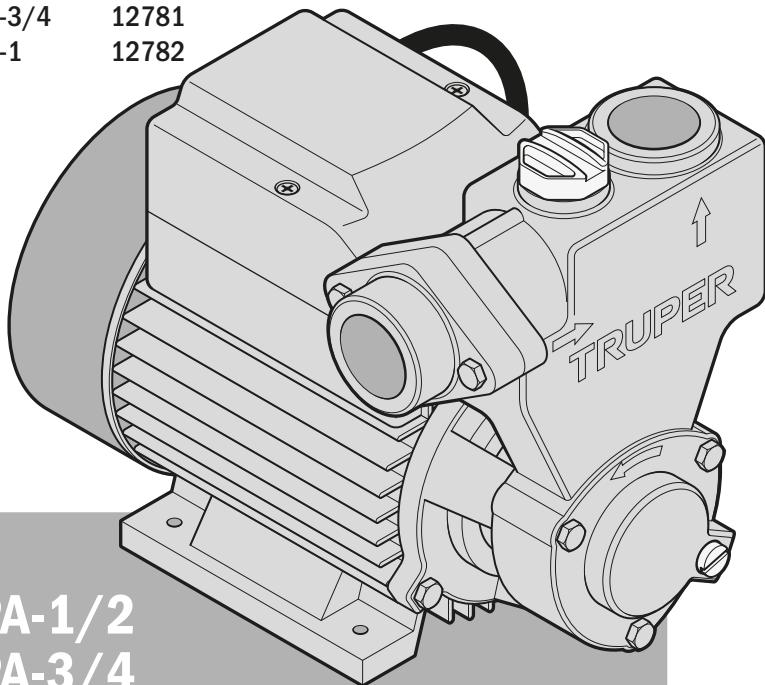


Manual

Self-priming peripheral water pump for agricultural use

Applies for:

Models	Codes
BOPA-1/2	12780
BOPA-3/4	12781
BOPA-1	12782



BOPA-1/2
BOPA-3/4
BOPA-1



CAUTION



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



Technical Data	3
Power Requirements	3
 General Power Tool Safety Warnings	4
 Safety Warnings for Using Water Pumps	5
 Parts	5
Installation	6
Startup	7
Maintenance	8
Troubleshooting	9
Notes	10
Authorized Service Centers	11
Warranty Policy	12

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.

Use and care recommendations



RESPECT THE WORK CYCLES.

50 min of work per 20 min of rest. Maximum 6 hours daily.



ALWAYS ensure the pump has a constant water supply.

Follow the installation instructions (page 6)



PURGE WITH WATER before turning on the pump for the first time, when used occasionally or during maintenance (page 7)



Perform regular **MAINTENANCE** on your machine (page 8).

	BOPA-1/2	BOPA-3/4	BOPA-1
Code	12780	12781	12782
Description	Self-priming peripheral water pump for agricultural use		
Voltage	127 V~		
Frequency	60 Hz		
Speed	3450 RPM		
Current	5 A	8 A	11 A
Power	1/2 Hp	3/4 Hp	1 Hp
Outlet and Inlet Diameter	1 - 11.5 NPT		
Maximum Suction Depth	26 ft		
Total Manometric Maximum Height Value / Maximum Height	98 ft	180 ft	196 ft
Maximum Flow	10.5 gal/min	11.8 gal/min	15.8 gal/min
Maximum Water Temperature	104 °F		
Conductors	18 AWG	16 AWG	
Work Cycle	50 min of work per 20 min of rest. Maximum 6 hours daily.		
Insulation	Class I		
Grade IP	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.



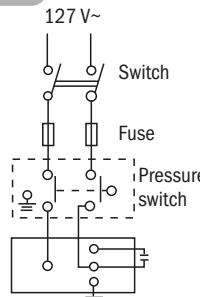
Power Requirements

CAUTION A professional electrician shall carry out the connection to the power source following the electric diagram to the right.

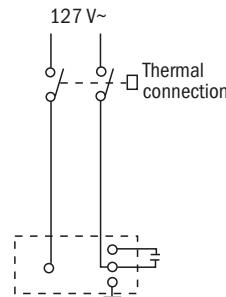
CAUTION Use a separate electric circuit for the pump. This circuit shall not have a conductor with a gauge lower to #12 and shall be protected with a 20 A time-delay fuse. Before you connect the motor to the power line, double check the switch is in the OFF position and the electric current is equal to the one indicated in the motor nameplate. If the pump is operated with lower voltage, the motor will get damaged.

