



Jet Pumps



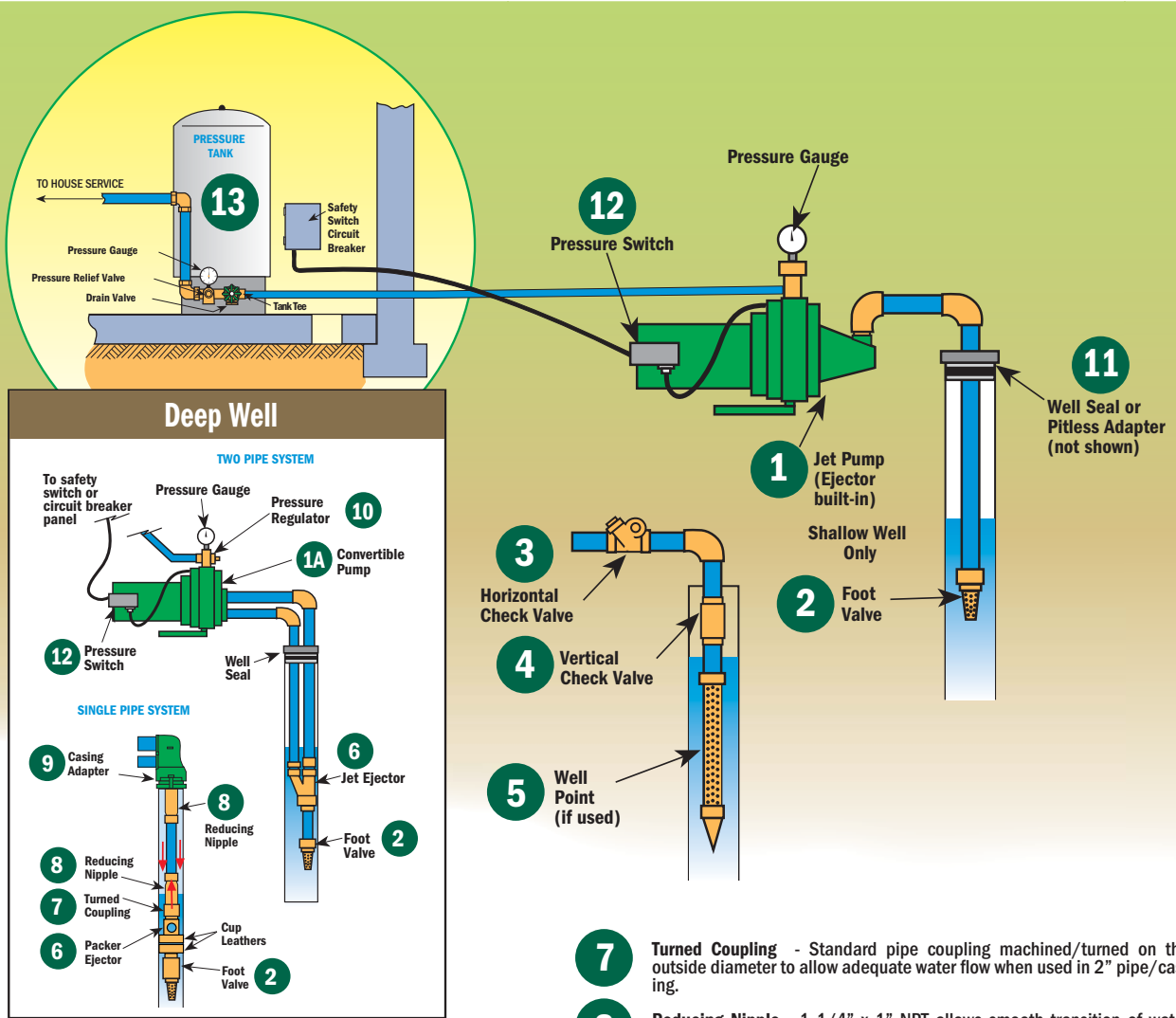
# Jet Pumps

Pump Catalog - January 2020

MORE THAN A BRAND. WE'RE A FAMILY.

# Typical Jet Pump Installations

## Shallow Well Pump



- 1** **Jet Pump** - A pump combining two pumping principles - centrifugal operation and ejection. They can be used in shallow or deep wells. When well diameter is 2", a surface mounted pump with 2" packer jet ejector is one of the only ways to automatically draw water from more than 25' below ground.
- 1A** **Convertible Pump** - A pump that can be used in either a shallow or deep well.
- 2** **Foot Valve** - A type of check valve with built-in strainer. Used at point of liquid intake to retain liquid in the system, preventing loss of prime when liquid source is lower than pump. You must have a reliable foot valve for deep well jet pumps.
- 3** **Check Valve** - Allows liquid to flow in one direction only. Generally used in suction and discharge line to prevent reverse flow. Available in (3) horizontal and (4) vertical models.
- 4** **Vertical Check Valve** - Same as horizontal check valve, but designed for vertical installation.
- 5** **Well Point** - Sometimes called a Sand Point or Drive Point because they are driven/hammered into the water table. Equipped with various sized screens, water flows into the inside of the screen and is pumped (by vacuum) to the surface.
- 6** **Jet Ejector** - Jet ejectors are a combination of nozzle and venturi that works together to create a vacuum and thereby pull additional water along with the high velocity water provided.

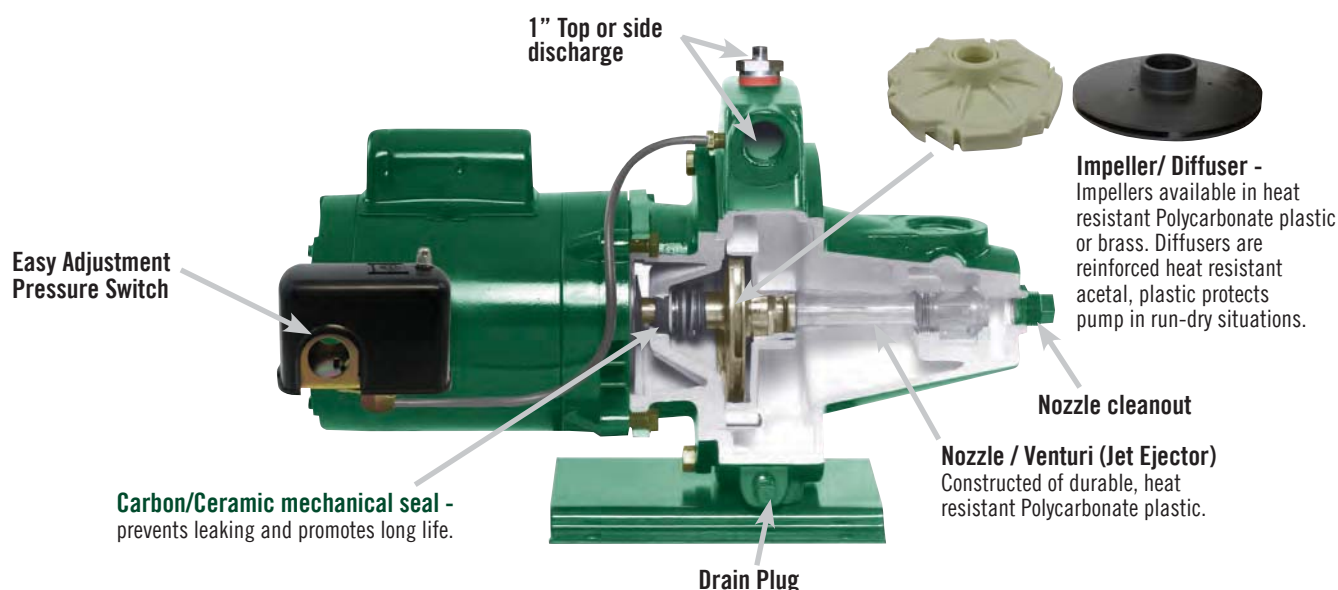
- 7** **Turned Coupling** - Standard pipe coupling machined/turned on the outside diameter to allow adequate water flow when used in 2" pipe/casing.
- 8** **Reducing Nipple** - 1 1/4" x 1" NPT allows smooth transition of water flowing from the jet ejector to the above ground pump.
- 9** **Casing Adapter** - Seals the top of the well casing and allows the water coming from the pump to reach a "packer-type" jet ejector using the casing as the "drive pipe".
- 10** **Regulating Valve/Pressure Regulator** - Attaches to the discharge of a jet pump (or is built-in) to recirculate some of the water in the pump through a jet ejector in the well. Required for deep well ONLY.
- 11** **Well Seal / Pitless Adapter** - Seals the well from contamination. Pitless adapters (not shown) are required in freezing climates.
- 12** **Pressure Switch** - Critical to the smooth operation of the system. As water pressure increases (from the pump filling a tank), a diaphragm in the pressure switch applies force to a spring loaded lever. As the pressure overcomes the spring tension, the contacts snap open interrupting the electrical circuit stopping the pump. The greater the spring pressure, the higher the pump ON/OFF settings.
- 13** **Pressure Tank** - Provides storage of water under pressure for delivery between cycles; allows for reserve capacity for periods of peak demand; protects and extends the life of the pump by reducing the number of on/off cycles; and, helps reduce overall system maintenance.

# Features & Motors

## Easily Serviceable

- No need to disturb piping when servicing. Working parts are integral to motor adapter/seal plate assembly.
- Nozzle clean out plug and drain plug in pump housing.
- Motor Adapter: Precision machined cast iron for positive alignment/concentricity on 8100/8200 series.
- Seal/Condensation Plate: Molded from heat resistant, acetal plastic for 8500/8600 series.
- All A.Y. McDonald Mfg. Co. Jet Pumps use standardized parts to minimize repair parts inventories.

\*\*In the jet pumps the seal seats after the pump has been running awhile. It is normal for a jet pump to have a small drill. This should stop after about an hour or so of run time.



## Nema J Motor

- 8100 & 8200 Series
- UL and CSA listed motors
- Standard service factors
- Dual voltage w/ Voltage Change Device
- Built-in thermal overload with automatic reset
- 7/16" - 20 thread



## Square Flange Motor

- 8500 & 8600 Series
- UL and CSA listed motors
- High service factor
- Dual voltage w/ Voltage Change Device
- Built in thermal overload with automatic reset
- Easily accessible four bolt pattern
- Dual voltage switch, easily accessible.
- Screwdriver slot, in the motor shaft, easily accessible to remove the impeller on 8500/8600 Series.
- 7/16" - 20 thread



## 8100 Series - Shallow Well

A.Y. McDonald offers a full line of shallow well and convertible jet pumps built for years of trouble free operation, with high-efficiency impellers and diffusers. The 8100 series shallow well capacity is up to 25 gallons per minute (GPM) and pressures to 80 PSI.

All 8100 Series Shallow Well Pumps come with a 1 1/4" suction pipe and 1" top or side discharge. The sizes range from 1/2 to 1 horsepower (HP).

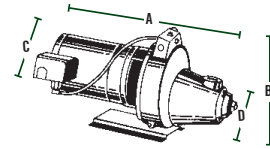
### Features:

- Nema J (Threaded Shaft) Motor 7/16" - 20 Threads
- Pressure switch factory settings:  
 1/2 HP High Capacity = 20-40 PSI  
 1/2 HP High Pressure = 30-50 PSI  
 All 3/4 and 1 HP = 30-50 PSI
- \* Maximum Amp. Draw at factory voltage setting.



### Models Available High Capacity

Model No.	HP	Volt	*Max. Amps	Switch	Impeller	A	B	C	D	WT
8150	1/2	115/230	11.2	20/40	plastic	20"	10"	10.5"	8"	45
8151	1/2	115/230	11.2	20/40	brass	20"	10"	10.5"	8"	46
8170	3/4	<b>230</b> /115	7.4	30/50	plastic	19.5"	10"	10.5"	8"	48
8171	3/4	<b>230</b> /115	7.4	30/50	brass	19.5"	10"	10.5"	8"	50
8110	1	<b>230</b> /115	8.8	30/50	plastic	20"	10"	10.5"	8"	51
8111	1	<b>230</b> /115	8.8	30/50	brass	20"	10"	10.5"	8"	53



Overall Length "A" | Overall Height "B"  
 Overall Width with Pressure Switch "C"  
 Overall Width without Pressure Switch "D"  
 \*See table to left for dimensions.

### High Pressure

Model No.	HP	Volt	*Max. Amps	Switch	Impeller	A	B	C	D	WT
8150HP	1/2	115/230	11.2	30/50	plastic	20"	10"	10.5"	8"	46
8151HP	1/2	115/230	11.2	30/50	brass	20"	10"	10.5"	8"	47
8170HP	3/4	<b>230</b> /115	7.4	30/50	plastic	19.5"	10"	10.5"	8"	49
8171HP	3/4	<b>230</b> /115	7.4	30/50	brass	19.5"	10"	10.5"	8"	49
8110HP	1	<b>230</b> /115	8.8	30/50	plastic	20"	10"	10.5"	8"	52
8111HP	1	<b>230</b> /115	8.8	30/50	brass	20"	10"	10.5"	8"	53

Factory Voltage Setting listed first in bold type.

# 8100 Series - Shallow Well

## High Capacity | Shallow Well

Model No.	HP	Suction Lift - Ft.	Capacities in GPM at Discharge Pressure (PSI)				MAX Shut Off Pressure
			20	30	40	50	
8150	1/2	5	15.6	15.6	8.6	2.3	58
8151		15	11.7	11.7	6.5	1.2	
		25	6.6	6.6	4.7	--	
8170	3/4	5	18.8	18.8	16.2	8.8	64
8171		15	14.4	14.4	12.3	3.9	
		25	8.6	8.6	7.3	2.7	
8110	1	5	24.2	24.0	23.0	15.0	64
8111		15	20.1	18.6	18.4	10.9	
		25	11.6	11.4	11.3	4.7	

## High Pressure | Shallow Well

Model No.	HP	Suction Lift - Ft.	Capacities in GPM at Discharge Pressure (PSI)					MAX Shut Off Pressure
			30	40	50	60	70	
8150HP	1/2	5	7.6	7.1	5.7	2.7		70
8151HP		15	5.5	5.4	4.3	2.0		
		25	3.7	3.6	2.9			
8170HP	3/4	5	9.4	9.4	7.8	4.2		74
8171HP		15	7.0	7.0	5.9	2.9		
		25	4.6	4.6	3.8	2.1		
8110HP	1	5	13.4	13.4	12.7	9.2	3.0	80
8111HP		15	10.0	10.0	9.4	6.5	2.4	
		25	6.2	6.2	6.0	4.3	1.8	

**1 - Zinc Plated Plug**  
(With Pressure Gauge Tap & 1/4" plug)

**2 - Impeller**  
Available in either dynamically balanced bronze or engineered thermoplastic

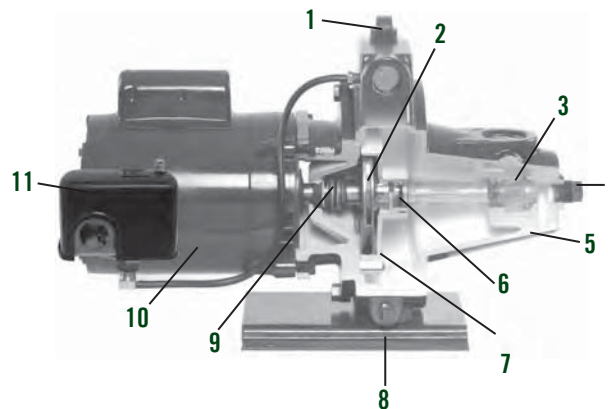
**3 - Nozzle-Venturi (Jet Ejector) Assembly**  
Unitized construction made of non-distorting Polycarbonate with excellent heat resistance

**4 - Zinc Plated Nozzle Clean-out Plug**

**5 - Cast Iron Pump Body & Motor Adapter**

**6 - Buna-N O-ring (On Venturi)**

**7 - Diffuser**  
Multi-volute engineered thermoplastic diffuser for maximum capacity and pressure



**8 - Drain Plug**

**9 - Shaft Seal**  
Standard 5/8" ceramic carbon rotating mechanical seal

**10 - Standard, Capacitor Start, Nema J Motor**  
Built to NEMA specifications by nationally known manufacturers to assure local service availability. Choice of 1/2, 3/4 and 1 H.P. 50 Hz. or 60 Hz.

