

Manual

# Hydropneumatic Pressure Boosting System

**4 and 6**Simultaneous  
Water Connections

Applies for:

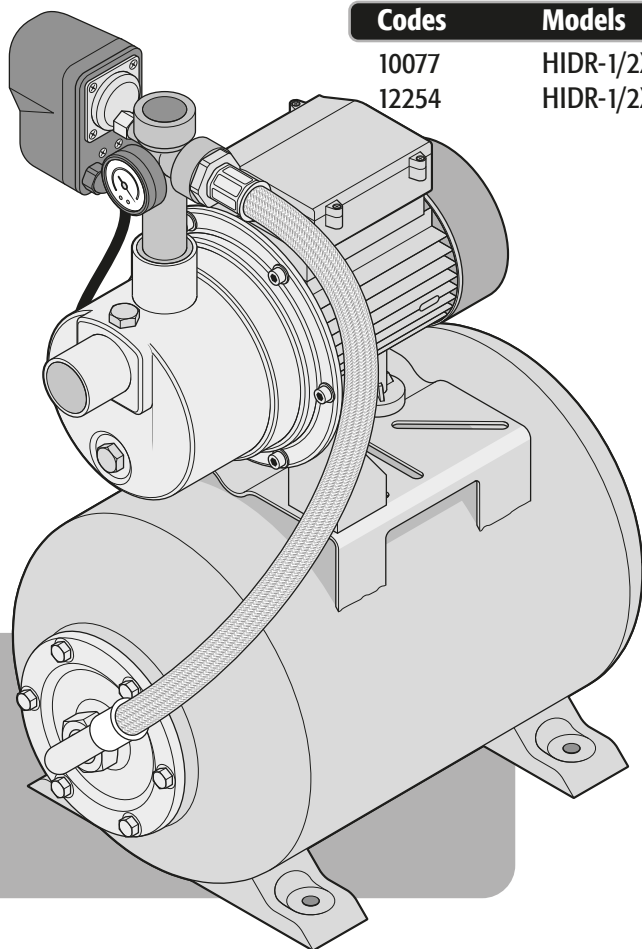
**Codes****Models**


10077

HIDR-1/2X24

12254

HIDR-1/2X50

 **CAUTION**Read the user's manual thoroughly  
before operating this tool.

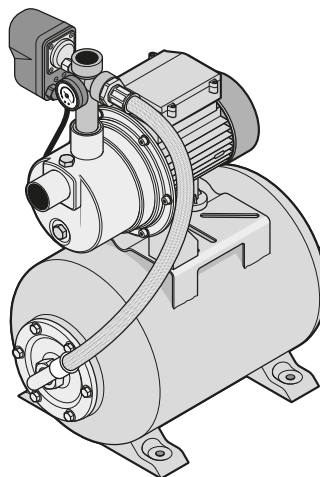
Technical data .....	<b>3</b>
Power Requirements .....	<b>3</b>
 General Power Tool Safety Warnings .....	<b>4</b>
 Safety Warnings for Hydropneumatic Equipment .....	<b>5</b>
Parts .....	<b>6</b>
Installation .....	<b>7</b>
Pressure Switch .....	<b>8</b>
Start Up .....	<b>8</b>
Maintenance .....	<b>9</b>
Troubleshooting .....	<b>9</b>
Notes .....	<b>10</b>
Authorized Service Centers .....	<b>11</b>
Warranty Policy .....	<b>12</b>

## **CAUTION**

To gain the best performance of the tool, prolong the duty life, make the Warranty valid if necessary, and to avoid hazards of fatal injuries please read and understand this Manual before using the tool.

Keep this manual for future references.

The illustrations in this manual are for reference only. They might be different from the real tool.



**HIDR-1/2X24**  
**HIDR-1/2X50**

# Technical data



HIDR-1/2X24		HIDR-1/2X50	
Code •	10077	12254	
Description •	Hydropneumatic Pressure Boosting System		
Voltage •	127 V ~		
Frequency •	60 Hz		
Current •	6.5 A		
Speed •	3400 RPM		
Inlet and Outlet Diameter •	1" x 1"		
Maximum Suction Depth •	29.5 ft		
Maximum Height / Maximum Value of Total Manometric Height •	92 ft		
Maximum Flow •	11.3 gal/min		
Services •	4 water connections	6 water connections	
Tank Capacity •	6.3 gal	13.2 gal	
Work Cycle •	50 minutes' work per 20 minutes' rest. Daily maximum: 6 hours		
Insulation •	Class I	IP Grade •	IPX4
Power Cord Grips used in this product: Type "Y". Tool Build Quality: Basic insulation Thermal insulation on motor winding: Class F			

**⚠ WARNING** Avoid the risk of electric shock or severe injury. When the power cable gets damaged it should only be replaced by the manufacturer or at a **TRUPER** Authorized Service Center. The build quality of the electric insulation is altered if spills or liquid gets into the tool while in use. Do not expose to rain, liquids and/or dampness.