WARNING All wiring, electric connections and the system ground connection shall comply with the NORMA OFICIAL MEXICANA NOM-001-SEDE, INSTALACIONES ELÉCTRICAS

(UTILIZACIÓN) or with the local codes and ordinances. Call a certified electrician. It is advisable the pump shall feed with a circuit that includes a differential circuit breaker with an assigned current to higher than 30 mA



Motor Connections



Motor Connections

⚠️WARNING! Read carefully all safety warnings and instruction 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 loss of 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.



This tool is in compliance with the Official Mexican Standard (NOM - Norma Oficial Mexicana).



General power tool safety warnings



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, jewelry or long hair may get caught in moving parts.



If you have dust extraction and collection 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 Using Water Pumps

TRUPER

Adequate use

- The pump is a stationary device designed to pump clean, neutral liquids with no abrasive solids suspended; in temperatures not above 104 °F. It is useful for orchards, to pump non-aggressive liquids and to increase insufficient pressure in the aqueduct network.
- Auxiliary pumps are adequate for agriculture applications in irrigation systems with mini sprinkling or aerial spraying where pressure requirements are higher due to the sprinkling system height and, the minimal pressure requirements for the correct functioning of the spray type sprayer or nebulizers are high. In these types of applications, centrifugal pumps are not advisable due to the low pressure those devices supply.
- The device complies at best with the most updated safety requirements only if the device is used according to its design. The device can only be used under the performance restrictions allowed.
- The pump shall not be used to pump explosive, combustible or aggressive materials nor substances hazardous to health or sewage.
- Inadequate use or modifications to the device, the use of components not approved and tested by the manufacturer may result in unforeseen damage to the device and the operator, and the manufacturer is released of legal liability.

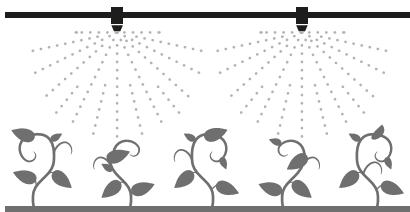
CAUTION • Do not install the pump outdoors or near wet areas.

WARNING • Do not install the pump in areas where there is risk of explosion or near combustible liquids or gasses.

WARNING • Do not aim the water jet against the device or other electric components. There is danger of death by electric shock.

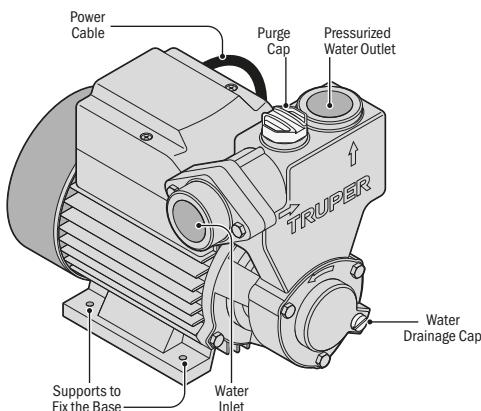
CAUTION • Double check the power cable is not making contact with the water circulating in the pump.

- Any type of repairs shall only be carried out in a TRUPER Authorized Service Center. Otherwise the user will be exposed to electric shock and the warranty will be void.
- Symbols attached in the device shall not be removed or covered. All information attached regarding the device that is not legible and clear shall be immediately replaced.
- Read and observe all the operation instructions before installing and starting the pump. Any mechanical breakdown cause by the omission of the indications in this Manual can damage the pump and make the warranty void.



Recommended for aerial sprinkling with nebulizers and sprayers

Parts



Mounting

- The pump shall be installed in a dry place sheltered from outdoor weather but that allows the flow of air for its adequate ventilation (A). Ambient temperature shall not exceed 104 °F.
- Use bolts to fix the pump into a concrete base to avoid vibration (B). The pump shall be installed horizontally to assure good functioning.
- Pipes in the suction and pressure lines shall be supported to the wall or floor to prevent transmitting tension into the pump body (C).
- Use care to damaging the pump and / pipes, due to excessive tightening of the joints.

