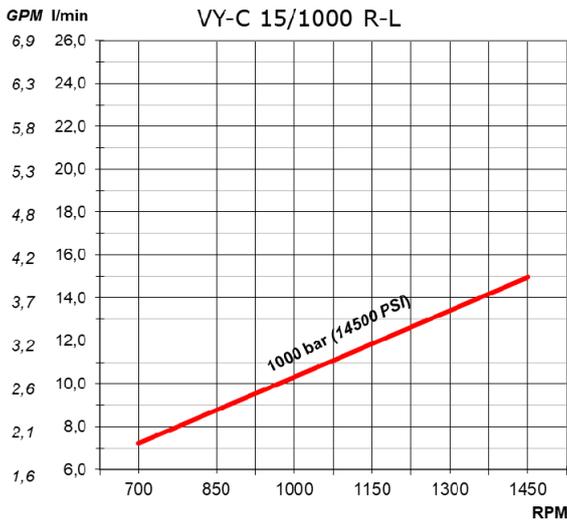
POS.	DESCRIZIONE	DESCRIPTION	Nm	lbf•ft	Loctite	NOTE
1	Dadi Ciechi Testata	Head Blind Nuts	130	96		Vedi /See **
2	Tappi Aspiraz. e Mandata	Inlet and Outlet Plugs	130	96	243	
3	Prigioniero	Stud Bolt	30	22	243	
4	Nipplo "Cooling System"	"Cooling System" Connector	50	37		
5	Viti Flangia Cuscinetto	Bearing Flange Bolts	50	37		
6	Tappo Scarico Olio	Oil Drain Plug	11	8		
7	Viti Coperchio Posteriore	Rear Cover Screws	11	8		
8	Viti Biella	Connecting Rod Screws	25	19	243	
9	Viti Spinotto	Pin Screws	6	4.5	243	
10	Viti Pistone	Plunger Bolts	6	4.5		

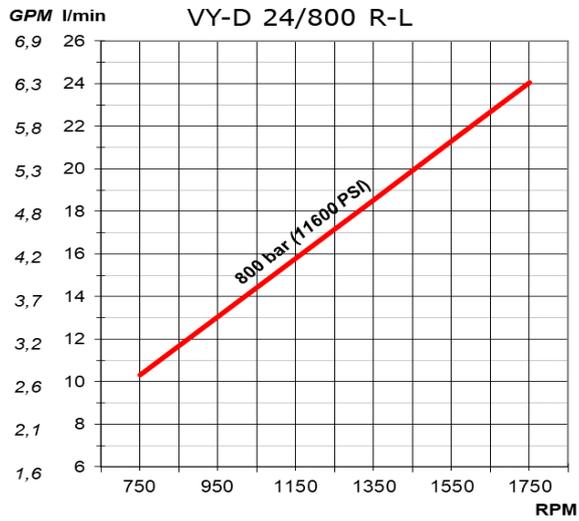
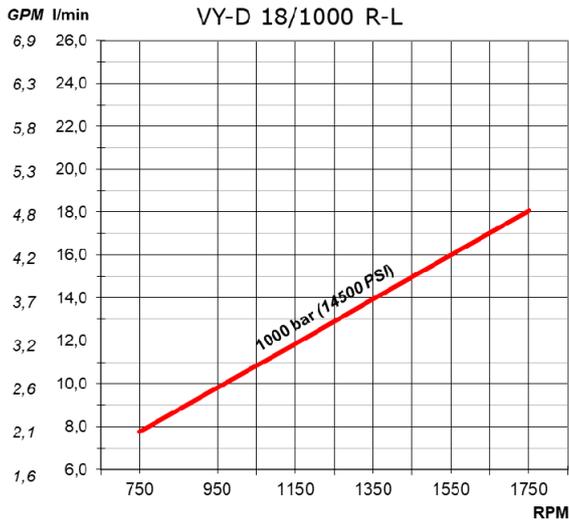
14. PERFORMANCE CURVES