**⚠ WARNING** Before gaining access to the terminals all power sources should be disconnected.



## Power Requirements

**⚠ WARNING** The tool shall be grounded while in use to prevent electric shock. The hydro pneumatic equipment shall be installed as close as possible to the main power source. Double check the power supply carries the same voltage than the voltage indicated in the motor nameplate.

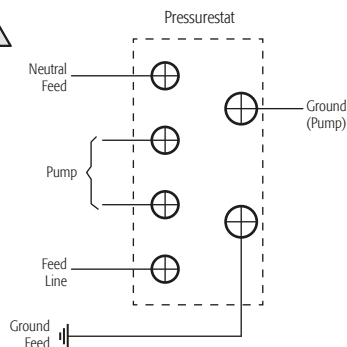
The power supply conductor gauge shall be a minimum 18 AWG. The equipment shall be set as close as possible to the power supply. In the event the distance is over 10 meters; a higher gauge conductor is recommended (minimum gauge 12 AWG).

**⚠ CAUTION** Connection to the power source shall be carried out by a professional electrician, according to figure 1 (see page 6, Power Connection).

- The professional electrician connecting the equipment shall comply with the relevant mandatory rules.
- The fixed installation shall include a device to assure Omni polar disconnection from the power source (thermomagnetic switch or fuse).
- Make sure the power requirements described in these manual and in the equipment nameplate match with the power supply capacity values.
- The hydro pneumatic equipment is built with a single-phase motor protected against overload. It uses a thermal device (due to overload) set in the motor winding. Using power extension cables is not recommended for hydro pneumatic equipment. The use of an extension cable causes voltage drop, loss of power in the motor and overheating.
- In the case the hydro pneumatic equipment is connected to a fuse protected circuit, use delay action fuses Type "D".

**⚠ WARNING** All the cabling, power connections and ground connection to the system shall comply with the **MEXICAN OFFICIAL STANDARD NOM-001-SEDE, POWER INSTALLATIONS (USE)** or with the local codes and ordinances.

Fig. 1





**⚠ WARNING! Read carefully all safety warnings and instructions listed below.** Failure to comply with any of these warnings may result in electric shock, fire and / or severe damage. **Save all warnings and instructions for future references.**

## Work area

**Keep your work area clean, and well lit.**

Cluttered and dark areas may cause accidents.



**Never use the tool in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.**

Sparks generated by power tools may ignite the flammable material.



**Keep children and bystanders at a safe distance while operating the tool.**

Distractions may cause losing control.



## Electrical Safety

**The tool plug must match the power outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded power tools.**

Modified plugs and different power outlets increase the risk of electric shock.



**Avoid body contact with grounded surfaces, such as pipes, radiators, electric ranges and refrigerators.**

The risk of electric shock increases if your body is grounded.

**Do not expose the tool to rain or wet conditions.**

Water entering into the tool increases the risk of electric shock.

**Do not force the cord. Never use the cord to carry, lift or unplug the tool. Keep the cord away from heat, oil, sharp edges or moving parts.**

Damaged or entangled cords increase the risk of electric shock.

**When operating a tool outdoors, use an extension cord suitable for outdoor use.**

Using an adequate outdoor extension cord reduces the risk of electric shock.

**If operating the tool in a damp location cannot be avoided, use a ground fault circuit interrupter (GFCI) protected supply.**

Using a GFCI reduces the risk of electric shock.

## Personal safety

**Stay alert, watch what you are doing and use common sense when operating a tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.**

A moment of distraction while operating the tool may result in personal injury.

**Use personal protective equipment. Always wear eye protection.**

Protective equipment such as safety glasses, anti-dust mask, non-skid shoes, hard hats and hearing protection used in the right conditions significantly reduce personal injury.



**Prevent unintentional starting up. Ensure the switch is in the "OFF" position before connecting into the power source and / or battery as well as when carrying the tool.**

Transporting power tools with the finger on the switch or connecting power tools with the switch in the "ON" position may cause accidents.

