CHECKLIST FOR SIZING
DYNAFLUID 2000

Information needed to size valve:

- Running water Pressure (psi)
  (at point of installation)
- Running Steam Pressure (psi)
  (at point of installation)
- Inlet water temperature
- Water temperature desired
- Gallons per minute required
- Finish required (i.e. rough bronze, stainless steel, chrome plated)

To size the valve:

- Determine maximum cold water capacity of heater using “Cold Water Capacity” column with “Water Pressure” column at point of installation.
- Using “Steam Pressure” column, locate the steam pressure available at point of installation. Determine temperature rise required by subtracting inlet water temperature from water temperature desired. Go across columns to locate temperature rise required to find the GPM the unit can heat to required temperature.
- Compare the capacities found in steps 1 and 2. The lower of these two capacities is the maximum amount of hot water that size heater can produce to the desired temperature.

Note:

- A minimum flow rate must be established to lift the piston and open the internal steam valve. Minimum flows are:
  - 1/2” = 1 GPM
  - 3/4” = 2 GPM
  - 1” = 10 GPM
  - 1 1/2” = 15 GPM
- Valves require a 15 PSI pressure drop on the water side to lift the piston and open the internal steam valve.

EXAMPLE: (Using 3/4" size) assume water is 60 PSI and steam is 40 PSI. Mixer can pass 19 GPM of cold water but can only heat 10 GPM with a 105°F rise. Therefore the capacity of the mixer is only 10 GPM. If the steam pressure were raised to 100 PSI, the capacity of the same unit would be 19 GPM, 105°F rise.

OUTPUT CAPACITY TABLES

1/2" Valve

WATER PRESSURE (PSI)	COLD WATER CAPACITY (GPM)	STEAM PRESSURE (PSI)	TEMPERATURE RISE 45°	55°	65°	75°	85°	95°	105°	115°	125°	135°	145°	155°
20	8	20	8	6	5	5	4	4	-	-	-	-	-	-
30	10	30	10	7	6	5	5	4	4	4	3	3	-	-
40	11	40	13	9	8	7	6	5	5	5	4	4	3	3
50	13	50	16	12	10	9	8	7	6	6	5	5	5	4
60	14	60	18	13	11	9	8	7	7	6	6	5	5	5
70	15	70	19	14	12	10	9	8	7	7	6	6	5	5
80	16	80	20	15	12	11	10	9	8	7	7	6	6	5
90	17	90	22	16	13	12	10	9	8	8	7	6	6	6
100	18	100	+	17	14	12	11	10	9	8	7	7	6	6
110	19	110	+	18	15	13	12	10	9	8	8	7	7	6
120	20	120	+	19	16	14	12	11	10	9	8	8	7	7
130	21	130	+	19	17	14	13	11	10	9	9	8	7	7
140	22	140	+	20	17	15	13	12	11	10	9	8	8	7
150	22	150	+	22	18	16	14	12	11	10	10	9	8	8

3/4" Valve

WATER PRESSURE (PSI)	COLD WATER CAPACITY (GPM)	STEAM PRESSURE (PSI)	TEMPERATURE RISE 45°	55°	65°	75°	85°	95°	105°	115°	125°	135°	145°	155°
20	9	20	15	12	10	9	8	7	6	6	5	5	5	4
30	14	30	17	14	12	10	9	8	8	7	6	6	5	5
40	15	40	23	19	16	14	12	11	10	9	8	8	7	7
50	17	50	25	23	20	17	15	14	12	11	10	10	9	8
60	19	60	31	25	21	18	16	15	13	12	11	10	10	9
70	20	70	33	27	23	20	17	16	14	13	12	11	10	10
80	22	80	35	29	24	21	18	17	15	14	13	12	11	10
90	23	90	39	32	27	24	21	19	17	15	14	13	12	11
100	25	100	+	25	30	26	23	21	19	17	16	15	14	13
110	26	110	+	26	31	29	26	23	21	19	17	16	15	14
120	27	120	+	+	31	32	28	25	23	21	19	18	16	15
130	28	130	+	+	32	33	29	26	23	21	20	18	17	16
140	29	140	+	+	33	33	29	26	24	22	20	18	17	16
150	33	150	+	+	33	33	30	27	24	22	20	19	17	16

