PENTAIR

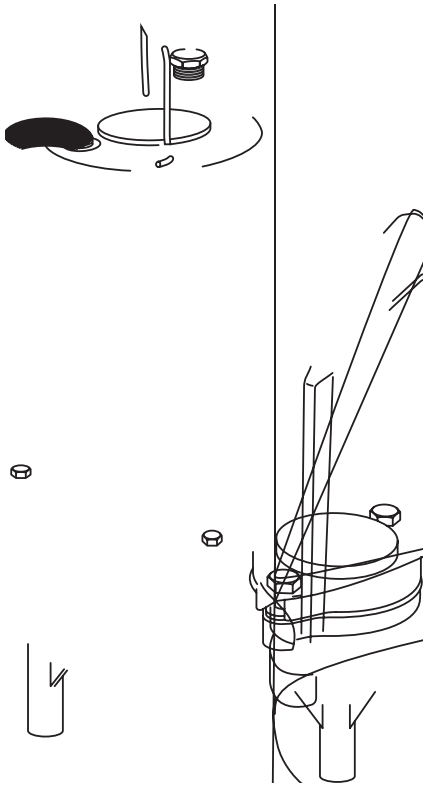
MYERS®

INSTALLATION AND
OPERATOR'S MANUAL

MSK60 Submersible Sewage Ejector Pump

INSTALLATION ET MANUEL DE
L'OP RATEUR

Pompe submersible d'eaux d'egout MSK60



Installation/Operation/Parts
For further operating, installation, or maintenance assistance:

Call 1-888-987-8677
English . . . . . .Pages 2-10

Installation/Fonctionnement/Pièces
Pour plus de renseignements concernant l'utilisation, l'installation ou l'entretien,

Composer le 1 (888) 987-8677
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293 WRIGHT STREET, DELAVAN, WI 53115 WWW.FEMYERS.COM
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23833A707 (05/23/16)

Important Safety Instructions

- This manual contains important instructions that should be followed during installation, operation, and maintenance of the product. Save this manual for future reference.

⚠ This is the safety alert symbol. When you see this symbol on your pump or in this manual, look for one of the following signal words and be alert to the potential for personal injury!

⚠ DANGER indicates a hazard which, if not avoided, result in death or serious injury.

⚠ WARNING indicates a hazard which, if not avoided, result in death or serious injury.

⚠ CAUTION indicates a hazard which, if not avoided, result in minor or moderate injury.

NOTICE addresses practices not related to personal injury.

The manufacturer cannot anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and the tags and decals affixed to the unit are, therefore, not all-inclusive. If you use a procedure or operating technique that the manufacturer does not specifically recommend, you must satisfy yourself that it is safe for you and others. You must also make sure that the procedure or operating technique that you choose does not render the system unsafe.

Electrically powered sewage pumps normally give many years of trouble-free service when correctly installed, maintained, and used. However, unusual circumstances (interruption of power to the pump, large solids in the sump, flooding that exceeds the pump's capacity, electrical or mechanical failure in the pump, etc.) may prevent your pump from functioning normally. To prevent possible damage, consult your dealer about installing a secondary sewage pump or a high water alarm. See *T* in this manual for information about common sewage pump problems and remedies. For more information, see your retailer, call HYDROMATIC® customer service at 1-888-957-8677 or visit our web site at hydromatic.com.

⚠ WARNING . Shock can cause serious injury or death. Failure to follow the warnings below can result in fatal electric shock.

⚠ WARNING . Motors can operate at high temperatures. Do not touch an operating motor. To do so can cause personal injury.

C

5. . Septic tank must be vented in accordance with local plumbing codes.

   Do not smoke or use sparkable electrical devices or flame in a septic (gaseous) or possible septic sump.

   If a septic sump condition exists and if entry into sump is necessary, then (1) provide proper safety precautions per OSHA requirements and (2) do not enter sump until these precautions are strictly adhered to.

   Do not install pump in location classified as hazardous per N.E.C., ANSI/NFPA 70- 2001.
6. Know the pump application, limitations and potential hazards.
7. Wear safety glasses at all times when working with the pump.
8. Keep the work area clean, uncluttered and properly lighted - secure all unused tools and equipment.
9. Keep visitors at a safe distance from working area.
10. Make the workshop child-proof - with padlocks, master switches, and by removing starter keys.
11. Release all pressure within the system before servicing any component.
12. Provide a means of pressure relief for pumps whose discharge line can be shut-off or obstructed.
13. Periodically inspect the pump and system components. Perform routine maintenance as required.
14. Drain all the liquid from the system before servicing.

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⚠ WARNING This product and related accessories contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Installation

Thank you for purchasing this HYDROMATIC® pump. To help ensure years of trouble-free operation, please read the manual carefully.

Before installation, check your local electrical and plumbing codes. A typical sewage pump installation is shown below.

Cord Lift Warning

⚠ WARNING

1. Attempting to lift or support the pump by the power cord can damage cord and cord connections, expose bare wires, and cause a fire or electrical shock.
2. Use handle on top of pump for all lifting or lowering of pump. Disconnect the power to the pump before doing any work on it or attempting to remove it from the pit.
3. Lifting or supporting the pump by the power cord will void the warranty.

1. Provide properly sized sump (see *S*, ~~~).
2. Do not set pump directly on the bottom of sump pit if it is not solid. Raise the pump by using bricks or concrete blocks underneath it.
3. Make sure sump is free of string, cloth, nails, gravel, etc. before installing pump.
4. Do not remove ground pin from electrical plug.
5. Do not use an extension cord to operate this pump.
6. For proper automatic operation, make sure the pump power cord is plugged into the piggyback receptacle on the switch cord. Three phase models must be properly connected to a suitable control panel.

   Do not cut, crimp, or bend single phase switch power cord (**15**). The vent tube needs to "breathe" for proper operation of switch. This may cause pump failure and void warranty.
7. Use steel or plastic pipe for all connecting lines between pump and sewer outlet.

   NOTICE: Some city regulations do not allow installing a pump with plastic pipe. Check local regulations.
8. Use PTFE pipe thread sealant tape on pipe connections. Do not use ordinary pipe joint compound on plastic pipe or pump. Pipe joint compound can attack plastics and damage pump.
9. In applications where the pump may sit idle for months at a time, it is recommended that the pump(s) be cycled every month to ensure the pumping system is working properly when needed.
10. A check valve should be installed horizontally in discharge pipe.
11. The optional Hydromatic Q Alert is an audible alarm system for high water conditions. It should be installed in every sump for greater protection.

    NOTICE: Q Alert is for indoor use only. Other Q Alarm and control panels are available for outdoor use. Contact your HYDROMD1vailable for outdoor B.er r4bT0ref 1.83all c9rmv Do not sU

Checking motor stator

Remove plug (**21**) from top of housing (**1**) and pour oil into a clean glass container. There are approximately two quarts of oil in the motor housing. If oil is clear, it will indicate motor is not burned and there has been no water leak into the motor. If oil is black, it will indicate a burned stator. If oil is cloudy, it will indicate water in motor oil, so all seals should be replaced.

Remove bolts (**17**) to separate volute case (**12**) from motor housing. Remove O-ring (**18**) and seal plate (**11**) from motor housing. Remove bolts to separate motor-stator from rotor. If stator is visibly burned, it must be replaced. If stator is not burned but the oil shows signs of water, stator can be checked with the ohmmeter to see if it can be used.

Ground check

Set ohmmeter scale to R X 1 scale and check meter by putting both meter leads together and adjusting the needle knob until meter reads zero. If meter cannot be adjusted to zero, the batteries in meter must be replaced.

NOTICE: Always reset meter to zero [0] when going to a new scale before making any measurements.

If wire is OK, meter needle will go to near zero and stay there. If meter needle does not move, the wire has an open and the wire must be repaired or replaced.

Connect one meter lead to one blade terminal of stator and touch other meter lead to motor stator housing (**4**). If the resistance to the ground is less than 500,000 ohms, stator must be dried out before retesting. To dry out, place pump in 220 degree oven for four hours. Recheck after motor cools.