**Remove any wrench or vice before turning the power tool on.**

Wrenches or vices left attached to rotating parts of the tool may result in personal injury.

**Do not overreach. Keep proper footing and balance at all times.**

This enables a better control on the tool during unexpected situations.

**Dress properly. Do not wear loose clothing or jewelry. Keep hair, clothes and gloves away from the moving parts.**

Loose clothes or long hair may get caught in moving parts.



**If you have dust extraction and recollection devices connected onto the tool, inspect their connections and use them correctly.**

Using these devices reduce dust-related risks.

## Power Tools Use and Care

**Do not force the tool. Use the adequate tool for your application.**

The correct tool delivers a better and safer job at the rate for which it was designed.



**Do not use the tool if the switch is not working properly.**

Any power tool that cannot be turned ON or OFF is dangerous and should be repaired before operating.

**Disconnect the tool from the power source and / or battery before making any adjustments, changing accessories or storing.**

These measures reduce the risk of accidentally starting the tool.

**Store tools out of the reach of children. Do not allow persons that are not familiar with the tool or its instructions to operate the tool.**

Power tools are dangerous in the hands of untrained users.



**Service the tool. Check the mobile parts are not misaligned or stuck. There should not be broken parts or other conditions that may affect its operation. Repair any damage before using the tool.**

Most accidents are caused due to poor maintenance to the tools.



**Keep the cutting accessories sharp and clean.**

Cutting accessories in good working conditions are less likely to bind and are easier to control.

**Use the tool, components and accessories in accordance with these instructions and the projected way to use it for the type of tool when in adequate working conditions.**

Using the tool for applications different from those it was designed for, could result in a hazardous situation.

## Service

**Repair the tool in a  TRUPER Authorized Service Center using only identical spare parts.**

This will ensure that the safety of the power tool is maintained.

**Children or people with reduced physical, sensory or mental capabilities shall not operate the tool, neither inexperienced people or without knowledge in the use of the tool, unless supervised by a person responsible of their safety or if receiving previous instructions about the tool operation.**

Children shall be kept under supervision to double-check they will not play with the tool. Tight supervision shall be used with children or disabled persons to prevent from using or being close to any household tool.



# Safety Warnings for Hydropneumatic Equipment



## Appropriate Use

- The equipment is a stationary device designed to pump clean neutral liquids that do not contain suspended abrasive solids with temperature not higher than 104 °F. Any other type of use is inadequate.
- The device is in compliance with the most current safety requirements, provided it is used for purposes originally designed for. The device shall only be used under the performance restrictions allowed.
- It shall not be used to pump explosives, fuel or aggressive materials nor health damaging substances or sewer water.
- The device is designed for household use. It is not adequate for commercial or industrial use.
- Inadequate use or modifications to the device may result in unforeseen damage to the device and the operator, and releases the manufacturers of their legal responsibility.

**⚠ CAUTION** • Do not set up the equipment outdoors or close to wet areas.

**⚠ WARNING** • Do not install the device in areas where there is danger of explosion or in the vicinity of combustible liquids or gases.

**⚠ WARNING** • Do not direct the water jet against the device or other electric devices. There is danger of death due to electric shock.

