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Captain / Fire Marshal

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AMFD, Fire Station Two
6384 Maxville Road
Awendaw, SC 29429

Charleston County Department of Public Safety
Awendaw-McClellanville Fire Department

Date:10/28/2026

Subject: Fire Protection System Requirements – Water Supply, Tank, Pumping, and Support Systems for new major subdivisions or major subdivisions that are 50% or less in completion in the unincorporated areas of Charleston County, Town of Awendaw, and Town of McClellanville, South Carolina with no municipal water supply.

1. Purpose

The purpose of this document is to establish the minimum fire protection water supply and pumping system requirements for the proposed installation supporting firefighting operations in accordance with Charleston County, International Fire Code 2021 edition, Sections 3313.1, 3313.2, and 3313.3 or the most current Internation Fire Code edition adapted by Charleston County, and applicable state code requirements.

2. System Overview

The proposed installation shall include the following major components:

- One 12,000-gallon corrugated steel water tank with dome roof (Model 1204-WT-CHR)

- One permitted and cased deep well, approximately 55–75 GPM recovery rate

- One 5 HP stainless steel submersible well pump (approx. 50 GPM)

- One 500 GPM heavy-duty centrifugal repressurization pump

- Pump house enclosure with heat and lighting (6 ft × 6 ft)

- Required suction and discharge piping, manifolds, valves, controls, and instrumentation

- Concrete pad supporting tank and pump house

- Foundation designed for tank load and soil requirements

3. Water Storage Tank Requirements

Capacity: 12,000 gallons nominal

Construction: Corrugated steel panels with dome roof

Foundation Requirements:

- Concrete ring wall or slab engineered for load
- Minimum 3-inch reinforcement cover
- Concrete designed for 3,000 PSI compressive strength (28-day)
- Reinforcing steel per ASTM Grade 40/60

Tank Features:

- Internal standpipe with ball cock float valve
- Overflow (4") with flap gate
- 2" SCH 80 inlet and outlet flanges
- 3" drain flange
- Locking safety ladder cover

4. Pumping System Requirements

A. Well Pump System:

- 5 HP stainless steel submersible pump (approx. 50 GPM)
- Stainless steel casing
- Motor per Goulds GS-Series specifications

B. Repressurization Pump:

- Heavy-duty centrifugal pump rated for 500 GPM
- Capable of supplying high-flow demand for fire apparatus filling
- Smooth bore piping to minimize friction loss
- Bronze or stainless steel construction

5. Piping & Valves

- Galvanized steel or Schedule 80 PVC
- Cycle-stop valve and pressurized storage tank
- Level control system required between well and tank
- Isolation valves at all major access points

6. Enclosure Requirements

- Pump house must include freeze protection
- Interior lighting
- Weather-resistant electrical installation
- Adequate clearance for service

7. Inspection, Testing & Certification

- Hydrostatic testing of tank
- Pump performance testing
- Verification of overflow and drain function
- Electrical inspection
- Structural inspection of foundation
- Documentation of equipment and serial numbers

8. Maintenance Requirements

- Annual tank and pump inspection

- Monthly operational test of repressurization pump

- Annual well flow test

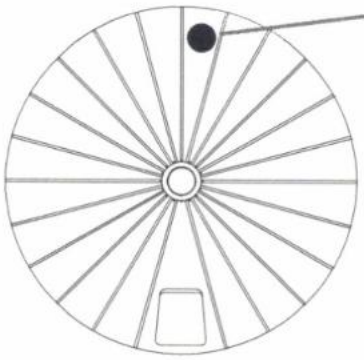
- Maintain 10 ft clear space around structures