If motor is thoroughly dry, needle of ohmmeter will not move on the ground check. This indicates a reading of 50 megohms or higher. When making the ground check, if the needle goes to zero, the motor has a wire touching the stator shell at some place and the stator will have to be replaced.

NOTICE: If motor shows a satisfactory ground check then the winding resistance must be checked.

Winding resistance test

Use ohmmeter with scale set to R X 1 scale. On this scale, meter reads directly in ohms. Recheck to zero [0] before making a reading on the winding.

NOTICE: If water is found in motor, seal should be replaced.

Replacing seal

Hold rotor. On 3 phase motors only, remove the impeller screw and impeller washer. Unscrew impeller (**13**). Tap on end of shaft with plastic or rubber hammer. This will push the rotating seal (**10**) from shaft and also push lower bearing from seal plate. Clean seal plate (**11**) and motor housing (**1**) thoroughly. All sand and dirt must be removed. Remove stationary ceramic seat of seal (**10**) from seal plate. Push new ceramic seat into seal plate. Use O-ring Lube on rubber ring. Replace rotor in seal plate (**11**). Use care in putting shaft through ceramic seat to be sure it is not chipped. Inspect seal after shaft is in place. If seal has been chipped it must be replaced. Do not replace rotating part of seal until the balance of the pump is assembled.

Bearings

When the pump rotor has been removed, check bearings before replacing. If bearings are rusted or rough when turned, they should be replaced. When installing a replacement bearing, press only on the inner face. If a press is not available, bearings can be tapped on, using a sleeve that bears only on the inner face.

NOTICE: Never pound on the outer face of the bearing as this will cause bearing damage.

Reassembly

1. Push the new rotor shaft and ball bearing assembly into the seal plate. (Note that the replacement rotor must be of the same manufacture as the existing stator, or vice versa.) Reassemble the motor (**4**) to the seal plate (**11**) with the four long cap screws. Be sure to tighten down the bolts evenly and firmly to prevent cocking of the stator. An uneven assembly can cause the rotor to rub the motor causing the motor to short.
2. Press the new ceramic seal (**10**) in place with the rubber ring facing the impeller. This should have a thin oil (dielectric, same as in motor housing) coating.

   NOTICE: Ceramic must be kept clean. Any dirt will cause seal failure.
3. Start the impeller (**13**) on the shaft one to two turns; then, add a drop of [2]Loctite® #243 to the impeller threads and screw the impeller hand tight. The impeller will force the ceramic seal into position. The shaft should be free of dirt, grease, etc., or the Loctite® will not hold as designed. Replace impeller washer and impeller screw to the shaft on three phase models.

[2] Henkel Corporation, Germany

   NOTICE: Loctite® overrun onto the seal or bearing will result in shaft seizure.

[illegible]	[illegible] ( )	[illegible]
Motor not running	Motor protector tripped.	

1	Cord Nut (All 1Ø)	1	000750051
2	Ring Seal (All 1Ø)	1	001390141
3	Wire Terminal (All 1Ø)	1	060000821
	Wire Terminal (All 1Ø)	2	060000811
	Wire Connector (All 3Ø)	4	000730011
4	Motor 115/1/60	1	133711001
	Motor 230/1/60	1	133721001
	Motor 200/1/60	1	133731001
	Motor 200/3/60	1	108343001
	Motor 230-460/3/60	1	108341001
	Motor 380/3/60	1	108342001
	Motor 575/3/60	1	108787001
5	Clamp Ring	1	056770003
6	Flathead Screw	3	009840011
7	Discharge Flange 2” (STD)	1	002080002
	Discharge Flange 3” (OPT)	1	002070002
8	Capscrew (2” Discharge)	2	19103A052
	Capscrew (3” Discharge)	2	19103A043
9	Gasket	1	003240011Ref.DescriptionQty.Part Number10Shaft Seal1014525A01011Seal Plate1068460Q1Volute1068180Q13I

LIMITED WARRANTY

Myers® warrants to the original consumer purchaser ("Purchaser" or "You") of the products listed below, that they will be free from defects in material and workmanship for the Warranty Period shown below.

Product	Warranty Period whichever occurs first:
Jet pumps, small centrifugal pumps, submersible pumps and related accessories	12 months from date of original installation, or 18 months from date of manufacture
Fibrewound Tanks	5 years from date of original installation
Steel Pressure Tanks	5 years from date of original installation
Sump/Sewage/Effluent Products	12 months from date of original installation, or 36 months from date of manufacture
Battery Backup Units	
MBSP-2, MBSP-2C	12 months from date of original installation, or 18 months from date of manufacture
MBSP-3, MBSP-3C	24 months from date of original installation, or 30 months from date of manufacture
Wastewater Solids Handling Pumps	12 months from date of shipment from factory or 18 months from date of manufacture

Our warranty applies only where such products are used in compliance with the requirements of the applicable product catalog and/or manuals. For additional information, please refer to the applicable standard limited warranty featured in the product manual.

Our warranty will not apply to any product that, in our sole judgement, has been subject to negligence, misapplication, improper installation, or improper maintenance. Without limiting the foregoing, operating a three phase motor with single phase power through a phase converter will void the warranty. Note also that three phase motors must be protected by three-leg, ambient compensated, extra-quick trip overload relays of the recommended size or the warranty is void.

Your only remedy, and MYERS's only duty, is that MYERS repair or replace defective products (at MYERS's choice). You must pay all labor and shipping charges associated with this warranty and must request warranty service through the installing dealer as soon as a problem is discovered. No request for service will be accepted if received after the Warranty Period has expired. This warranty is not transferable.

MYERS SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, OR CONTINGENT DAMAGES WHATSOEVER.

THE FOREGOING LIMITED WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE FOREGOING LIMITED WARRANTIES SHALL NOT EXTEND BEYOND THE DURATION PROVIDED HEREIN.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on the duration of an implied warranty, so the above limitations or exclusions may not apply to You. This warranty gives You specific legal rights and You may also have other rights which vary from state to state.

This Limited Warranty is effective April 1, 2014 and replaces all undated warranties and warranties dated before April 1, 2014.

MYERS
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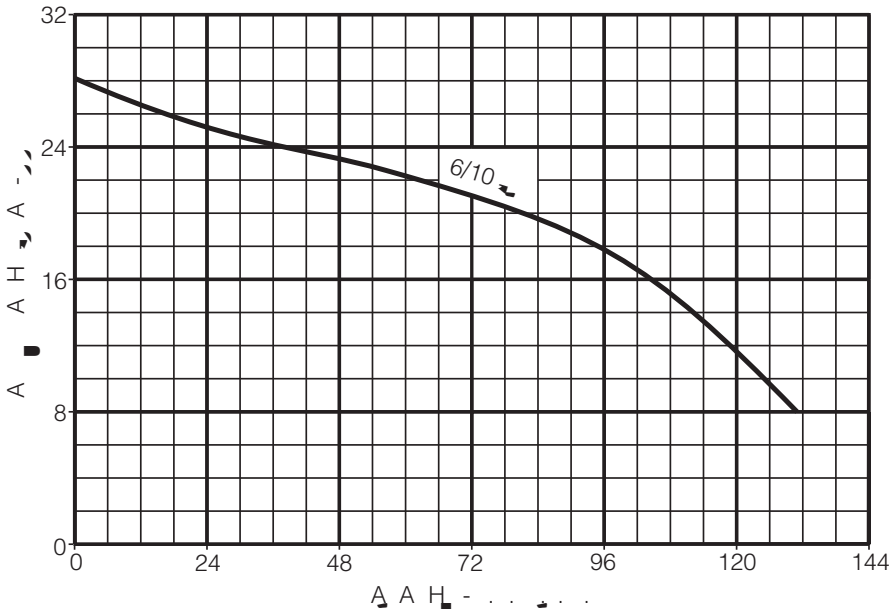
In Canada: 490 Pinebush Road, Unit 4, Cambridge, Ontario N1T 0A5
Phone: 800-363-7867 Fax: 888-606-5484