**⚠ CAUTION** • Double check the power cable is not making contact with water circulating around the device.

• Any type of repairs shall be carried out only in a

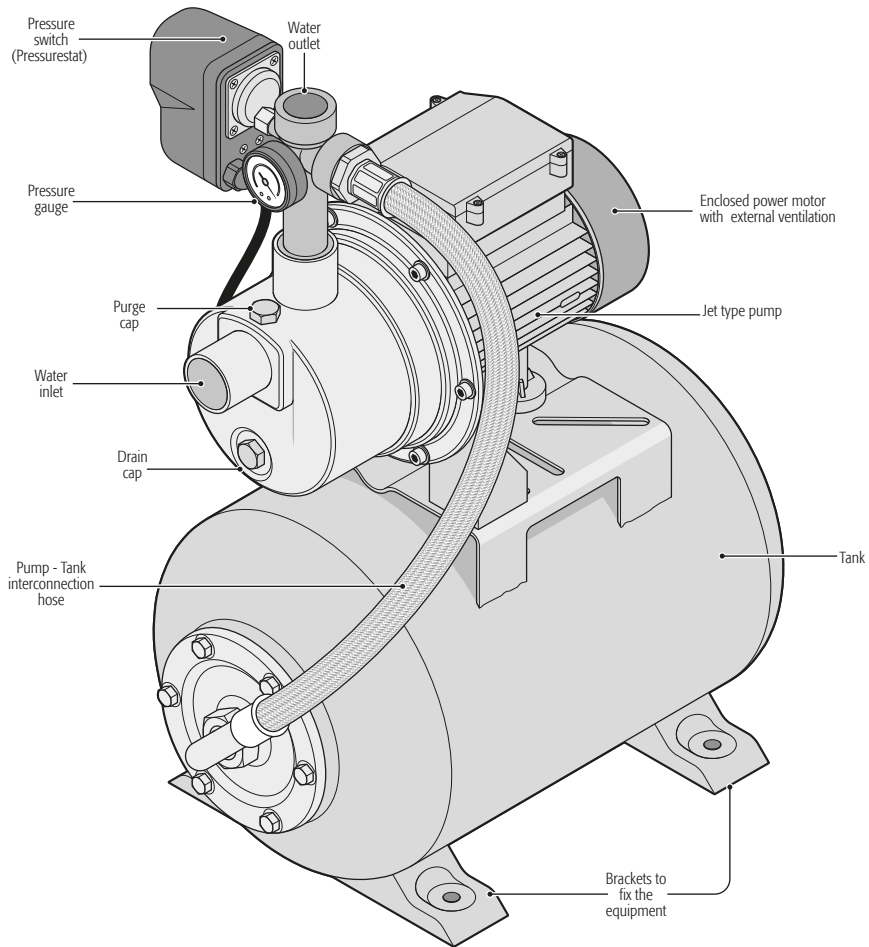
 **TRUPER**® Authorized Service Center.

Otherwise, the user is exposed to electric shock and makes the Warranty void.

• Do not remove or cover the symbols attached to the device. All information about the device that is no longer legible shall be replaced immediately.

• Read and obey the operation instructions before installing and starting the equipment. Any malfunction caused by disregarding the instructions in this manual may damage the equipment and makes the Warranty void.

• When the equipment is used into pools or ponds, the pump shall be connected through RCCB (Residual Current Circuit Breaker) designed with a current short circuit not higher than 30 mA



## Mounting

- The set-up place for the equipment shall be dry and no exposed to weather with enough air flowing to get adequate ventilation (A). The environment temperature shall not exceed (104 °F).
- Use bolts to fix the equipment to a concrete base to prevent vibration (B). The hydro pneumatic equipment shall be set horizontally to assure perfect functioning.
- The suction and pressure lines pipes shall be fastened to the wall or floor to prevent voltage transmission to the hydro pneumatic equipment (C).
- Use care not to damage the hydro pneumatic equipment and / or pipes due to excessive tightening of the joints.
- Use thread tape (Teflon) to seal all the joints. Leaks cause air entrance and hinder the water outlet.

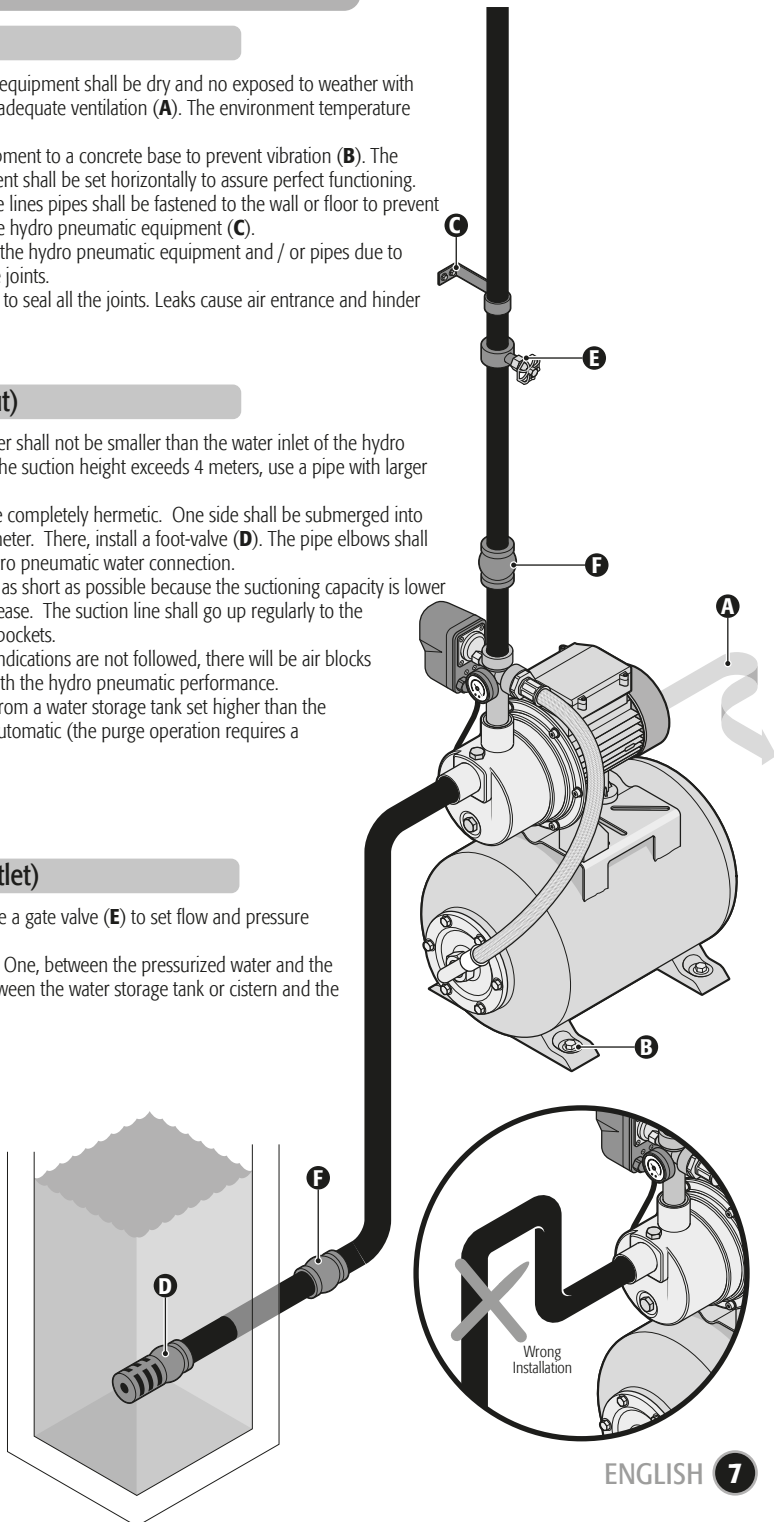
## Suction Line (Input)

- The suction pipe diameter shall not be smaller than the water inlet of the hydro pneumatic equipment. If the suction height exceeds 4 meters, use a pipe with larger diameter.
- The suction pipe shall be completely hermetic. One side shall be submerged into the water at least half-a -meter. There, install a foot-valve (D). The pipe elbows shall bend 90° towards the hydro pneumatic water connection.
- The suction line shall be as short as possible because the suctioning capacity is lower on a par with the line increase. The suction line shall go up regularly to the equipment to prevent air pockets.

**⚠ CAUTION** If these indications are not followed, there will be air blocks and bubbles interfering with the hydro pneumatic performance. When water is suctioned from a water storage tank set higher than the equipment, the purge is automatic (the purge operation requires a couple of minutes).

## Pressure Line (Outlet)

- The outlet pipe shall have a gate valve (E) to set flow and pressure speeds required.
- Set two check valves (F). One, between the pressurized water and the gate valve. The other, between the water storage tank or cistern and the water inlet.



- The hydro pneumatic machine is equipped with a pressure switch (pressurestat) that turns on the motor when the tank pressure is equal or lower than the starting pressure.
- The pressurestat turns off the motor when the pressure inside the tank increases up to the stopping pressure.

**⚠ CAUTION** The pressurestat is calibrated in the factory to correct the starting and closing pressure.

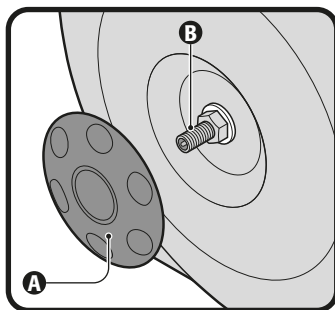
## Preliminary Increase of the Filling Up Pressure

• If in the long term the equipment starts running after a slightly emptying water (approximately 0.13 gal), the preliminary increase of the filling up pressure in the tank shall be reestablished:

1. Disconnect the feed.
2. Open the pressure line (open the male or nozzle) let the water flow out completely.
3. Unscrew and remove the drain cap to empty the tank. The air control valve is in the rear of the tank in the horizontal tank equipment and in the upper side in vertical tank equipment.
4. Connect the compressors' airline to the air control valve with a "pressure valve" and a pressure gauge.
5. Get to the filling up preliminary pressure: 0.19 MPa - 0.20 MPa (28 PSI - 30 PSI).
6. Connect the equipment again and check its functioning.