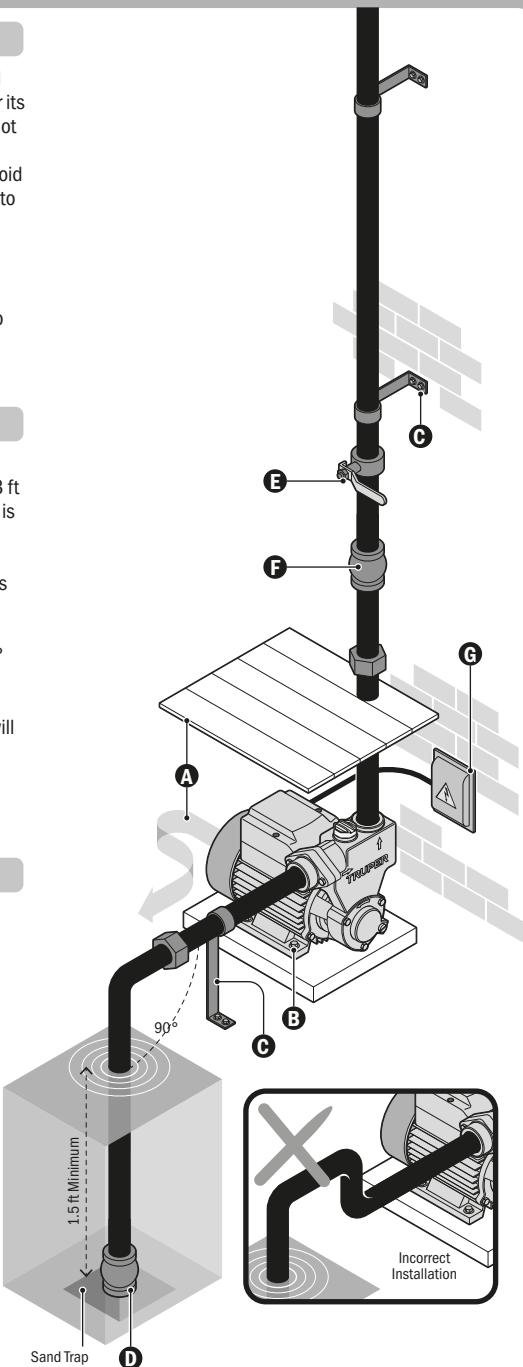
Suction Line (input)

- The suction pipe diameter shall not be smaller than the pump water inlet. If the suction height exceeds 13 ft or the distance between the pump and the water inlet is 33 ft, use a pipe with a bigger diameter.
- The suction pipe shall be watertight. It shall be submerged in water at least 1.5 ft, and the end no less than 12" from the tank bottom. It is recommended to use a foot valve with filter (D).
- The pipe must be perfectly vertical and bend to 90° towards the pump water inlet.

CAUTION Failure to follow these indications will lead to the formation of air traps and bubbles which will interfere with the pump good performance.

Pressure Line (Outlet)

- The outlet pipe diameter shall not be smaller than the pump outlet diameter.
- Adapt a gate valve (E) to adjust flow speed and pressure needed.
- It is advisable to adapt a check valve (F) between the pump pressurized water and the gate valve to prevent the unexpected return of water columns exceeding 65 ft.



Electric Connection

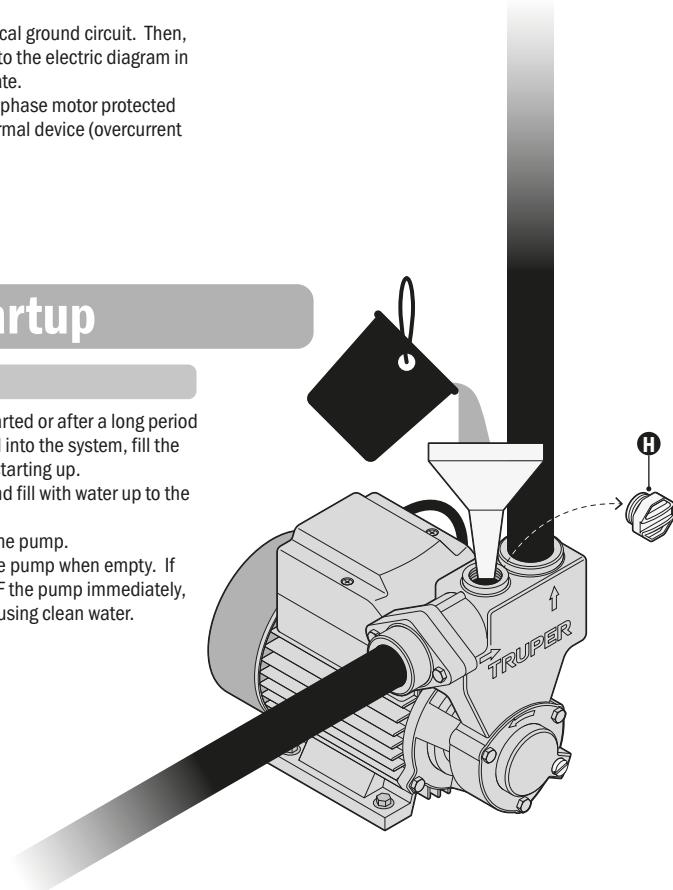
- Call a professional electrician to set up the electric connections to the power source (G), meeting the mandatory directives.
- The fixed installation shall incorporate a device that assure the omnipolar connection of energy.
- Make sure the electric requirements described in this Manual and in the pump nameplate match the power supply capacity values.
- Connect the pump in a physical ground circuit. Then, connect the phases according to the electric diagram in page 3 or in the pump nameplate.
- The pump is built with a one-phase motor protected against overcharge using a thermal device (overcurrent cut) set in the winding.