Included is a copy of material specifications

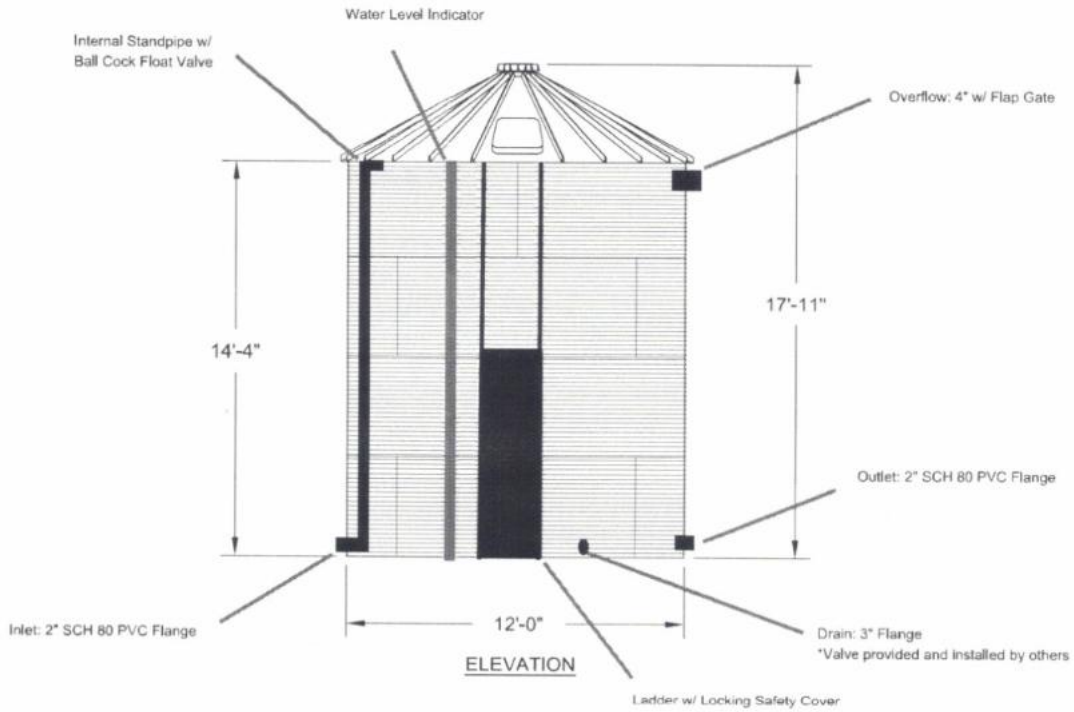
Quantities and locations will be determined during site plan reviews.



Corrugations on roof panels are not shown for clarity.



PLAN



ELEVATION

		BY	DATE
	DWN	IU	2/18/2013
	CKD	JH	2/18/2013
	ENG	JH	2/18/2013

CORGAL WATER TANKS

WATER STORAGE TANKS, INC.
1-800-463-1898
www.corgaltanks.com

THE DRAWING DEPICTED ON THIS PRINT AND THE INFORMATION CONTAINED HEREIN ARE PROPRIETARY TO Water Storage Tanks, Inc. AND SHALL NOT BE USED IN WHOLE OR PART WITHOUT THE WRITTEN CONSENT OF Water Storage Tanks, Inc.

TITLE: MODEL 1204-WT-CHR
CORGAL STEEL WATER STORAGE TANK
NOMINAL CAPACITY - 12,000 GALLONS (U.S.)

DWG. NO.: 1204-WT-CHR
REV. NO.: B

SIZE: A
SCALE: 3/16"=1'-0"
SHEET: 1 OF 1

GENERAL NOTES

1. THIS STRUCTURAL PLAN MUST BE ACCOMPANIED BY A CLEAR PLOT PLAN SHOWING WATER TANK LAYOUT AND DISTANCE TO PROPERTY LINE, SLOPES, AND STRUCTURES.
2. SEE ARCHITECTURAL DRAWINGS FOR:
   A. DIMENSIONS AND DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
   B. EXTENT AND LOCATION OF SLOPES, DRAINAGE, FINISH FLOOR ELEVATIONS, ETC.
3. REPRESENTATIVES OF JMCE HAVE NOT INSPECTED THE SITE & ARE RELYING ON INFORMATION PROVIDED BY THE CONTACTOR OR OWNER TO DETERMINE THE ADEQUACY OF THIS STRUCTURAL PLAN FOR THE ACTUAL SITE CONDITIONS. SHOULD SITE CONDITIONS VARY FROM THAT COVERED BY THIS STRUCTURAL PLAN, IT IS THE RESPONSIBILITY OF THE CONTRACTOR OR THE OWNER TO NOTIFY JMCE, INC PRIOR TO CONSTRUCTION.
4. THIS STRUCTURAL PLAN IS NOT INTENDED TO BE APPLICABLE TO NON-STRUCTURAL ITEMS INCLUDING BUT NOT LIMITED TO PLUMBING, ELECTRICAL, FENCING, WATERPROOFING, DRAINAGE AND CONCRETE DECKING ON GRADE.
5. ALL CONSTRUCTION SHALL COMPLY WITH THE 2013 EDITION OF THE CALIFORNIA BUILDING CODE (CBC) AND LOCAL ORDINANCES.
6. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER DRAWING SCALE.
7. SIGNS & SAFETY EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES.
8. NO CHANGES ARE TO BE MADE TO THESE PLANS WITHOUT THE KNOWLEDGE OR CONSENT OF THE ENGINEER WHOSE SIGNATURE APPEARS HEREON.
9. NO DEVIATIONS FROM STRUCTURAL DETAILS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. APPROVAL BY THE CITY INSPECTOR DOES NOT CONSTITUTE AUTHORITY TO DEVIATE FROM PLANS OR SPECIFICATIONS.
10. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE RESULTS OF ERRORS, DISCREPANCIES AND/OR OMISSIONS OF WHICH THE CONTRACTOR FAILED TO NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION AND/OR FABRICATION OF THE WORK.
11. OWNER, ARCHITECT OR CONTRACTOR IS RESPONSIBLE FOR REVIEWING AND CHECKING STRUCTURAL PLANS AND DETAILS HEREIN FOR CORRECTNESS OF DESIGN INTENT PRIOR TO SUBMITTING FOR PERMIT. INITIATION OF WORK OR ORDERING OF MATERIALS. VARIANCES OR ERRORS SHALL BE BROUGHT TO THE ATTENTION OF JMCE BEFORE PROCEEDING.
12. THE CONTRACTOR SHALL VISIT THE JOB SITE AND VERIFY ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS PRIOR TO COMMENCING CONSTRUCTION.
13. THESE PLANS ARE FOR THE STRUCTURAL DESIGN ONLY. THE CONFIGURATION OF THE STRUCTURES HEREIN ARE AS DIRECTED BY THE OWNER, ARCHITECT OR CONTRACTOR.
14. THIS PLAN DEPICTS THE STRUCTURES IN A COMPLETED STATE ONLY. THE INSTALLER IS RESPONSIBLE FOR JOB SITE CONDITIONS AND THE SAFETY OF ALL PERSONS & PROPERTY DURING THE COURSE OF CONSTRUCTION.
15. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE ARCHITECT OR ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ARCHITECT OR ENGINEER, WHETHER OF MATERIAL OR WORK, AND FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING COMPLIANCE WITH CONTRACT DOCUMENTS, DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.

FOUNDATION NOTES

1. ALL FOOTING STEEL SHALL HAVE 3" MINIMUM CLEARANCE (CONCRETE COVER) TO EARTH.
2. SHOULD UNUSUAL OR UNEXPECTED SOIL CONDITIONS BE ENCOUNTERED, THE PROJECT GEOTECHNICAL ENGINEER SHOULD BE NOTIFIED TO PROVIDE ADDITIONAL RECOMENDATIONS.

CONCRETE NOTES

1. ALL CONCRETE HAS BEEN HAS BEEN DESIGNED TO HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I.
2. KEEP CONCRETE DAMP CONTINUOUSLY FOR 10 DAYS.
3. CEMENT SHALL CONFORM TO CBC 66 SECTION 1903.7, ACI 318 SECTION 3.2, ASTM C150.
4. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C 33.
5. WATER USED IN CONCRETE SHALL BE CLEAN AND FREE FROM DELETERIOUS SUBSTANCES.
6. HYDRATED LIME SHALL CONFORM TO ASTM C 51.
7. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO CBC CHAP. 19 DIV. II AND BE TYPE I OR II.
8. NO ADMIXTURES OF ANY KIND ARE ALLOWED WITHOUT APPROVAL FROM THIS OFFICE PRIOR TO CONSTRUCTION.

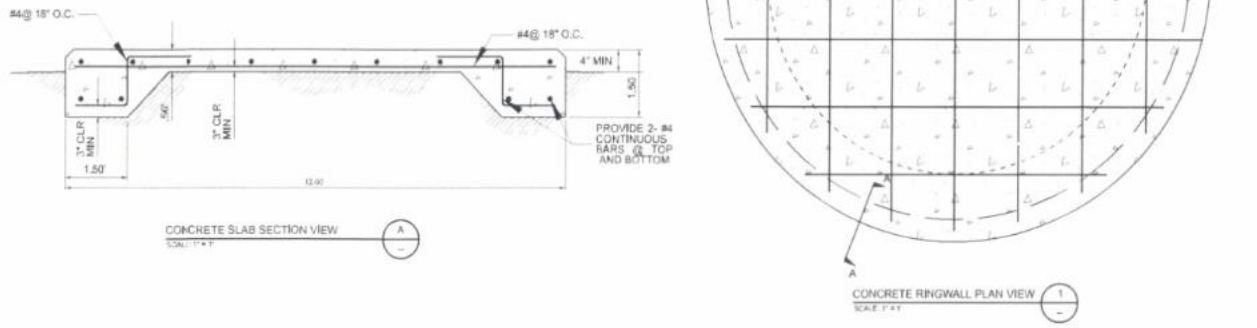
REINFORCING NOTES

1. REINFORCING STEEL SHALL BE DEFORMED BARS & CONFORM TO ASTM A615 GRADE 40 FOR #4 BARS AND SMALLER, AND GRADE 60 FOR #5 BARS AND LARGER.
2. LAP SPLICES TO CONFORM WITH ACI 318 CURRENT EDITION.
3. MINIMUM CLEARANCE BETWEEN PARALLEL BARS SHALL BE 2 1/2".
4. THE MINIMUM COVER FOR REINFORCEMENT SHALL BE IN ACCORDANCE WITH CBC AND ACI 318.
5. BARS SHALL BE CLEAN OF GREASE AND/OR OTHER MATERIAL LIKELY TO IMPAIR BONDING.
6. ALL REBAR SHALL BE BENT COLD IN ACCORDANCE WITH ACI 318 CURRENT EDITION.
7. ALL REINFORCING STEEL LAPS OR SPLICES SHALL BE AS INDICATED ON PLANS. WHERE LAP OR SPLICE LOCATIONS ARE NOTE SPECIFIED, LAPS OR SPLICES SHALL BE WELL STAGGERED.
8. PROTECT FROM CORROSION ALL REINFORCEMENT LEFT EXPOSED FOR FUTURE CONCRETE PLACEMENT.

DESIGN CRITERIA

STRUCTURAL DESIGN PER 2013 CBC			
• SOIL BEARING PRESSURE: 2,000 P.S.F.		• REINFORCING:	60,000 PSI (GR. 60)
• CONCRETE:	3,000 PSI		