**11 - Pressure Switch**  
Easily adjusted for higher or lower operating pressures

## 8200 Series - Convertible

A.Y. McDonald offers a full line of shallow well and convertible jet pumps built for years of trouble free operation, with high-efficiency impellers and diffusers. The 8200 series convertible capacity is up to 65 gallons per minute (GPM) and pressures to 80 PSI.

All 8200 Series Convertible Pumps come with a 1 1/4" suction pipe and 1" top or side discharge. The sizes range from 1/2 to 1 horsepower (HP).

### Features:

- Nema J (Threaded Shaft) Motor 7/16" - 20 Threads
- Pressure switch factory settings:
  - 1/2 HP = 20-40 PSI
  - 3/4 and 1 HP = 30-50 PSI
- Two pipe tapings 1" x 1 1/4"
- \* Maximum Amp. Draw at factory voltage setting.



### Models Available

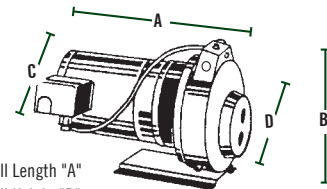
Model No.	HP	Volt	*Max. Amps	Impeller	A	B	C	D	WT
8250	1/2	<b>115/230</b>	11.2	plastic	15.5"	10"	10.5"	8"	42
8251	1/2	<b>115/230</b>	11.2	brass	15.5"	10"	10.5"	8"	44
8270	3/4	<b>230/115</b>	7.4	plastic	15"	10"	10.5"	8"	45

Model No.	HP	Volt	*Max. Amps	Impeller	A	B	C	D	WT
8271	3/4	<b>230/115</b>	7.4	brass	15"	10"	10.5"	8"	47
8210	1	<b>230/115</b>	8.8	plastic	15.5"	10"	10.5"	8"	48
8211	1	<b>230/115</b>	8.8	brass	15.5"	10"	10.5"	8"	50

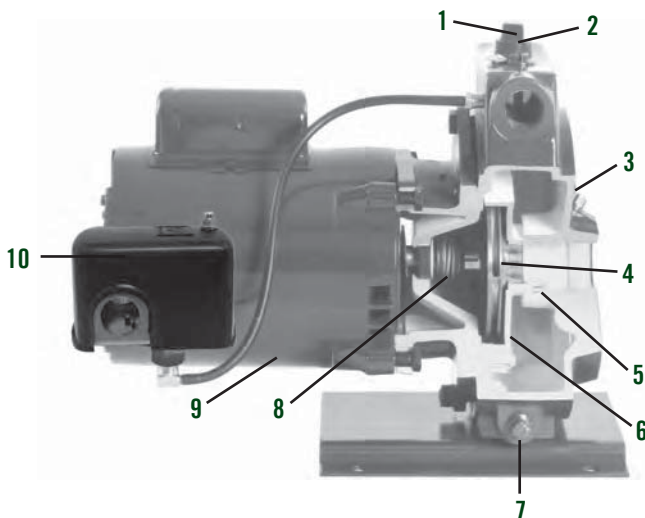
Factory Voltage Setting listed first in bold type.

\*Maximum Amp. draw at factory voltage setting.

- See page 186 for required Jet Ejectors



Overall Length "A"  
 Overall Height "B"  
 Overall Width with Pressure Switch "C"  
 Overall Width without Pressure Switch "D"  
 \*See table to left for dimensions.



- 1- **Zinc Plated Plug**  
(With Pressure Gauge Tap & 1/4" plug)
- 2- **Internal Regulating Valve**  
(Manual adjustment for deep well only)
- 3- **Cast Iron Pump Body & Motor Adapter**
- 4- **Impeller**  
Available in either dynamically balanced bronze or engineered thermoplastic
- 5- **Buna-N O-ring (In Body)**
- 6- **Diffuser**  
Multi-volute engineered thermoplastic diffuser for maximum capacity and pressure
- 7- **Drain Plug**
- 8- **Shaft Seal**  
Standard 5/8" ceramic carbon rotating mechanical seal
- 9- **Standard, Capacitor Start, Nema J Motor**  
Built to NEMA specifications by nationally known manufacturers to assure local service availability. Choice of 1/2, 3/4 and 1 H.P. 50 Hz. or 60 Hz.
- 10- **Pressure Switch**  
Easily adjusted for higher or lower operating pressures

# 8200 Series - Convertible

## 8200 Series - Convertible | Shallow Well Performance

Model No.	HP	Jet Ejector*	Suction Lift - Ft.	Capacities in GPM at Discharge Pressure (PSI)						MAX Shut Off Pressure
				20	30	40	50	60	70	
8250 8251	1/2	651-JP Hi-Capacity	5	15.6	15.6	8.6	2.3			58
			15	11.7	11.7	6.5	1.2			
			25	6.6	6.6	4.7				
		655-JP Hi-Pressure	5	7.6	7.6	7.1	5.7	2.7		74
			15	5.5	5.5	5.4	4.3	2.0		
			25	3.7	3.7	3.6	2.9			
8270 8271	3/4	652-JP Hi-Capacity	5	18.8	18.8	16.2	8.8			61
			15	14.4	14.4	12.3	3.9			
			25	8.6	8.6	7.3	2.7			
		656-JP Hi-Pressure	5	9.7	9.4	9.4	7.8	4.2		75
			15	7.1	7.0	7.0	5.9	2.9		
			25	4.7	4.6	4.6	3.8	2.1		
8210 8211	1	653-JP Hi-Capacity	5	24.2	24.0	23.0	15.0			64
			15	20.1	18.6	18.4	10.9			
			25	11.6	11.4	11.3	4.7			
		657-JP Hi-Pressure	5	13.3	13.3	13.3	12.7	9.2	3.0	80
			15	10.0	10.0	10.0	9.4	6.5	2.4	
			25	6.2	6.2	6.2	6.0	4.3	1.8	

\*Jet Ejectors must be ordered separately

## Shallow Well Performance without Jet Ejector

Model No.	HP	Jet Ejector*	Suction Lift - Ft.	Capacities in GPM at Discharge Pressure (PSI)						MAX Shut Off Pressure
				10	15	20	25	30	35	
8250 8251	1/2	Without	10	49.5	47	39.5	25	11		34
Jet		20	45	40.5	28	11.5				
8270 8271	3/4	Without	10	60	58	56	51.5	40		38
Jet		20	52	52	50	41	19			
8210 8211	1	Without	10	65	63	61	57	50	41.5	42
Jet		20	54	53.5	52	48	41	26		