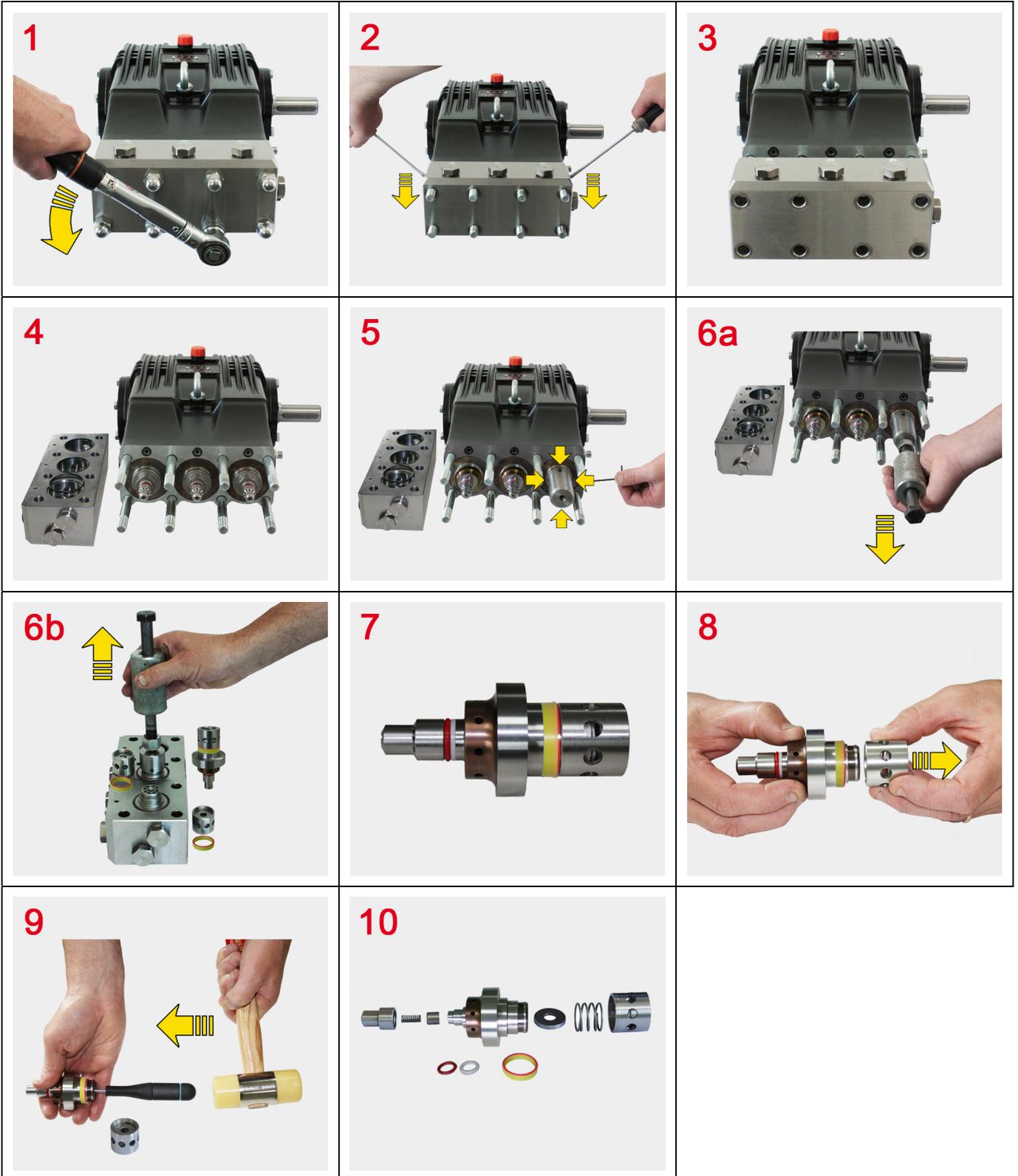


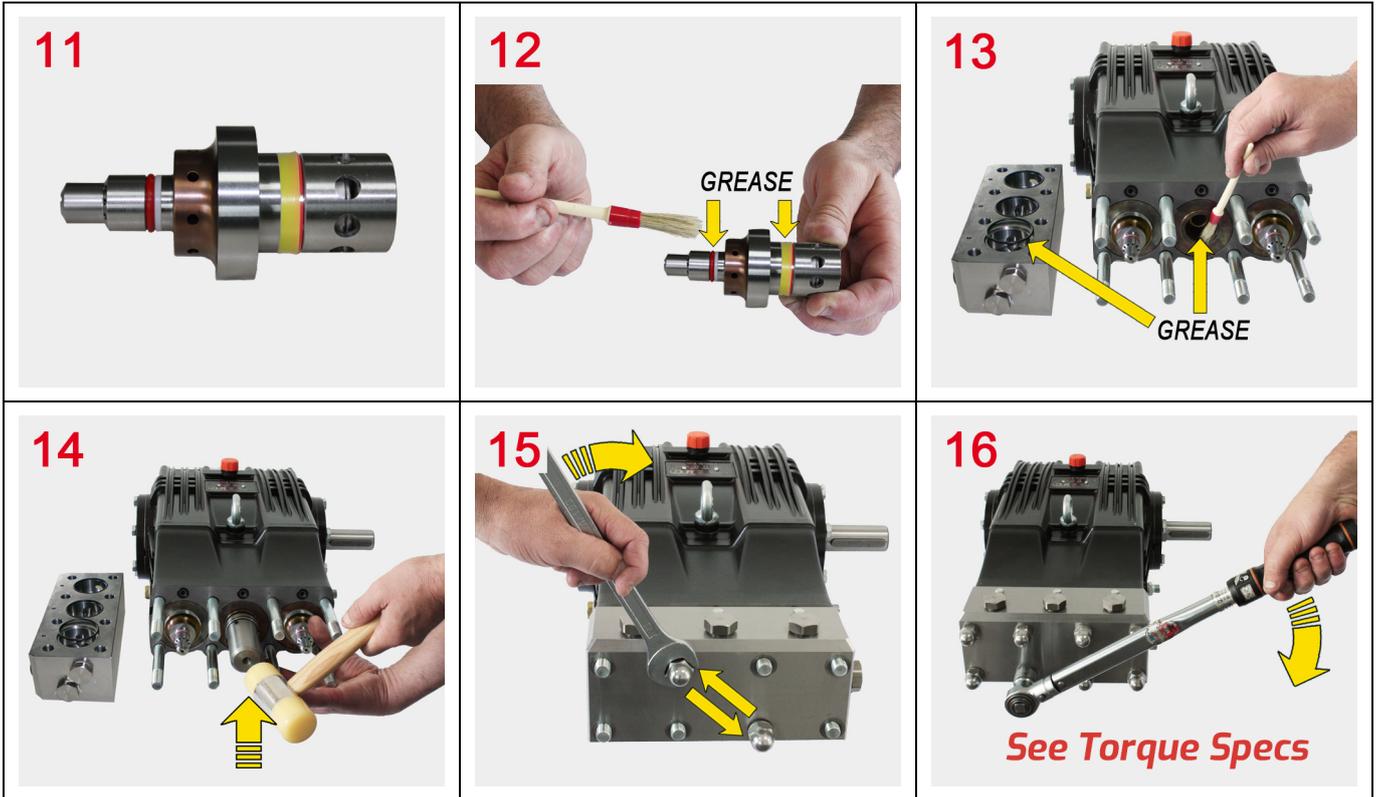




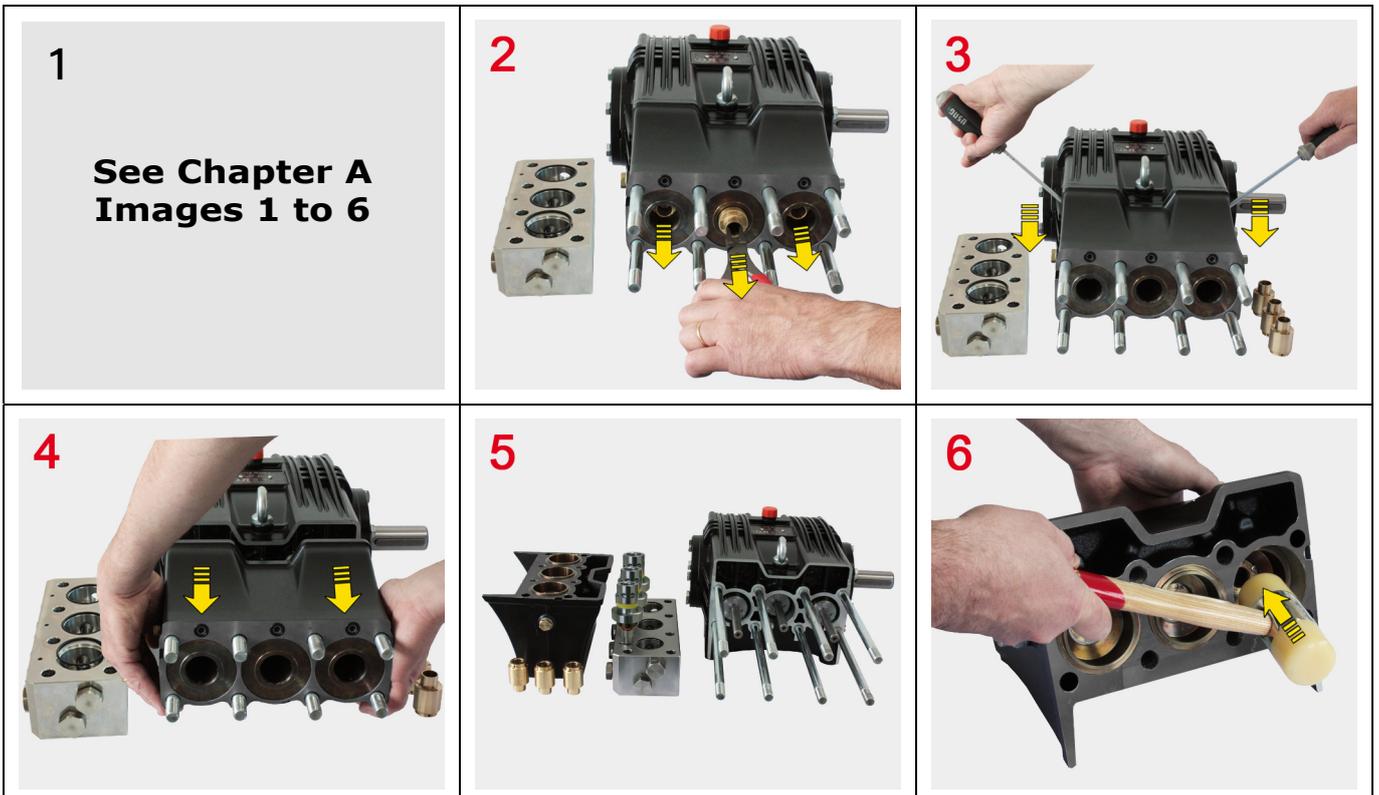
15. MAINTENANCE GUIDE

A CHECK OR REPLACEMENT OF VALVES

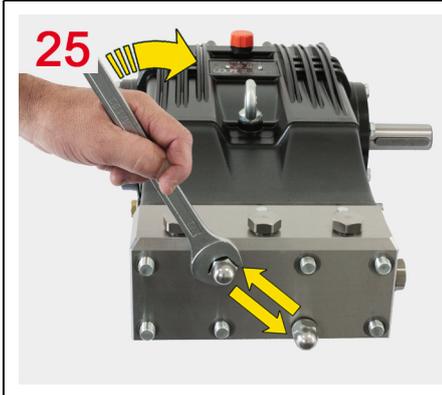
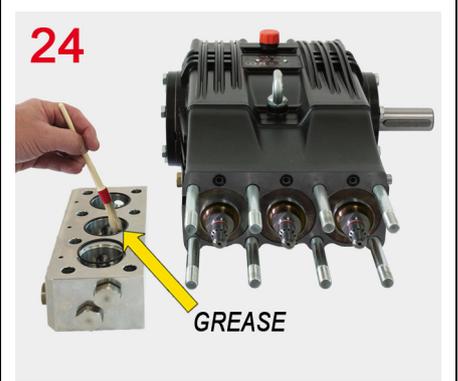




B CHECK OR REPLACEMENT OF WATER PACKING SEALS







C	MAINTENANCE LOG
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<i>PUMP MODEL</i>	<i>PUMP CODE</i>	<i>SERIAL NUMBER</i>	<i>DATE OF PURCHASE</i>	<i>DATE OF INSTALLATION</i>
<i>MAINTENANCE WORKS</i>		<i>DATE</i>	<i>OPERAT. HOURS</i>	<i>NOTES</i>
<i>OIL CHANGE</i>				
<i>POWER END OIL SEAL AND GASKET (KIT 651)</i>				
<i>FLUID END O-RING (KIT 653)</i>				
<i>HIGH & LOW PRESSURE WATER SEALS (KIT 667 OR KIT 652 OR KIT 657)</i>				
<i>BRASS RINGS (KIT 668 OR KIT 655 OR KIT 656)</i>				
<i>ALVES SPARE PARTS (KIT 654)</i>				
<i>COMPLETE VALVE (600693)</i>				

DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

according to Machinery Directive (2006/42/CE and subsequent amendments) and the implementing provisions.

The manufacturer:

UDOR S.p.A.

Via A. Corradini, 2 - 42048 Rubiera (Reggio Emilia) - Italia

in the person of its legal representative

declares under its sole responsibility that the “partly completed machinery” of its own production, namely:

Plunger Pumps, VY Series

which this declaration is referred to, is in conformity with the essential safety requirements of Directive 2006/42/EC, for which it is applied and respected in all the essential issues:

- from 1.1.1 to 1.1.3
- from 1.1.5 to 1.1.5
- 1.2.4.3
- from 1.2.6 to 1.3.2
- 1.3.4
- from 1.3.7 to 1.3.8
- 1.3.8.2
- from 1.4.1 to 1.4.2.1
- from 1.5.2 to 1.5.8
- 1.5.13
- from 1.6.1 to 1.6.2
- from 1.6.4 to 1.7.1
- 1.7.2
- from 1.7.4 to 1.7.4.3

with the Relevant Technical Documentation conforming to the annex VII B.

They also comply with the following Standard: UNI EN 809.

It is additionally specified that:

- The Relevant Technical Documentation is kept at UDOR S.p.A. premises in: Via A. Corradini, 2 – 42048 Rubiera (Reggio Emilia) – Italy, in the person of its legal representative.
- Any reasoned request by national authorities will be fulfilled with the relevant information on the “Partly Completed Machinery”.
- The “Partly Completed Machinery” Plunger Pumps cannot be operated until the machine where they are incorporated into, has complied with the same Directive 2006/42/EC and with the other potentially applicable Directives.

Rubiera, 29/12/2009



Marco Zanasi
(CEO UDOR S.p.A.)

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VY - 10/20

Rev. 1.6

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