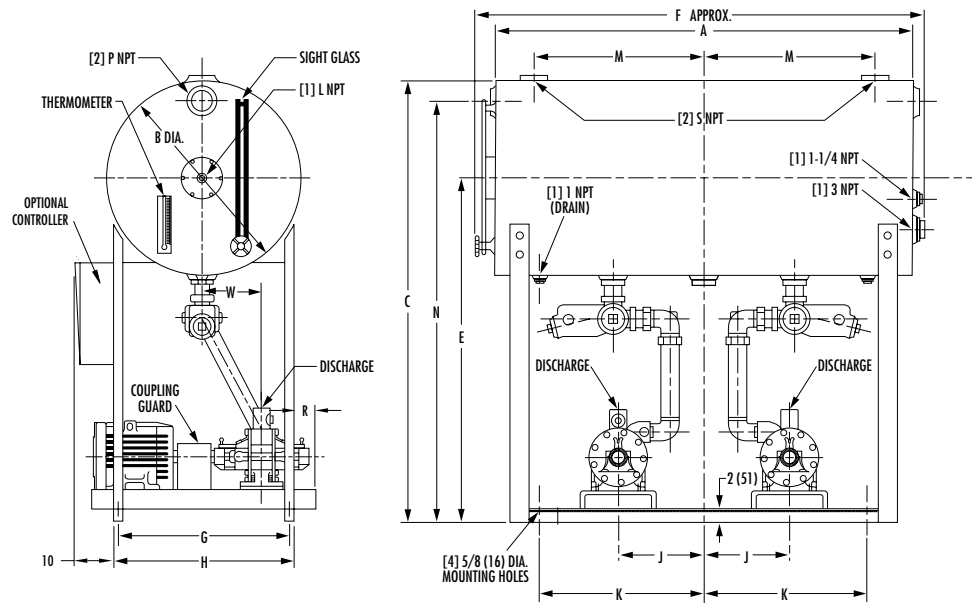


Standard Equipment and Engineering



110A Turbine Pumps

RECEIVER CAPACITY GALLONS	3-WAY VALVE SIZE	A	B	C	E	F	G	H	J	K	L	M	N	P	S	R
30	1-1/4	37	16	42.19	34	44	14.25	15.75	9	15.5	3/4	14.5	40	2	2	7.81
60	1-1/4	37	22	49.69	38.5	44	20.38	21.88	9	15.5	3/4	15	47	2	2	4.75
100	1-1/4	51	24	59.69	47.5	58	21.25	22.75	11	21	3/4	20.5	57	2	3	4.31
200	2*	65	30	77.19	62	72	26.25	27.75	17	25.5	1	26.5	74	3	3	10.81
250	2*	60	36	80.19	62	67	28.38	29.88	17	25.5	1	26.5	77	3	3	9.81
350	3**	60	42	80.19	59	67	36.75	38.25	17	25.5	1-1/2	26.5	76	3	3	5.63
500	3	84	42	80.19	59	91	37.38	38.88	17	28.5	1-1/2	38.5	76	3	3	10.5
750	3	96	48	88.19	64	103	45.5	47	17	35.5	1-1/2	40	85	3	3	1.25
1000	3	120	48	88.19	64	127	45.5	47	17	47.5	1-1/2	52	85	3	3	1.25

* 3" with pump sizes D6T and E6T

** 2" with pump sizes J5, K5 and L5.

LIMITATIONS

MAXIMUM INTERNAL	MAXIMUM DISCHARGE PRESSURE	MAXIMUM TEMP. LIMIT ON PUMP SUCTION	MAKE-UP VALVE**
5 P.S.I.G.	250 P.S.I.G.	210°F	3/4" NPT 22.5 G.P.M.
Short Surges Only*			1" NPT 45 G.P.M.
			1-1/2" NPT 87 G.P.M.

* This is a vented system and pressure ratings are for short surges only.

** Make-up valve limitation based on 40 P.S.I. utility water pressure.

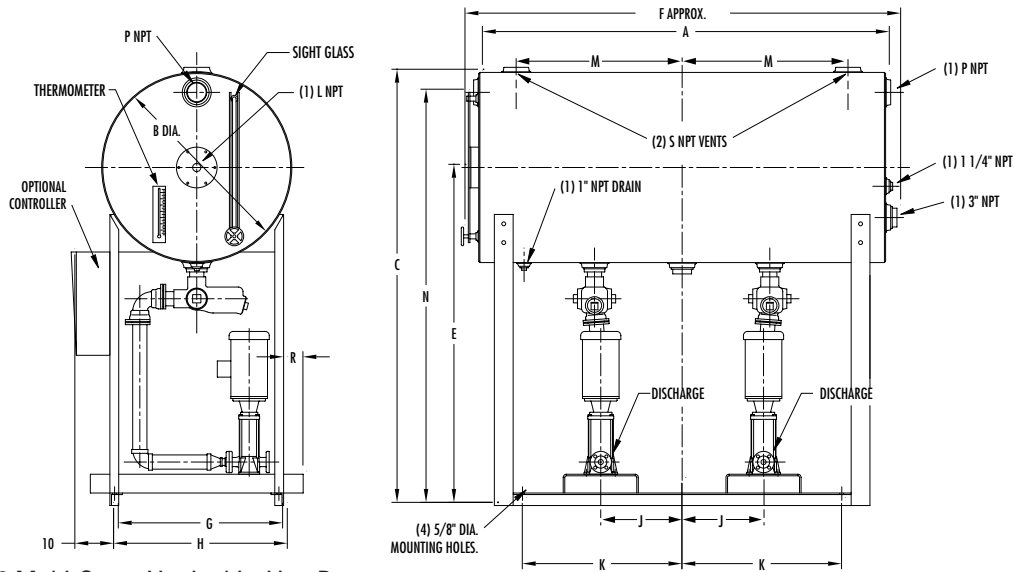
RECEIVER ASSEMBLY PART

PART	MATERIAL
Receiver	3/16" CARBON STEEL
3-Way Valve Body	Cast Iron ASTM A48-64
3-Way Valve Strainer	Brass
Float Valve	Brass ASTM B-36
Gauge Glass Fitting	Brass ASTM B-36
Base and Supports	Commercial Steel

Notes:

- Dimensions and weights are approximate.
- All dimensions are in inches (mm) and may vary $\pm .50"$.
- Optional Controller may be mounted on end of unit if space deems it to be necessary.
- Not for construction purposes unless certified.

Standard Equipment and Engineering



390 Multi-Stage Vertical In-Line Pumps

RECEIVER CAPACITY GALLONS	3-WAY VALVE SIZE	A	B	C	E	F	G	H	J	K	L	M	N	P	S	R
30	1-1/4	37	16	69.19	61	44	14.25	15.75	9	15.5	3/4	14.5	67	2	2	.13
60	1-1/4	37	22	76.69	65.5	44	20.38	21.88	9	15.5	3/4	15	74	2	2	1.06
100	3	51	24	86.69	74.5	58	21.25	22.75	11	21	3/4	20.5	84	2	3	2.06
200	3	65	30	101.19	86	72	26.25	27.75	17	25.5	1	26.5	98	3	3	1.13
250	3	60	36	104.19*	86	67	28.38	29.88	17	25.5	1	26.5	101	3	3	.06
350	3	60	42	116.19*	95	67	36.75	38.25	17	25.5	1-1/2	26.5	112	3	3	.38
500	3	84	42	116.19*	95	91	37.38	38.88	17	28.5	1-1/2	38.5	112	3	3	.06
750	3	96	48	124.19*	100	103	45.5	47	17	35.5	1-1/2	40	121	3	3	.5
1000	3	120	48	124.19*	100	127	45.5	47	17	47.5	1-1/2	52	121	3	3	.5

* "C" DIMENSIONS OVER 103 WILL REQUIRE SPECIAL SHIPPING ARRANGEMENTS.