## 8200 Series - Convertible | Deep Well Performance at 20 PSI | For 20-40 PSI Pressure Switch Setting

Model No.	HP	Well Casing Size	Jet Ejector*	Deep Well Capacities in GPM - At Depth to Water in Feet										
				30	40	50	60	70	80	90	100	110	120	
8250 8251	1/2	4"	7508-JP	12.7	10.5	8.8								
		4"	7509-JP		9.3	8.1	6.3	5.0	4.0					
		2"	7735-JP	11.3	9.4	7.9								
		2"	7736-JP		8.3	7.3	5.7	4.6						
8270 8271	3/4	4"	7901-JP	16.1	13.0	9.6								
		4"	7906-JP			9.9	8.4	6.5	5.1					
		4"	7907-JP						4.7	3.9	3.3	2.5		
		2"	7808-JP	14.3	11.6	8.5								
8210 8211	1	2"	7812-JP			8.9	7.5	5.8	4.6					
		2"	7813-JP						4.2	3.6	2.9	2.2		
		4"	7901-JP	16.8	14.3	11.9								
		4"	7902-JP			11.8	9.9	8.1	6.3					
8210 8211	1	4"	7903-JP						5.5	4.8	4.3	3.5	2.8	
		2"	7808-JP	15.0	12.9	10.7								
		2"	7809-JP			10.4	8.8	7.2	5.6					
		2"	7810-JP						4.8	4.2	3.8	3.1	2.6	

\*Jet Ejectors must be ordered separately



## E-Series

### 8300 Series Jet Pumps

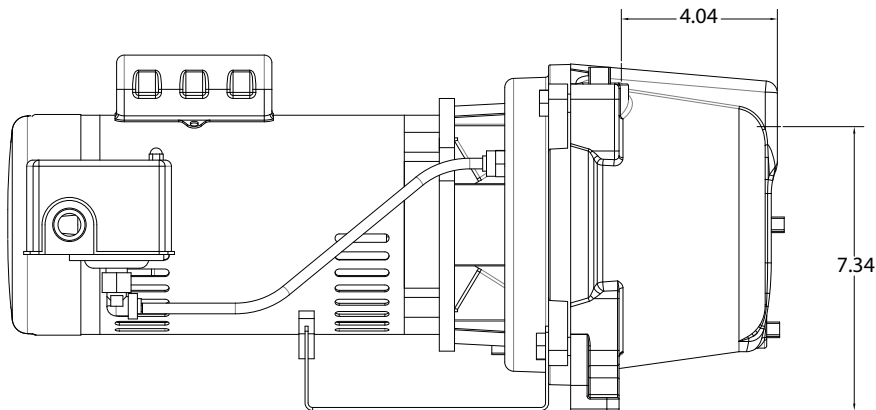
Get water from point A to point B easier than ever with A.Y. McDonald's E-Series Jet Pump. Available in 1/2, 3/4, 1, and 1 1/2 HP, this pump also contains a flow of up to 32 gallons per minute (GPM). The E-Series Jet Pump is designed with a 1 1/4" inlet and 1" outlet while allowing for an easy switch between 115V and 230V.

The High Pressure E-Series Jet Pump is available in 1/2 HP with pressures to 80 PSI and flows up to 11 gallons per minute (GPM).



#### Features:

- Up to 32 GPM
- 1" Outlet
- 1 1/4" Inlet
- Reliable, robust, and tested motor
- Easy to switch between 115V & 230V
- 304 Stainless steel motor shaft with wrench flat
- All iron pump housing and seal plate
- 304 Stainless steel insert on plastic impeller
- Stainless steel wear ring between the impeller & diffuser
- Stainless steel bolt hardware connecting pump to motor



#### Models Available

Model No.	HP	Volts	Suction	Discharge	Max Amp	Switch	Ship WT. (lbs.)
8350	1/2	<b>115</b> / 230	1 1/4"	1"	10.8	20/40	52
8350HP	1/2	<b>115</b> / 230	1 1/4"	1"	10.8	40/60	52
8370	3/4	<b>230</b> / 115	1 1/4"	1"	7.1	30/50	53
8310	1	<b>230</b> / 115	1 1/4"	1"	8.3	30/50	63
8315	1 1/2	<b>230</b> / 115	1 1/4"	1"	10.5	40/60	65

Factory Voltage Setting listed first in bold type.



# 8300 Series Jet Pumps

**Performance**

Model No.	HP	Suction Lift - FT.	Capacities in GPM at Discharge Pressure					Max. Shut off PSI
			20	30	40	50	60	
8350	1/2	5	17.4	12.6	8.0	2.7	-	58
		10	15.8	11.9	6.6	1.6	-	56
		15	12.9	10.9	5.6	0.8	-	52
		20	10.7	9.4	4.4	0.2	-	51
		25	8.5	8.3	3.6	0.1	-	51
8350HP	1/2	5	10.6	10.6	9.3	6.5	3.4	80
		10	9.4	9.	9.2	6.1	3.1	77
		15	8.2	8.1	8.0	5.3	2.3	74
		20	6.6	6.7	6.7	4.6	1.9	73
		25	4.9	5.0	5.0	4.1	0.0	70
8370	3/4	5	-	22.2	17.1	11.1	6.7	73
		10	-	20.0	15.8	10.8	6.0	70
		15	-	16.5	13.8	9.4	3.7	66
		20	-	13.7	10.9	7.5	1.6	62
		25	-	11.2	10.6	6.6	0.4	61
8310	1	5	-	25.9	21.3	13.8	7.0	70
		10	-	23.3	19.0	12.4	6.0	69
		15	-	19.5	17.1	10.1	3.1	66
		20	-	16.3	15.2	9.6	2.2	63
		25	-	13.4	12.9	7.8	0.2	60
8315	1 1/2	5	-	27.2	26.9	21.8	16.0	87
		10	-	24.1	24.0	20.2	15.2	82
		15	-	20.1	20.1	18.7	13.3	80
		20	-	16.7	16.7	15.9	11.4	75
		25	-	14.3	13.9	13.5	11.3	74

## 8500 Series - Shallow Well

A.Y. McDonald offers a full line of shallow well and convertible jet pumps built for years of trouble free operation, with high-efficiency impellers and diffusers. The 8500 series shallow well capacity is up to 25 gallons per minute (GPM) and pressures to 80 PSI.

All 8500 Series Shallow Well Pumps come with a 1 1/4" suction pipe and 1" top or side discharge. The sizes range from 1/3 to 1 horsepower (HP).

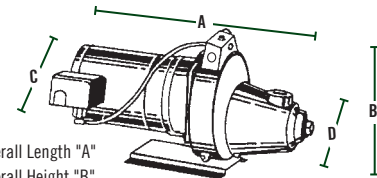
### Features:

- Square Flange Motor 7/16" - 20 Threads
- Pressure switch factory settings:  
 1/3 and 1/2 HP High Capacity = 20-40 PSI  
 1/3 and 1/2 HP High Pressure = 30-50 PSI  
 All 3/4 and 1 HP = 30-50 PSI
- \* Maximum Amp. Draw at factory voltage setting.



### Models Available High Capacity

Model No.	HP	Volt	*Max. Amps	Impeller	A	B	C	D	WT
8530	1/3	<b>115/230</b>	10.6	plastic	19.5"	10"	10.5"	8"	38
8531	1/3	<b>115/230</b>	10.6	brass	19.5"	10"	10.5"	8"	40
8550	1/2	<b>115/230</b>	12.0	plastic	20"	10"	10.5"	8"	43
8551	1/2	<b>115/230</b>	12.0	brass	20"	10"	10.5"	8"	44
8570	3/4	<b>230/115</b>	7.6	plastic	20.2"	10"	10.5"	8"	43
8571	3/4	<b>230/115</b>	7.6	brass	20.2"	10"	10.5"	8"	45
8510	1	<b>230/115</b>	9.2	plastic	20.6"	10"	10.5"	8"	45
8511	1	<b>230/115</b>	9.2	brass	20.6"	10"	10.5"	8"	47



Overall Length "A"  
 Overall Height "B"  
 Overall Width with Pressure Switch "C"  
 Overall Width without Pressure Switch "D"  
 \*See table to left for dimensions.