Startup

Purge

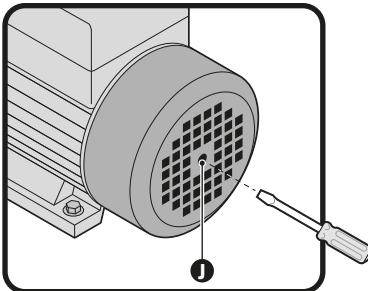
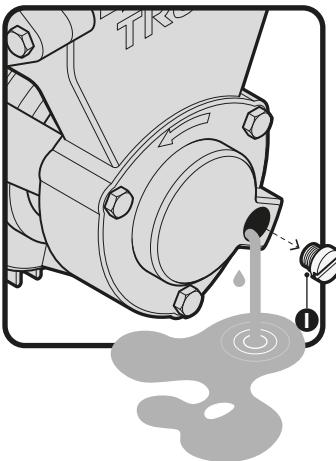
- The first time the pump is started or after a long period of inactivity or when air entered into the system, fill the pump with clean water before starting up.
- Remove the purge cap (H) and fill with water up to the orifice level.
- Screw on the cap and start the pump.

WARNING Never start the pump when empty. If accidentally is started, turn OFF the pump immediately, wait it cools down and then fill using clean water.



- The pump is maintenance free only if the following cautions are followed:
 - If there is risk of freezing empty the pump completely removing the drain cap (I). Remember to purge the pump before starting up again.
 - Check the foot valve (not included) regularly and clean it if necessary.
 - If the pump is not being used for long periods of time, it is advisable to empty the pump, rinse with clean water and store it in a dry place.
 - If the pump shaft is not rotating freely use a screwdriver to release it. Insert the screwdriver in the rear orifice of the pump (J).

WARNING Disconnect the pump from the water supply before carrying up maintenance works.



Problem	Cause	Solution
The motor does not start.	<ul style="list-style-type: none">• There is no power.• Stuck impeller.	<ul style="list-style-type: none">• Check the connection and voltage values.• Release it with a screwdriver (see page 8).
The motor is turning but it is not pumping water.	<ul style="list-style-type: none">• Clogged foot valve filter.• Excessive suction height.• Air in the admission.	<ul style="list-style-type: none">• Clean the filter.• Reduce the length of the suction pipe.• Check the suction pipe is hermetic. Double check the foot valve is submerged at least 1.5 ft. <p>Purge the pump once more (see page 7)</p> <p>Check the suction height.</p>
Insufficient flow speed.	<ul style="list-style-type: none">• Suction height in the limit.• Foot valve filter partially clogged.	<ul style="list-style-type: none">• Shorten the suction pipe length.• Clean the foot valve and the whole suction pipe if necessary.
The motor thermal protection was activated.	<ul style="list-style-type: none">• The motor is overheated.• The impeller is stuck.	<ul style="list-style-type: none">• Check voltage and ventilation.• Release it with a screwdriver (see page 8).

In the event of any problem contacting a TRUPER Authorized Service Center, please see our webpage 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.

