

Star Water Systems Table of Contents

SW0026
0915
Supersedes 0215

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Submersible Utility Pump



- 115V thermal overload protected PSC motor
- Environmentally friendly, oil-free motor runs cooler and lasts longer
- Thermoplastic body resists corrosion, stress and heat
- Vent hole prevents air lock
- 3/4" male discharge with garden hose adapter for easy hookup
- Pumps floor dry to 3/8"; fits into 7" opening
- 10' double-sealed cord standard on UTHAL.
- 1-year limited warranty



UTHALC
1/6 HP
2STHALC
1/4 HP

Model	Discharge Pipe Size	Gallons Per Hour Lift Capacity			UPC #
		5 ft.	10 ft.	15 ft.	
UTHALC	1"	900	660	360	054757000912
2STHALC	1-1/4"	1470	1150	800	054757053338

1/4 HP Sensor Utility Pump



- Automatic operation: Runs when water is present, shuts off when dry
- Environmentally friendly, oil-free motor runs cooler and lasts longer
- Thermoplastic body resists corrosion, stress and heat
- Vent hole prevents air lock
- 1" male discharge with 1-1/4" female adapter and garden hose adapter for easy hookup
- Pumps floor dry to 1/8"; fits into 7" opening
- 9' double-sealed cord standard
- 1-year limited warranty



Automatic Operation

2SUEL
1/4 HP

Model	HP	Discharge Pipe Size	Gallons Per Hour Lift Capacity			UPC #
			5 ft.	10 ft.	15 ft.	
2SUEL	1/4	1-1/4"	1800	1320	720	054757053338



1/2 HP Hi-Volume Farm/Contractor Pump

- Moves water fast
- Ideal for rental, farm and contractor applications
- 1/2 HP, 115V PSC motor, 6.0 amps
- Thermoplastic body resists corrosion, stress and heat.
- Built-in thermal overload protection.
- Vent hole prevents air lock.
- 2" NPT discharge with barb hose adapter - Pumps to 1"
- 9' double-sealed cord
- 1-year limited warranty



55TH
1/2 HP

Model	HP	Discharge Pipe Size	Gallons Per Hour Lift Capacity					UPC #
			5 ft.	10 ft.	15 ft.	20 ft.	30 ft.	
55TH	1/2	2"	3318	2808	2208	1482	300	054757054250

Household and RV Pumps



Featuring the Puddle-Vac for easy water removal!

- Features cast aluminum pump head to prevent cross-threading
- 115V, 60 Hz with 3-prong, grounded plug (HPP360)
- Moves up to 360 gallons per hour -- Lifts water from 15 ft. below to 30 ft. above
- Includes one extra impeller and gasket
- and one 6 ft. hose with strainer
- Use to empty water beds, washing machines, or remove water from pool covers
- Transfers water for RV holding tanks, stock tanks and more
- 1-year limited warranty



HPP360



HPP360 - 115V
HPP12V - 12V*

*HPP12V includes 6' battery clip leads (not shown)

Model	Volts	Gallons Per Hour Lift Capacity				UPC #
		5 ft.	10 ft.	15 ft.	20 ft.	
HPP360	115V	330	320	310	290	054757046941
HPP12V *	12V	275	240	200	150	054757054069

(*) HPP12V includes 6 ft. battery clip leads

PumpMate® Portable Electric Utility Pump



CS511

- Overload protected motor for long life
- Boosts line pressure by as much as 40 PSI for power washing
- Pump water from flooded basements, empty boats, or water lawns and gardens
- 1/2 HP, 115V
- Cast iron pump housing for long life.
- Includes garden hose adapters and extra set of brushes
- Use for lawn sprinkling, power washing and water transfer
- 1-year limited warranty



Model	Gallons Per Hour Lift Capacity			UPC #
	5 ft.	10 ft.	15 ft.	
CS511	1286	1230	1166	054757055011

Maximum Case Pressure 100 PSI

Condensate Pump



COND1

- Bearingless Sealed Motor for longer life.
- Greater Reliability.
- Low Profile (10" x 5" x 4.75" height).
- Handles condensate up to 150° F.
- 3/8" ID discharge with check valve included.
- ABS Plastic Housing for strength.
- Integrated Safety switch included.
- 6' power cord.
- 1 year limited warranty.



Model	Gallons Per Hour					UPC #
	3 ft.	6 ft.	9 ft.	12 ft.	15 ft.	
COND1	76	68	60	43	21	054757071875

1/4 & 1/3 HP Submersible Sump Pump



2SPHAL 1/4 HP

- 1/4 HP or 1/3 HP, 115V PSC motor, 2.2 amps
- Environmentally friendly, oil-free motor runs cooler and lasts longer
- Thermoplastic body resists corrosion, stress and heat
- Built-in thermal overload protection
- Vent relief port prevents air lock
- 1-1/4" NPT discharge
- 9' double-sealed cord
- 1-year limited warranty



Model	HP	Discharge Pipe Size	Gallons Per Hour Lift Capacity			UPC #
			5 ft.	10 ft.	15 ft.	
2SPHAL	1/4	1-1/4"	1800	1320	720	054757002312

Uses KH30 Replacement switch



**3USPHC 1/3 HP
5USPHC 1/2 HP**

Submersible Sump Pump

- 1/3 HP or 1/2 HP, 115V energy-efficient motor, 4.6 amps
- Cast aluminum body resists heat
- Built-in thermal overload protection
- Fits in 12 in. sump basin
- 1-1/2" NPT discharge
- 9' double-sealed cord
- 1-year limited warranty



Model	HP	Discharge Pipe Size	Gallons Per Hour Lift Capacity			UPC #
			5 ft.	10 ft.	15 ft.	
3USPHC	1/3	1-1/2"	2,780	2,190	1,500	054757081928
5USPHC	1/2	1-1/2"	3,200	2,710	2,200	054757095499



Streamlined Automatic Submersible Sump Pump

- Streamlined design easily fits into pits as small as 10" in diameter.
- Non-clogging vortex impeller effectively removes lint and debris
- Environmentally friendly, oil-free, high efficiency motor runs cooler and lasts longer
- Thermoplastic and stainless steel construction
- Thermal overload protection keeps motor from overheating.
- Waterproof cord with 3-prong grounded plug for easy replacement of pedestal pump in a wet environment.
- 1-1/2" NPT discharge - passes 3/8" solids.
- 100% water tested before shipment for reliable operation
- 1-year limited warranty.



3SPHL .3 HP
5SPHL .5 HP



Model	HP	Gallons Per Hour Lift Capacity			UPC #
		5 ft.	10 ft.	15 ft.	
3SPHL	.3	2280	1800	840	054757000905
5SPHL	.5	3000	2400	1800	054757037024

(*) Discharge reduces to 1-1/4" with part # KH49

Cast Iron Sump Pump



- Rugged cast iron motor housing for long life
- Highly efficient, overload protected, oil-filled motor
- Standard tethered float switch provides for automatic operation
- Non-clogging vortex impeller effectively removes lint and debris
- All stainless steel hardware
- 1-1/2" NPT discharge - passes 3/8" solids
- 100% tested before shipment for reliable operation
- 1-year limited warranty



3SDHL 1/3 HP

Model	HP	Discharge Pipe Size	Gallons Per Hour Lift Capacity				UPC #
			5 ft.	10 ft.	15 ft.	20 Ft.	
3SDHL	1/3	1-1/2"*	3,000	2,500	2,000	1,500	054757053314

(*) Discharge reduces to 1-1/4" with part # KH49





Cast Iron Sump Pump

- Rugged cast iron motor housing for long life
- Highly efficient, overload protected, oil-filled motor
- Standard tethered float switch provides for automatic operation
- Non-clogging vortex impeller effectively removes lint and debris
- All stainless steel hardware
- 1-1/2" NPT discharge - passes 3/8" solids
- 100% tested before shipment for reliable operation
- 1-year limited warranty



5STS 1/2 HP



Model	HP	Discharge Pipe Size	Gallons Per Hour Lift Capacity				UPC #
			5 ft.	10 ft.	15 ft.	20 Ft.	
5STS	1/2	1-1/2"	3,400	2,850	2,250	1,500	054757066444

(*) Discharge reduces to 1-1/4" with part # KH49



Cast Iron Sump Pump

- Premium vertical switch easily fits into pits as small as 10 inches in diameter
- Rugged cast iron motor housing for long life
- Highly efficient, overload protected, oil-filled motor
- Non-clogging vortex impeller effectively removes lint and debris
- All stainless steel hardware
- 1-1/2" NPT discharge - passes 3/8" solids
- 100% tested before shipment for reliable operation
- 1-year limited warranty



3SVS 1/3 HP

5SEH 1/2 HP

7SEH 3/4 HP

Products may not be exactly as shown



Model	HP	Discharge Pipe Size	Gallons Per Hour Lift Capacity				UPC #
			5 ft.	10 ft.	15 ft.	20 ft.	
3SVS	1/3	1-1/2"*	3,000	2,500	2,000	1,500	054757072490
5SEH	1/2	1-1/2"*	3,400	2,850	2,250	1,500	054757072506
7SEH	3/4	1-1/2"*	4,320	3,200	3,000	2,150	054757053000

(*) Discharge reduces to 1-1/4" with part # KH49

Thermoplastic Column Sump Pump



3CEH

- Open type non-clogging multi-vane impeller
- Heavy duty motor - 115V, 60 cycle, single phase, 1725 RPM
- Thermal overload protection keeps motor from overheating
- Waterproof cord with grounded plug
- Easily adjustable on/off float and rod type switch
- Top suction strainer filters out debris
- Durable shaft securely fits to impeller
- Operates in 130°F water continuously; 150°F intermittently
- Conveniently fits into 12" diameter pit
- 1-year limited warranty



Model	HP	Base	Discharge Pipe Size	Gallons Per Hour Lift Capacity			UPC #
				5 ft.	10 ft.	15 ft.	
3CEH	1/3	Thermoplastic	1-1/4"	3000	2160	600	054757000721

Cast Iron Column Sump Pumps



**3CDH
5CDH**

- Cast iron base for stability and long life
- Open type non-clogging multi-vane impeller
- Heavy duty motor - 115V, 60 cycle, single phase, 1725 RPM
- Thermal overload protection keeps motor from overheating
- Waterproof cord with grounded plug
- Easily adjustable on/off float and rod type switch
- Top suction strainer filters out debris
- Durable shaft securely fits to impeller
- Operates in 130°F water continuously; 150°F intermittently
- Conveniently fits into 12" diameter pit
- 1-year limited warranty



Model	HP	Base	Discharge Pipe Size	Gallons Per Hour Lift Capacity				UPC #
				5 ft.	10 ft.	15 ft.	20 ft.	
3CDH	1/3	Cast Iron	1-1/2" *	3120	2460	720	-	054757000851
5CDH	1/2	Cast Iron	1-1/2" *	3540	3060	2280	1020	054757035129

(*) Discharge reduces to 1-1/4" with part # KH49

Cast Iron Contractor Sump/Effluent Pumps



- Non-clogging vortex impeller passes 1/2" solids
- Corrosion-resistant, powder coated epoxy finish
- .3 HP, 115V, 9.7 amps
- Cast iron switch case, motor and pump housing for long life and quiet operation
- Solid, buoyant float material and stainless steel float switch arm ensure long term reliability
- 1-1/2" NPT discharge to meet commercial code requirements
- Thermal overload protection keeps motor from overheating
- 1-year limited warranty.



3SEHL .3 HP

For unit with cast iron impeller, order Model S1057

Model	HP	Discharge Pipe Size	Gallons Per Hour Lift Capacity			UPC #
			5 ft.	10 ft.	15 ft.	
3SEHL / S1057	.3	1-1/2" *	2580	2040	1140	054757000868

(*) Discharge reduces to 1-1/4" with part # KH49

High Capacity Contractor Sump/Effluent Pump



- 1/2 HP, 115V, 9.4 amps
- Epoxy coated cast iron construction for long life
- Stainless steel components will not rust or corrode
- Thermal overload protection keeps motor from overheating
- Oil-filled, sealed, high efficiency motor for dependable service
- 1-1/2" NPT discharge - passes 1/2" spherical solids
- 100% water tested before shipment for reliable operation
- Temperature rating: 130°F. (54°C.)
- 1-year limited warranty



S1098 1/2 HP

Model	HP	Discharge Pipe Size	Gallons Per Hour Lift Capacity				UPC #
			5 ft.	10 ft.	15 ft.	20 ft.	
S1098	1/2	1-1/2"	4320	3660	2700	1500	054757054137



High Head Contractor Sump/Dewatering Pump

- 1/2 HP, 115V, 10.7 amps
- Epoxy coated cast iron construction for long life
- Stainless steel components will not rust or corrode
- Thermal overload protection keeps motor from overheating
- Oil-filled, sealed, high efficiency motor for dependable service
- Waterproof cord with grounded plug for easy replacement of pedestal pump in a wet environment
- 1-1/2" NPT discharge - passes 5/8" solids
- 100% water tested before shipment for reliable operation
- Temperature rating: 130°F. (54°C.)
- 1-year limited warranty



S1137 1/2 HP



Model	HP	Discharge Pipe Size	Gallons Per Hour Lift Capacity					UPC #
			5 ft.	10 ft.	15 ft.	20 ft.	25 ft.	
S1137	1/2	1-1/2"	5400	4500	3480	2160	480	054757053307



S1104

DRAINMAKER Pumping System

- Install a drain almost *anywhere* for wet bars, sinks, water softeners and more
- Requires no roughed-in plumbing
- No need to break concrete
- Easy to install - no special tools required
- Includes .3 HP drain pump
- 1-1/2" Discharge with non-clog vortex impeller passes 3/8" solids
- Completely automatic
- No filters or screens to clean or replace
- Temperature rating 77° F.
- 1-year limited warranty



Replacement pump model 1104RP

Model	Discharge Height Above Pumping Level	5 ft.	10 ft.	15 ft.	UPC #
	Gallons Per Hour	1740	1320	600	
S1104					054757053413

Crawl Space Pumping System



S1108

- Pre-packaged system eliminates water and moisture from crawl spaces
- System includes automatic pump, hose and tank assembly
- Reduces mold and fungus
- Helps control rodents, slugs, insects and pests
- Helps prevent structural damage from ice formation

For replacement pump, order model 1108RP



Model	HP	Discharge Pipe Size *	Gallons Per Hour Lift Capacity			UPC #
			5 ft.	10 ft.	15 ft.	
S1108	.3	1-1/2"	2580	2040	1140	054757053420

(*) Discharge reduces to 1-1/4" with part # KH49



Silent Sentry® 12 Volt Battery Operated Back-Up Sump Pump

Primary Pump
Not Included

**Compare Features!
SB12DCC**

- Automatic operation for worry-free basement protection
- 10 Amp battery charger with burnout and battery overcharge protection
- Solid state circuitry with regulated self-charger
- Pumps up to 1392 GPH
- 12 volt high efficiency pump
- Automatic 12 volt, DC, solid state control box with complete light, alarm indicators and warning system
- Variable level reliable (Low Voltage) float switch
- Includes all required fittings, check valves & instructions for easy installation
- One year limited warranty

Does your insurance cover basement water damage?

Model	Gallons Per Hour Lift Capacity		UPC #
	5 ft.	10 ft.	
SB12DCC	1380	780	054757037291

Battery and primary pump not included (marine deep cycle battery recommended for longer life, but not required).



Protects basements where home insurance may not.



Basement Protector

- Includes BOTH primary sump pump and 12V backup pump
- Completely assembled and ready to install
- Automatic operation for worry-free basement protection
- 10 Amp battery charger with burnout and battery overcharge protection protects basement longer
- Solid state circuitry with regulated self-charger
- 2,580 GPH - Primary Protection, 1,380 GPH - Backup Protection
- 12 volt high efficiency pump
- Automatic 12 volt, DC, solid state control box with complete light, alarm indicators and warning system
- Fits in 18 in. sump basin
- One year limited warranty



S2-N-1

	Pump Model	Discharge Pipe Size	Gallons Per Hour Lift Capacity			UPC #
			5 ft.	10 ft.	15 ft.	
Backup Pump	SB12DCC	N/A	1380	780	-	054757083519
Primary Pump	3SDHL	1-1/2"	1920	1500	600	



HomeGuard **OPTIMA** EMERGENCY SUMP PUMP BACKUP SYSTEM



Typical Installation
Primary sump pump
not included

S1503

Model S1503 is a high capacity, high efficiency water powered back-up system. With no electricity or batteries required, the S1503 takes over seamlessly when your primary sump system fails.

The S1503 comes fully assembled for fast,

easy and trouble-free installation. The small footprint allows for installation in even the smallest sump pits. With superior performance and discharge capacity, it uses less water and costs less to operate.

The S1503, installed as a back-up system,

does not use any water until the primary system malfunctions or in the case of power failure. Water flow is equivalent to a normal faucet and is required only when the S1503 is operating. Not intended for use as a primary water removal unit.

- No electricity required
- Powered by municipal / city water pressure
- Works during power failures
- No battery to charge
- Use with any sump pump brand

- Pre-assembled
- High-capacity

Model S1503	Total Dynamic Head/Flow per Minute			UPC #
Feet	40 PSI	60 PSI	80 PSI	054757076658
5	12.7	19.0	20.0	
10	12.7	19.0	20.0	
15	7.4	15.0	20.0	
20	2.0	11.1	20.0	
25	-	7.1	15.3	
30	-	3.2	10.9	
35	-	-	6.4	
40	-	-	1.8	
Shut-off Head:	22.0 ft.	34.0 ft.	42.0 ft.	



Pump capacity varies due to: Inlet Water Pressure, Working Water Pressure, Discharge Elevation, Number of Pipe Fittings, Inlet and Outlet Pipe Size, Fluid

Viscosity, Degree of Water Clarity, Water Temperature. The flow rates in the chart are approximate values.

NOTE: Some districts may require a reduced

pressure principle backflow preventer per ASSE Standards 1013. Check Local Codes.



**4EP
Vertical
Float Switch**

.4 HP Submersible Sewage Ejector Pump

- Bottom suction inlet with vortex impeller
- 2" NPT discharge with 2" solids pumping capacity
- Double seal for reliable service and extended life
- High efficiency, .4 HP, 115V, 60 Hz motor
- Environmentally friendly oil-free motor runs cooler and lasts longer
- Thermal overload protects against overheating
- Waterproof power cord with grounded plug
- One year limited warranty



Model	HP	Gallons Per Hour Lift Capacity			UPC #
		5 ft.	10 ft.	15 ft.	
4EP	.4	4920	3180	1920	054757053291



40EC .4 HP

50TC 1/2 HP

Cast Iron Submersible Sewage Ejector Pumps

- Rugged oil filled .4 HP, 115V, 60 Hz. motor
- Thermal overload protects against overheating
- Epoxy coated, cast iron design dissipates motor heat to ensure long life
- 2" discharge with 2" solids pumping capacity
- Bottom suction inlet with vortex impeller
- 15' waterproof power cord with grounded plug
- Ceramic and carbon seal for reliable service and extended life
- Temperature Rating: 130°F. (54°C.)
- One year limited warranty
- **S1910 package system** includes S1267 pump, 1-18" x 30" polyethylene basin, a one-piece steel cover with 2" vent - 2" discharge, a 4" cast iron neoprene inlet hub and one check valve. (UPC #054757054526)



Model	HP	Gallons Per Hour Lift Capacity				UPC #
		5 ft.	10 ft.	15 ft.	20 ft.	
40EC	.4	5400	3600	1350	-	054757053352
50TC	1/2	7680	5340	3000	600	054757081041

Instant TOILET SYSTEM



For S1201 replacement pump, order Model N202RP. For S1203 replacement pump, order Model WM202RPPC



KH80 **Flood Alert** **High Water Alarm**

Alerts you of overflowing water in sump pits, bathrooms, kitchens and more.

- Operates on three AAA batteries.
- Warns you when sensor contacts water.
- Loud intermittent horn.
- Solid state components.
- Flexible sensor wire for use in many applications.
- 1 Year limited warranty.



S1031 basin
with cast hub
UPC #054757053383

S1035 basin
with neoprene insert
UPC #054757054083

EZ Basins **For Fast and Easy Sump Pump Installation**

- Designed for fast and easy sump pump installation
- 18" x 30" polyethylene basin
- One-piece steel cover
- 2" vent with 2" discharge
- 4" cast-iron (Model S1031) or plastic (Model S1035) inlet hub
- For replacement lid, order part #S1017



135917
24 ft. 1-1/4" Hose
kit

24 ft. Hose Kits

020123
24 ft. 1-1/4" Hose
kit with 1-1/2" and
1-1/4" adapters

137519
24 ft. 1-1/2" Hose
kit

Check Valves and Accessories



KH34
1-1/4" x 1-1/4"
Boot on Boot Check
Valve

KH81
1-1/4" x 1-1/2"
Boot on Boot Check
Valve

KH12
1-1/4" Threaded
Check Valve



KH49
Sump Pump
Reducer bushing
1-1/2" to 1-1/4"



**KH91 Sump Pump
Stand**



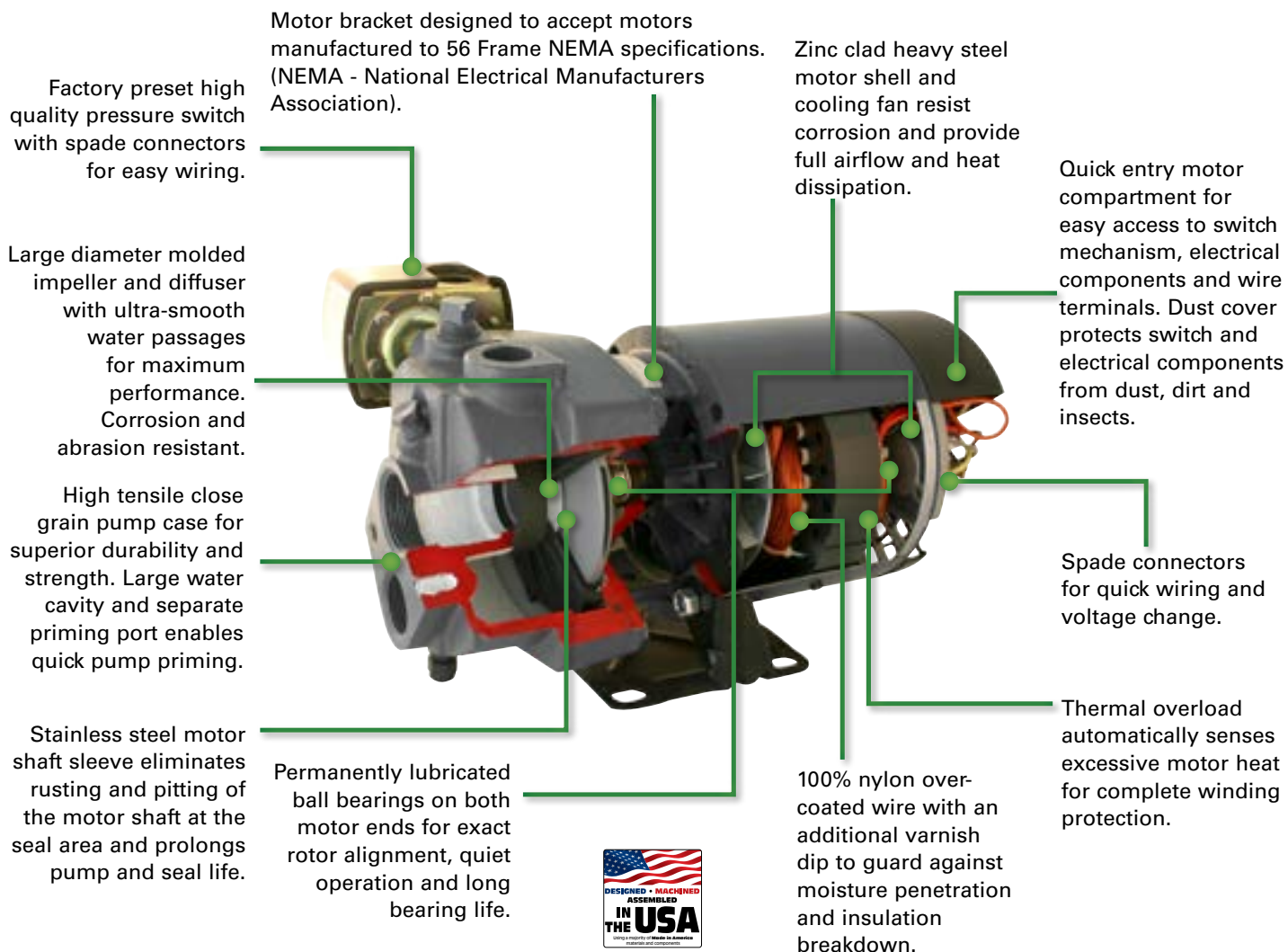
KH53
Drill Pump

Sump Pump Accessories and Repair Parts

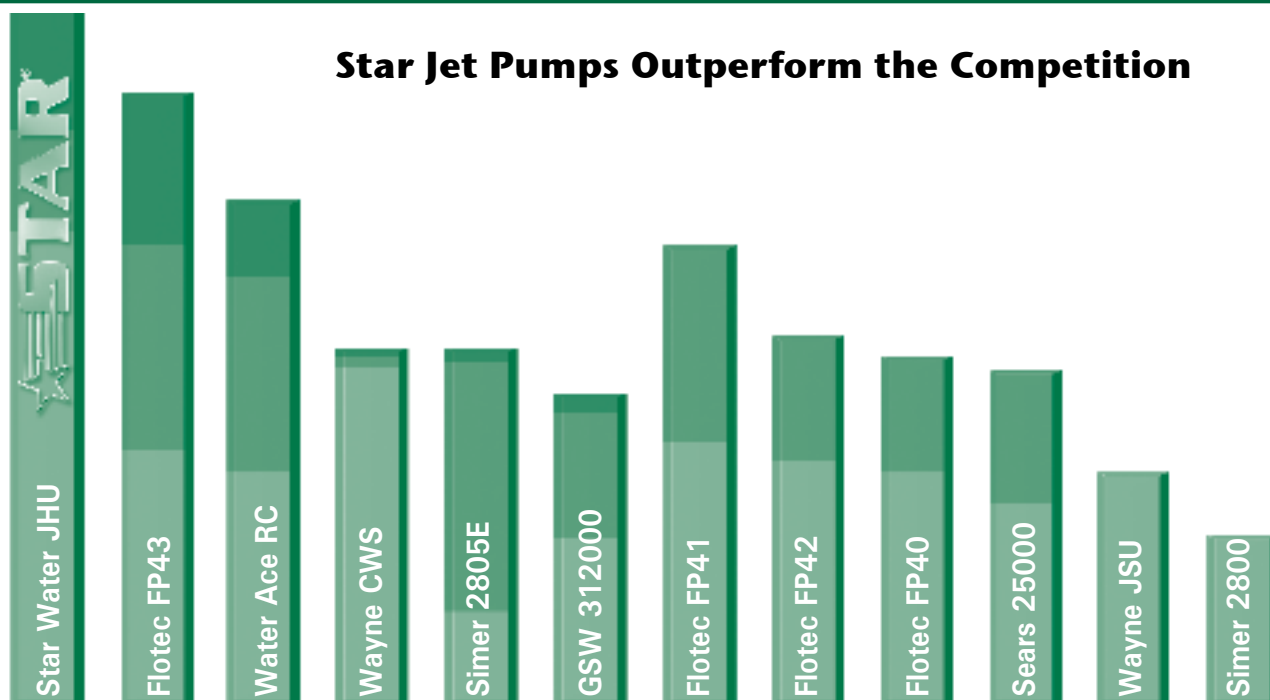
Part #	Description	Card Size	Master Carton Wt.	Qty.	Carded UPC#
KH12	Sump pump check valve	6 x 8	1.72	5 ¹	054757001278
KH14	Universal column sump pump switch	6 x 8	1.85	6 ¹	054757001360
KH28	Impeller for all columns after 9901 and 5SEH	6 x 8	1.90	6 ¹	054757035235
KH29	Float rod guide	6 x 8	1.21	6 ¹	054757035242
KH30	Mechanical float switch	8 x 11	9.11	6 ²	054757035259
KH34	1-1/4" boot on boot check valve	8 x 11	N/A	6 ²	054757035297
KH43	Float rod stop (2 ea.)	6 x 8	N/A	6 ²	054757035433
KH49	1-1/2" to 1-1/4" sump pump bushing	6 x 8	1.20	6 ²	054757035495
KH51	2" sewage check valve	9.75 x 11.25	5.16	3 ²	054757035518
KH53	1/4" drill pump	6 x 8	2.6	5 ²	054757036867
KH71	Gasket & impeller kit for HPP360& HPP12V	6 x 8	N/A	6 ¹	054757047160
KH72	Brush kit for HPP360	6 x 8	N/A	6 ¹	054757047177
KH80	Flood Alert high water alarm	6 x 8	.24	12	054757053376
KH81	Deluxe boot on boot check valve for gases or water	6 x 12 Bag	.88	4	054757053772
KH82	Sump Pump Switch Kit for Model 3SEHL, S1057	6 x 8	1.64	6 ¹	054757054076
KH83	Replacement Noryl impeller for 3SEHL, S1057	8 x 11	3.26	6 ²	054757054175
KH85	2" Seal for Powerflush	6 x 8	1.40	6 ¹	054757055554
KH88	Hose bib Kit	6 x 8	33.0	6 ¹	054757078775
KH91	Sump Pump Stand	14 x 13	1.5	1	054757082925
S1031	EZ Basin with cast hub for fast and easy sump pump installation	Bulk (1 ea.)	27	1	054757053383
S1035	Basin with neoprene insert for fast and easy sump pump installation	Bulk (1 ea.)	20	1	054757054083
015846	Brush kit for CS511	Bulk (1 ea.)	.1	1	054757083793
020387	Impeller and seal kit for CS511 - Pump Rev A	Bulk (1 ea.)	.15	1	054757055042
150380	Impeller and seal kit for CS511 - Pump Rev B	Bulk (1 ea.)	.15	1	054757083861
020148	Check valve less boot	Bulk (1 ea.)	.40	25	054757054052
132894	Boot on boot check valve 1-1/2" or 1-1/4"	Bulk (1 ea.)	.47	25	054757001902
135913	1-1/4" check valve	Bulk (1 ea.)	.25	25	054757001094
135917	1-1/4" discharge hose kit	Bulk (1 ea.)	16.60	8	054757001100
020248	115V variable level float switch	Bulk (1 ea.)	2.0	1	054757054557
020249	230V variable level float switch	Bulk (1 ea.)	1.96	1	054757054564
10-0764	Aquanot battery box	Bulk (1 ea.)	N/A	1	054757054830
10-1450	Gel Battery	Bulk (1 ea.)	N/A	1	054757054823

⁽¹⁾ Master carton dimensions are 13 x 6.5 x 8.5 - ⁽²⁾ Master carton dimensions are 19 x 18.5 x 12

Precision Designed for City Water Pressure in Rural Areas



Star Jet Pumps Outperform the Competition



Economy Cast Iron Shallow Well Jet Pump



SJ05S - 1/2 HP
SJ07S - 3/4 HP

- Rugged cast iron pump and motor housing for long life.
- Dual voltage 115/230 motor with easy-change voltage switch.
- Trouble-free, long life TEFC motor.
- Quick and easy to install.
- Features quick, reliable priming.
- 1 year limited warranty.

Pump Model	Discharge PSI	Capacities in GPM from Pump to Pumping Water Level in Feet			Suction & Discharge	UPC #
		5	15	25		
1/2 HP SJ05S	20	9.5	6.5	3.5	1-1/4" x 1"	054757054892
3/4 HP SJ07S	20	12.2	8.6	4.9		054757088897



SAF
UL Std. No. 778



ES05S - 1/2 HP
ES07S - 3/4 HP

Cast Iron Shallow Well Jet Pumps

- 115/230 dual voltage motor.
- Sturdy cast iron construction.
- Includes ejector for easy serviceability.
- Includes pressure switch.
- Thermal overload protects against overheating.
- Special priming port and large volume for easy priming.
- Carbon/ceramic mechanical shaft seal.
- Continuous duty uni-frame 56 frame motor (NEMA J adaptable).
- Capacitor start motors provide maximum starting torque.
- Easy access drain plug for winterizing.
- 1 year limited warranty.

Scan for
installation video



Model	Suction Lift Ft.	Pressure Switch Setting PSI	Capacities GPM at Discharge Pressure PSIG				Suction & Discharge	UPC #
			20	30	40	50		
ES05S 1/2 HP	5	20-40	10.5	9.5	5.8	4.0	1-1/4" x 3/4"	054757002077
	15		7.6	7.3	4.5	2.5		
	25		4.5	4.2	3.5	2.0		
ES07S 3/4 HP	5	20-40	15.5	15.0	10.0	5.8	1-1/4" x 3/4"	054757002084
	15		11.9	11.7	9.1	3.8		
	25		6	5.8	5.2	2.0		



JHU10S - 1 HP
JHU15S - 1-1/2 HP

High Volume, High Pressure Jet Pump

- 1-1/2 HP provides superior volume and higher pressures for jet pump and lawn sprinkling applications.
- Sturdy cast iron construction for long life.
- Easily serviceable NEMA J flange, 56 frame, dual voltage, capacitor start motor.
- Complete with ejector and pressure switch for easy installation.



Model	HP	Suction Lift Feet	Pressure Switch Setting PSI	Capacities - GPM At Discharge PSI						Shut-Off Pressure PSI	UPC	
				20	30	40	50	60	70			80
JHU03S	1/3	5	30-50	11.1	10.5	9.3	6.5				054757000813	
		15		8.5	8.3	7.6	5.1					
		25		5.1	5.1	5.0	4.0					
JHU10S	1	5	30-50	20.0	20.0	19.5	18.3				65	054757087654
		15		15.8	15.5	15.0	14.5				60	
		25		10.0	9.7	9.5	9.0				55	
JHU15S	1-1/2	5		14.8	14.5	14.5	14.4	12.0	8.0	4.0	91	054757000745
		15		10.5	10.3	10.4	10.5	10.1	6.3	2.5	90	
		25		5.5	5.7	5.9	6.0	6.0	4.0	0.0	88	

Above chart based on 1-1/4" x 1" suction and discharge



SJ05 - 1/2 HP
SJ07 - 3/4 HP
SJ10 - 1 HP

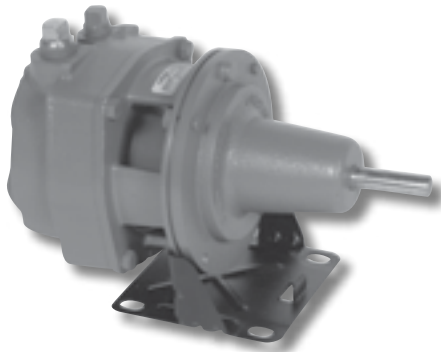
Economy Cast Iron Convertible Deep Well Jet Pump

- Rugged cast iron pump and motor housing for long life.
- Dual voltage 115/230 motor with easy-change voltage switch.
- Trouble-free, long life TEFC motor.
- Quick and easy to install.
- Features quick, reliable priming.
- 1 year limited warranty.

"SJ" Series Shallow Well and Deep Well Capacities

Pump Model	Discharge PSI	Capacities in GPM from Pump to Pumping Water Level in Feet					Suction	Discharge	UPC #
		5	15	25	30	40			
1/2 HP SJ05	20	8.5	6.0	3.5	7.0	6.5	1-1/4 in. NPT	1 in. NPT	054757093433
3/4 HP SJ07	20	10.0	8.0	4.5	8.5	6.8			054757093440
1 HP SJ10	20	13.0	10.0	5.5	10.0	7.0			054757093457

NOTE: See installation instructions for setting flow control for maximum pressures.



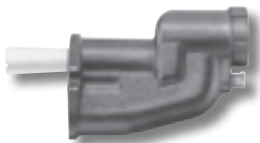
Convertible Jet Pump With Power Conversion Unit

All models have threaded shaft. Fitted with a power conversion unit to offer flexibility of electric motor or gasoline engine drive.

Can be belt or direct driven. Power conversion unit features cast iron body and double, heavy duty ball bearings. Order ejector, pressure gauge and pressure switch separately.

JH05222 - 1/2 HP UPC# 054757034207
JH07222 - 3/4 HP UPC# 054757034214
JH10222 - 1 HP UPC# 054757034221

Ejectors For JHU Series Jet Pumps



Shallow Well "SW" Ejector

Shallow well installations only. (For water levels 25 feet or less) Includes: Ejector, gasket, and bolts for shallow well hook up only.



4-Way Convertible "DW" Ejector

Shallow or deep well installations. Includes: Ejector, gasket, and bolts for shallow well or deep well hook up. (For deep well installation 4" casing minimum required).



Single Pipe "SP" 2" Deep Well Packer Ejector

Includes :Ejector, foot valve, 2" right angle adapter (see accessories section).



Cast Iron Convertible Deep Well Jet Pumps With Power Plus 56 Frame Motor



**JHU Series Convertible Jet Pumps
with NEMA J adaptable
uni-frame motor**

- Sturdy cast iron construction.
- Highly serviceable NEMA J or NEMA J adaptable motors.
- Includes pressure switch.
- Thermal overload protects against overheating.
- Ejector purchased separately.
- 2 year limited warranty.



Use your smart phone to scan for an installation video.



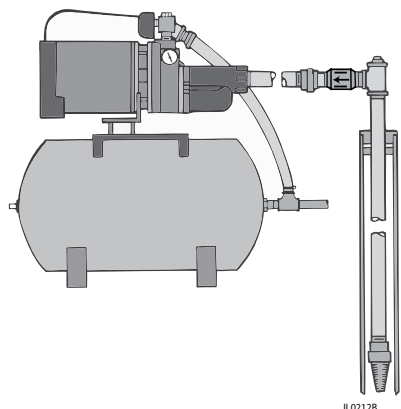
JHU05 - 1/2 HP 115/230 V
JHU07 - 3/4 HP 115/230 V
JHU10 - 1 HP 115/230 V

1-1/4" inlet, 3/4" discharge
1-1/4" inlet, 3/4" discharge
1-1/4" inlet, 1" discharge

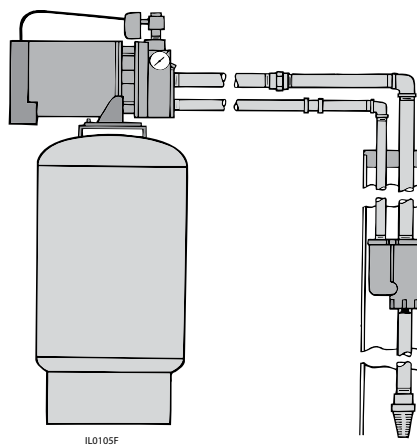
Pump Model Number	Ejector Model Number	Discharge PSI	Capacities in GPM from Pump to Pumping Water Level in Feet													DW Minimum Operating PSI
			Shallow Well Ejector Attached to Pump			Deep Well Ejector in 4" ID well or larger										
			5	15	25	20	30	40	50	60	70	80	90	100	110	
1/2 HP JHU05	SW03E-1626	20	11.3	8.7	5.3											---
		40	9.5	7.8	5.2											
	DW40E-1828	20	10.7	7.6	4.3	10.6	9.0	7.6								24
		40	8.9	7.1	4.0	3.9	3.0	1.7								
	DW40E-1726	20	8.9	6.2	3.5	10.3	8.9	7.6	6.2							24
		40	8.4	6.1	3.4	4.5	3.5	2.4	1.1							
3/4 HP JHU07	SW05E-1630	20	17.0	12.9	7.8											---
		40	10.0	8.0	5.5											
	DW40E-1828	20	10.7	7.4	4.2	12.3	11.8	9.1	7.5							24
		40	10.4	7.1	3.9	8.0	6.2	5.1	3.4							
	DW40E-1726	20	8.4	6.1	3.4	11.5	10.4	8.9	8.0	6.2						34
		40	8.0	5.9	3.0	7.9	6.7	5.2	4.0	2.8						
1 HP JHU10	SW07E-1432	20	19.5	15.2	9.5											---
		40	18.0	14.2	8.8											
	DW40E-1828	20	10.7	7.8	4.2	16.1	14.6	11.1	11.0	8.9	7.4					38 - 45
		40	10.4	7.5	3.9	12.4	10.6	7.9	7.3	5.7	4.6					
	DW40E-1726	20	8.6	6.3	3.5	11.3	11.3	11.0	10.5	9.0	7.5	4.8	4.0			37 - 43
		40	8.1	6.0	3.2	11.0	10.8	9.3	7.7	6.4	4.8	3.0	2.1			
DW40E-1520	20											5.0	4.8	4.3	3.7	39 - 45
	40											3.7	3.3	3.0	2.7	

NOTE: See installation instructions for setting flow control for maximum pressures.

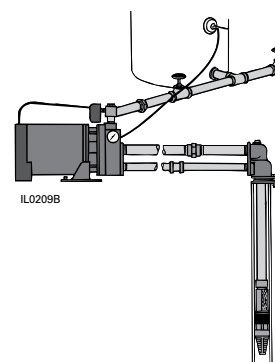
Typical Ejector Applications



Shallow well installation with "SW" shallow well ejector.



4" minimum diameter well.
Deep well installation with convertible "DW" ejector.



2" minimum diameter well.
Deepwell packer ejector.

Tank-Mounted Systems



System Model #	Includes Pump Model #	Includes Tank Model #	Tank Style	Total System Dimensions (In.)	Shipping Weight	UPC #
SJ05SAT20H	SJ05S	023723 15 gal. Equiv.	Horizontal/ PWD20S/20LFW	22 x 12 x 23	54 lbs.	054757055240
ES05SAT15	ES05S	132477 12 gal. Cottage	Compact/ PWD15/18LFW	15 x 18.5 x 25	55 lbs.	054757002398
ES05SAT20H	ES05S	138337 15 gal. Equiv.	Horizontal/ PWD20S/20LFW	22 x 12 x 23	51 lbs.	054757083762
ES05SAT25H	ES05S	136877 21 gal. Equiv.	Horizontal/AT25H	23.25 x 14 x 28.5	62 lbs.	054757002404
ES07SAT25H	ES07S	136877 21 gal. Equiv.	Horizontal/AT25H	23.25 x 14 x 28.5	62 lbs.	054757002411
JHU03SAT20H	JHU03S	138337 15 gal. Equiv.	Horizontal/ PWD20S/20LFW	24.5 x 26 x 12.5	51 lbs.	054757051754
JHU05AT44H-order ejector separately	JHU05	136878 30 gal. Equiv.	Horizontal/ PWD44S60LFW	24.5 x 17.25 x 33.5	90 lbs.	054757002459
JHU07AT44H-order ejector separately	JHU07	136878 30 gal. Equiv.	Horizontal/ PWD44S60LFW	24.5 x 17.25 x 33.5	99 lbs.	054757055257

Reduce SKU's With Star Mix and Match Tank Fitting Packages

Fittings



**131009 or
132477
Compact Air-
E-Tainer®**

+

Package Ordering

**Fittings
Package
134273
UPC#
054757002138**

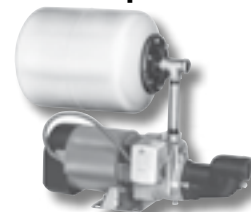
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Information For Use With



=

Star Jet Pumps



Star Shallow Well Jet Pump

Cottage Air-E-Tainer® System



**136877 or
136878
Horizontal
Air-E-Tainer®
w/Bracket**

+

**Fittings
Package
136879
UPC #
054757002381**

+



=



Star Shallow Well Jet Pump

Horizontal Air-E-Tainer®



**132661 or
132662
Vertical
Bottom
Connect
Air-E-Tainer®**

+

**Fittings
Package
135918
UPC #
054757000646**

+



=



Star Convertible Jet Pump

**Top Mounted Vertical
Air-E-Tainer® Systems
Bottom Connect**



2-Stage Vertical Deep Well Jet Pump

- NEMA J flange, 56 frame, dual voltage, capacitor motor.
- Large diameter thermoplastic impellers and diffusers for maximum pressure and capacities.
- Stainless steel motor shaft and stainless steel threaded pump shaft extension. Allows for motor removal without disturbing shaft seal or pump hydraulic components.
- Large one piece pump case design. Pump can be disassembled without disturbing well or discharge pipes.
- Top located priming port and discharge prevents air lock and allows for easy priming.
- Optional pump base available for horizontal mounting.

HVS210P - 1 HP UPC# 054757001476

HVS215P - 1-1/2 HP UPC# 054757025809

HVS Series Deep Well Performance Specifications

Model No. HP Stages	Two Pipe Ejectors	Single Pipe Ejectors		Nozzle Venturi		Vertical Distance to Water In Feet Capacity in GPM														Pump Disch. Press. (Lbs.)	
	4"	2"	2"	N	V	30	40	50	60	70	80	90	100	120	140	160	180	200	220	240	
HVS210P 1 HP 2 Stage	DW40E*			13 15 14	28 26 20	16.5	14.7	12.5 12.6	10.1 11.3	10.1	8.8	7.5	6.3 6.2								50
		SP20CL† SP22CL†	SP20BL† SP20BR†	14 15 14	28 26 18	15.2	12.7	10.1 11.1	8.5 9.5	8.2	6.8	5.4	4.4 4.3								
HVS215P 1-1/2 HP 2 Stage	DW40E*			12 15 14	28 26 20	17.4	15.6	13.8 14.3	11.9 13.1	11.9	10.8	9.5	8.3 7.3								60
		SP20CL† SP22CL†	SP20BL† SP20BR†	12 15 14	28 26 20	16.4	14.4	12.4 13.0	10.3 11.6	10.2	8.8	7.4	6.5 6.3								



Lawn Sprinkler / Irrigation Pump

- Quick self-priming operation for lawn irrigation
- Star Water Systems Service Plus capacitor start, ball bearing motor for continuous operation
- Heavy-duty cast-iron construction
- 115/230 Dual voltage motor
- Easy access drain plug
- 2 in. suction pipe / 1-1/2 in. discharge pipe



Scan for product demo



HSP10P1 1 HP
HSP15P1 1-1/2 HP
HSP20P1 2 HP

Model #	HP	Suction Lift Ft.	Capacity - U.S. Gallons per Minute Discharge Pressure PSI						Shut Off Pressure @ 0 Lift (PSI)	Suction Pipe Tap	Dis-charge Pipe Tap	Ship Wt.	UPC
			15	20	25	30	35	40					
HSP10P1	1	5	63	57	50	42	28	0	39	2 in.	1-1/2 in.	52.0	054757083076
		10	57	52	45	35	20	0					
		15	47	44	37	30	10	0					
		20	44	42	36	25	8	0					
		25	24	23	22	17	5	0					
HSP15P1	1-1/2	5	70	67	62	55	45	33	45	2 in.	1-1/2 in.	56.0	054757083083
		10	68	65	59	53	42	29					
		15	63	61	57	50	39	20					
		20	56	55	47	44	31	10					
		25	42	42	41	38	24	0					
HSP20P1	2	5	75	72	68	62	52	42	48	2 in.	1-1/2 in.	60.0	054757083090
		10	72	70	67	60	51	41					
		15	65	63	60	55	46	35					
		20	59	58	57	54	42	26					
		25	44	43	42	41	37	12					

Portable Lawn Sprinkler Pump



HSPJ100

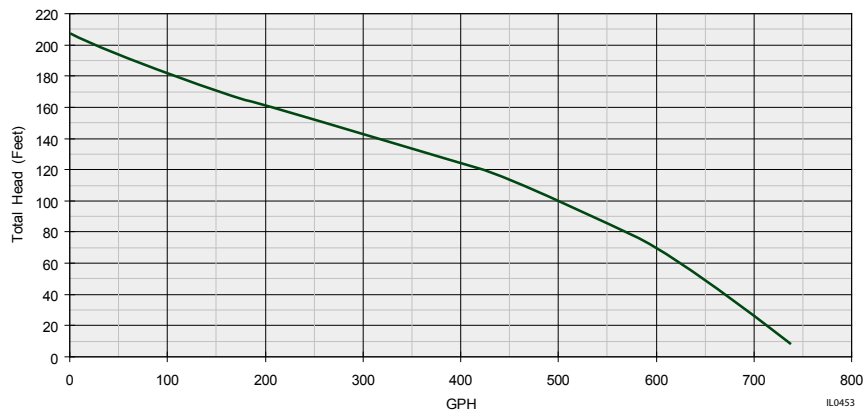
FEATURES AND BENEFITS

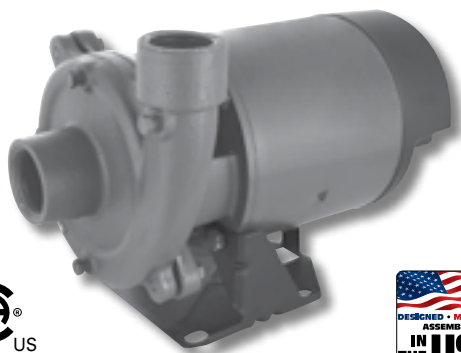
- Capacities to 730 GPH
- Stainless steel pump body
- Easy to use . . . includes garden hose adapter
- 3-Prong grounded plug
- 1 HP, 115V, 60Hz
- One year limited warranty

APPLICATIONS

- Sprinkle lawns and gardens from lakes, ponds or rivers
- Remove standing water from flooded areas

1HP Portable Lawn Sprinkler Pump
Model HSPJ100





HCJ103P031 1/3 HP
UPC# 054757067229
HCJ103P051 1/2 HP
UPC# 054757067236
HCJ103P071 3/4 HP
UPC# 054757067243
HCJ103P101 1 HP
UPC# 054757067250
HCJ103P151 1-1/2 HP
UPC# 054757067267

- ## Single Stage Centrifugal Pumps
- Heavy duty 56 frame, NEMA J, capacitor start, double ball bearing motors for continuous operation.
 - Rugged volute type casing. Discharge can be rotated to any one of four positions for horizontal or vertical service line.
 - Normal wearing parts are easily removed for service and replacement without disturbing the suction or discharge piping.
 - One year limited warranty.
- ### APPLICATIONS
- Booster service
 - Water circulation
 - Cooling systems
 - Laundry equipment
 - Liquid transfers

MODEL NO.	HP	SUCTION LIFT FT.	CAPACITY U.S. GPM								MAX. PRESS. PSI	▲MAX. CASE PRESS.	▲MAX. LIQUID TEMP.
1 PHASE			DISCHARGE PRESSURE PSI										
			10	15	20	25	30	35	40				
HCJ103P031	1/3	5 15 25	43 35 26	35 24	21					26	100psig	200° F	
HCJ103P051	1/2	5 15 25	45 41 31	45 41 29	44 38 27	36 24	19			32	100psig	200° F	
HCJ103P071	3/4	5 15 25	69 64 49	68 62 48	64 57 45	57 46 31	42 28	20		38	100psig	200° F	
HCJ103P101	1	5 15 25	67 61 47	65 59 46	64 58 45	62 55 43	51 41 23	35		40	100psig	200° F	
HCJ103P151	1 1/2	5 15 25	68 62 48	67 61 47	66 60 46	65 59 45	63 55 41	52 39	31	44	100psig	200° F	

▲Do not exceed the maximum case pressure and maximum liquid temperature rating of the pump
 Suction and Discharge Tappings 1-1/2" X 1-1/4"

2 Stage Centrifugal Pump



- 56 frame, NEMA J, capacitor start, double ball bearing motor for continuous operation.
- 3/4, 1, 1-1/2, and 2 HP sizes with single phase motor.
- Rugged cast iron pump casing. Multi stage for high head.
- Normal wearing parts are easily removed for service and replacement without disturbing the suction or discharge piping.
- One year limited warranty.

HCJ101P071 - 3/4 HP UPC# 054757055134
HCJ101P101 - 1 HP UPC# 054757055141
HCJ101P151 - 1-1/2 HP UPC# 054757055158
HCJ101P201 - 2 HP UPC# 054757055165

MODEL NO.	HP	STAGES	SUCTION LIFT FT.	CAPACITY U.S. GPM									MAX. PRESS. PSI	▲MAX. CASE PRESS.	▲MAX. LIQUIDTEMP	
1 PHASE				DISCHARGE PRESSURE PSI												
				10	20	30	40	50	60	70	80	90				
HCJ101P071	3/4	2	5	41	35	28	20						49	160psig	160° F	
			15	38	32	26	13									
			25	32	29	22										
HCJ101P101	1	2	5	45	40	35	28	20					60	160psig	160° F	
			15	42	39	33	26	15								
			25	35	33	30	22									
HCJ101P151	1 1/2	2	5	54	50	44	38	28					61	160psig	160° F	
			15	48	46	42	35	23								
			25	37	35	33	28	17								
HCJ101P201	2	2	5	55	52	47	41	34	23				67	160psig	160° F	
			15	49	47	45	39	30	17							
			25	37	36	33	32	26								

▲Do not exceed the maximum case pressure and maximum liquid temperature rating of the pump
 Suction and Discharge Tappings 1-1/2" X 1-1/4"

Boosting city water pressure has never been easier



Model HCP05

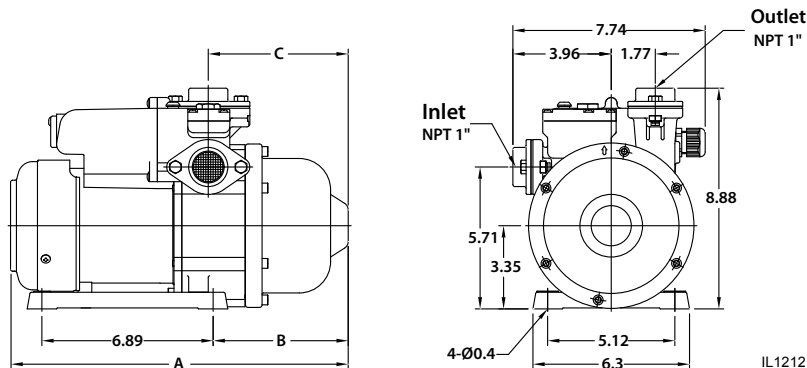


- All-in-one unit, consisting of pump, motor, stainless steel pressure tank and electronic controller
- Compact design and quiet operation make it suitable for many applications
- System has automatic built-in diagnostics to protect against:
 - Run Dry
 - Dead Head
 - Rapid Cycling
- Impeller constructed of thermo plastic with stainless steel bearing and shaft sleeve
- 1 in. stainless steel inlet and outlet flanges

PERFORMANCE

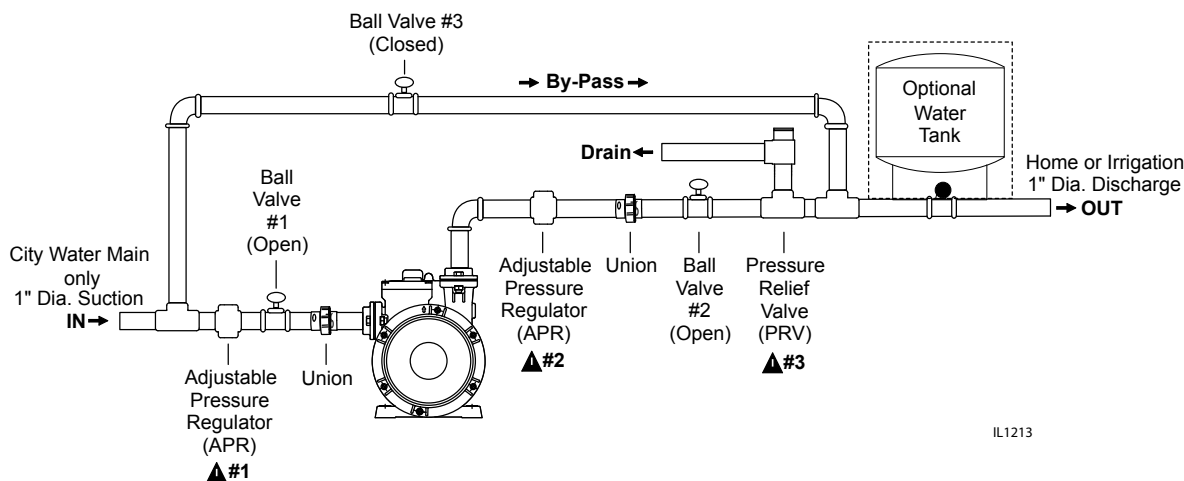
Inlet PSI	HCP05 System Pressure (PSI) at Flow Rates (GPM)							HP
	3	6	9	12	15	18	21	
10	44	39	32	25	17	-	-	1/2
20	54	49	42	35	27	-	-	
30	64	59	52	45	37	-	-	

DIMENSIONS



Model	A (in.)	B (in.)	C (in.)
HCP05	13.56	5.43	5.63

TYPICAL INSTALLATION



Cast Iron "G" Models 10 & 19 Gallons / Minute



Stainless "A" Steel Models 5, 7, 10 & 19 Gallons / Minute



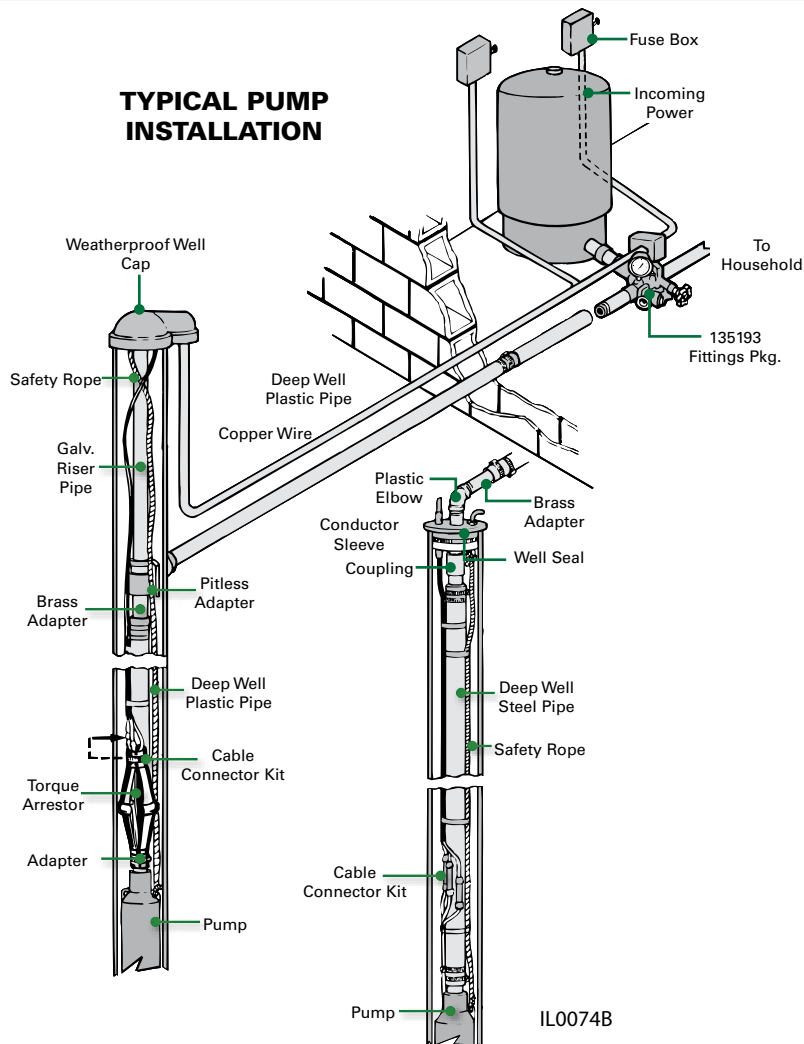
- 1/2 HP models available in 115 or 230V
- 3/4 & 1 HP . . . 230V only
- 2 Wire models do not require a control box (wire through pressure switch)
- 3-Wire models require corresponding control box
- Star submersibles pump to deeper depths
- Proven motors for reliable operation



Scan for product demo

Products may not be exactly as shown

TYPICAL PUMP INSTALLATION



NOTE:

All 3 wire plus ground submersible well pumps require a control box which must be purchased separately.

Control Box Information

HP	Volts/Phase	Control Box Number
1/2	115/single	127185A
	230/single	127189A
3/4	230/single	127197A
1	230/single	126319A

4" Submersible Cast Iron Pump Selection Charts

5 GPM • 1/2 THRU 1 1/2 HP Recommended Range 1.7 - 10 GPM • 60Hz • 3450 RPM

HP Size and Model No.	Stages	Motor Type	Ship Weight	Discharge Pressure PSI	Depth To Water Level In Feet - Capacities In Gallon Per Minute																		Maximum Pressure		
					20	40	60	80	100	120	140	160	180	200	225	250	275	300	325	350	400	450	500	Ft.	PSI
1/2 HP 4H05A05	15	1 PH 3 Wire	29	0		9.9	9.6	9.2	8.9	8.5	8.2	7.8	7.4	7.0	6.5	5.9	5.3	4.7	4.0	3.2				390	168
				20	9.1	8.8	8.4	8.1	7.7	7.3	6.9	6.5	6.0	5.5	4.8	4.1	3.3	2.3							
		1 PH 2 Wire	29	40	8.3	7.9	7.5	7.1	6.7	6.3	5.9	5.4	4.9	4.2	3.5	2.4									
				60	7.5	7.1	6.7	6.2	5.8	5.3	4.8	4.2	3.6	2.7											
3/4 HP 4H05A07	21	1 PH 3 Wire	35	0			9.9	9.6	9.4	9.1	8.9	8.7	8.4	8.2	7.8	7.5	7.2	6.8	6.5	6.1	5.2	4.2	2.9	550	238
				20	9.3	9.1	8.8	8.6	8.3	8.1	7.8	7.5	7.2	6.9	6.5	6.1	5.7	5.3	4.3	3.0					
		1 PH 2 Wire	35	40		8.7	8.5	8.2	8.0	7.7	7.5	7.2	6.9	6.5	6.2	5.7	5.3	4.9	4.4	3.1					
				60	8.2	7.9	7.7	7.4	7.1	6.8	6.5	6.2	5.8	5.4	4.9	4.5	3.9	3.3	1.3						
				80		7.6	7.3	7.0	6.7	6.4	6.1	5.9	5.5	5.1	4.5	4.0	3.3	2.6	1.5						

NOTE: Pipe friction loss in drop pipe is not included in chart above.

4" Submersible Well Pumps



7 GPM • 1/2 HP

Recommended Range 2 - 13.0 GPM • 60 Hz • 3450 RPM

Model	Volts	HP	Stages	Motor Type	Ship Wt.	Disch. Press. PSI	DEPTH TO WATER LEVEL IN FEED - CAPACITIES IN GALLONS PER MINUTE														Max. Press.		
							20	40	60	80	100	120	140	160	180	200	225	250	275	300	Ft.	PSI	
4H07G05-301	230	1/2	10	1 PH 3 Wire	28	0	14.1	13.6	13.0	12.4	11.7	11.0	10.4	9.8	9.0	8.2	7.2	5.8	4.2	2.1	310	134	
4H07G05-005	115			20	12.9	12.2	11.6	10.9	10.3	9.6	8.9	8.1	7.2	6.1	4.7	2.6							
4H07G05-305	230			1 PH 2 Wire	32	60	9.8	9.1	8.3	7.5	6.5	5.3	4.0	2.3									
						80	8.1	7.2	6.1	4.9	3.5												

10 GPM • 1/2 THRU 1-1/2 HP

Recommended Range 3 - 15 GPM • 60 Hz • 3450 RPM

Model	Volts	HP	Stages	Motor Type	Ship Wt.	Disch. Press. PSI	DEPTH TO WATER LEVEL IN FEED - CAPACITIES IN GALLONS PER MINUTE																								Max. Press.	
							20	40	60	80	100	120	140	160	180	200	225	250	275	300	325	350	400	450	500	550	600	Ft.	PSI			
4H10A05-001 4H10G05-001	115	1/2	8	1 PH 3 Wire	27	0		15.6	14.7	14.2	13.4	12.6	11.7	10.8	9.7	8.3	6.3	2.1														
4H10A05-301 4H10G05-301	230					20	14.6	14.1	13.3	12.5	11.6	10.5	9.5	7.8	6.0	3.4																
4H10A05-005 4H10G05-005	115			1 PH 2 Wire	32	60	10.9	9.9	8.6	6.7	4.5																	250	108			
4H10A05-305 4H10G05-305	230					80	7.8	4.9	3.6																							
4H10A07-301 4H10G07-301	230	3/4	12	1 PH 3 Wire	32	0			15.5	15.0	14.6	14.1	13.6	13.1	12.5	12.0	11.3	10.4	9.7	8.5	7.4	5.7										
4H10A07-305 4H10G07-305	230					20	15.4	14.9	14.5	13.9	13.4	13.0	12.4	11.9	11.4	10.7	9.8	8.9	7.4	6.1												
				40	14.3	13.8	13.3	12.8	12.4	11.4	11.0	10.5	9.6	8.9	7.9	6.1	3.5										375	162				
				60	13.2	12.6	12.1	11.5	10.9	10.3	9.6	8.7	7.7	6.6	3.8																	
						80	11.9	11.4	10.6	10.0	9.3	8.4	7.4	6.2	3.8																	
4H10A10-301 4H10G10-301	230	1	15	1 PH 3 Wire	36	0				15.4	15.1	14.7	14.3	13.9	13.6	13.1	12.6	12.0	11.4	10.8	10.2	9.3	7.4	3.8								
4H10A10-305 4H10G10-305	230					20		15.3	15.0	14.7	14.3	13.8	13.4	13.0	12.6	12.1	11.6	10.9	10.2	9.6	8.5	7.6	4.6									
				40	14.9	14.5	14.1	13.7	13.3	12.9	12.4	11.9	11.4	10.9	10.3	9.5	8.6	7.9	6.5	4.5							470	203				
				60	13.9	13.5	12.7	12.7	12.3	11.8	11.2	10.9	10.3	9.7	8.9	7.8	6.6	5.0														
						80	13.1	12.6	12.1	11.7	11.2	10.7	10.1	9.7	9.0	8.2	6.8	5.3	2.6													
4H10A15-301	230	1-1/2	20	1 PH 3 Wire	47	0				15.5	15.2	15.0	14.7	14.4	14.1	13.8	13.4	12.9	12.6	12.2	11.8	11.4	10.9	9.9	8.6	7.0	4.1	3.9				
4H10A15-305	230					20			15.4	15.1	14.9	14.6	14.3	14.1	13.8	13.4	13.0	12.6	12.2	11.8	11.4	10.9	9.9	8.6	7.1	4.4			630	272		
				40	15.3	15.0	14.8	14.5	14.2	13.9	13.6	13.4	13.0	12.7	12.4	11.9	11.5	11.0	10.5	10.0	8.6	7.1	4.4									
				60	14.7	14.5	14.1	13.9	13.6	13.2	12.9	12.7	12.3	12.0	11.5	11.1	10.6	10.1	9.5	8.8	7.3	4.8										
						80	14.1	13.8	13.5	13.2	12.9	12.6	12.2	11.8	11.4	11.0	10.5	10.1	9.6	9.0	8.2	7.4	4.9									

19 GPM • 1/2 THRU 3 HP

Recommended Range 6 - 28 GPM • 60 Hz • 3450 RPM

Model	Volts	HP	Stages	Motor Type	Ship Wt.	Disch. Press. PSI	DEPTH TO WATER LEVEL IN FEED - CAPACITIES IN GALLONS PER MINUTE																				Max. Press.		
							20	40	60	80	100	120	140	160	180	200	225	250	275	300	325	350	400	450	500	550	600	650	Ft.
4H19A05-001	115	1/2	5	1 PH 3 Wire	27	0	26.6	24.6	22.7	20.5	17.9	15.0	10.4																
4H19A05-305	230			1 PH 2 Wire	32	20	22.0	19.8	17.1	14.0	5.9																	155	67
4H19A07-301	230	3/4	7	1 PH 3 Wire	32	0	27.4	26.2	24.6	23.3	21.7	20.0	18.2	16.0	13.3	9.6													
				20	24.4	22.9	21.4	19.5	17.5	15.3	12.4	8.6																	
				40	20.6	18.7	16.6	14.3	11.0	5.5																		215	93
4H19A07-305	230			1 PH 2 Wire	32	60	16.2	13.6	10.2																				
4H19A10-301 4H19G10-301	230	1	9	1 PH 3 Wire	36	0	27.5	26.6	25.5	24.4	23.2	22.1	20.7	19.4	17.8	16.2	13.7	10.7	5.0										
				20	25.2	24.0	22.9	21.7	20.4	19.0	17.4	15.6	13.7	11.4	6.2														
				40	22.5	21.2	19.8	18.4	16.8	15.2	12.8	10.4	5.6															283	122
4H19A10-305 4H19G10-305	230			1 PH 2 Wire	36	60	19.5	17.9	16.4	14.5	12.2	9.6	3.5																
						80	15.7	13.7	11.5	8.0																			
4H19A15-301	230	1-1/2	12	1 PH 3 Wire	47	0	27.8	27.1	26.3	25.5	24.6	23.8	22.9	22.0	21.1	20.1	18.9	17.5	15.1	14.3	11.8	8.7							
				20	26.1	25.2	24.4	23.5	22.7	21.7	20.7	19.9	18.9	17.7	16.3	14.3	12.2	9.5	3.6										
				40	24.2	23.3	22.4	21.4	20.5	19.5	18.5	17.4	16.3	14.9	12.7	9.7	5.7											375	163
4H19A15-305	230			1 PH 2 Wire	47	60	22.1	21.1	20.2	19.2	18.2	17.1	15.8	14.4	12.7	10.4	6.3												
						80	19.9	18.8	17.8	16.7	15.4	13.7	11.9	9.2	5.9														

Franklin Control Boxes



CONTROL BOX FOR 3-WIRE MODELS

Control box not required for 2-wire models.

Submersible Pump HP	Motor Voltage & Phase	Control Box P/N	UPC #
1/2	115 V/1 PH	127185A	054757001742
	230 V/1 PH	127189A	054757001018
3/4	230 V/1 PH	127197A	054757001025
1	230 V/1 PH	126319A	054757001209
1-1/2	230 V/1 PH	133589A	054757012496

1/2 HP Pond Fountain Pump



SPS0501

Features And Benefits

- Produces water fountain up to 15' in height
- Produces up to 4,900 gallons of water per hour
- Easy to Install - pre-assembled with Water Lily Pattern installed
- 115V motor with large circular screen to draw water from below the surface extended motor life
- 100' Electrical cable with GFI plug connects directly to 120V outlet.
- Flotation system with UV resistant, polyethylene float will not water log.
- Operates in water 5 feet or deeper

Applications

- Waterscapes
- Retention ponds
- Golf courses



Optional 023369 Light Kit with GFI connector



Scan for installation and maintenance video

WARNING:

Not tested or approved for use in swimming areas

Three Easily Interchangeable Patterns Included



Water Lily
An eye-catching combination spray
(15' @ 4,900 GPH)



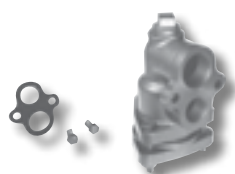
Sky Cannon
A dramatic single plume of water
(15' @ 3,300 GPH)



Water Trumpet
A symmetrical inverted bell shape
(13' @ 2,700 GPH)

Jet Pump Accessories and Repair Parts

Order Number	For Pump Model (s)	Description	UPC #
KH01	JH03, JHU03, ES05S	Includes impeller, diffuser, rotary seal, quadraseal and diffuser rubber	054757001223
KH02	JH05, JHU05, ES07S	Includes impeller, diffuser, rotary seal, quadraseal and diffuser rubber	054757001230
KH03	JH07, JHU07	Includes impeller, diffuser, rotary seal, quadraseal and diffuser rubber	054757001247
KH04	All JH, JHU and ES	Includes rotary seal, quadraseal (2) and diffuser rubber	054757001254
KH15	All Convertible Jet Pumps	Kit Includes flow control body, screw and bushing	054757002558
KH50	1/2 thru 3 HP Jets & Centrifugals	Replacement switch/governor for 94 series motors	054757035501
KH86	1/2 thru 3 HP Jets & Centrifugals	Replacement switch/governor for 96 series motors	054757059514
KH58LLC	All Jet Pumps	Quick Jet priming kit - Helps prime pumps	054757089948
KH65	All Jet Pumps	Prevents water leaks between jet pump housing and ejector	054757044077



Right Angle Adapter



Straight Adapter

Well Adapters for Jet Pump Installations

Order Number	Description	Well Size	Drop Pipe	Suction Pipe	Pressure Pipe	UPC Number
127025	Right Angle	2"	1"	1-1/4"	1"	054757002114
129723	Right Angle	2"	1-1/4"	1-1/4"	1"	054757008567
129719	Straight	2"	1"	1-1/4"	1"	054757003067
129720	Straight	2"	1-1/4"	1-1/4"	1"	054757008550



Single Pipe Jet



Double Pipe Jet



Single Pipe Submersible



Well Cap

Jet and Submersible Sanitary Well Seals and Well Caps

Order Number	Description	Well Size			Suction Pipe	UPC Number
		Casing O.D.	Casing I.D.	Conduit Top Size		
120366	Single pipe jet installation	--	2"	--	1"	054757000998
KH38	Double pipe jet installation 1" Pressure Pipe	--	4"	--	1-1/4"	054757035334
KH39		--	5"	--	1-1/4"	054757035341
KH40		--	6"	--	1-1/4"	054757035358
KH35	Single pipe submersible installation with cable seal	--	4"	--	1"	054757035303
126077		--	4"	--	1-1/4"	054757001285
129331		--	4"	--	2"	054757008338
KH36		--	5"	--	1"	054757035310
126369		--	5"	--	1-1/4"	054757007409
KH37		--	6"	--	1"	054757035327
125760		--	6"	--	1-1/4"	054757007355
138176	Well Cap	4-1/2"	4"	1"	--	054757043506
138177	Well Cap	5-9/16"	5"	1"	--	054757043513
138178	Well Cap	6-5/8"	6"	1"	--	054757043520



Well Point

Order Number	Size	Gauge	Screen Length	UPC Number
120857	1-1/4" x 30"	60	24"	054757002107
120881	1-1/4" x 36"	60	30"	054757006808

Priming Kit

Order Number	Description	UPC Number
KH58LLC	Priming Kit	054757089948



KH32

Drive Coupling and Drive Cap

Order Number	Description	UPC Number
KH32	1-1/4" coupling for 1-1/4" drive pipe	054757035273
KH67	1-1/4" drive cap	054757044312

Pressure Tank Accessories



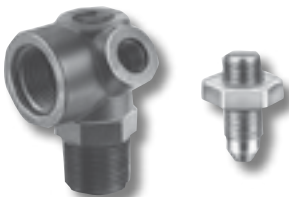
Air Volume Control (Diaphragm Type)

Charges standard galvanized (non-diaphragm) pressure tanks with air on each operating cycle. Maintains the correct relationship between the volume of air and quantity of water in the tank.

KH05LLC Complete Air Volume Control Kit

All tubing and fittings included for vertical and horizontal galvanized tanks up to 80 gallons.

Order No.	NPT	Type	Max. Tank Capacity	UPC #
KH05LLC	3/8"	AV45 pkg. Includes: 1/4" x 38" tube & fittings	80 Gallon	054757089795
130724	1/4"	AV45 Non-repairable	80 Gallon	054757009342
126722	3/8"	AV100 Non-repairable	120 Gallon	054757001711
KH76LLC	3/8"	AV45 Non-repairable	80 Gallon	054757089955



KH15

Flow Control Kit

Order No.	Contents	UPC #
KH15	Flow control body, screw and 3/4" x 1" bushing	054757002558



**KH21LLC
KH92**

Pressure Relief Valve

Order No.	NPT	Release Pressure	Capacity Gal. Per Hr.	UPC #
KH21LLC	1/2"	75 PSI	1200 at 70 PSI	054757089856
KH92 Low Lead	1/2"	75 PSI	1200 at 70 PSI	054757085537

NOTE: Install a pressure relief valve with any pump capable of producing more than 75 PSI at the tank

Pressure Switches



KH06/KH07

Order No.	Switch Setting	Bottom Connection NPT	Maximum Electrical Rating			UPC #
			Single Phase		Three Phase	
			115V	230V	115V	
KH06	20-40	1/4 M	1 HP	1-1/2 HP	2 HP	054757001261
KH07	30-50	1/4 M	1-1/2 HP	2 HP	3 HP	054757001148
KH33*	20-40	1/4 F	1 HP	1-1/2 HP	2 HP	054757035280
KH93	40-60	1/4 M	1-1/2 HP	2 HP	3 HP	054757085995

(*) Indicates low pressure cut off

NOTE: All switches are two pole



KH11LLC

Pressure and Vacuum Gauges

Order No.	Max. Pressure (lbs.) Or Vacuum (ft.)	Connection NPT	UPC #
KH11LLC	100 lbs	1/4"	054757089627
KH56LLC	200 lbs	1/4"	054757089931



Check Valves Spring Controlled for general service of jet, submersible or centrifugal, for horizontal or vertical application.

Brass Check Valves

Order Number	NPT	UPC Number
KH18LLC	3/4"	054757089825
KH09LLC	1"	054757089818
KH19LLC	1-1/4"	054757089832
KH20LLC	1-1/2"	054757089849
KH26LLC	2"	054757089887

Stainless Steel Check Valves

Order Number	NPT	UPC #
KH63	1"	054757043537
KH64	1-1/4"	054757043544



Foot Valves Spring Controlled for jet or centrifugal pumps. For vertical application.

Brass Foot Valves

Order Number	NPT	UPC Number
KH24LLC	1-1/2"	054757089863
KH25LLC	2"	054757089870
KH08LLC*	1-1/4" x 1"	054757089801

*Dual purpose 1" ID 1-1/4" OD threaded.

Plastic Foot Valves

Order #	NPT	Description	UPC #
KH61	1"	1" PVC plastic foot valve	054757043476
KH62	1-1/4"	1-1/4" PVC plastic foot valve	054757043483
023226	2"	2" PVC plastic foot valve	054757083540



Plastic Check Valve

Order #	NPT	Description	UPC #
KH70	1-1/4"	1-1/4" PVC plastic check valve	054757046835



KH22

Heat Shrink Splice Kit

Contains 4 Sta-kon connectors and 4 heat shrinkable sleeves. For #14, #12, and #10 wire sizes.
UPC #054757003135

Connectors and Electrical Tape Splice Kits

Order No.	Description	UPC #
125746	Sta-Kon connector #16 - #10 - wire	054757007331
126535	#16 - #10 wire, 2 rolls tape, 4 connectors	054757007478



Submersible Pump Replacement Motors *

HP	Volts	Wt.	2-Wire Motors	3-Wire Motors
1/2	115	16	M137412	M137426
1/2	230	16	M137414	M137428
3/4	230	20	M137416	M137430
1	230	22	M137418	M137432

(*) Includes motor leads

Carded Control Box Repair Parts

Order No.	Description	UPC #
KH44	1/2 HP 230 V Franklin Relay Switch	054757035440
KH45	3/4 HP 230 V Franklin Relay Switch	054757035457
KH46	1/2 HP 230 V Franklin Capacitor	054757035464
KH47	3/4 HP 230 V Franklin Capacitor	054757035471



127103 Lightning Arrestors

Single phase 250 volt (max.) 1 required.
UPC #054757007706



134099 Polypropylene Submersible Safety Rope

500 ft. reels (no cut lengths)
UPC #054757013998

Submersible Power Cable Plus Ground 500 Ft. Random Reels (No Cut Lengths)

Wire Size	Plastic Jacket		UPC #
	3-Wire Order No.	2-Wire Order No.	
12	262-123-54		054757002244
		261-122-54	054757002237

TW Insulation, Standard Copper Conductor, with Ground

Submersible Cable Quick Reference Chart

Cable Length Feet			20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	340	360	380	400	420	440	460	480	500
Copper Wire Cable Size Required	1/2 HP	115 VOLTS	NO. 14				NO. 12				NO. 10				NO. 8						NO. 6						
		230 VOLTS	NO. 14																NO. 12								
	3/4 HP	230 VOLTS	NO. 14														NO. 12						NO. 10				
		1 HP	230 VOLTS	NO. 14												NO. 12						NO. 10					

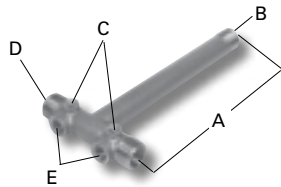
Cable is selected for maximum pumping setting plus offset distance to control box (three wire) or pressure switch (two wire). This size used for complete length of wire.

Above cable chart is for motors manufactured by Franklin Electric only. Wire sizes will vary between motor manufacturers.

Do not use wire smaller in size than is specified. No. 14 wire is smaller in size than No 12, etc.



Fittings Package



**KH66LLC
Brass Cross**

Submersible Pump Fittings For Air-E-Tainer and other Contained Air Tanks

Tank cross, pressure switch 30/50 PSI, pressure gauge, 1/2" pressure relief valve, 1" check valve, 1/2" boiler drain.

Order Number	Dimensions Inches NPT					UPC Number
	A	B	C	D	E	
023281	10"	1"	1/4"	1"M x 3/4"F	1/2"	054757083878
KH66LLC	10"	1"	1/4"	1"M x 3/4"F	1/2"	054757089900
135192S	2-7/16	1"	1/4"	1"M x 3/4"F	1/2"	054757043490



KH48LLC

Pitless Adapter

Provides below frost line discharge while maintaining above ground access to the well for submersible pump installations.

Order Number	Support* Strength	Drop and Discharge Pipe Size	Casing Sizes	Casing Hole Size	UPC Number
H48LLC	300 ft.	1"	5"-8"	1-3/4"	054757089900

*Will support 300 ft. length of schedule 40 steel pipe full of water.



KH42

Submersible Torque Arrestor

Eliminates damage to submersible pump due to high starting torque.

Order No.	Description	UPC #
KH42	Adjustable to well casings from 4" to 8" ID	054757035426



KH10 (5 per pkg.)

Submersible Cable Guard

Prevents power cable abrasion against side walls of well casing.

Order No.	Description	UPC #
KH10	Fits 6" well. Cut tabs for use in 4" and 5" wells	054757001179



**KH54LLC & KH59 1"
KH55LLC & KH60 1-1/4"**

Submersible Threaded Adapters

Order Number	Description	UPC Number
KH54LLC	1" male adapter-brass	054757089917
KH55LLC	1-1/4" male adapter-brass	054757089924
KH59	1" male adapter SS	054757043452
KH60	1-1/4" male adapter SS	054757043469

AIR-E-TAINER®

Pre-Pressurized Well System Tanks

Check These Features:



- Positive lock internal clench ring prevents slipping. Diaphragm draws down in concave manner, eliminating "wrinkle pattern" which can become brittle and crack.
- Threaded top nut for easy pump stand installation.
- True air flow design reduces condensation.
- Patented controlled action diaphragm is FDA approved butyl rubber construction - not plastic.
- Paint cap on elbow eliminates connection problems. 5 year limited warranty.
- Adjustable air charge.
- Airtight welds.
- Two part urethane finish over epoxy primer for durability and luster.
- Will not waterlog.
- Diffuser directs water flow up and out while locking lower diaphragm in place.

Capacity	42 Gallons	82 Gallons	120 Gallons	220 Gallons
Galvanized Tank Measure	20" x 34" 16" x 51"	20" x 63"	24" x 65"	30" x 78"
Diaphragm Equivalent Model	16" x 29"	16" x 43"	21" x 36"	26" x 44"

Q: How is it possible for the pre-charged tanks to hold the same amount of water as conventional tanks even though they are smaller?

A: Tanks are sized based on the amount of water provided before the water pressure drops enough to turn on the pump. Galvanized tanks are very inefficient and leave most of their stored water in the tank when the pump turns on. Pre-charged tanks are very efficient and will provide you with more water between pump cycles.

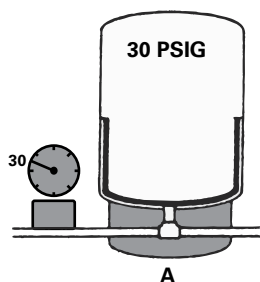
Q: Do I need to change my plumbing to replace my galvanized tank with a pre-charged tank?

A: Some adjustments will be necessary. A complete set of instructions are included with each pre-charged tank that will help you with the installation.

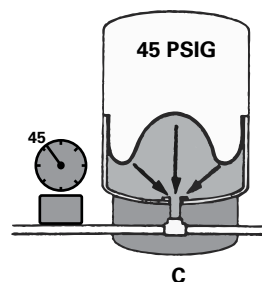
Q: How do I know what size to buy?

A: If you already have a pre-charged tank simply buy one of the same physical size. If you have a conventional tank use the chart below.

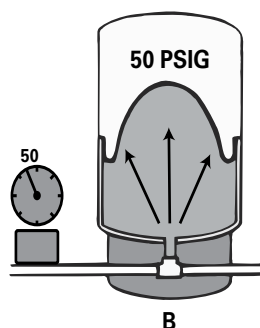
HOW THE STAR AIR-E-TAINER® WORKS



A. Tank is pre-pressurized with air at the factory.



C. When water is demanded, pressure in the air chamber forces water into the system. Pump turns on.



B. When pump starts, water enters the reservoir. At 50 psig. system is filled. Pump shuts off.

D. When pressure in tank drops to pressure switch cut-in point (30 psig) pump refills the tank as in illustration B.

IL0294

STAR DIAPHRAGM AIR-E-TAINER® SIZING GUIDE

Make sure you have a tank size suited to your present plumbing system.

You may need to switch to a higher or lower capacity model to match the system.

To select the proper size tank, count the number of fixtures in your home (sinks, showers, bathtubs, toilets, dishwashers,

faucets, washing machines, outside faucets, etc.)

The proper tank volume is three (3) times the number of fixtures.

For example:

No. Fixtures

5
6-8
9-11
12-15
16-21
22-30
31 plus

Tank Volume

14
20
32
44
62
86
119

Air-E-Tainer Tank

132661 or larger
132662 or larger
132663 or larger
133517 or larger
136875 or larger
135460 or larger
136876 or larger

If you have a heat pump, hot tub, sprinkler system or irrigation system, choose a tank one model larger.

DIAPHRAGM PRESSURE TANK DRAWDOWN CHARTS

AIR-E-TAINER® PRE-PRESSURIZED WELL SYSTEM TANKS

Part No.	Model No.	Total Tank Vol. Gallons	Equiv Standard Pressure Tank***	Drawdown - Gallons by PSI Settings			Approx. Size In. Dia x Ht	Ship Wt Lbs	NPT Size/ MTL	Factory Precharge PSIG	Max Working Pressure (PSI)	Max Working Temp	UPC #
				20/40	30/50	40/60							
131009	PWD6/8LFW*	2.1	5	0.8	0.7	0.6	9 x 11.3	5.5	3/4"	28	100	140	054757002213
132477	PWD15/18LFW*	4.5	12	1.7	1.4	1.2	10 x 15	10	3/4"	28	100	140	054757001865
138337	PWD20S/20LFW	6	15	2.2	1.9	1.6	10.4 x 11.6	12	3/4"	28	125	140	054757044329
136877	AT25H**	8.5	21	3.1	2.6	2.2	12.5 x 20.4	32	3/4"	28	100	140	054757002367
132661	AT44	14	30	5.2	4.3	3.8	16 x 21.8	30	1"	28	100	200	054757001889
136878	PWD44S60LFW	14	30	5.2	4.3	3.8	15.3 x 16.7	28	3/4"	28	125	140	054757002374
132662	AT66	20	42	7.4	6.2	5.4	16 x 28.8	35	1"	28	100	200	054757001056
021492	AT88	26	70	9.5	8	6.9	16.0 x 34.5	41	1"	28	100	200	054757067700
132663	AT122	34	82	12.3	10.3	9	16 x 43	53	1"	28	100	200	054757001896
133517	AT144	44	120	16.3	13.6	11.9	21 x 36.2	66	1-1/4"	38	100	200	054757012427
136875	AT211	63	180	23.3	19.5	17	21 x 48	92	1-1/4"	38	100	200	054757018436
135460	AT244	81	220	30	25.1	22	21 x 62	101	1-1/4"	38	100	200	054757015770
021491	AT266	85	220	31	26.2	22.7	26.0 x 44.5	121	1-1/4"	38	125	200	054757067663
136876	AT366	119	315	43.5	36.7	31.8	26 x 62	160	1-1/4"	38	125	200	054757018443

*Compact In-Line Tank.

**Horizontal Tank with Mounting Bracket.

***Air-E-Tainer® Tanks Will Deliver Drawdown Equivalent to Conventional Tanks of this size.

Caution: Install a Pressure Relief Valve on Any Installation Where the Pump Pressure Can Exceed the Tank's Maximum Working Pressure.

NOTE: Precharged tanks cannot ship via air freight.

Diaphragm Tank Stand



**134151
KH52**

134151 pump stand for mounting jet pumps on top of 132661, 132662, and 132663 Air-E-Tainer tanks. UPC # 054757035570

Water Heater Diaphragm Expansion Tanks

For water heater protection. Use wherever back flow preventers or check valves are installed. Prevents dangerous pressure build-up.

Part No.	Model	Total Volume Gallons	Dia.	Ht.	Shipping Wt.	Bronze System Connection	Precharge Pressure	Max. Working Pressure	UPC #
138004	PH5FW	2.1	9"	11"	7 lbs.	3/4" NPT	40 PSIG	150 PSIG	054757042158
138005	PH12FW	4.5	10"	16"	10 lbs.	3/4" NPT	40 PSIG	150 PSIG	054757042165

See Jet Pump Section for Mounted Systems and complete mounting kit.

GALVANIZED TANK DRAWDOWN CHARTS

Galvanized Tanks

Order No.	Total Tank Volume Gallons	Drawdown Gallons			Approx. Size Inches	Approx. Ship Wt. Lbs	Tapping Size - Inches			UPC #
		20/40	30/50	40/60			A	C	D	
124831	42S	6.5	4.2	3.0	20 x 34	71	1-1/4"	1-1/4"	1-1/4"	054757001629
125211	42T	6.5	4.2	3.0	16 x 51	71	1-1/4"	1-1/4"	1-1/4"	054757001650
124832	82	12.7	8.3	5.8	20 x 63	114	1-1/4"	1-1/4"	1-1/4"	054757001636
124833	120	18.6	12.1	8.5	24 x 65	154	1-1/4"	1-1/2"	1-1/2"	054757001643
124834	220	34.1	22.2	15.6	30 x 78	303	1-1/4"	2"	2"	054757007089
124835	315	48.8	31.8	22.4	36 x 80	416	1-1/4"	2"	2"	054757007096

Non-stock items - consult factory for delivery schedule.

75 PSI maximum working pressure. 150 PSI test pressure.

CAUTION: Install a pressure relief valve on any installation where the pump pressure can exceed the tank maximum working pressure.

Star Water Conditioning Quality Features

Three-Year Limited Warranty on Control Valve
Ten-Year Limited Warranty on NSF approved mineral tank

Control Valve – Can be automatic valve, demand regeneration valve or solid state electronic control valve.

Mineral Tank – Storage tank for the mineral that softens the water, untreated water flows through this tank.

Distributor Tube – Directs the flow of water through the mineral tank.

Softening Resin – High capacity resin which removes hardness (calcium and magnesium) and ferrous iron. See individual models for hardness and iron removal rates.

Salt Storage Tank – Referred to in the water trade as the brine tank. Stores salt which is mixed with water to regenerate softening mineral. Salt water flows through the mineral bed attracting the calcium and magnesium ions (hardness chemicals) which are flushed to drain along with the salt water. This leaves the original mineral regenerated and ready for the next softening cycle.

Brine Tube – Transfers salt water to mineral bed enabling the regeneration cycle to begin.

Brine Well – Allows salt water to be transferred to mineral bed and keeps salt away from brine components.

Brine Well Cap – Prevents salt and other substances from entering brine well.

Safety Brine Valve – Prevents water level in salt storage tank from overflowing. Float mechanism shuts off valve located in brine line if water level gets high.

Overflow Fitting – When connected to a drain adds additional insurance against the possibility of water overflow.

Brine Line – Flexible tubing used to transfer water between the mineral and salt brine tank.



Buy the Right Unit the First Time.

Have Water Professionally Tested and Avoid Costly Mistakes.

**ORDER FACTORY TEST KIT
136958**



The effectiveness of all water conditioning products to enhance water quality depends on a variety of water factors such as pH, dissolved solids, flow rates, and others. Star recommends testing all water prior to selecting any water treatment,

particularly private well water. To ensure peak performance, Star's 136958 Comprehensive Factory Analysis Kit is available.



Economy Water Softener with Multi-Day Timer

- Fully automatic motor control valve allows for multi-day programming flexibility to fit your specific needs.
- Space saving single-tank design cabinet with large salt storage capacity.
- High-capacity resin ensures maximum softening capability. Resin can be regenerated indefinitely.
- Automatic internal by-pass valve for constant household water flow during regeneration cycles.
- Corrosion resistant, maintenance free tanks.
- Three-year limited warranty on control valve and ten-year limited warranty on mineral tank. One-year limited warranty on other parts.

EC Style

Model #	Valve Style	Mineral Bed Capacity Grains	Hardness Removal Max. GPG	Iron Removal (Clear) ¹ Max. PPM	High Cap. Resin cu. ft.	Total Space Required (Inches)	Flow Rate GPM		Salt Storage Capacity lbs.	Approx. Ship Wt lbs.	UPC #
							Service Max. ²	Backwash Min.			
S07EC24	Isobar	24,000	50	3	3/4	14 x 20 x 44	7	1.5	250	88	054757000295

(¹) Removes iron in solution (Ferrous "clear" iron) up to amounts shown.

(²) Maximum service flow rates thru the softener must never exceed the specified flow rate in gallons per minute.

By-pass valve and safety brine valve not included. For by-pass valve, order 135507



Dual Tank Metered Water Softener

- Metered valve regenerates based on actual water usage, saves water and salt by regenerating only when needed.
- Dual tank design for easy maintenance and 225 lb. salt storage capacity.
- High capacity resin ensures maximum softening capability.
- Removes up to 5 PPM clear water iron.
- Automatic internal by-pass valve for constant household water flow even during regeneration cycles.
- Corrosion resistant, maintenance free tanks.
- Safety brine overflow protection standard equipment.
- Three-year limited warranty on control valve and ten-year limited warranty on mineral tank. One-year limited warranty on other parts.

FS DR Style

Model #	Valve Style	Mineral Bed Capacity Grains	Hardness Removal Max. GPG	Iron Removal (Clear) ¹ Max. PPM	High Cap. Resin cu. ft.	Space Required		Flow Rates GPM		Salt Storage Capacity Lbs.	Approx. Ship. Weight Lbs.	UPC #
						Brine Tank (In.)	Mineral Tank (In.)	Service Max. ²	Backwash Min.			
S07FS32DR	Isobar	32,000	100	5	1	14 x 14 x 34	9 x 48	8	2.0	225	100	054757000356
S07FS48DR	Isobar	48,000	100	5	1-1/2	14 x 14 x 34	10 x 54	10	2.4	225	133	054757000370



Metered valve saves water and salt.

Single Tank Deluxe Cabinet Metered "DR" Water Softener

- Metered valve regenerates based on actual water usage, saves up to 50% in water and salt by regenerating only when needed.
- Automatic water by-pass for constant household water flow during regeneration.
- Clear water iron removal up to 5 PPM.
- Safety brine overflow protects unit from overflowing, even during power failure.
- Three-year limited warranty on control valve and ten-year limited warranty on mineral tank. One-year limited warranty on other parts.

DC DR Style

Model #	Valve Style	Mineral Bed Capacity Grains	Hardness Removal Max. GPG	Iron Removal (Clear) ¹ Max. PPM	High Cap. Resin cu. ft.	Total Space Required (In.)	Flow Rates GPM		Salt Storage Capacity	Approx. Ship. Weight	UPC #
							Service Max. ²	Backwash Min.			
S07DC32DR	Isobar	32,000	75	5	1	14 x 20 x 44	8	2.4	250 lbs	100 lbs.	054757000042

(¹) Removes iron in solution (Ferrous "clear" iron) up to amounts shown.

(²) Maximum service flow rates thru the softener must never exceed the specified flow rate in gallons per minute. By-pass valve included.

Tannin / Hardness / Iron Removal System with Water Efficient Digital Demand Regeneration Control Valve



S11TS32DR8

UPC #054757034412

Product may not be exactly as shown.

The removal of organic tannins from water cannot be accomplished by standard water filters and softeners. The water usually has a yellow or brownish cast and the color does not settle out.

Tannins (or humic acids) are the result of decayed forest vegetation that is picked up by surface water and carried to underground sources. Tannins are organic substances that are very difficult to remove even by oxidation and filtration. They can,

however, be removed by the ion exchange principle.

This system is able to remove tannins, hardness and clear water iron from your water supply. The substances are pulled out by special premium grade resins which are easily regenerated with salt. Use salt containing iron control agents or packaged iron control products if iron is present to keep mineral bed in top condition.

- Digital demand regeneration control valve features:
 - Modular design for easy servicing
 - Automatic water by-pass for constant household flow during regeneration.
 - Motorized cycle sequencing which operates independent of household water pressure.
- 24V electrical transformer guards against high voltage danger.
- High quality, long lasting mineral for maximum tannin, hardness and iron removal.
- Strong corrosion proof fiberglass mineral tanks made from approved materials. Also, National Sanitation Foundation approved. Ten-year limited warranty.
- Corrosion-proof, maintenance-free polyethylene brine tanks and cabinets with brine overflow fitting. Made with FDA approved materials. One-year limited warranty.
- By-pass valve included for easy installation and service.

Model No.	Valve Style	Hardness Removal Max. Grains	Tannin Removal Max. PPM	Iron Removal (Clear) ¹ Max. PPM	Minerals		Total Space Required		Flow Rate GPM		Salt Storage lbs.	Approx. Ship Wt. lbs.
					High Cap. Resin cu. ft.	Tannin Anion Resin cu. ft.	Brine Tank (In.)	Mineral Tank (In.)	Service ² Max.	Backwash Min.		
S11TS32DR8	E14	100	3	.5	1	1/2	14 x 14 x 34	10 x 54	7.0	3.0	225	164

(¹) Removes iron in solution (Ferrous "clear" iron) up to amounts shown.

(²) Maximum service flow rates thru the softener must never exceed the specified flow rate in gallons per minute.

WHICH CAPACITY WATER SOFTENER IS BEST FOR MY SPECIFIC NEEDS?

1. Hard water is measured by grains of hardness.
2. Take your total grains of hardness as indicated by our test.
3. Add 4 grains of hardness for each PPM of ferrous iron (to compensate for iron.)
4. Count the number of members in your household.
5. Simply intersect the grains column with your family member total.

GRAINS OF COMPENSATED HARDNESS LEVEL								
Number in Family	Moderately Hard	Very Hard	Extremely Hard Water					
	5 	10 	15 	20 	25 	30 	35 	40
2								
3	24,000 GRAIN CAPACITY							
4	FOR SMALL TO MEDIUM				32,000 GRAIN CAPACITY			
5	FAMILIES			FOR MEDIUM TO LARGE				
6			FAMILIES			48,000 GRAIN CAPACITY		
7						FOR EXTREMELY HARD WATER		
8								
Regenerate at least every six days on multi-day timers								

Regenerate at least every six days on multi-day timers



Convenient By-pass Valve available with many Star Units: 135507



Optional Easy-to-Install 136599 Installation Kit †

136599 Easy Installation Kit

1. Shut off water supply and drain water line.
2. Tap into water line with a hacksaw.
3. Join incoming water line to softener intake valve using easy-to-install installation kit 136599.
4. Connect softener outlet valve to existing exposed water line.

BY-PASS VALVES

Part No.	Used On	Ship Wt.
135507	Fleck 5600, 5600SXT - Bulk	1.99#
KH57	Fleck 5600, 5600SXT	1.40#

†Not for sale in states following Proposition 65 and AB1953

Star DRAINMAKER Pumping System



- Install a drain for your softener when there is none available.
- Requires no roughed-in plumbing.
- No need to break concrete.
- Easy to install - no special tools required.
- Completely automatic.
- No filters or screens to clean or replace.
- Temperature rating 77° F.
- 1-year limited warranty.



S1104

Replacement pump model 1104RP



Model	Discharge Height Above Pumping Level	5 ft.	10 ft.	15 ft.	UPC #
S1104	Gallons Per Hour	1740	1320	600	054757053413



Removal Capacities of Activated Carbon

Aceraldehyde	4	Emulsions	2	Lead	3	Precipitated Sulphur	2
Acetic Acid	3	Ethyl Acetate	5	Lime	0	Propioic Acid	4
Acerone	4	Ethyl Acrylate	5	Mercaptans	4	Propionaldehyde	3
Alcohols	4	Ethyl Alcohol	4	Metal Salts	1	Propyl Acetate	4
Alkalinity	1	Ethyl Amine	4	Methyl Acetate	4	Propyl Alcohol	4
Amines	3	Ethyl Chloride	4	Methyl Alcohol	4	Propyl Chloride	4
Ammonia	1	Ethyl Ether	4	Bethyl Bromide	5	Radon	4
Amyl Acetate	5	Fertilizers	1	Methyl Chloride	4	Rubber Hose Taste	5
Amyl Alcohol	5	Fluorides	2	Methyl Ethyl Ketone	5	Sea Water	1
Antifreeze	4	Formaldehyde	2	Naphtha	5	Sediment	2
Arsenic	1	Gasoline	5	Nitrates	0	Soap	3
Benzene	5	Glycols	5	Nitric Acid	3	Sodium Hypochlorite	5
Bleach	5	Hardness	0	Nitrobenzene	5	Soluble Iron	2
Boron	1	Heavy Metals	3	Nitrotoluene	5	Solvents	4
Butyl Alcohol	5	Herbicides	5	Odors (General)	5	Sulfuric Acid	1
Butyl Acetate	5	Hydrogen Bromide	2	Oil-dissolved	5	Suphonated Oils	4
Calcium Hypochlorite	5	Hydrogen Chloride	1	Oil-suspended	2	Suspended Matter	2
Carbon Dioxide	0	Hydrogen Fluoride	1	Organic Acids	4	Tannins	4
Chlordaine	5	Hydrogen Iodide	2	Organic Esters	5	Tar Emulsions	4
Chloramine	4	Hydrogen Peroxide	5	Organic Salts	4	Tartaric Acids	4
Chloroform	5	Hydrogen Selenide	3	Oxalic Acid	5	Taste (DI Water)	4
Chlorine	5	Hydrogen Sulfide	3	Oxygen	5	Taste (From Organics)	4
Chlorobenzene	5	Hypochlorous Acid	5	Ozone	4	THM's	5
Chlorophenol	5	Inorganic Acids	1	PCB's	5	Toluene	5
Chlorophyll	4	Inorganic Chemicals	1	Pesticides	5	Toluidine	5
Citric Acid	4	Insecticides	5	Phenol	5	Trichlorethylene	5
Cresol	5	Iodine	5	Phosphates	0	Turpentine	5
Difoliant	5	Isopropyl Acetate	5	Plastic Taste	5	Urine	2
Detergents	3	Isopropyl Alcohol	5	Plating Wastes	3	Vinegar	3
Diesel Fuel	5	Ketones	5	Potassium Permanganate	4	Xanthophyll	4
Dyes	5	Lactic Acid	4	Precipitated Iron	2	Xylene	5

KEY TO LIST:

Not an application for GAC	0
POOR - not a recommended use	1
FAIR - limited application	2
GOOD - very acceptable results	3
VERY GOOD - a proven application	4
EXCELLENT - a proven application	5



**S07AF10
For Rural Water**

Whole Household Automatic Filter

- Fully automatic, motor-operated valve with 12 day timer
- Modular valve and timer designed for easy service
- All fiberglass mineral tank will not rust or corrode
- By-pass valve for easy installation
- High-quality filtering material available separately

Specifications

Model #	Flow Rates		Backwash Min.	Volume (Cu.Ft.)	Inlet/ Outlet	Total Space Required (In.)	Ship Weight (Lbs.)	UPC #
	Cont.	Peak						
S07AF10	4	6	5.0	1.00	3/4"	9 x 48	27	054757000073

(*) Includes gravel underbed and by-pass valve

Star offers a variety of different filter media to correct your specific water problem:

- Eliminate Iron Problems
- Neutralize Acidic Water
- Remove Sediment
- Remove Taste & Odor

WATER TREATMENT RESINS AND MINERAL			
APPLICATION	MINERAL	DESCRIPTION	ORDER #
ACID NEUTRALIZER AND SEDIMENT REMOVAL	CALCITE	A crushed and screened white marble material which can inexpensively be used to neutralize acidic or low pH waters to a neutral noncorrosive effluent. Acidic waters on contact with calcite slowly dissolve the calcium carbonate media to raise the pH which reduces the potential leaching of copper, lead and other metals found in typical plumbing systems. The calcite bed will have to be periodically added to as the dissolved calcite depletes. As the calcite's calcium carbonate neutralizes the water, it will increase hardness and a water softener may become necessary after the neutralizing filter.	136372 1/2 cu. ft. 43 lbs. 023357 1 cu. ft. 85 lbs.
SEDIMENT AND TURBIDITY REMOVAL	FILTER AG	A non-hydrous highly efficient filter media for the removal of suspended matter. Filter AG granules have irregular surface characteristics affording maximum removal of suspended matter throughout the filter bed. A substantial savings can be realized, when designing a system using filter AG, because equipment can be smaller, requiring less square foot area. Filter AG is a lightweight substance which means additional savings in backwashing rates and volumes of water.	135518 1 cu. ft. 23 lbs.
TASTE AND ODOR REMOVAL	ACTIVATED CARBON	May be used for a variety of water treatment applications requiring the removal of taste, odor, and color. One of the most common applications for Activated Carbon is the removal of the undesirable taste present in many chlorinated water supplies. The end product is clean, fresh water with no objectionable taste or odor characteristics. Activated Carbon has an extremely high capacity but must be replaced when the filter bed loses the capacity for removal of taste and odor.	135516 1 cu. ft. 23 lbs.
IRON REMOVAL	BIRM	Birm is an efficient and economical media for the reduction of dissolved iron and manganese compounds from raw water supplies. The physical characteristics of Birm provide an excellent filter media which is easily cleaned by backwashing to remove the precipitant. Birm is not consumed in the iron removal operation and therefore offers a tremendous economic advantage over many other iron removal methods. Other advantages of Birm include; long material life with relatively low attrition loss, a wide temperature performance range and extremely high removal efficiency. Negligible labor costs are involved because Birm does not require chemicals for regeneration . . . only periodic backwashing is required	135514 1 cu. ft. 49 lbs.