### High Pressure

Model No.	HP	Volt	*Max. Amps	Impeller	A	B	C	D	WT
8530HP	1/3	<b>115/230</b>	10.6	plastic	19.5"	10"	10.5"	8"	41
8531HP	1/3	<b>115/230</b>	10.6	brass	19.5"	10"	10.5"	8"	42
8550HP	1/2	<b>115/230</b>	12.0	plastic	20"	10"	10.5"	8"	44
8551HP	1/2	<b>115/230</b>	12.0	brass	20"	10"	10.5"	8"	42
8570HP	3/4	<b>230/115</b>	7.6	plastic	20.2"	10"	10.5"	8"	44
8571HP	3/4	<b>230/115</b>	7.6	brass	20.2"	10"	10.5"	8"	44
8510HP	1	<b>230/115</b>	9.2	plastic	20.6"	10"	10.5"	8"	45
8511HP	1	<b>230/115</b>	9.2	brass	20.6"	10"	10.5"	8"	47

Factory Voltage Setting listed first in bold type.

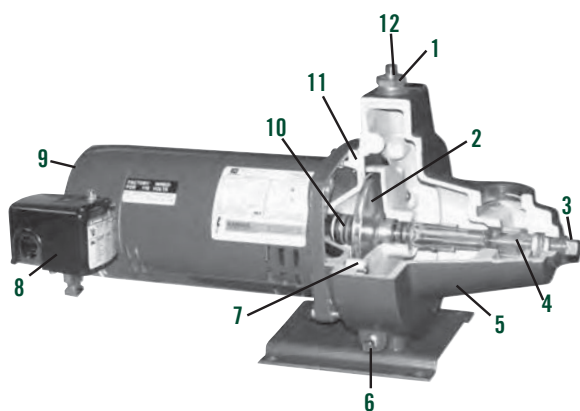
# 8500 Series - Shallow Well

## 8500 Series - High Capacity | Shallow Well

Model No.	HP	Suction Lift - Ft.	Capacities in GPM at Discharge Pressure (PSI)				MAX Shut Off Pressure
			20	30	40	50	
8530	1/3	5	12.6	12.6	7.4	2.5	57
8531		15	10.0	10.0	6.0	1.3	
		25	5.8	5.8	2.7	--	
8550	1/2	5	15.6	15.6	8.6	2.3	58
8551		15	11.7	11.7	6.5	1.2	
		25	6.6	6.6	4.7	--	
8570	3/4	5	18.8	18.8	16.2	8.8	61
8571		15	14.4	14.4	12.3	3.9	
		25	8.6	8.6	7.3	2.7	
8510	1	5	24.2	24.0	23.0	15	64
8511		15	20.1	18.6	18.4	10.9	
		25	11.6	11.4	11.3	4.7	

## 8500 Series - High Pressure | Shallow Well

Model No.	HP	Suction Lift - Ft.	Capacities in GPM at Discharge Pressure (PSI)					MAX Shut Off Pressure
			30	40	50	60	70	
8530HP	1/3	5	6.7	6.1	4.3	2.3		70
8531HP		15	4.8	4.6	3.3	1.1		
		25	3.0	2.9	2.1			
8550HP	1/2	5	7.6	7.1	5.7	2.7		74
8551HP		15	5.5	5.4	4.3	2.0		
		25	3.7	3.6	2.9			
8570HP	3/4	5	9.4	9.4	7.8	4.2		75
8571HP		15	7.0	7.0	5.9	2.9		
		25	4.6	4.6	3.8	2.1		
8510HP	1	5	13.4	13.4	12.7	9.2	3.0	80
8511HP		15	10.0	10.0	9.4	6.5	2.4	
		25	6.2	6.2	6.0	4.3	1.8	



- 1 - Zinc Plated Plug**  
(With Pressure Gauge Tap and 1/4" plug in side discharge, see picture above)
- 2 - Impeller**  
Available in engineered polycarbonate thermoplastic
- 3 - Zinc Plated Nozzle Cleanout Plug**
- 4 - Nozzle-Venturi (jet Ejector) Assembly**  
Unitized construction made of non-distorting Polycarbonate with excellent heat resistance
- 5 - Cast Iron Pump Body**
- 6 - Drain Plug**
- 7 - Diffuser**  
Multi-volute engineered thermoplastic diffuser for maximum capacity and pressure
- 8 - Pressure Switch**  
Easily adjusted for higher or lower operating pressures
- 9 - High Service Factor, Capacitor Start, Threaded Shaft, Square Flange Motor**  
Built to specifications by nationally known manufacturers to assure local service availability. Choice of 1/3, 1/2, 3/4 and 1 H.P. 50 Hz. or 60 Hz.
- 10 - Shaft Seal**  
Standard 5/8" ceramic carbon rotating mechanical seal
- 11 - Thermoplastic Seal / Condensation Plate**  
Provides air gap between motor and water chamber
- 12 - Discharge**  
1" Top or 3/4" Side discharge

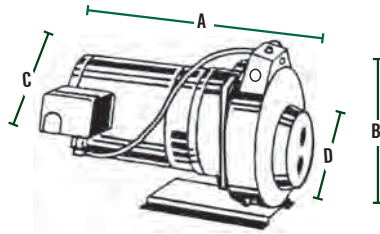
## 8600 Series - Convertible

A.Y. McDonald offers a full line of shallow well and convertible jet pumps built for years of trouble free operation, with high-efficiency impellers and diffusers. With appropriate jet ejector the 8600 series convertible capacity is up to 65 gallons per minute (GPM) and pressures to 80 PSI.

All 8600 Series Convertible Pumps come with a 1 1/4" suction pipe and 1" top or side discharge. The sizes range from 1/3 to 1 horsepower (HP).

### Features:

- Square Flange Motor 7/16" - 20 Threads
- Deep Well performance to 120 feet to water
- Pressure switch factory settings:  
1/3 and 1/2 HP = 20-40 PSI  
3/4 and 1 HP = 30-50 PSI
- Two pipe tapping 1" x 1 1/4"
- \* Maximum Amp. Draw at factory voltage setting.



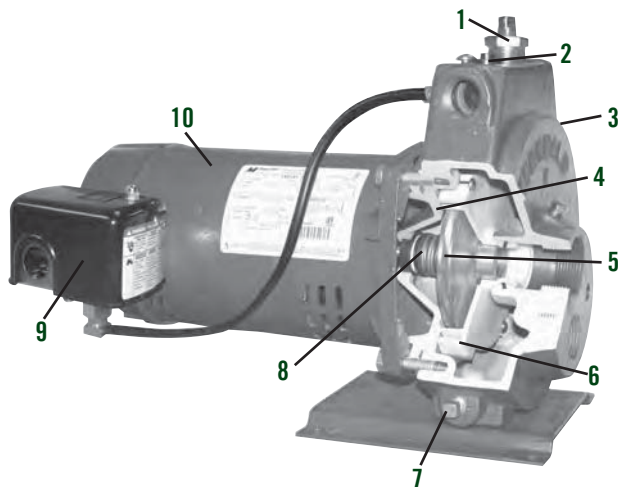
Overall Length "A"  
Overall Height "B"  
Overall Width with Pressure Switch "C"  
Overall Width without Pressure Switch "D"  
\*See table to left for dimensions.

### Models Available

Model No.	HP	Volt	*Max. Amps	Impeller	A	B	C	D	WT
8630	1/3	<b>115/230</b>	10.6	plastic	15.2"	10"	10.5"	8"	35
8631	1/3	<b>115/230</b>	10.6	brass	15.2"	10"	10.5"	8"	36
8650	1/2	<b>115/230</b>	12.0	plastic	15.5"	10"	10.5"	8"	37
8651	1/2	<b>115/230</b>	12.0	brass	15.5"	10"	10.5"	8"	38
8670	3/4	<b>230/115</b>	7.6	plastic	15.9"	10"	10.5"	8"	39
8671	3/4	<b>230/115</b>	7.6	brass	15.9"	10"	10.5"	8"	40
8610	1	<b>230/115</b>	9.2	plastic	16.2"	10"	10.5"	8"	42
8611	1	<b>230/115</b>	9.2	brass	16.2"	10"	10.5"	8"	44

\*Factory Voltage Setting listed first in bold type.

- Optional jet ejectors: High Capacity and High Pressure



1 - Zinc Plated Plug  
(With Pressure Gauge Tap and 1/4" plug)

2 - Internal Regulating Valve  
(Manual adjustment for deep well only)

3 - Cast Iron Pump Body

4 - Seal / Condensation Plate  
Provides air gap between motor and water chamber

5 - Impeller  
Available in engineered polycarbonate thermoplastic

6 - Diffuser  
Multi-volute engineered thermoplastic diffuser for maximum capacity and pressure

7 - Drain Plug

8 - Shaft Seal  
Standard 5/8" ceramic carbon rotating mechanical seal

9 - Pressure Switch  
Easily adjusted for higher or lower operating pressures

10 - High Service Factor, Capacitor Start, Threaded Shaft, Square Flange Motor  
Built to NEMA specifications by nationally known manufacturers to assure local service availability. Choice of 1/3, 1/2, 3/4 and 1 H.P. 50 Hz. or 60 Hz.

# 8600 Series - Convertible

Jet Pumps

## 8600 Series - Convertible | Shallow Well Performance

Model No.	HP	Jet Ejector*	Suction Lift - Ft.	Capacities in GPM at Discharge Pressure (PSI)						MAX Shut Off Pressure
				20	30	40	50	60	70	
8630 8631	1/3	650-JP Hi-Capacity	5	12.6	12.6	7.4	2.5			57
			15	10.0	10.0	6.0	1.3			
			25	5.8	5.8	2.0				
		654-JP Hi-Pressure	5	6.8	6.8	6.1	4.3	2.3		70
			15	4.8	4.8	4.6	3.3	1.1		
			25	3.0	3.0	2.9	2.1			
8650 8651	1/2	651-JP Hi-Capacity	5	15.6	15.6	8.6	2.3			58
			15	11.7	11.7	6.5	1.2			
			25	6.6	6.6	4.7				
		655-JP Hi-Pressure	5	7.6	7.6	7.1	5.7	2.7		74
			15	5.5	5.5	5.4	4.3	2.0		
			25	3.7	3.7	3.6	2.9			
8670 8671	3/4	652-JP Hi-Capacity	5	18.8	18.8	16.2	8.8			61
			15	14.4	14.4	12.3	3.9			
			25	8.6	8.6	7.3	2.7			
		656-JP Hi-Pressure	5	9.7	9.4	9.4	7.8	4.2		75
			15	7.1	7.0	7.0	5.9	2.9		
			25	4.7	4.6	4.6	3.8	2.1		
8610 8611	1	653-JP Hi-Capacity	5	24.2	24.0	23.0	15.0			64
			15	20.1	18.6	18.4	10.9			
			25	11.6	11.4	11.3	4.7			
		657-JP Hi-Pressure	5	13.3	13.3	13.3	12.7	9.2	3.0	80
			15	10.0	10.0	10.0	9.4	6.5	2.4	
			25	6.2	6.2	6.2	6.0	4.3	1.8	

## Shallow Well Performance without Jet Ejector

Model No.	HP	Jet Ejector*	Suction Lift - Ft.	Capacities in GPM at Discharge Pressure (PSI)						MAX Shut Off Pressure
				10	15	20	25	30	35	
8630	1/3	Without	10	45	41.5	30	15			26
8631		Jet	20	40	31	20				
8650	1/2	Without	10	49.5	47	39.5	25	11		34
8651		Jet	20	45	40.5	28	11.5			
8670	3/4	Without	10	60	58	56	51.5	40		38
8671		Jet	20	52	52	50	41	19		
8610	1	Without	10	65	63	61	57	50	41.5	42
8611		Jet	20	64	53.5	52	48	41	26	

## 8600 Series - Convertible | Deep Well Performance at 20 PSI | For 20-40 PSI Pressure Switch Setting

Model No.	HP	Well Casing Size	Jet Ejector*	Deep Well Capacities in GPM - At Depth to Water in Feet									
				30	40	50	60	70	80	90	100	110	120
8630 8631	1/3	4"	7502-JP	9.8	8.0	6.2							
			7503-JP		6.9	5.7	4.3	3.3					
			7733-JP	8.8	7.2	5.6							
			7734-JP		6.2	5.1	3.8	3.0					
8650 8651	1/2	4"	7508-JP	12.7	10.5	8.8							
			7509-JP		9.3	8.1	6.3	5.0	4.0				
			7735-JP	11.3	9.4	7.9							
			7736-JP		8.3	7.3	5.7	4.6					
8670 8671	3/4	4"	7901-JP	16.1	13.0	9.6							
			7906-JP			9.9	8.4	6.5	5.1				
			7907-JP						4.7	3.9	3.3	2.5	
			7808-JP	14.3	11.6	8.5							
			7812-JP			8.9	7.5	5.8	4.6				
			7813-JP						4.2	3.6	2.9	2.2	
8610 8611	1	4"	7901-JP	16.8	14.3	11.9							
			7902-JP			11.8	9.9	8.1	6.3				
			7903-JP						5.5	4.8	4.3	3.5	2.8
			7808-JP	15.0	12.9	10.7							
			7809-JP			10.4	8.8	7.2	5.6				
			7810-JP						4.8	4.2	3.8	3.1	2.6

\*Jet Ejectors must be ordered separately

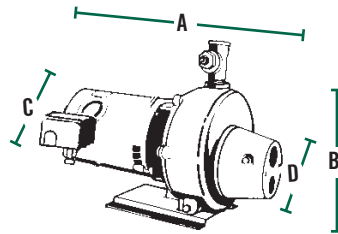
## 1500 Series - Multi-Stage

A.Y. McDonald offers a full line of shallow well, convertible, and multi-stage jet pumps built for years of trouble free operation, with high-efficiency impellers and diffusers. The 1500 series shallow well capacity is up to 40 gallons per minute (GPM) and pressures to 100 PSI.

All 1500 Series Multi-Stage Pumps come with a 1 1/4" suction pipe and a 1" discharge. The sizes range from 3/4 to 1 1/2 horsepower (HP).

### Features:

- Nema C (Keyed Shaft) Motor
- Pressure switch factory setting 30-50 PSI
- Two pipe drop pipe 1" x 1 1/4" (with 108 adaptor)
- SW models are less regulating valve
- 460V available, contact factory
- \* Maximum Amp. Draw at factory voltage setting.



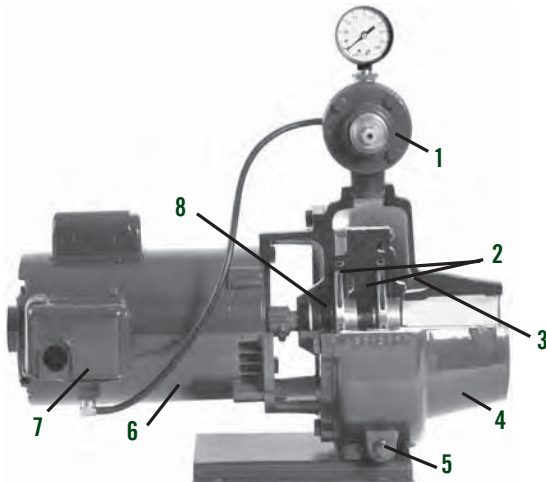
Overall Length "A"  
 Overall Height "B" (without Regulating Valve)  
 Overall Width "C" (with Pressure Switch)  
 Overall Width "D" (without Pressure Switch)  
 \*See table to left for dimensions.