• To avoid issues, check regularly the pre-loading pressure in the tank. At this point, disconnect the equipment to the feeding source and open the feed key to eliminate the pressure from the system. Then, remove the cap (A) in the rear of the tank and measure the pre - charge pressure in the valve (B). Measure with an independent pressure gauge.

**⚠ CAUTION** • Only authorized staff shall open and install the pressurestat. Disconnect the equipment from the power source before opening the pressurestat.

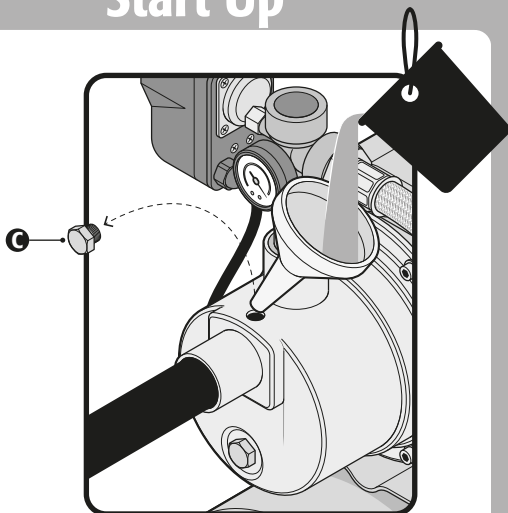


## Start Up

### Purge

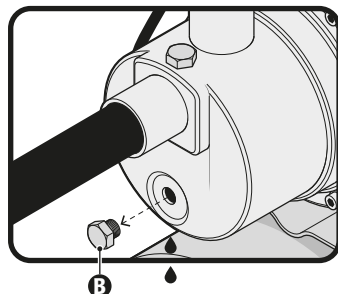
- The first time you start the hydro pneumatic equipment, or after a long period of inactivity, or when air enters into the system, fill the pump with clean water before starting up.
- Remove the purge cap (C) and fill with water up to the orifice level.
- Screw the cap and start the hydro pneumatic equipment.

**⚠ WARNING** Never start up the hydro pneumatic equipment when the pump is empty. If occurs accidentally, turn off the hydro pneumatic equipment immediately. Let it cool down and then, fill the pump with clean water.





- The hydro pneumatic equipment does not require maintenance only if taking the following caution measures:
- When there is risk of freezing empty the pump completely removing the drain cap (B). Remember to purge the pump before starting it back.
- Check periodically the foot valve (not included) and clean if necessary.
- When the hydro pneumatic equipment will be used long periods of time, we recommend emptying the pump fully and rinse with clean water.



## Troubleshooting

### Problem

### Cause

### Solution

The motor does not start .

- There is no power.
- The impeller is stuck.

- Check connections and voltage values.
- Remove the fan cover and turn the shaft to release it.

The motor turns but is not pumping water.

- The foot valve filter is clogged.
- Excessive suction height.
- Air in the inlet.

- Clean the filter.
- Shorten the suction pipe length.
- Check the suction pipe is hermetic. Assure the foot-valve is submerged at least 20". Purge again the pump (see page 8). Check the suction height.

Not enough pressure.

- Suction height is in the limit.
- Foot valve filter partially clogged.

- Shorten the suction pipe length.
- Clean the foot valve and the full suction pipe if necessary.

The overload thermal protector is in operation.

- The motor is overheated.
- The impeller is stuck.

- Check tension and ventilation.
- Remove the fan cover and rotate the motor shaft to free it.

Dotted lines for writing notes.

In the event of any problem contacting a  **TRUPER** Authorized Service Center, please see our webpage [www.truper.com](http://www.truper.com) to get an updated list, or call our toll-free numbers **800 690-6990** or **800 018-7873** to get information about the nearest Service Center.

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Codes	Models	Brand
10077	HIDR-1/2X24	 <b>TRUPER®</b>
12254	HIDR-1/2X50	

This product is guaranteed for 1 year. To make the warranty valid or purchase parts and components you must present the product in Corregidora 22, Col. Centro, Alc. Cuauhtémoc, CDMX C.P. 06060 or at the establishment where you purchased it, or at any Truper® Service Center listed in the annex to the warranty policy and/or in [www.truper.com](http://www.truper.com). Transportation costs resulting from compliance of this warranty will be covered by  **TRUPER®**

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