Product Specifications

Model Family	MSK60
Typical Application:	Sewage, dewatering
Capacities:	up to 130 GPM (8.2 LPS)
Heads:	up to 28 ft (8.5 m)
Electrical:	115V, 1ø, 12.0 FLA, 60Hz; 208V, 1ø, 6.9 FLA, 60Hz; 230V, 1ø, 6.0 FLA, 60Hz; 208V, 3ø, 2.9 FLA, 60Hz; 230V, 3ø, 2.5 FLA, 60Hz; 460V, 3ø, 1.3 FLA, 60Hz; 575V, 3ø, 1.04 FLA, 60Hz
Motor:	(single phase) - 6/10 HP split phase with thermal overload protection, 1750 RPM; (three phase) - 6/10 HP polyphase, 1750 RPM
Intermittent Liquid Temperature:	140°F (60°C)
Minimum Recommended Sump Diameter:	Simplex = 24" (609.6 mm); Duplex = 36" (914.4 mm)
Automatic Operation:	Diaphragm pressure switch (single phase only, manual available)
Materials of Construction:	Class 30 cast iron
Impeller:	Class 30 cast iron two-vane nonclog
Discharge Size:	2" NPT (50.8 mm); 3" NPT (76.2 mm) optional
Solids Handling:	2" (50.8 mm)
Power Cord:	1ø, 115V - 10', STW-A (20' optional); other 1ø and all 3ø - 20', STW-A

Performance Curve



Directives de sécurité importantes

– Ce manuel renferme d'importantes directives qu'il faut suivre durant l'installation et l'entretien de la pompe. Conservez ce manuel pour référence future.

Ce symbole ⚠ indique qu'il faut être prudent. Lorsque ce symbole apparaît sur la pompe ou dans cette Notice, rechercher une des mises en garde qui suivent, car elles indiquent un potentiel de blessures corporelles!

Le mot signal

2. Ne brancher cette fiche que dans une prise de courant adéquatement mise à la terre.
3. Tout le câblage doit être effectué par un électricien qualifié.
4. Protéger le cordon électrique contre les objets tranchants, les surfaces chaudes, l'huile et les produits chimiques. Observer le [illegible] indiquées ci-dessous.
5. [illegible]. Le système septique doit bénéficier d'une aération conformément aux codes de plomberie locaux.

   Ne fumez pas, n'utilisez pas d'appareils électriques à étincelle ou de flamme dans une fosse septique (gazeuse) ou si le puisard est susceptible d'être septique.

   S'il y a possibilité que le puisard soit septique et que l'on doive y entrer : (1) observez les précautions de sécurité appropriées conformément aux exigences OSHA et (2) n'entrez pas dans la fosse tant que ces précautions n'ont pas été strictement respectées.

   N'installez pas la pompe dans un endroit considéré comme dangereux par la norme ANSI/NFPA 70-2001 du Code national de l'électricité.
6. Avant tout, il faut savoir ce que la pompe peut faire, ses limites et les dangers potentiels que présentent son utilisation.
7. Toujours porter des lunettes de sécurité lorsque l'on intervient sur une pompe.
8. Toujours garder la zone de travail propre, débarrassée de tout débris et bien éclairée - enlever tous les outils et tout le matériel dont on ne se sert pas.
9. Ne pas laisser les visiteurs s'approcher de la zone de travail.
10. Empêcher les enfants d'accéder à l'atelier en posant des cadenas, un disjoncteur général et en enlevant les clés des démarreurs.
11. Dissiper toute la pression du système avant d'intervenir sur un élément.
12. Si la conduite de refoulement de la pompe peut être fermée avec un robinet ou si elle risque d'être obstruée, prévoir un moyen de dissiper la pression.
13. Périodiquement, inspecter le puisard et tous les éléments de la pompe et du système. Enlever tous les débris et tous les corps étrangers du puisard. Procéder à un entretien périodique au besoin.
14. Vider toute l'eau du système avant d'intervenir sur le système.

65 [illegible]

⚠ AVERTISSEMENT Ce produit et les accessoires connexes contiennent des produits chimiques reconnus dans l'État de la Californie comme pouvant provoquer des cancers, des anomalies congénitales ou d'autres dangers relatifs à la reproduction.

Installation

Nous vous remercions d'avoir acheté cette pompe HYDROMATIC®. Pour vous assurer des années de fonctionnement optimal, veuillez lire ce manuel attentivement.