AGUASCALIENTES	DE TODO PARA LA CONSTRUCCIÓN GRAL. BARRAGÁN #1201, COL. GREMIAL, C.P. 20030, AGUASCALIENTES, AGS. TEL.: 449 994 0537
BAJA CALIFORNIA	SUCURSAL TIJUANA AV. LA ENCANTADA, LOTE #5, PARQUE INDUSTRIAL EL FLORIDO II, C.P. 22244, TIJUANA, B.C. TEL.: 664 969 5100
BAJA CALIFORNIA SUR	FIX FERRETERÍAS FELIPE ÁNGELES ESQ. RUIZ CORTÍNEZ S/N, COL. PUEBLO NUEVO, C.P. 23670, CD. CONSTITUCIÓN, B.C.S. TEL.: 613 132 1115
CAMPECHE	TORNILLERÍA Y FERRETERÍA AAA AV. ÁLVARO OBREGÓN #324, COL. ESPERANZA C.P. 24080 CAMPECHE, CAMP. TEL.: 981 815 2808
CHIAPAS	FIX FERRETERÍAS AV. CENTRAL SUR #27, COL. CENTRO, C.P. 30700, TAPACHULA, CHIS. TEL.: 962 118 4083
CHIHUAHUA	SUCURSAL CHIHUAHUA AV. SILVESTER TERRAZAS #128-11, PARQUE INDUSTRIAL BAFAR, CARRETERA MÉXICO CUAHTEMOC, C.P. 31415, CHIHUAHUA, CHIH. TEL. 614 434 0052
CIUDAD DE MÉXICO	FIX FERRETERÍAS EL MONSTRUO DE CORREGIDORA, CORREGIDORA # 35, COL. CENTRO, C.P. 06060, CUAHTEMOC, CDMX. TEL: 55 5522 5031 / 5522 4861
COAHUILA	SUCURSAL TORREÓN CALLE METAL MECÁNICA #280, PARQUE INDUSTRIAL ORIENTE, C.P. 27278, TORREÓN, COAH. TEL: 871 209 68 23
COLIMA	BOMBAS Y MOTORES BYMTESA DE MANZANILLO BLVD. MIGUEL DE LA MADRID #190, COL. 16 DE SEPTIEMBRE, C.P. 28239, MANZANILLO, COL. TEL: 314 332 1986 / 332 8013
DURANGO	TORNILLOS ÁGUILA, S.A. DE C.V. MAZURO #200, COL. LUIS ECHEVERRÍA, DURANGO, DGO.TEL: 618 817 1946 / 618 818 2844
ESTADO DE MÉXICO	SUCURSAL CENTRO JILOTEPEC PARQUE INDUSTRIAL #1, COL. PARQUE INDUSTRIAL JILOTEPEC, JILOTEPEC, EDO. DE MÉX. C.P. 54257 TEL: 761 782 9100 EXT. 5728 Y 5102
GUANAJUATO	CÍA. FERRETERA NUEVO MUNDO S.A. DE C.V. AV. MÉXICO - JAPÓN #225, CD. INDUSTRIAL, C.P. 38010, CELAYA, GTO. TEL.: 461 617 7578 / 79 / 80 / 88
GUERRERO	CENTRO DE SERVICIO ECLIPSE CALLE PRINCIPAL MZ.1 LT. 1, COL. SANTA FE, C.P. 39010, CHILPANCINGO, GRO. TEL.: 747 478 5793
HIDALGO	FERREPPRECIOS S.A. DE C.V. LIBERTAD ORIENTE #304 LOCAL 30, INTERIOR DE PASAJE ROBLEDO, COL. CENTRO, C.P. 43600, TULANCINGO, HGO. TEL.: 775 753 6615 / 775 753 6616
JALISCO	SUCURSAL GUADALAJARA AV. ADOLFO B. HORN # 6800, COL: SANTA CRUZ DEL VALLE, C.P.: 45655, TLAJOMULCO DE ZÚÑIGA, JAL. TEL.: 33 3606 5285 AL 90
MICHOACÁN	FIX FERRETERÍAS AV. PASEO DE LA REPÚBLICA #3140-A, COL. EX-HACIENDA DE LA HUERTA, C.P. 58050, MORELIA, MICH. TEL.: 443 334 6858