Example Only

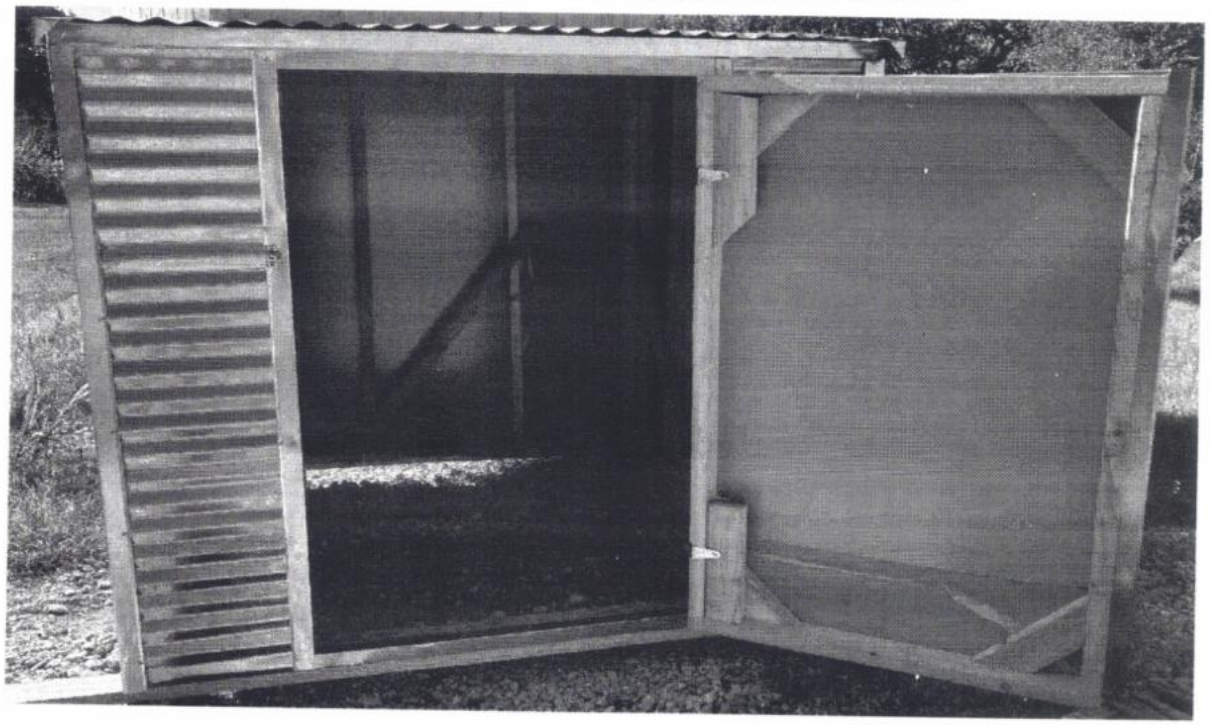


CONCRETE RINGWALL PLAN VIEW (1)

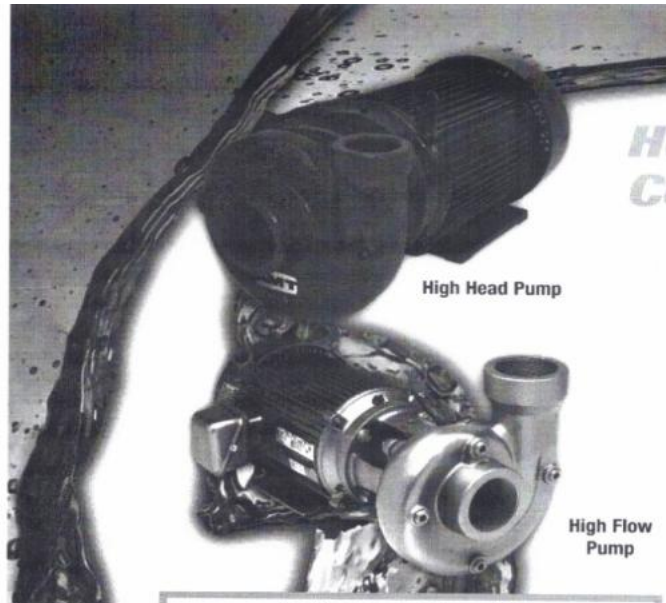
CONCRETE SLAB SECTION VIEW (A)