MATERIALS OF CONSTRUCTION

110A TURBINE PUMPS

PUMP PART

Casing	Cast Iron ASTM A48-64
Covers	Cast Iron ASTM A48-64
Channel Rings	Cast Iron ASTM A48-56
Impeller	Bronze ASTM B62-63
Shaft	Stainless Steel AISI-416
Center Spacer	Cast Iron ASTM A48-56
Packing	Interwoven, T.F.E. impregnated acrylic die molded, diagonally cut
Mechanical Seals	Optionally available

390 MULTI-STAGE VERTICAL IN-LINE CENTRIFUGAL PUMPS

PUMP PART

Upper Casing	Stainless Steel AISI 304 wetted & ASTM 48 Class 35
Lower Casing	Stainless Steel AISI 304 wetted with Iron Flange Rings
Diffusers	Stainless Steel AISI 304
Impeller	Stainless Steel AISI 304
Shaft	Stainless Steel AISI 303
Pump Sleeve	Stainless Steel AISI 304
Pump Bushings	Tungsten Carbide vs Aluminum Oxide Ceramic
O-rings	EPDM
Mechanical Seal	Carbon vs Silicon Carbide Faces with EPDM Elastomers & AISI 316 SS metals

Notes:

1. Dimensions and weights are approximate.
2. All dimensions are in inches (mm) and may vary $\pm .50"$.
3. Optional Controller may be mounted on end of unit if space deems it to be necessary.
4. Not for construction purposes unless certified.

Engineering Specifications

Furnish and install as shown on the plans, one Aurora Pump Model Number....(Simplex) (Duplex) (Dual) (Triplex) packaged Boiler Feed System consisting of.....Gallon receiver of carbon steel with flat heads, (turbine pump(s), (multi-stage vertical in-line centrifugal pump(s), horsepower, R.P.M. motor(s), 3-way strainer valve(s), steel base and supports, and all necessary suction piping factory installed. The system shall be suitable for returning.....G.P.M. at a pressure ofP.S.I. for 210°F water to supply a H.P. boiler.

TURBINE PUMPS:

Each pump shall be the APCO bronze fitted turbine type. The pump casing(s) shall be vertically split. The pump covers shall be of the removable channel ring design to permit replacement of the channels only and shall incorporate the bearing arms and stuffing boxes for (packing) (mechanical seals). The pump(s) shall be flexibly coupled to the motor(s).

MULTI-STAGE VERTICAL IN-LINE CENTRIFUGAL PUMPS:

Each pump shall be in Multi-Stage Vertical In-Line Centrifugal Pump. Each

pump shall be constructed with 304 Stainless Steel impellers and diffusers, a high temperature mechanical seal with carbon vs Silicon Carbide, EPDM elastomers through out, Tungsten Carbide against Ceramic pump bushings and a Cast Iron motor bracket. Flanges will be Ductile or cast Iron in Slip Ring (and isolated for liquid).

TURBINE OR MULTI-STAGE VERTICAL IN-LINE CENTRIFUGAL PUMPS:

The pump(s) shall be mounted within the support stand on a common steel base. Coupling guard(s) will be provided. Suction piping between the receiver and pump(s) shall be factory assembled with expansion type elbows to relieve pipe strain and vibration and 3-way strainer valve(s) with removable brass strainer. The strainer valve plug must be so designed that by turning the plug the liquid flow may be channeled in tow directions - through the strainer housing or by-pass around the strainer directly into the pump - or be completely shut off. The receiver shall contain all necessary openings for float operated automatic make-up water feeder, water level sight glass with shut-off valves, thermometer, and in simplex units, a plugged suction opening for a future pump shall be

provided, to easily convert a simplex unit to a duplex or dual unit. The receiver shall be 3/16" carbon steel and shall be mounted on structural steel legs attached to the pump base. Threaded inlets shall be provided at the top of both tank heads. Two vents shall be provided and also a 1" drain. Motors shall be open drip-proof for (230/460 volt, 3 phase) (115/230 volt, 1 phase) 60 Hertz current, built in a standard NEMA frame.

OPTIONAL:

Magnetic starters with overload and under voltage protection shall be mounted and wired to the pump motors, (3 phase, 1/3 H.P motors or less). On Simplex units, the starters shall be in a general purpose enclosure. On Duplex, Dual and Triplex units, magnetic starters shall be panel mounted in a NEMA 1 enclosure. Reset buttons shall be provided outside the box. On Duplex and Triplex units, transfer switches to provide standby pump operations shall be mounted and wired in the panel. The transfer switch is not required on Dual units. An alternator (will) (will not) be provided on Duplex models in lieu of a selector switch.



NOTE: Aurora Pump reserves the right to make revisions to its products and their specifications, and to this bulletin and related information, without notice.

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