Avant l'installation, vérifiez les codes d'électricité et de plomberie locaux. Les installations typiques des pompes d'eaux d'égout sont illustrées à la page suivante.

Avertissement concernant le levage par le cordon

⚠ AVERTISSEMENT

[illegible]

1. Essayer de lever ou tenir la pompe par son cordon d'alimentation peut endommager le cordon et les raccordements de celui-ci, mettre les fils à nu et provoquer un incendie ou un choc électrique.
2. Utilisez la poignée située sur le dessus de la pompe pour tout levage ou abaissement de la pompe. Coupez l'alimentation électrique de la pompe avant de travailler dessus ou d'essayer de la retirer de la fosse.
3. Lever ou tenir la pompe par son cordon d'alimentation annule la garantie.

1. Fournissez une fosse aux dimensions adéquates (reportez-vous aux C) pour le réservoir d'eaux d'égout.
2. N'installez pas la pompe directement sur le fond du puisard, si celui-ci n'est pas solide. Surélevez la pompe en utilisant des briques ou des blocs de béton.
3.

AVIS : Lisez toutes les instructions avant de remplacer toute pièce. Déconnectez toujours la pompe de la source d'alimentation avant un entretien/une réparation.

Les nombres entre parenthèses, tels que (**3**) ou (**16**), se rapportent aux numéros d'article utilisés dans le schéma *P*

Remplacement de l'interrupteur à diaphragme

Retirez la vis (**14**) du boîtier de l'interrupteur (**15**). Remplacez

Roulements

Une fois le rotor de la pompe enlevé, vérifiez les roulements avant de le remettre en place. Si les roulements sont rouillés ou ont du mal à tourner, ils doivent être remplacés. Lorsque vous installez un roulement de rechange, appuyez uniquement sur sa face intérieure.

AVIS : Ne tapez jamais sur la face extérieure du roulement, car cela l'endommagerait.

Remontage

1. Poussez le nouvel ensemble d'arbre de rotor et de roulement à billes pour l'insérer dans la plaque d'étanchéité. (Notez que le rotor de rechange doit être de la même marque que le stator existant, et vice-versa.) Remontez le moteur (**4**) sur la plaque d'étanchéité (**11**) avec les quatre longues vis d'assemblage. Veillez à serrer fermement et uniformément les boulons pour éviter toute inclinaison du stator. En cas de montage non uniforme, le rotor peut frôler le moteur et

⚠ AVERTISSEMENT [illegible] Peut provoquer des chocs

Pièces de rechange

Caractéristiques du produit

	MSK60
Application typique	Eaux d'égout, capacité élevée
Capacité :	jusqu'à 130 GPM (8.2 LPS)
Hauteurs d'eau :	jusqu'à 28 pi (8.5 m)
Système électrique :	115V, 1ø, 12.0 FLA, 60Hz; 208V, 1ø, 6.9 FLA, 60Hz; 230V, 1ø, 6.0 FLA, 60Hz; 208V, 3ø, 2.9 FLA, 60Hz; 230V, 3ø, 2.5 FLA, 60Hz; 460V, 3ø, 1.3 FLA, 60Hz; 575V, 3ø, 1.04 FLA, 60Hz
Moteur :	(1ø) - 6/10 cv décalage de phase avec la surcharge thermique, 1 750 tr / min; (3ø) - 6/10 cv polyphasés, 1 750 tr / min
Température de liquide intermittente :	140°F (60°C)
Diamètre de fosse minimal recommandé :	Simplex = 24 po (609.6 mm); Duplex = 36 po (914.4 mm)
Fonctionnement automatique :	Pressostat à membrane (une seule phase, d'emploi disponibles)
Matériaux de construction :	Fonte de classe 30
Impulseur :	Fonte de classe 30, deux palettes
Dimension du refoulement :	2 po NPT (50.8 mm); 3 po NPT (76.2 mm) opt.
Gestion des matières solides :	2 po (50.8 mm)
Cordon d'alimentation :	1ø, 115V - 10 pi, STW-A (20 pi opt.); outre 1ø et 3ø - 20 pi, STW-A

Courbe de performance2nsion du refoaphii9 disponibles)