Part No.	Material	Cu. Ft.	Ship Wt.
137261	Hi Cap Resin (Fine)	1/2	27
137262	Hi Cap Resin (Fine)	3/4	40
023355	Hi Cap Resin (Coarse)	3/4	40
023356	Hi Cap Resin (Coarse)	1	62

Part No.	Material	Cu. Ft.	Ship Wt.
023358	Mixed Blend	1	88
135523	"D" Gravel		21.5
136203	Tannin Resin	1/2	24
136227	Carbon-Gravel refill kit		10.5

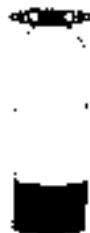


Model S07UF06C
UPC #054757000134

Deluxe Undercounter Taste & Odor Filter

Unlike the small cartridge type carbon filters which need to be replaced each month, the Star Deluxe Undersink Filter can last up to 3 years under normal conditions before carbon replacement is necessary.

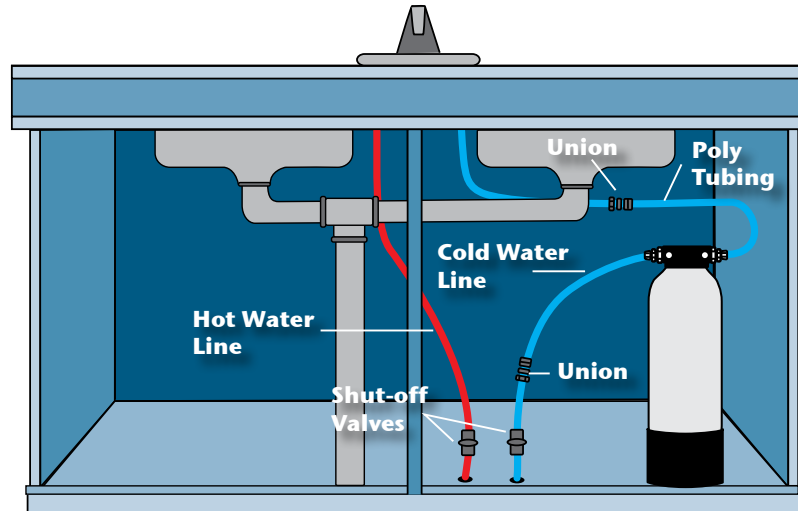
Plus, the Deluxe Undercounter Filter allows a normal rate of water flow of approximately three gallons per minute through the faucet. Most cartridge type filters and faucet mount filters restrict water flow to a level that requires considerable time to fill a pan with water. Or, they have no restriction control at all, which means little contact time with carbon and therefore less effective removal of contaminants present in the water. More mineral, more contact time with water, less hassle with changing cartridges every 45 days.

Value Plus Performance			
	Undersink Cartridge Filter	Typical Cartridge Filter	Typical Faucet Mount Filter
Amount of Activated Carbon	4 pounds (1814 grams)	14 ounces (398 Grams)	Less than 1 oz. (27 Grams)

Effectively reduces: bad taste, odors, chlorine, organic chemicals, pesticides and herbicides. For use on private or municipal water systems.

- Simple to install—easily replaces standard cartridge filters.
- Mineral easily replaced, approximately every three years.
- 10 year warranty on NSF approved fiberglass tank.
- Wastes no water, uses no electricity.
- Compact size (7" W x 20" H) fits conveniently under standard kitchen sink.
- Improves the taste and odor of water and beverages.
- Effectively reduces over 100 EPA priority contaminants.
- Reduces chemicals such as chlorine and municipal treatment chemical by-products.
- Effectively reduces pesticides and herbicides.
- Chemical free filtration—uses granular activated carbon.*

Typical Installation



***NOTE:** Carbon filter mineral must be replaced periodically to ensure filter effectiveness. Maximum life is 3 years. For your 3 year carbon replacement, order carbon refill kit 136227.

Service Flow Rate	Max. Operating Temp.	Max. Operating Pressure	Min. Operating Pressure	Plumbing Conn.	Total Space Required	Approx. Ship Wt.
3 GPM (11.4 LPM)	100°F (40.8°C)	80 PSI (551.6 KPa)	20 PSI (137.9 KPa)	3/8" O.D. Copper or Plastic	7" x 20" (17.8cm x 53.4cm)	14 lbs. 6.35 kg

TERMS & CONDITIONS OF SALE

ACCEPTANCE OF ORDERS: All orders are subject to acceptance by Star Water Systems in Kendallville, Indiana, and to conditions stated herein. Acceptance of Star product order constitutes acceptance of the terms and conditions stated herein.

Star Water Systems will not be bound by any term or condition on buyer's order which is different from or in addition to the terms and conditions of Star Water Systems.

SHIPPING POLICY: All prices are based upon product sold F.O.B. point of shipment. Star Water Systems will prepay and absorb transportation charges to common carrier points within the continental limitations of the United States, Alaska and Hawaii excluded, in accordance with the freight policy outlined in the Distributor Discount Schedule; and provided Star Water Systems is allowed to select point of origin of shipment, method of transportation and routing of the shipment. Star Water Systems reserves the right to add a shipping surcharge due to heavy weight, oversize dimensions, non-pump product mix and/or large order quantities with an order that qualifies for prepaid freight outlined in the Distributor Discount Schedule.

SHIPPING CLAIMS: Star Water Systems is not responsible for any damage or loss of any shipments after surrendering shipment to carrier in good order and original bill of lading to customer. Claims for loss or damage to products in transit must be made to the carrier by the purchaser within 5 working days after receipt of product, regardless of whether products are shipped prepaid or collect. No claims for shortages in quantity will be honored by Star Water Systems unless presented within 5 working days after receipt of goods.

PRICES: While every effort will be made to provide customers advance notice of price changes, all prices and discounts are subject to change without notice.

Star Water Systems reserves the right to refuse any order due to a price change or price discrepancy; and acceptance of such order by Star Water Systems is subject to customer acceptance of the revised current price.

CANCELLATION: Orders accepted by Star Water Systems in Kendallville, Indiana are not subject to cancellation; but, where cancellation for any cause is mutually agreed to, the purchaser will be billed for reasonable charges based on expenses already incurred and commitments made by Star Water Systems.

TERMS OF PAYMENT: 2% 30 days, Net 45 days. Accounts past due will be subject to a 1 1/2% monthly interest charge.

SALES TAX EXEMPTION: Star is required to have a current sales tax exemption certificate on file for your company. If you have multiple stores or branches that we ship to in other states, please provide a MTC (Multistate Tax Commission) exemption certificate. It is your responsibility to provide the correct form for your state. Failure to provide your sales tax exemption certificate will result in sales tax being charged on your order.

RETURNING PRODUCT: Authorization and shipping instructions must be obtained from Star Water Systems by the purchaser before returning any product. A 15% handling and restocking charge will be charged for new product returned to Star Water Systems for credit. Non-cataloged product is not returnable.

EXPORT COMPLIANCE POLICY: All Star Water Systems products sold outside of the Continental United States are subject to the standards and regulations set forth by the Bureau of Industry and Security. Please consult with the factory on any product that it is intended to be exported outside of the United States. See FW1333 for additional information.

LIMITED WARRANTY: This product is warranted, unless otherwise stated, to the user to be free from defects in material and workmanship for a period of one (1) year from the date of purchase or two (2) years from the date of manufacture, whichever is less. To obtain service under this warranty, contact any authorized dealer or return any component which fails during this warranty period to the factory, freight prepaid. Components showing unmistakable signs of defects in material or workmanship will be repaired or replaced without charge and returned, freight prepaid.

THE WARRANTY PROVIDED HEREIN IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES, AND MAY NOT BE EXTENDED OR MODIFIED BY ANYONE. ANY IMPLIED WARRANTIES SHALL BE LIMITED TO THE PERIOD OF THIS LIMITED WARRANTY, AND THEREAFTER ALL SUCH IMPLIED WARRANTIES ARE DISCLAIMED AND EXCLUDED. STAR WATER SYSTEMS SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, SUCH AS, BUT NOT LIMITED TO, DAMAGE TO, OR LOSS OF, OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS, INCONVENIENCE, LABOR, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY TYPE OR NATURE. THE LIABILITY OF STAR WATER SYSTEMS SHALL NOT EXCEED THE PRICE ON THE PRODUCT UPON WHICH SUCH LIABILITY IS BASED.

This Warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow limitations on duration of implied warranties or exclusion of incidental or consequential damages, so the above limitations may not apply to you.

If you have any questions concerning this or any of our policies and procedures, please do not hesitate to contact your Sales Representative.

IMPORTANT NOTICE TO OWNER

This warranty shall become effective only in the event Star Water Systems's warranty registration card has been properly completed by the original retail purchaser and returned to Star Water Systems within ten (10) days of the date of purchase. Proof of purchase may be required to obtain warranty.

STAR WATER SYSTEMS ADVERTISING & PROMOTION COOPERATIVE PROGRAM FOR RETAILERS

1. Star Water Systems will credit the distributor up to 50% of expenses incurred, excluding sales tax and shipping charges, for programs to directly advertise and promote Star Water Systems products, up to maximum of 1% of net dollar purchases based upon the past calendar year January through December. All claims should be submitted within 30 days, but no later than December 15th of the current year. Claims submitted after December 15th will be applied to the following years' allowance.
2. This advertising and promotion cooperative program is available only to Star Water Systems qualified Retailers; credit may be earned only when the Retailer incurs an equal or greater amount of expense marketing Star Water Systems products.
3. Cooperative advertising and promotional programs proposed by a Retailer should be submitted for prior approval to the National Accounts Manager for submission to the Marketing Manager before they can qualify for credit.
4. Proper documentation must be submitted with the request for co-op funds.
5. All cooperative programs, which have previously been approved by the Marketing Manager, will receive the appropriate credit for expenses incurred when the following data has been submitted.
6. A credit memorandum will be sent to the Retailer immediately after submission and approval of all claims. Cooperative program credit allowances will not be carried forward into the next year.
7. The distributor's account with Star Water Systems must be current at the time co-op approval is requested. If a Retailer's account is not current at the time approval is requested, the request will be denied.

Freight Damage and Discrepancies

All freight carriers require damage or shipping discrepancies to be reported to them within 5 days of receipt shipment. In order to receive credit for freight claims, all damage (visible or concealed) or any shipping discrepancies must be submitted to Star Water Systems within that time frame and noted on the bill of lading, if possible.

Notification of damaged freight or shipping discrepancies should be made by contacting Star Water Systems' Technical Service Center at 800-742-5044. Please provide the Service Technician with the PO #, missing or damaged model #'s and their quantities. A Return Authorization Number (RA #) and shipping instructions will be provided by the Service Technician. Return all damaged goods to:

Star Water Systems
95 North Oak Street
Kendallville, IN 46755

Be sure to reference the RA # on the outside of the box.

Star Water Systems will consider all orders as being satisfactorily received and complete by your receiving department if no damaged freight or shipping discrepancies are reported to us within the above mentioned

5 day time frame. Please note below the standard industry guidelines as stated on the back of your invoice contract; which reads as follows:

Section 4 - Star Water Systems is not responsible for any damage or loss of any shipment once it has left the Star warehouse with a common carrier (UPS, FedEx, etc.)

Section 8 - Return of defective products can be made, but only with prior consent of Star Water Systems and subject to the conditions that are specified above.

Section 12 - No claims for shortage in weight or quantity will be honored by Star Water Systems unless presented within 5 working days after receipt of goods.

Any claim made outside the freight carrier's specified 5 days from receipt of delivery will not be honored. Payment in full will be required on all orders except those with proper notification.

If you have any questions concerning this or any of our policies and procedures, please do not hesitate to contact your Sales Representative.

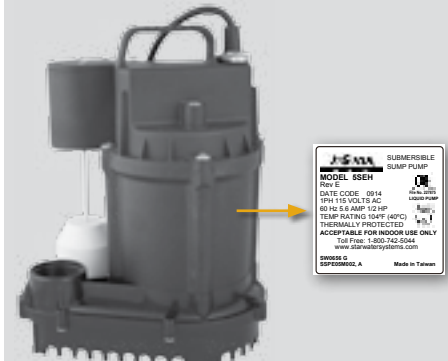
Utility Pumps & Utility Sump Pumps



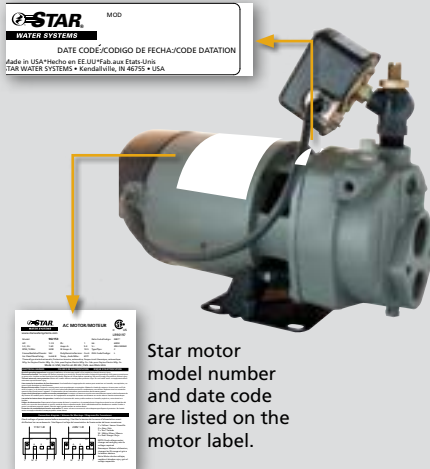
Column Sump Pumps



Sump Pumps



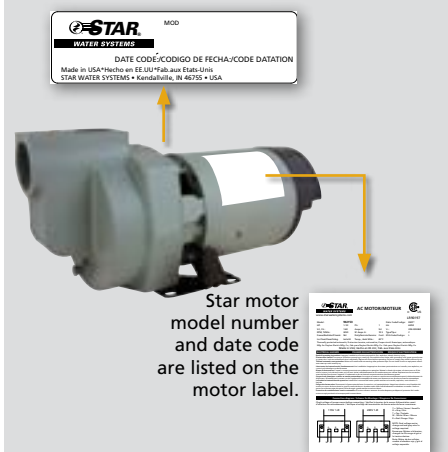
Jet Pumps



Submersible Pumps



Irrigation Pumps



LIMITED WARRANTY

This product is warranted, unless otherwise stated, to the user to be free from defects in material and workmanship for a period of one (1) year from the date of purchase with sales receipt or two (2) years from the date of manufacture, whichever is less.

To read date code label,



Month is first, followed by year.
0511 = May, 2011

Star Customer Service Toll Free Help Line:

800-742-5044



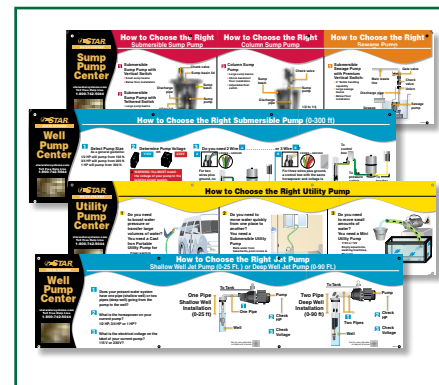
Promotional Literature

Full color literature and point of purchase brochures highlight the features and benefits of Star products to help store personnel and customers choose the right product.



Training Material

Installation and training manuals and videos are excellent resources for training store personnel and educating customers. Step-by-step installation and equipment operation manuals and general pump and water conditioning materials are available in hard copy and on line from the Star web site.



Display Header Boards

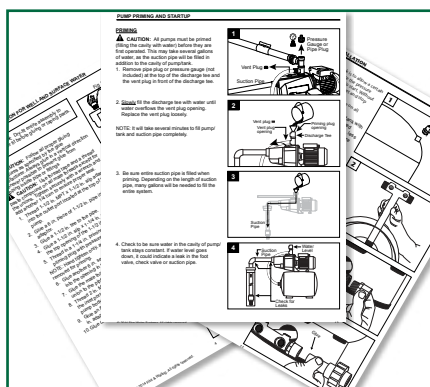
Colorful, bold, easy-to-read header boards feature the STAR product line selling features and easy installation information. Easily attaches to gondola, vers-rack shelving or product for high visibility, attention-grabbing, point of purchase displays.



On-line Pump Sizing Program

A few clicks help you choose the right pump for every application.

Available at
starwatersystems.com



On Line Consumer Information

Product instructions and trouble-shooting manuals available at starwatersystems.com



On Line Product Information

Product information, contact names, repair parts and more available on line