TASK FORCE TIPS®
FIRE FIGHTING EQUIPMENT

Suction Strainer Series

INSTRUCTIONS FOR OPERATION AND MAINTENANCE

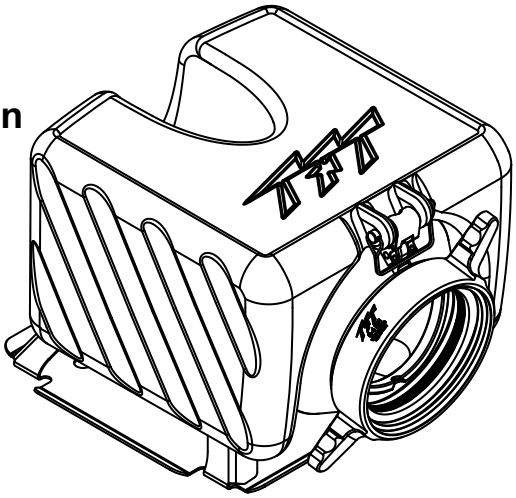
⚠WARNING

Understand manual before use. Operation of this device without understanding the manual and receiving proper training is a misuse of this equipment. Obtain safety information at tft.com/serial-number.

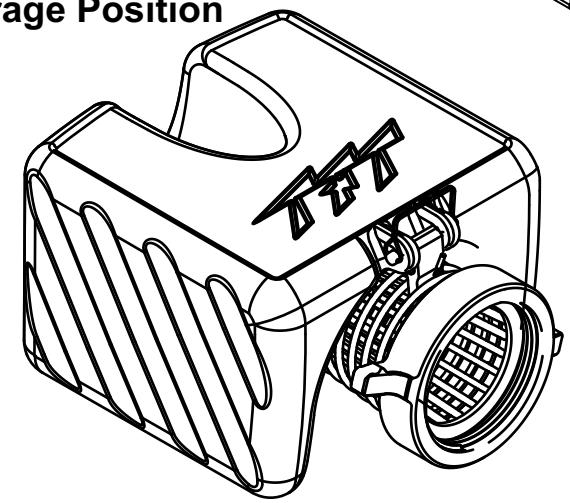
This equipment is intended for use by trained and qualified emergency services personnel for firefighting. All personnel using this equipment shall have completed a course of education approved by the Authority Having Jurisdiction (AHJ).

This instruction manual is intended to familiarize firefighters and maintenance personnel with the operation, servicing, and safety procedures associated with this product. This manual should be kept available to all operating and maintenance personnel.

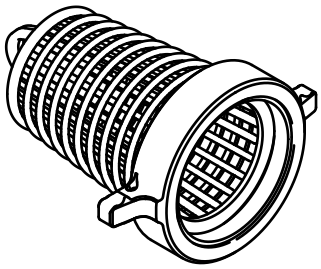
Low Level Strainer with Jet Siphon and Float in Storage Position



Jumbo Barrel Strainer and Float in Storage Position



Jumbo Barrel Strainer



OPERATING RANGE

Suction: 0 to 29 inches Hg (Full Vacuum)
Jet Siphon: 200 psi Max (measured at 1.5” inlet)

TASK FORCE TIPS LLC
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1.0 MEANING OF SAFETY SIGNAL WORDS

A safety related message is identified by a safety alert symbol and a signal word to indicate the level of risk involved with a particular hazard. Per ANSI Z535.6, the definitions of the four signal words are as follows:

DANGER **DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.**

WARNING **WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.**

CAUTION **CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.**

NOTICE **NOTICE is used to address practices not related to physical injury.**

2.0 SAFETY

WARNING **This equipment is intended for use by trained personnel for firefighting. Use of this equipment for other purposes may involve hazards not addressed by this manual. Seek appropriate guidance and training to reduce risk of injury.**

WARNING **Equipment may be damaged if frozen while containing significant amounts of water. Such damage may be difficult to detect visually. Subsequent pressurization can lead to injury or death. Any time the equipment is subject to possible damage due to freezing, it must be tested and approved for use by qualified personnel before being considered safe for use.**

CAUTION **Any alterations to the product or its markings could diminish safety and constitutes a misuse of this product.**

CAUTION **Mismatched or damaged waterway connections may cause equipment to leak or uncouple under pressure. Failure could result in injury. Equipment must be mated to matched connections.**

CAUTION **Dissimilar metals coupled together can cause galvanic corrosion that can result in the inability to uncouple the connection, or complete loss of engagement over time. Failure could cause injury. Per NFPA 1962, if dissimilar metals are left coupled together, an anti-corrosive lubricant should be applied to the connection and the coupling should be disconnected and inspected at least quarterly.**

NOTICE **To prevent mechanical damage, do not drop or throw equipment.**

3.0 GENERAL INFORMATION

The high volume Low-Level Strainer is made of hard anodized and powder-coated aluminum. Clog-resistant stainless steel filter has over twice as much flow area as a 6” hose. This keeps friction loss down to 0.5 psi (1” Hg) at 1500 gpm and reduces the potential for air vortexes to form as water sinks towards the 2.5” minimum usable depth. If desired, the Low-Level Strainer can be held just under the surface of the water through the use of the low density polyethylene (LDPE) float. Oversized sealed ball pivot allows 45° range of hose angle without constricting the flow path. A jet siphon substantially increases suction lift capability.

The Jumbo Barrel Strainer is made of durable molded nylon. The size and shape minimize pressure loss and promote a continuous draft by preventing air vortexes. The Jumbo Barrel Strainer can be held just under the surface of the water through the addition of the low density polyethylene (LDPE) float.

3.1 SPECIFICATIONS

	Jumbo Barrel Strainer	Low Level Strainer
Primary Material	Nylon-6 strainer, hard anodized aluminum coupling	Cast 356-T6 hard anodized and powder coated aluminum, LPDE float
Suction Screen	N/A	Stainless Steel, 5/16” square mesh
Overall Dimensions	16” x 15” x 11” (406 x 381 x 279)	15” x 22” x 11” (381 x 559 x 279)
Base Footpad	N/A	15” x 15” (381 x 381)
Weight	11 lb (4.9 kg)	20 lb (9 kg)
Float	Optional	Standard
Operating Temperature Range of Fluid	33 to 120°F (1 to 50°C)	
Storage Temperature Range	-40 to 150°F (-40 to 65°C)	

Table 3.1

4.0 PRESSURE LOSS

This graph represents performance of the Barrel Strainer and the Low Level Strainer with the screen installed, without the assistance of the jet siphon.

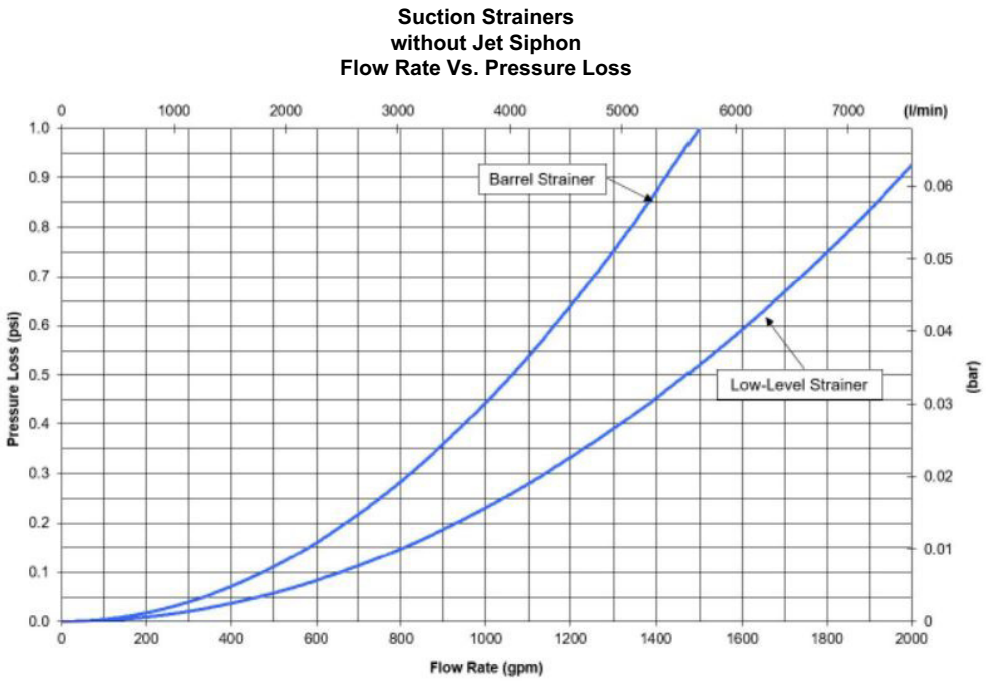


Figure 4.0

5.0 USE OF THE LOW LEVEL STRAINER

5.1 WITHOUT JET SIPHON

1. Complete strainer discharge connections using hard suction hose
2. Immerse the strainer in at least 6” of water
3. Tie the strainer off to a robust object
4. Engage the pump primer to completely fill the suction hose
5. Commence pumping

5.2 USE WITH JET SIPHON

The jet siphon can increase the water transfer up to 400% using the Venturi effect.
Maximum jet siphon inlet pressure is 200 PSI (13.8 bar).
Jet siphon coupling size: 1.5”
Jet siphon nozzle diameter: 1”

1. Connect a fire hose to the jet siphon
2. Allow enough slack in the fire hose to approach the inlet without kinks
3. Complete strainer discharge connections using hard suction hose
4. Immerse the strainer in at least 6” of water
5. Tie the strainer off to a robust object
6. Pressurize the jet siphon
7. Adjust the strainer base to sit upright
8. Commence pumping

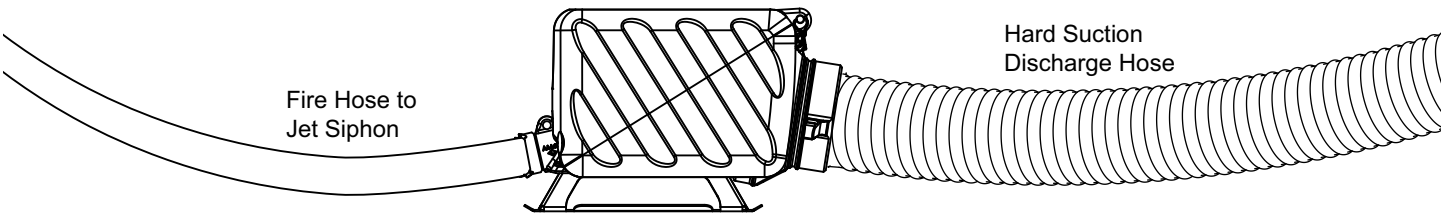


Figure 5.2A

⚠WARNING **Do not use LDH lay-flat hose directly between the strainer outlet and fire pump inlet as the sole water supply to a fire. Lay-flat hoses can be sucked flat or kinked, which will interrupt the water supply and could result in serious injury or death to persons dependent on water flow.**

- **Always use hard suction hose between the strainer outlet and fire pump inlet.**
- **Use of lay-flat hose with the strainer is appropriate only when using the jet siphon for transfer to a non-pressurized tank, or for dewatering.**

⚠CAUTION **Changing flows or charging the jet siphon can cause the strainer to shift as hoses stretch, straighten, and become pressurized. Injury can result from shifting hoses or loss of water supply from tank damage. Tie off the strainer to a robust object before initiating flow. Charge the hose slowly and avoid abrupt changes in fire flow.**

Another use for the jet siphon is to drive water transfer on its own without suction applied to the LDH hose. This method is used in water shuttle operations to transfer from one portable tank to another. Figure 5.2B estimates the total tank to tank flow rate driven by the jet siphon for 2 adjacent tanks on level ground with a single 10 ft long 6" hard suction hose. Performance will be reduced with additional hose length and/or elevation. The net transfer flow rate is the total flow rate minus the jet siphon flow rate.