- STEAM PRESSURE TOO LOW
+ STEAM PRESSURE TOO HIGH

TO DETERMINE APPROXIMATE STEAM CONSUMPTION:
Measure, calculate or approximate the outlet hot water flow from Dynafluid 2000. Review the flow charts above but be sure to acknowledge the presence of any outlet fitting such as a Water Nozzle at the end of a Washdown Hose in a Hose Station application. For approximation purposes use 8 GPM to rate the Water Nozzle.

Note the inlet cold water temperature (T1) and desired outlet hot water temperature (T2) and establish the Temperature Rise based upon the differential (T2-T1).

Apply the following formula: Lbs per Hour = GPM/2 x (T2-T1)

OUTPUT CAPACITY TABLES

1” Valve

WATER PRESSURE (PSI)	COLD WATER CAPACITY (GPM)	STEAM PRESSURE (PSI)	TEMPERATURE RISE 45°	55°	65°	75°	85°	95°	105°	115°	125°	135°	145°	155°
20	24	20	33	24	20	18	16	-	-	-	-	-	-	-
30	28	30	40	29	24	21	19	17	15	14	13	12	11	10
40	31	40	45	32	28	24	21	19	17	16	14	13	12	12
50	34	50	50	37	31	27	24	21	19	17	16	15	14	13
60	37	60	+	40	34	30	25	23	21	19	18	17	16	14
70	40	70	+	44	37	32	28	25	23	21	19	18	17	16
80	43	80	+	48	40	35	31	28	25	23	21	19	18	17
90	44	90	+	52	44	38	33	30	27	25	23	21	20	18
100	47	100	+	+	47	41	36	32	29	26	24	23	21	20
110	48	110	+	+	50	43	38	34	31	28	26	24	22	21
120	50	120	+	+	53	46	41	36	33	30	28	26	24	22
130	53	130	+	+	+	49	43	39	35	32	29	27	25	24
140	53	140	+	+	+	52	46	41	37	34	31	29	27	25
150	55	150	+	+	+	53	47	42	38	35	32	30	28	25

1 1/2” Valve

WATER PRESSURE (PSI)	COLD WATER CAPACITY (GPM)	STEAM PRESSURE (PSI)	TEMPERATURE RISE 45°	55°	65°	75°	85°	95°	105°	115°	125°	135°	145°	155°
20	37	20	34	25	21	18	16	-	-	-	-	-	-	-
30	43	30	45	33	28	24	21	19	-	-	-	-	-	-
40	51	40	57	42	35	30	27	24	22	20	18	17	16	14
50	57	50	68	50	42	36	32	29	26	24	22	20	19	17
60	62	60	79	58	49	42	37	33	30	28	25	23	22	20
70	63	70	90	65	55	48	42	38	34	31	29	27	25	23
80	70	80	100	73	62	53	47	42	38	35	32	30	28	25
90	75	90	+	+	67	58	52	46	42	38	35	32	30	29
100	79	100	+	+	73	63	55	50	45	41	38	35	33	30
110	83	110	+	+	77	67	59	53	48	44	40	37	35	32
120	86	120	+	+	81	70	62	55	50	46	42	39	37	33
130	90	130	+	+	84	73	64	58	52	48	44	40	38	35
140	93	140	+	+	87	75	66	59	54	49	45	42	39	36
150	96	150	+	+	89	77	68	61	55	50	46	43	40	37

- STEAM PRESSURE TOO LOW
+ STEAM PRESSURE TOO HIGH

TO DETERMINE APPROXIMATE STEAM CONSUMPTION:
Measure, calculate or approximate the outlet hot water flow from Dynafluid 2000. Review the flow charts above but be sure to acknowledge the presence of any outlet fitting after the valve.

Note the inlet cold water temperature (T1) and desired outlet hot water temperature (T2) and establish the Temperature Rise based upon the differential (T2-T1).

Apply the following formula: Lbs per Hour = GPM/2 x (T2-T1)