MORELOS	FIX FERRETERÍAS CAPITÁN ANZURES #95, ESQ. JOSÉ PERDIZ, COL. CENTRO, C.P. 62740, CUATLÁ, MOR. TEL.: 735 352 8931
NAYARIT	HERRAMIENTAS DE TEPIC MAZATLÁN #117, COL. CENTRO, C.P. 63000, TEPIC, NAY. TEL.: 311 258 0540
NUEVO LEÓN	SUCURSAL MONTERREY CARRETERA LAREDO #300, 1B MONTERREY PARKS, COLONIA PUERTA DE ANÁHUAC, C.P. 66052, ESCOBEDO, NUEVO LEÓN, TEL.: 81 8352 8791 / 81 8352 8790
OAXACA	FIX FERRETERÍAS AV. 20 DE NOVIEMBRE #910, COL. CENTRO, C.P. 68300, TUXTEPEC, OAX. TEL.: 287 106 3092
PUEBLA	SUCURSAL PUEBLA AV. PERIFÉRICO #2-A, SAN LORENZO ALMECATLA, C.P. 72710, CUATLACINGO, PUE. TEL.: 222 282 8282 / 84 / 85 / 86
QUERÉTARO	ARU HERRAMIENTAS S.A. DE C.V. AV. PUERTO DE VERACRUZ #110, COL. RANCHO DE ENMEDIO, C.P. 76842, SAN JUAN DEL RÍO, QRO. TEL.: 427 268 4544
QUINTANA ROO	FIX FERRETERÍAS CARRETERA FEDERAL MZ. 46 LT. 3 LOCAL 2, COL. EJIDAL, C.P. 77710 PLAYA DEL CARMEN, Q.R. TEL.: 984 267 3140
SAN LUIS POTOSÍ	FIX FERRETERÍAS AV. UNIVERSIDAD #1850, COL. EL PASEO, C.P. 78320, SAN LUIS POTOSÍ, S.L.P. TEL.: 444 822 4341
SINALOA	SUCURSAL CULIACÁN AV. JESÚS KUMATE SUR #4301, COL. HACIENDA DE LA MORA, C.P. 80143, CULIACÁN, SIN. TEL.: 667 173 9139 / 173 8400
SONORA	FIX FERRETERÍAS CALLE 5 DE FEBRERO #517, SUR LT. 25 MZ. 10, COL. CENTRO, C.P. 85000, CD. OBREGÓN, SON. TEL.: 644 413 2392
TABASCO	SUCURSAL VILLAHERMOSA CALLE HELIO LOTES 1, 2 Y 3 MZ. #1, COL. INDUSTRIAL, 2A ETAPA, C.P. 86010, VILLAHERMOSA, TAB. TEL.: 993 353 7244
TAMAULIPAS	VM ORINGS Y REPARACIONES CALLE ROSITA #527 ENTRE 20 DE NOVIEMBRE Y GRAL. RODRÍGUEZ, FRACC. REYNOSA, C.P. 88780, REYNOSA, TAMS. TEL.: 899 926 7552
TLAXCALA	SERVICIOS Y HERRAMIENTAS INDUSTRIALES PABLO SIDAR #132, COL. BARRIO DE SAN BARTOLOMÉ, C.P. 90970, SAN PABLO DEL MONTE, TLAX. TEL.: 222 271 7502
VERACRUZ	LA CASA DISTRIBUIDORA TRUPER BLVD. PRIMAVERA, ESQ. HORTENSIA S/N, COL. PRIMAVERA C.P. 93308, POZA RICA, VER. TEL.: 782 823 8100 / 826 8484
YUCATÁN	SUCURSAL MÉRIDA CALLE 33 #600 Y 602, LOCALIDAD ITZINCAB Y MULSAY, MPIO. UMAN, C.P. 97390, MÉRIDA, YUC. TEL.: 999 912 2451

Model	Code	Brand
BOPA-1/2	12780	TRUPER®
BOPA-3/4	12781	
BOPA-1	12782	

Warranty. Duration: 2 years. Coverage: parts, components and workmanship against manufacturing or operating defects, except if used under conditions other than normal; when it was not operated in accordance with the instructive; was altered or repaired by personnel not authorized by TRUPER®. To make the warranty valid, present the product, stamped policy or invoice or receipt or voucher, in the establishment where you bought it or in Corregidora 35, Centro, Cuauhtémoc, CDMX, 06060, where you can also purchase parts, components, consumables and accessories. It includes the costs of transportation of the product that derive from its fulfillment of its service network. Phone number 800-018-7873. Made in China. Imported by TRUPER, S.A. de C.V. Parque Industrial 1, Parque Industrial Jilotepec, Jilotepec, Edo. de Méx. C.P. 54257, Phone number 761 782 9100.



Stamp of the business. Delivery date: