

W A T E R O U S

Weight Chart

Form No.	Issue Date	Rev. Date
F-2108	01/91	02/17/98

Waterous
Midship Pump and Accessory
Weight Chart

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Add weight of items required from each table to estimate total pump weight.

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NOTE: All weights shown on this form are for cast iron pumps and rounded to the nearest half pound or tenth of a kilogram.

Table 1. Body and Impeller Shaft

Table 1a. Basic Pump (Includes Body, Impellers and Shaft)

PUMP MODEL	IMPELLERS	WEIGHT (Pounds/Kilograms)	
CM	71537 / 71538	600.0	272.1
	71796 / 71797	595.0	269.9
CMD	71537 / 71538	603.0	273.5
	71796 / 71797	598.0	271.2
CMH	71537 / 71538 / 71670	660.0	299.4
	71796 / 71797 / 71670	655.0	297.1
CMHD	71796 / 71797 / 71671	668.0	303.0
CMU	71649T / 71650T	590.0	267.6
CMUD	71649T / 71650T	593.0	269.0
CMUH	71649T / 71650T	650.0	294.8
CMUHD	71649T / 71650T	653.0	296.2
CS	71799	592.0	268.5
CSD	71799	595.0	269.9
CSH	71799 / 71670	652.0	295.7
CSHD	71799 / 71671	655.0	297.1
CSU	71651T	587.0	266.3
CSUD	71651T	590.0	267.6
CSUH	71651T / 71670	647.0	293.5
CSUHD	71651T / 71671	650.0	294.8
CR	81721	367	166.5
CZ	81710	269	122.0
CRQA	81721	521	236.5

Table 1b. Intake Adapters

COMBINATIONS		WEIGHT (Pounds/Kilograms)	
L.H. SIDE	R.H. SIDE	WITH FLAP VALVE	WITHOUT FLAP VALVE
Standard	Standard	132.5 / 60.1	130.0 / 59.0
Large	Large	154.5 / 70.1	152.0 / 69.0
Standard	Large	143.5 / 65.1	141.0 / 64.0
Large	Standard	143.5 / 65.1	141.0 / 64.0
Standard	Standard Rear*	157.5 / 71.4*	155 / 70.3*
Large	Large Rear*	197.5 / 89.6*	195 / 88.5*

* Add the following for rear adapter fittings: 71289 5" Victaulic – 10.5 / 4.8
71290 5" ANSI Flange – 22.0 / 10.0
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Table 1c. Tank Inlet Connection

FITTING / VALVE	WEIGHT Pounds/Kilograms
Blind Flange	5.0 / 2.3
2-1/2" NPT Flange	7.0 / 3.2
3" NPT Flange	6.0 / 2.7
4" ANSI Flange	15.0 / 6.8
Flap Valve	1.0 / 0.5
Tank to Pump Valve	45.0 / 20.4

Table 2. Transfer Valve Actuator

TYPE	MOUNTING	MANUAL OVERRIDE	WEIGHT Pounds/Kilograms
Manual	Top	–	10.0 / 4.5
	Bottom	–	10.0 / 4.5
Electric	Top	Yes	26.0 / 11.8
		No	21.0 / 9.5
	Bottom	Yes	18.0 / 8.2
		No	13.5 / 6.1

Table 3. Transmissions

Table 3a. Transmissions

TYPE	MODEL	AVERAGE WEIGHT PER RATIO Pounds/Kilograms
"Y" Series Chain Drive	YB	323.0 / 146.5
	YC	350.0 / 158.8
	YBX	332.0 / 150.6
	YCX	354.0 / 160.6
"W" Series Chain Drive	WB	260.0 / 117.9
	WBX	270.0 / 122.5
"P" Series Chain Drive	PA	111.0 / 50.3

* Optional end yokes for 2.35 in. driveline: 1710 Series 13.5 / 6.1
1810 Series 18.0 / 8.2

Table 3b. Parking Brake

USED ON MODELS	SIZE	WEIGHT Pounds/Kilograms
WB	9 x 3	23.0 / 10.4
WB, WBX, YB, YC	12 x 3	53.0 / 24.0

Table 4. Priming System

Table 4a. Priming Pumps

MODEL	WEIGHT Pounds/Kilograms
HHE	65.0 / 29.5
HHEB	79.0 / 35.8
VPE	48.0 / 21.8
VPES	48.0 / 21.8

Table 4b. Priming Valves (with hose)

TYPE	USED WITH MODELS	WEIGHT Pounds/Kilograms
Manual/Electric	HHE, VPE, VPES	5.0 / 2.3
Electric (Solenoid)	HHE, HHEB, VPE, VPES	9.0 / 4.1

Table 4c. Priming Oil Tank

ITEM	WEIGHT Pounds/Kilograms
Priming Oil Tank	2.0 / 0.9

Table 5. Pressure Control Systems

Table 5a. Discharge Relief Valves

SIZE	TYPE	WEIGHT Pounds/Kilograms	
		PUMP MOUNTED	SEPARATELY MOUNTED
2"	Indicating	23.0 / 10.4	17.0 / 7.7
	Non-Indicating	21.0 / 9.5	15.0 / 6.8
3"	Indicating	34.0 / 15.4	34.0 / 15.4
	Non-Indicating	33.0 / 15.0	33.0 / 15.0
4"	Indicating	31.0 / 14.1	–
Pilot Valve		10.5 / 4.8	

Table 5b. Intake Relief Valves

TYPE	WEIGHT Pounds/Kilograms
Pump Mounted	16.0 / 7.3
Separately Mounted	16.0 / 7.3
Pilot Valve	7.0 / 3.2

