

# RUSSELL PUMP

## Model A712

End Suction, Close Coupled, Bronze Fitted,  
Centrifugal Pump



## Typical Applications

General Purpose, OEM, Boosters,  
Cooling Towers, Boiler Feed,  
Process Fluids, HVAC, Irrigation,  
Hot and Chilled Water Circulation

Russell Pump and Engineering Inc.  
102 W. Chicago Street  
Albion, IA 50005  
641-488-2319

# Design Features

## CASING

Constructed as ASTM A48 class 30 cast iron. The discharge can be mounted in any 90° position. Drain and air ports are also positioned every 90°, 1/4 npt suction and discharge tappings are standard. Back pull out design allows the pump to be serviced without disturbing the piping. The volute was designed to maximize hydraulic efficiency.

## MECHANICAL SEAL

Type 21 buna-n seal is rated to 225°F and pressures to 175PSI. Carbon seal face mates with the ceramic seat providing years of trouble free service. Alternate seals available upon request.

## IMPELLER

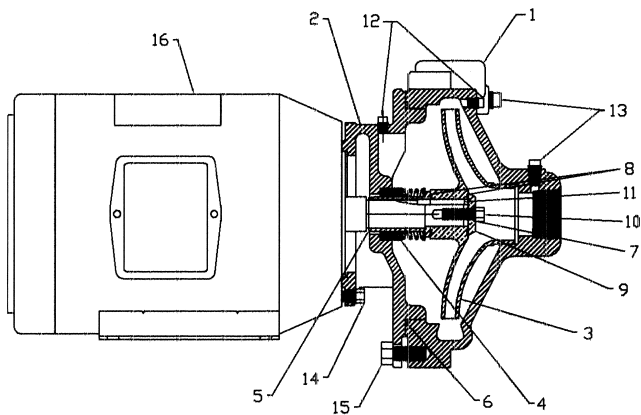
The hydraulic design of the impeller maximizes pressure and gpm while minimizing horsepower. The enclosed impeller is made of cast bronze.

## ADAPTER

The precise machining of the adapter allows for easy assembly of the pump. A 1/8 npt hole is provided if a seal flush line is added. Construction consists of ASTM A48 class 30 cast iron.

## MOTOR

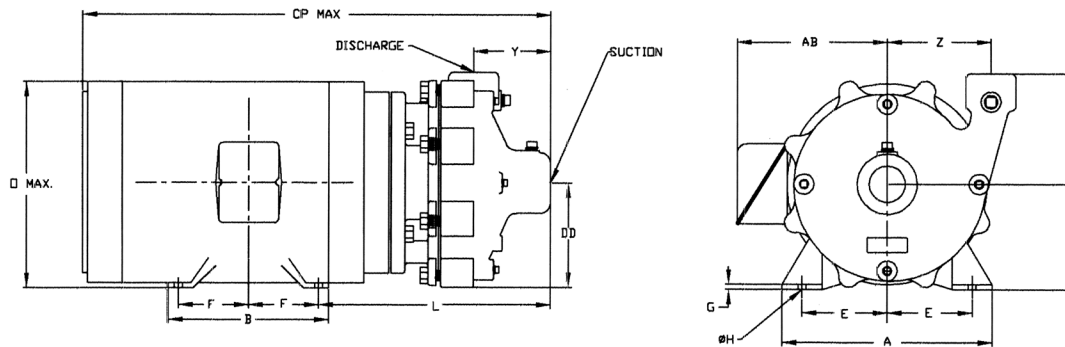
The NEMA JM frame motor utilizes a high carbon steel shaft. The motor's heavy duty ball bearings withstand axial and radial thrust loads with no problem. Standard enclosure type is dripproof but alternates are available.