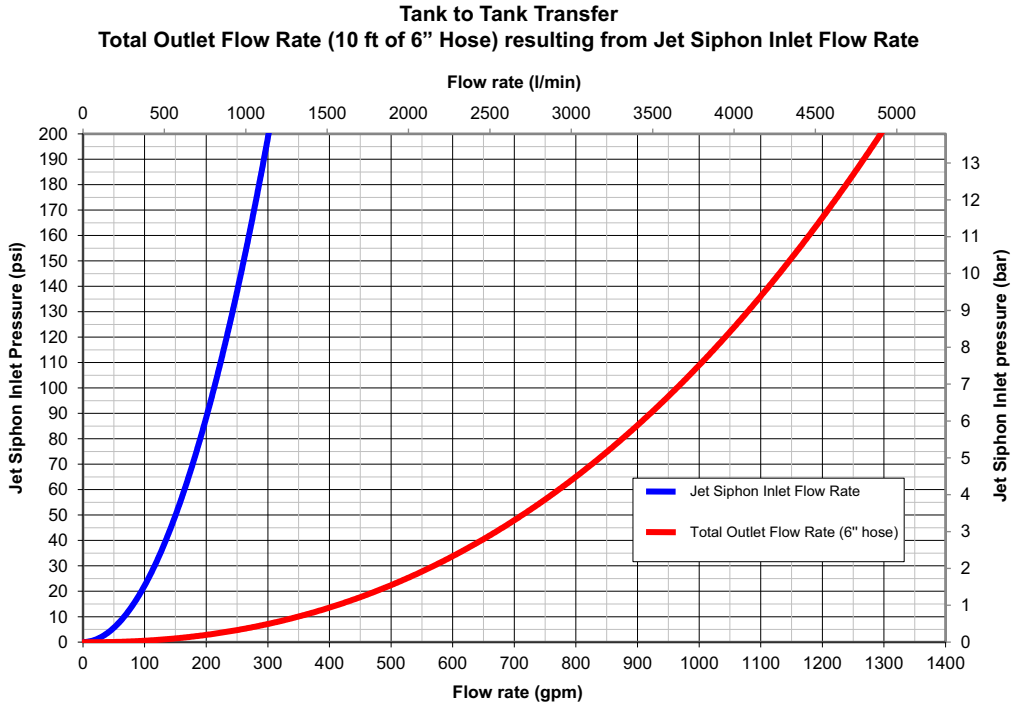


Figure 5.2B

6.0 USE WITH FLOAT

The flotation device (optional on Barrel Strainer) allows the strainer to collect clean water from ponds, lakes, and rivers. With the float installed, the strainer inlet hangs below the water level to avoid sucking surface air and bottom debris. The float is capable of supporting up to 30 ft of hose to extend well beyond safety ledges of residential ponds. The float nests compactly over the strainer for storage. Disabling the swinging action of the float pivot will change the buoyancy, resulting in loss of prime.