### Models Available

Model No.	HP	Volt	*Max. Amps	Impeller	A	B	C	D	Wt.
1575	3/4	<b>230/115</b>	7.4	brass	19.5"	10.5"	11"	8.8"	68
1575P	3/4	<b>230/115</b>	7.4	plastic					
1575SW	3/4	<b>230/115</b>	7.4	brass	19.5"	10.5"	11"	8.8"	62
1575SWP	3/4	<b>230/115</b>	7.4	plastic					
1510	1	<b>230/115</b>	9.0	brass	19.5"	10.5"	11"	8.8"	68
1510P	1	<b>230/115</b>	9.0	plastic					
1510SW	1	<b>230/115</b>	9.0	brass	19.5"	10.5"	11"	8.8"	69
1510SWP	1	<b>230/115</b>	9.0	plastic					
1515SW	1 1/2	<b>230/115</b>	10.6	brass	20.5"	10.5"	11"	8.8"	69
1515SWP	1 1/2	<b>230/115</b>	10.6	plastic					

Factory Voltage Setting listed first in bold type.



#### 1 - Automatic Diaphragm Type Regulating Valve

Positive acting - non-chattering for easier pump priming. Assures maximum performance at varying water levels (For deep well only)

#### 2 - Impeller

Available in either dynamically balanced bronze or engineered thermoplastic

#### 3 - Cast Iron Diffusers

Precision machined for greatest efficiency

#### 4 - Cast Iron Pump Body & Motor Adapter

#### 5 - Drain Plug

#### 6 - Nema Standard Motor

Heavy duty, capacitor start, dual voltage (230/115) with built-in overload protection. Choice of 3/4, 1, 1 1/2 HP & 50 Hz. or 60 Hz.

#### 7 - Pressure Switch

Easily adjusted for higher or lower operating pressures

#### 8 - Shaft Seal

Standard 3/4" ceramic carbon rotating mechanical seal

# 1500 Series - Multi-Stage

## 1000 Series | Shallow Well Performance

Model No.	HP	Jet Ejector*	Suction Lift - Ft.	Capacities in GPM at Discharge Pressure (PSI)							MAX Shut Off Pressure
				20	30	40	50	60	70	80	
1575SW Without Jet	3/4	N/A	10	34.3	28.7	22.2					53
			15	33.1	27.5	20.4					51
			25	29.9	24.5						46
1510SW Without Jet	1	N/A	10	41.6	37.6	31.6	24.1				65
			15	40.0	36.5	30.1	22.1				63
			25	29.5	28.5	26.5	16.5				58
1515SW Without Jet	1 1/2	N/A	10	42.3	40.5	36.5	32.0	24.5			76
			15	41.6	39.8	35.2	29.3	23.0			74
			25	33.3	32.5	31.0	26.5	18.8			69
1575 *Requires Jet	3/4	659JP	10		12.3	12.3	12.1	11.7	10.0	6.1	96
			15		11.0	11.0	11.0	10.5	7.6	4.1	94
			25		7.1	7.0	7.0	7.0	7.0	3.0	89
1510 *Requires Jet	1	658JP	10		15.0	14.8	14.7	14.1	13.4	9.1	102
			15		13.0	12.9	12.9	12.8	12.4	8.2	100
			25		7.6	7.5	7.5	7.5	7.4	6.3	96
1515SW *Requires Jet	1 1/2	652JP	10	17.4	17.2	17.1	16.9	15.0	10.0	5.8	100
			15	15.0	15.0	14.7	14.5	13.6	9.7	5.0	98
			25	9.6	9.2	9.0	8.8	8.8	6.7	3.1	94

\*Jet Ejectors must be ordered separately

## 1500 Series | Deep Well Performance at 30 PSI | For 30-50 PSI Pressure Switch Setting

Model No.	HP	Jet Ejector Package		Deep Well Capacities in GPM - At Depth to Water in Feet															
		4" Two Pipe	2" Single Pipe	30	40	50	60	70	80	90	100	110	120	130	140	150	160		
1575	3/4		7125 MP	14.5	13.1	11.2	9.3	7.2											
			7126 MP					9.3	8.0	6.6	5.4	4.2	3.2						
			7127MP								5.7	5.0	4.2	3.5	2.7	2.0	1.3		
			7109 MP			16.1	14.6	12.5	10.3	8.0									
			7110 MP							10.3	8.9	7.4	6.0	4.7	3.5				
1510	1		7111 MP								6.4	5.5	4.7	3.9	3.0	2.3	1.5		
			7128 MP	14.5	13.5	12.1	10.8	8.9	6.7										
			7129 MP					9.7	8.3	7.4	6.5	5.6	4.9	4.0					
			7130 MP									5.8	4.9	4.2	3.5	2.9	2.2	1.5	
			7112 MP			16.1	15.0	13.5	12.0	9.9	7.5								
	7113 MP						10.8	9.2	8.2	7.2	6.3	5.5	4.5						
	7114MP										6.5	5.5	4.6	3.9	3.2	2.5	1.8		

## Nema J Motor

The 8100 and 8200 series jet pumps use the Nema J motor, which has a single phase, Open Drip Proof (ODP) capacitor start.



### Features:

- 303 Stainless steel shaft
- Shaft threads 7/16-20 UNF-2A, 0.625" Diameter, 2.57" long from face
- Ball bearings (locked drive end bearing)
- Continuous duty at 40°C/104°F Ambient, 60Hz
- Automatic reset thermal overload protector
- Round frame (without base), Nema 56C mounting
- Power leads and ground wire supplied for proper connection to the pressure switch
- Voltage change device

### Single Compartments Products

Part No.	HP	RPM	Frame	Catalog Volt	Type	Service Factor	SF* AMPS	MTR LGTH(1)	Ship Wt.	Factory Wired
6155-240	1/2	3500	48/56	115/230	FHP	1.60	11.2/5.6	9.0"	15	115V
6155-241	3/4	3500	48/56	230/115	FHP	1.50	7.4/14.8	9.5"	19	230V
6155-242	1	3500	48/56	230/115	FHP	1.40	8.8/17.6	10"	21	230V

(1) Length not including shaft

## Square Flange Motor

The 8500 and 8600 series jet pumps use the Square Flange motor, which has a single phase, Open Drip Proof (ODP) capacitor start.



### Features:

- 303 Stainless steel shaft
- Shaft threads 7/16-20 UNF-2A, 0.625" Diameter, .91" long from face
- Ball bearings (locked drive end bearing)
- Continuous duty at 40°C/104°F Ambient, 60Hz
- Automatic reset thermal overload protector
- Round frame (without base)
- Power leads and ground wire supplied for proper connection to the pressure switch
- Voltage change device

### Two Compartments Products | E-Z Access

Part No.	HP	RPM	Frame	Catalog Volt	Type	Service Factor	SF* AMPS	MTR LGTH(1)	Ship Wt.	Factory Wired
6164-203	1/3	3500	48Y	115/230	FNP	1.95	10.6/5.3	11.23"	17	115V
6164-200	1/2	3500	48Y	115/230	FHP	1.90	11.2/5.6	12.0"	19	115V
6164-201	3/4	3500	48Y	230/115	FHP	1.65	7.6/14.3	12.27"	22	230V
6164-202	1	3500	48Y	230/115	FHP	1.65	9.2/18.4	12.35"	24	230V

\*Service Factor Amps. may vary with motor manufacturer - refer to label on motor

(1) Length not including shaft



# Nema C Motor

The 1000 and 1500 series jet pumps use the Nema C (Keyed Shaft Motor), which has a single phase, Open Drip Proof (ODP)<sup>(2)</sup> capacitor start.