WATER TANK FOUNDATION PLAN

FD-1

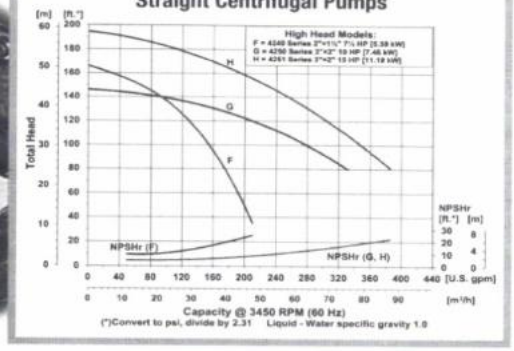


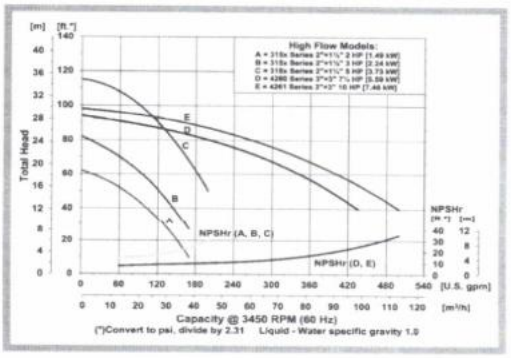
Heavy Duty Centrifugal Pumps



- **Available in: 300 Series Investment Cast Stainless Steel, Cast Bronze and Cast Iron Construction with Stainless Steel Impeller**
- **Buna-N Mechanical Seal and O-Ring on Cast Iron Models**
- **Viton® Mechanical Seal and O-Ring on Stainless Steel and Bronze Models**
- **Optional Silicon Carbide Seals Available**
- **Front Drain Plugs Located 90° Apart**
- **Maximum Head 194 Feet (84 PSI)**
- **Maximum Flow 500 GPM**
- **2 HP to 15 HP NEMA Motors, Single and Three Phase**
- **Optional Mounting Base Available**
- **Solids Handling and Dirty Water Design**

Performance of Heavy Duty Straight Centrifugal Pumps





AMT Heavy Duty Solids Handling Centrifugal pumps are suited for liquid and chemical transfer, recirculation, booster service, dirty water and other industrial applications. Stainless steel units are especially effective in applications where rust and/or corrosion can develop in systems. Pumps are designed to handle liquids with solids content or dissolved solids and debris. Semi-open impeller features self-cleaning ability that makes the unit useful in applications involving up to 1/4" diameter solids and muddy or dirty liquids. Discharge position can be adjusted in 90° increments with vent and drain plugs for all positions. Type 21 mechanical seal and O-ring casing seal. **Pumps are not self-priming and require flooded suction.**

AMT
A Gorman-Rupp Company
400 Spring Street • Royersford, PA 19468 USA
www.amtpump.com • 888-amt-pump (268-7867)

For use with nonflammable liquids compatible with pump component materials. Viton® and Teflon® are registered trademarks of E. I. Dupont.