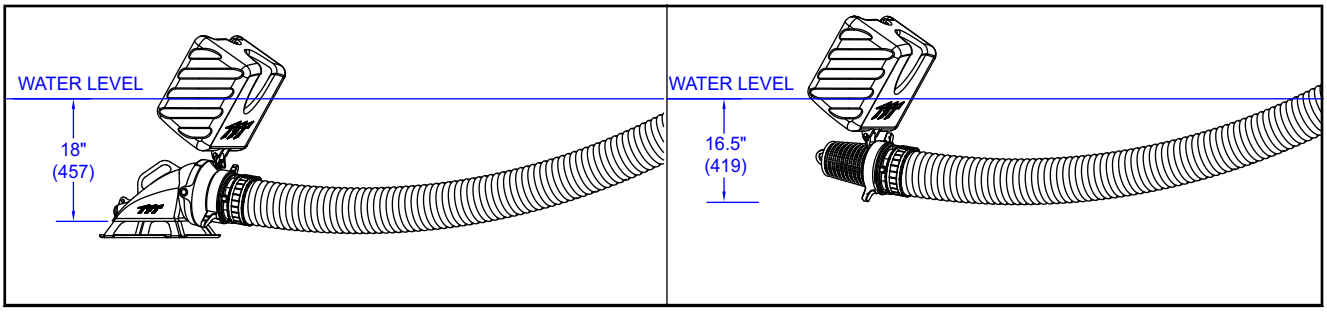
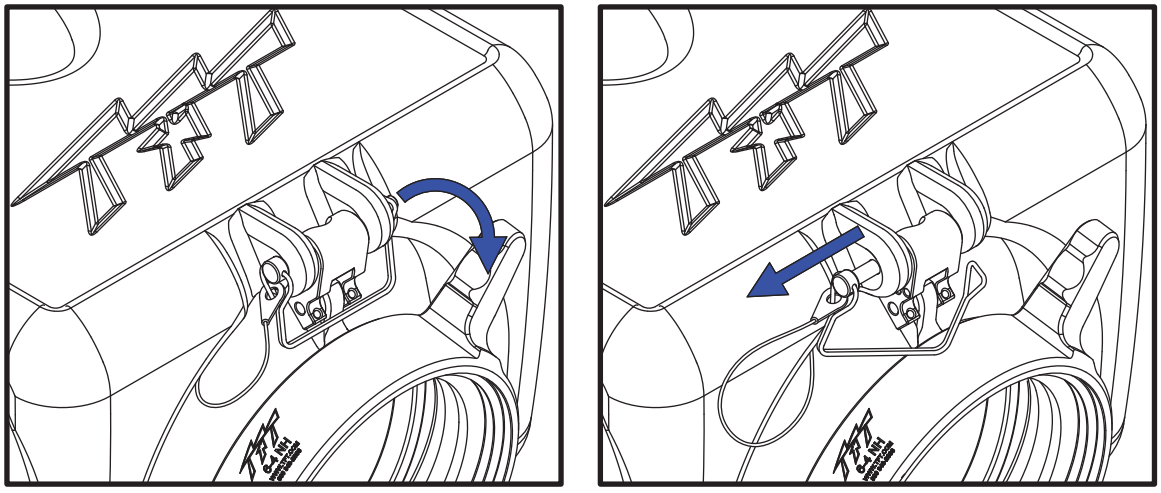


Figure 6.0

6.1 FLOAT REMOVAL

It is not necessary to remove the float when using the strainer for low level use. However, a tethered latching pin allows the float to be removed or installed instantly if desired. To remove the float, unlatch the pin and slide it out.



UNLATCH PIN **SLIDE PIN OUT**

Figure 6.1

7.0 WARRANTY

Task Force Tips LLC, 3701 Innovation Way, Valparaiso, Indiana 46383-9327 USA (“TFT”) warrants to the original purchaser of its products (“equipment”), and to anyone to whom it is transferred, that the equipment shall be free from defects in material and workmanship during the five (5) year period from the date of purchase for mechanical components, and the two (2) year period from the date of purchase for electrical components. TFT’s obligation under this warranty is specifically limited to replacing or repairing the equipment (or its parts) which are shown by TFT’s examination to be in a defective condition attributable to TFT. To qualify for this limited warranty, the claimant must return the equipment to TFT, at 3701 Innovation Way, Valparaiso, Indiana 46383-9327 USA, within a reasonable time after discovery of the defect. TFT will examine the equipment. If TFT determines that there is a defect attributable to it, TFT will correct the problem within a reasonable time. If the equipment is covered by this limited warranty, TFT will assume the expenses of repair.

If any defect attributable to TFT under this limited warranty cannot be reasonably cured by repair or replacement, TFT may elect to refund the purchase price of the equipment, less reasonable depreciation, in complete discharge of its obligations under this limited warranty. If TFT makes this election, claimant shall return the equipment to TFT free and clear of any liens and encumbrances.

This is a limited warranty. The original purchaser of the equipment, any person to whom it is transferred, and any person who is an intended or unintended beneficiary of the equipment, shall not be entitled to recover from TFT any consequential or incidental damages for injury to person and/or property resulting from any defective equipment manufactured or assembled by TFT.