## Features:

- Carbon steel shaft (not in contact with the water)
- Shaft 0.625" Diameter, x 2.07" long from face
- Ball bearings (locked drive end bearing)
- Continuous duty at 40°C/104°F Ambient, 60Hz
- Automatic reset thermal overload protector
- Round frame (without base), Nema 56C mounting
- Power leads and ground wire supplied for proper connection to the pressure switch
- Voltage change device (except 2 HP)



## Two Compartments Products | E-Z Access

Part No.	HP	RPM	Frame	Catalog Volt	Type	Service Factor	SF* AMPS	MTR LGTH(1)	Ship Wt.	Factory Wired
6127-154	3/4	3500	48/56	230/115	FHP	1.50	7.4/14.8	9.5"	21	230V
6127-160	1	3500	48/56	230/115	FHP	1.65	9.0/18.0	10"	24	230V
6127-156	1 1/2	3500	48/56	230/115	FHP	1.30	10.7/21.4	10.5"	28	230V

\*Service Factor Amps. may vary with motor manufacturer - refer to label on motor

\*Includes run capacitor for higher efficiency

(1) Length not including shaft

(2) Contact factory for three phase and/or TEFC motors

## Jet Ejectors

### Single Stage

8200 or 8600 Series - Shallow Well



#### High Capacity

\*1/3 HP 8600 Series ONLY

Model No.	HP	Wt.
*650JP	1/3	5
651JP	1/2	5
652JP	3/4	5
653JP	1	5

#### High Pressure

\*1/3 HP 8600 Series ONLY

Model No.	HP	Wt.
*654JP	1/3	5
655JP	1/2	5
656JP	3/4	5
657JP	1	5

### Deep Well

4" Two Pipe, 1" Drive Pipe, & 1 1/4" Return Pipe

Model No.	HP	Depth to Water (Ft.)	Wt.
7502JP	1/3	30/50'	6
7503JP	1/3	40/70'	4
7508JP	1/2	30/50'	4
7509JP	1/2	40/80'	4
7901JP	3/4 & 1	30/50'	4
7902JP	1	50/80'	4
7903JP	1	80/110'	4
7906JP	3/4	50/80"	4
7907JP	3/4	80/100'	4



Two Pipe

2" Single Pipe

Model No.	HP	Depth to Water (Ft.)	Wt.
7733JP	1/3	30/50'	3
7734JP	1/3	40/70'	3
7735JP	1/2	30/50'	3
7736JP	1/2	40/70'	3
7808JP	3/4 & 1	30/50'	3
7809JP	1	50/80'	3
7810JP	1	80/110'	4
7812JP	3/4	50/80"	3
7813JP	3/4	80/100'	4



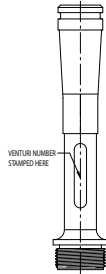
Single Pipe

Add "L" to the model number for less foot valve

\*For better efficiency, use increasing fittings to allow 1 1/4" drive pipe

## Deep Well Jet Kits

HP	Model No.	Part No.	Well Casing Size	Depth to Water (Ft.)	Wt.
1/2	7508/9JP	5999-115	4	30-80 ft.	4
1/2	7735/6JP	5999-116	2	30-70 ft.	3
3/4	7906/7JP	5999-117	4	50-110 ft.	4
3/4	7812/3JP	5999-118	2	50-110 ft.	4
1	7902/JP	5999-119	4	50-120 ft.	4
1	7809/10JP	5999-120	2	50-120 ft.	3



VENTURI NUMBER STAMPED HERE

Single Pipe  
2" Well Casing



Two Pipe  
4" Well Casing

## Multi-Stage

1000 or 1500 Series - Shallow Well

Model No.	For Model	HP	Wt.
659JP	1575	1/3	5
658JP	1510	1/2	5
652JP	1515	3/4	5



### Deep Well

4" Two Pipe, 1" Drive Pipe, & 1 1/4" Return Pipe

Model No.	For Model	Depth to Water (Ft.)	Wt.
7109MP	1075 & 1575	30/70'	4
7110MP	1075 & 1575	60/110'	4
7111MP	1075 & 1575	90/150'	4
7112MP	1010 & 1510	30/80'	3
7113MP	1010 & 1510	60/120'	3
7114MP	1010 & 1510	100/160'	3



Two Pipe

2" Single Pipe

Model No.	For Model	Depth to Water (Ft.)	Wt.
7125MP	1075 & 1575	30/70'	3
7126MP	1075 & 1575	60/110'	3
7127MP	1075 & 1575	90/150'	3
7128MP	1010 & 1510	30/80'	3
7129MP	1010 & 1510	60/120'	3
7130MP	1010 & 1510	100/160'	3



Single Pipe

Add "L" to the model number for less foot valve

\*For better efficiency, use increasing fittings to allow 1 1/4" drive pipe (2" well casing serves as the drive pipe)

# Adapters - Flanges

## 101 Casing Adapter

For all 8200, 8600 and 1500 Series. With tapped openings for offset installations using two pipes to the jet pump and single pipe jet ejector in the well. Slips onto the well casing and is secured by tightening the two bolts and nuts (one pictured). Also allows the pump to bolt directly to the well head using the specially designed fiber gasket between the two flat faces.



Part No.	Wt.
6450-103	9

## 106 Casing Adapter\*

For all single pipe 1000 Series. Slips onto the well casing and is secured by tightening the two bolts and nuts (one pictured). Thick rubber compression gasket eliminates threading or welding of casing. 1 1/4" x 1" face bushing or reducing nipple required to permit use of 1" drop pipe. Adapters and flanges bolt directly to the base of all 1000 and 1000SW Series pumps and 8200, 8600, and 1500 series. Sizes Available: 2"



Part No.	Wt.
6450-110	9

## 108 Threaded Flange\*

For all 1000 Series. Tapped openings permit use directly over standard 4" well seal as well as offset installation of all 1000 and 1000SW Series pumps. Furnished with all 1000SW pumps. Sizes Available: 4" | Includes 1" and 1 1/4" NPT



Part No.	Wt.
6421-124	3

## 100-4 Casing Adapter Plate\*

For use with 1000 series, not threaded with 1 1/2" & 1 1/2" opening.



Part No.	Wt.
6316-114	

## \*Flange Gasket

Part No.	Wt.
6316-257	

Pressure Switches see page 122.

## Jet Pump Accessories

Jet Pumps

### 105 - Automatic Regulating Valve

Spring loaded to maintain prime even with rising and lowering water levels. Required for deep well use only. Sizes Available: 1"



Part No.	Wt.
6453-105	3.25

### Face Bushing

For use with 2" and 3" single pipe jet ejectors and casing adapters. Sizes Available: 1 1/4" x 1"



Part No.	Wt.
3126-676	.01

### Turned Coupling

Attaches to single pipe ejector and mating drop pipe or reducing nipple. Plated finish for corrosion resistance. Allows greater flow when used inside 2" well casings. Sizes Available: 1 1/4"



Part No.	Wt.
6411-225	.38

### 6127-300 - Reducing/Increasing Nipple

Attaches to single pipe ejector and other uses. Sizes Available: 1 1/4" x 1" x 8"



Part No.	Wt.
6127-300	1

### Tubing and Fittings

Part No.	Description
6610-169	Plastic Tubing 1/4" x 5' Ft
6610-168	Plastic Tubing 1/4" x 100' Ft

Used on all Jet pumps (excluding 1000 series)

6155-356	Straight Conn - Fast&Tite - 1/4 Tube x 1/8 NPT
6155-355	Elbow Conn - Fast&Tite - 1/4 Tube x 1/4 NPT

Used on 1000 series

5999-900	Barb Straight Conn - 1/4 Plastic x 1/4 NPT - NL
5999-898	Barb Elbow - 1/4 Plastic x 1/8 MPT - NL