1	CASING A712	CLASS 30 CAST IRON	40008	1
		BRASS	40009	
2	ADAPTER A7 143-184 JM	CLASS 30 CAST IRON	40010	1
	ADAPTER A7 213-215 JM		40011	
	ADAPTER A7 143-184 JM		40012	
	ADAPTER A7 213-215 JM	BRASS	40013	
3	IMPELLER A712 143-215 JM	BRASS	30004	1
4	MECHANICAL SEAL 143-215 JM	BUNA-N	S-103	1
		FPT	S-104	
		VITON	S-105	
5	SLEEVE 143-215 JM	BRASS	10000	1
		BUNA-N	S-148	
		FPT	S-149	
		VITON	S-150	
6	O-RING CASING	BUNA-N	S-141	1
		FPT	S-142	
		VITON	S-143	
7	O-RING WASHER 143-215 JM	BUNA-N	S-135	1
		FPT	S-136	
		VITON	S-137	
8	O-RING IMPELLER 143-215 JM	BUNA-N	S-135	2
		FPT	S-136	
		VITON	S-137	
9	IMPELLER WASHER 143-215 JM	BRASS	10002	1
10	IMPELLER CAP SCREW 143-215 JM	3/8-16 X 1 BRASS	75020	1
11	KEY 143-215 JM	STAINLESS STEEL	10004	1
12	PIPE PLUG	1/8 NPT BRASS	69845	5
13	PIPE PLUG	1/4 NPT BRASS	69846	2
14	CAP SCREW	3/8-16 X 1 STEEL	19930	4
15	CAP SCREW	1/2-13 X 1 STEEL	19957	8
16	MOTOR	-	-	1

# Limitations

MAXIMUM WORKING PRESSURE	- 175PSI
MAXIMUM GALLONS PER MINUTE	- 175
MAXIMUM HEAD PRODUCED	- 253 FT.
RPM	- 3500
MAXIMUM SEAL TEMP BUNA-N	- 225°F
EPT	- 300°F
VITON	- 400°F
MAXIMUM HORSEPOWER	- 15



FRAME SIZE	SUCTION	DISCHARGE	A	AB	B	CP	D	DD	E	F	G	H	L	O	X	Y	Z
143JM	1/2 NPT	1 1/4 NPT	7	5 1/4	5 7/8	22 3/4	3 1/2	5 3/16	2 3/4	2	1/8	11/32	10 5/16	6 7/8	5 1/2	4	5 3/16
145JM						22 1/4				2 1/2							
182JM			9	5 7/8	6 1/2	25 3/32	4 1/2		3 3/4	2 1/4	3/16	13/32	10 13/16	8 7/16			
184JM						25 15/16			2 3/4								
213JM						27 5/8			2 3/4								
215JM	10 1/2	7 3/8	8	29 1/8	5 1/4	4 1/4	3 1/2	1/4	13/32	11 9/16	10 1/16						

### MOTOR HORSEPOWER DATA

FRAME SIZE	HORSEPOWER-ODP				HORSEPOWER-TEFC	
	3500RPM 3#	3500RPM 1#	1750RPM 3#	1750RPM 1#	3500RPM 3#	1750RPM 3#
143JM	1 1/2	1 1/2	1	1	1 1/2	1
145JM	2,3	2	1 1/2,2	1 1/2	2,3	1 1/2,2
182JM	5	3	3	2	3	3
184JM	7 1/2	5	5	3	5	5
213JM	10	7 1/2	7 1/2	5	7 1/2	7 1/2
215JM	15	10	10	7 1/2,10	10	10

# SPECIFICATIONS

The contractor shall furnish (and install as shown on the plans) a Russell Series A712 close coupled, centrifugal, bronze fitted pump. Each 1 1/4" x 1 1/2" pump shall have the capacity of \_\_\_\_ GPM when operated at a total head of \_\_\_\_ feet.

The pump casing shall be radially split, end suction with 1/4 npt suction and discharge gauge tappings included. The casing should be able to accommodate any 90° mounting position. There shall be four drain/air ports drilled and tapped 90° apart. The casing design should be of a back pull-out type.

The pump is to be furnished with a mechanical seal which incorporates stainless steel parts. Buna-N elastomers, ceramic seat, and carbon seal face shall be standard.

The adapter shall be drilled and tapped to allow for the possible addition of a seal flush line.

The pump shall be close coupled to a NEMA C face \_\_\_\_HP \_\_\_\_PHASE \_\_\_\_HERTZ \_\_\_\_VOLTAGE \_\_\_\_RPM dripproof motor. The motor shall be sized to prevent overloading at the duty point. The motor shall have a stainless steel shaft and sealed bearings.

All external cast parts shall have at least one coat of a high grade baked on powder coat paint. Each unit shall be checked by the contractor to regulate the correct pressure, voltage, and amp draw.