It is agreed and understood that the price stated for the equipment is in part consideration for limiting TFT’s liability. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.

TFT shall have no obligation under this limited warranty if the equipment is, or has been, misused or neglected (including failure to provide reasonable maintenance) or if there have been accidents to the equipment or if it has been repaired or altered by someone else.

THIS IS A LIMITED EXPRESS WARRANTY ONLY. TFT EXPRESSLY DISCLAIMS WITH RESPECT TO THE EQUIPMENT ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND ALL IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. THERE IS NO WARRANTY OF ANY NATURE MADE BY TFT BEYOND THAT STATED IN THIS DOCUMENT.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

8.0 MAINTENANCE

The TFT strainer should be disconnected, cleaned, and visually inspected at least twice annually, or as water quality and use may require. Moving parts such as the pivoting outlet and couplings should be checked for smooth and free operation.

As needed, the spherical pivot surface of the strainer body should be cleaned and coated lightly with a silicone-based grease such as Dow Corning 112. Wipe of excess grease as only a thin film of grease is needed to overcome friction.

Any scrapes that expose bare aluminum should be cleaned and touched up with enamel paint such as Rust-Oleum. Replace any missing or damaged parts before returning to service.

Prior to reassembly, fastener threads should be cleaned and coated with a stripe of Loctite 242 (blue) removable thread locker to prevent loosening over time.

8.1 SERVICE TESTING

In accordance with NFPA 1962, equipment must be tested a minimum of annually. Units failing any part of this test must be removed from service, repaired and retested upon completion of the repair.

8.2 REPAIR

Factory service is available. Factory serviced equipment is repaired by experienced technicians, wet tested to original specifications, and promptly returned. Call TFT service department at 1-800-348-2686 to troubleshoot and, if needed, directions for return. A return for service form can also be obtained at tft.com/Support/Returning-an-Item-for-Service.

Repair parts and service procedures are available for those wishing to perform their own repairs. Task Force Tips assumes no liability for damage to equipment or injury to personnel that is a result of user service. Contact the factory or visit the web site at tft.com for parts lists, exploded views, test procedures and troubleshooting guides.

Performance tests shall be conducted on the equipment after a repair, or anytime a problem is reported to verify operation in accordance with TFT test procedures. Consult factory for the procedure that corresponds to the model and serial number of the equipment. Any equipment which fails the related test criteria should be removed from service immediately. Troubleshooting guides are available with each test procedure or equipment can be returned to the factory for service and testing.

⚠WARNING **It is the responsibility of service technicians to ensure the use of appropriate protective clothing and equipment. The chosen protective clothing and equipment must provide protection from potential hazards users may encounter while servicing equipment. Requirements for protective clothing and equipment are determined by the Authority Having Jurisdiction (AHJ).**

⚠CAUTION **Any alterations to the product or its markings could diminish safety and constitutes a misuse of this product.**

NOTICE **All replacement parts must be obtained from the manufacturer to assure proper performance and operation of the device.**

9.0 EXPLODED VIEWS AND PARTS LISTS

Exploded views and part lists are available at tft.com/serial-number.

10.0 OPERATION AND INSPECTION CHECKLIST

BEFORE EACH USE, the device must be inspected to this checklist:

1. There is no obvious damage such as missing, broken or loose parts, damaged labels, etc.
2. The waterway is clear of obstructions.
3. Coupling is tight and leak free.

BEFORE BEING PLACED BACK IN SERVICE, the device must be inspected to this check list:

1. There are no broken or missing parts.
2. There is no obvious damage to the device that could impair operation (e.g. dents, cracks, corrosion, or other defects).
3. The thread and gasket are in good condition.
4. The waterway is clear of obstructions.
5. Device is clean and markings are legible.
6. Coupling is tightened properly.

⚠WARNING **Equipment failing any part of the checklist is unsafe for use and must have the problem corrected before use or being placed back into service. Operating equipment that has failed the checklist is a misuse of this equipment.**