AMT Heavy Duty Centrifugal Pumps

Pump Dimensional & Specification Data

Model ‡	Curve	HP	PH	Frame	ENC	Voltage @ 60 Hz +	Full Load Amps	SUC*	DIS*	A**	B**	C**	D**	E	F**	G	J**	K	L**	W**	H	‡ Ship Wt. (Lbs.)
3156	A	2	1	56J	TEFC	115/230	22/11	2	1½	5.4 [13.8]	5.0 [12.7]	8.5 [21.6]	3.5 [8.9]	2.5 [6.4]	4.0 [10.2]	4.3 [11.0]	2.4 [6.2]	1.3 [3.5]	17.4 [44.2]	10.6 [26.9]	9.6 [24.4]	78
3150			3	145JM		230/460	6/3			6.1 [15.5]	3.5 [8.9]	10.7 [27.1]	3.5 [8.9]	2.5 [6.4]	4.0 [10.2]	4.4 [11.3]	2.7 [7.0]	1.3 [3.5]	19.2 [48.7]	11.4 [28.9]	9.6 [24.4]	84
3157			3	56J		230/460	6/3			5.4 [13.8]	3.6 [9.1]	8.5 [21.8]	3.5 [8.9]	2.5 [6.4]	4.0 [10.2]	4.3 [11.0]	2.4 [6.2]	1.3 [3.5]	16.9 [42.9]	10.6 [26.9]	9.6 [24.4]	71
315A	B	3	1	56J	TEFC	230	12	2	1½	5.4 [13.8]	5.0 [12.7]	8.6 [21.8]	3.5 [8.9]	2.5 [6.4]	4.0 [10.2]	4.3 [11.0]	2.4 [6.2]	1.3 [3.5]	17.9 [45.4]	10.6 [26.9]	9.6 [24.4]	87
3151			3	182JM		230/460	8/4			7.1 [18.0]	6.6 [16.8]	10.9 [27.6]	4.5 [11.4]	2.5 [6.4]	4.0 [10.2]	4.4 [11.3]	3.7 [9.5]	0.3 [0.9]	20.0 [50.8]	12.8 [32.5]	9.6 [24.4]	137
3158			3	56J		230/460	8/4			5.4 [13.8]	3.6 [9.1]	8.5 [21.8]	3.5 [8.9]	2.5 [6.4]	4.0 [10.2]	4.3 [11.0]	2.4 [6.2]	1.3 [3.5]	17.4 [44.2]	10.6 [26.9]	9.6 [24.4]	75
315E	C	5	1	184JM	TEFC	230	16	2	1½	7.8 [19.9]	6.6 [16.8]	10.8 [27.6]	4.5 [11.4]	2.5 [6.4]	4.0 [10.2]	4.4 [11.3]	3.7 [9.5]	0.3 [0.9]	24.2 [61.4]	13.9 [35.3]	9.6 [24.4]	143
3152			3	184JM		230/460	17/9			7.1 [18.0]	6.6 [16.8]	10.8 [27.6]	4.5 [11.4]	2.5 [6.4]	4.0 [10.2]	4.4 [11.3]	3.7 [9.5]	0.3 [0.9]	21.7 [55.1]	12.8 [32.5]	9.6 [24.4]	145
4264	D	7½	1	213JM	TEFC	230	32	3	3	9.0 [22.9]	7.3 [18.7]	12.3 [31.4]	5.2 [13.3]	2.7 [7.0]	4.5 [11.4]	4.7 [12.1]	4.2 [10.8]	0.2 [0.7]	27.0 [68.6]	16.2 [41.1]	12.0 [30.4]	205
4260			3	184JM		230/460	22/11			7.0 [18.0]	6.6 [16.8]	11.6 [29.5]	4.5 [11.4]	2.7 [7.0]	4.5 [11.4]	4.7 [12.1]	3.7 [9.5]	1.0 [2.6]	22.5 [57.1]	14.3 [36.3]	12.0 [30.4]	172
4265	E	10	1	215JM	TEFC	230	40	3	3	9.0 [22.9]	6.2 [15.7]	12.3 [31.4]	5.2 [13.3]	2.7 [7.0]	4.5 [11.4]	4.7 [12.1]	4.2 [10.8]	0.2 [0.7]	27.0 [68.5]	16.2 [41.1]	12.0 [30.4]	213
4261			3	215JM		230/460	26/13			8.1 [20.7]	7.3 [18.7]	12.3 [31.4]	5.2 [13.3]	2.7 [7.0]	4.5 [11.4]	4.7 [12.1]	4.2 [10.8]	0.2 [0.7]	26.0 [66.0]	15.0 [38.1]	12.0 [30.4]	204
4242	F	7½	1	213JM	TEFC	230	32	2	1½	9.0 [22.9]	7.3 [18.7]	11.3 [28.9]	5.2 [13.3]	2.4 [6.2]	3.8 [9.7]	4.4 [11.3]	4.2 [10.8]	N/A	26.0 [66.0]	14.6 [37.1]	11.1 [28.1]	196
4240			3	184JM		230/460	22/11			7.1 [18.0]	6.6 [16.8]	10.6 [27.0]	4.5 [11.4]	2.4 [6.2]	4.5 [11.4]	4.5 [11.4]	3.7 [9.5]	0.1 [0.3]	21.5 [54.6]	12.6 [32.0]	10.5 [30.6]	163
4253	G	10	1	215JM	TEFC	230	40	3	2	9.0 [22.9]	5.5 [14.2]	11.5 [29.3]	5.2 [13.3]	2.7 [7.1]	4.7 [12.1]	5.0 [12.9]	4.2 [10.8]	0.3 [0.9]	26.1 [66.3]	15.9 [40.4]	10.6 [26.9]	217
4250			3	215JM		230/460	26/13			8.1 [20.7]	7.3 [18.7]	11.5 [29.3]	5.2 [13.3]	2.7 [7.1]	4.7 [12.1]	5.0 [12.9]	4.2 [10.8]	0.3 [0.9]	25.2 [64.0]	14.7 [37.3]	10.6 [26.9]	208
4251	H	15	3	215JM	TEFC	230/460	47/24	3	2	8.1 [20.7]	7.3 [18.7]	11.5 [29.3]	5.2 [13.3]	2.7 [7.1]	4.7 [12.1]	5.0 [12.9]	4.2 [10.8]	0.3 [0.9]	25.2 [64.0]	14.7 [37.3]	10.6 [26.9]	218

(*) Standard NPT (Female) pipe thread.
(**) This dimension may vary due to motor manufacturer's specifications.
(+) 3-Phase motors can also operate on 50 Hz. (This will change full load amps, service factor and RPM)
NOTE: Dimensions are in inches (centimeters) and have a tolerance of ± 1/4".
NOTE: Electric supply for **ALL** motors must be within ±10% of nameplate voltage rating (e.g. 230V ±10%= 207 to 253).

NOTE: Check Price Book for Specific Pump Construction/Material Availability.
Maximum Solids Handling Capacity: 1/4" Diameter

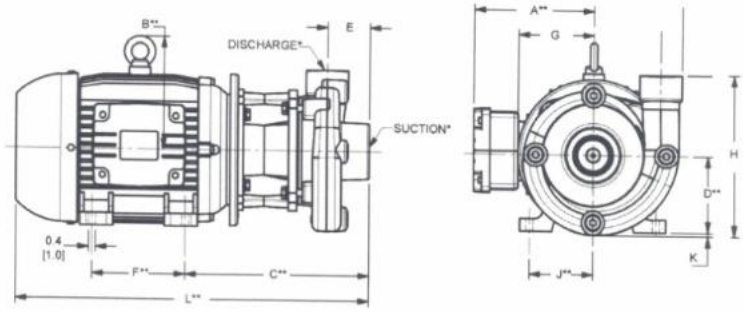
‡ When Ordering, Add the Correct (-9X) Suffix to Model Number Indicating Material Selection (Ex. 315A-95)

XCI (-95) Cast Iron Construction with Buna-N Seals

XB (-94) Cast Bronze Construction with Viton® Seals

XSS (-98) Cast Stainless Steel Construction with Viton® Seals

(All Models Come Standard with Stainless Steel Impeller)



Standard Features

- Stainless Steel, Bronze and Cast Iron Construction
- Buna-N or Viton® Mechanical Seal and O-ring, Depending on Model
- Optional Silicon Carbide Mechanical Seals Available
- Stainless Steel Motor Shaft and Hardware
- NEMA TEFC Single and Three Phase Motors, Depending on Model
- Optional Mounting Base Available for 182/184/215 JM Frames
- Self-cleaning Stainless Steel Impeller
- Maximum Working Pressure 150 PSI
- Maximum Temperature
  - Viton® 200° F
  - Buna-N 180° F
- Optional Seal Wash Port and Hose Available on All Models
- Pedestal Version Models Available for Frame Models 145/182/184JM
- QSP – Quick Ship Pump for Many Models
- Solids Handling Design

Hazardous Duty/Xplosion Proof motors available from stock ranging from 1 to 10 HP; *CALL FOR QUOTATION & LEAD TIME!*

AMT A Gorman-Rupp Company

Manufacturer of AMT & IPT Pumps
400 Spring Street • Royersford, PA 19468 USA
www.amtpump.com • 888-amt-pump (268-7867)

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