Table 6a. Intake Fittings

USED WITH INTAKE ADAPTER	THREAD	PART NUMBER	WEIGHT Pounds/Kilograms
Standard	4-1/2"	70326-M / 72436	39.0 / 17.7
		80421-M / 81830	50.0 / 22.7
		80538-M / 81835	80.0 / 36.3
		81996-M / 81996	68.0 / 30.8
	5"	81911-M / 81911	56.0 / 25.4
		80367-M / 81831	54.0 / 24.5
		80537-M / 81843	96.0 / 43.5
		80538-M / 81836	80.0 / 36.3
	6"	81912-M / 81912	57.0 / 25.9
		80395-M / 81832	63.0 / 28.6
		80539-M / 81844	98.0 / 44.5
		80540-M / 81837	82.0 / 37.2
		80894-M / 81834	76.0 / 34.5
		80914-M / 81914	54.0 / 24.5
Large	6"	81915-M / 81915	76.0 / 34.5
		81816-M / 81916	73.0 / 33.1
		81063-M / 81820	93.0 / 42.2
		81064-M / 81816	93.0 / 42.2
		81069-M / 81772	113.0 / 51.3

Table 6b. Add for 2-1/2 in. 4-bolt flanges mounted on the fittings listed below:

SIZE	WEIGHT POUNDS/KILOGRAMS
1-1/2 NPT	1.5 / 0.7
2 NPT	2.5 / 1.1
2-1/2 NPT	2.0 / 0.9
3 NPT	4.0 / 1.8
Blind	1.0 / 0.5

Table 6c. Add for 3-1/2 in. 8-bolt flanges mounted on the fittings listed below:

SIZE	WEIGHT POUNDS/KILOGRAMS
2-1/2 NPT	8.0 / 3.6
3 NPT	7.0 / 3.2
3-1/2 NPT	6.0 / 2.7
Blind	6.0 / 2.7

Table 7. Discharge Fittings

PART NAME	PART NUMBER	WEIGHT Pounds/Kilograms
WYES	70373-1	26.0 / 11.8
	70373-6	26.0 / 11.8
	70373-7	25.5 / 11.6
	70373-8	25.5 / 11.6
	71441-9	40.0 / 18.1
	71441-11	39.0 / 17.7
	71441-13	39.0 / 17.7
	71441-15	37.0 / 16.8
	71441-23	40.0 / 18.1
	71441-24	39.0 / 17.7
	71441-25	39.0 / 17.7
	71441-26	37.0 / 16.8
	71442-9	36.0 / 16.3
	71442-11	35.0 / 15.9
	71442-13	35.0 / 15.9
	71442-15	33.0 / 15.0
	71442-23	36.0 / 16.3
	71442-24	35.0 / 15.9
	71442-25	35.0 / 15.9
	71442-26	33.0 / 15.0
	71600	39.0 / 17.7
	71600-1	38.0 / 17.2
	71600-2	38.0 / 17.2
	71600-3	37.0 / 16.8
EXTENSIONS	70278-3	17.0 / 7.7
	70278-4	17.0 / 7.7
	70278-5	17.0 / 7.7
	70312	23.5 / 10.7
	70312-1	23.5 / 10.7
	71602	32.5 / 14.7
	71602-1	32.5 / 14.5
	71626-1	37.5 / 17.0
	71626-3	36.5 / 16.6
	71626-5	36.5 / 16.6
	71626-6	35.5 / 16.1
	71626-7	37.5 / 17.0
	71626-8	36.5 / 16.6
71626-9	36.5 / 16.6	
ELBOW	71443	12.5 / 5.7

Table 8. Discharge Valves

SIZE	MTG	ACTUATOR	OPERATION	LOCATION	WEIGHT Pounds/Kilograms
2-1/2" Standard	Flange	Manual	Push-Pull	Panel	20.0 / 9.1
				Remote	20.0 / 9.1
			Quarter turn locking handle	–	20.0 / 9.1
			Quarter turn remote locking	–	18.0 / 8.2
		Push-pull with flowmeter provision	Panel	*	
			Remote	*	
		Electric	With push-pull override	–	*
			With flowmeter provision	–	*
	In-line	Manual	Push-pull	–	21.5 / 9.8
			Quarter turn locking handle	–	*
			Quarter turn remote locking	–	*
		Electric	With push-pull override	–	*
2-1/2" Full Flow	Flange	Manual	Push-pull	Panel	22.5 / 10.2
				Remote	22.5 / 10.2
			Quarter turn remote locking	–	*
			Push-pull with flowmeter provision	Panel	38.0 / 17.2
		Remote		38.0 / 17.2	
		Electric	With push-pull override	–	*
	With flowmeter provision		–	*	
	In-line	Manual	Push-pull	–	*
			Quarter turn remote locking	–	*
		Electric	With push-pull override	–	*
3-1/2" Standard	Flange	Manual	Push-pull	Panel	42.0 / 19.1
				Remote	42.0 / 19.1
			Quarter turn remote locking	–	40.0 / 18.1
		Electric	With push-pull override	–	55.5 / 25.2

*NOTE: Weights not shown will be added in the near future.

Table 9. Center Discharge Piping

PART NAME	PART NUMBER	WEIGHT Pounds/Kilograms
Spacer	51539	5.0 / 2.3
	51754	5.5 / 2.5
Tapped Flange	51744	7.0 / 3.2
	51744-1	6.0 / 2.7
Extension	62052	21.0 / 9.5
	62407	19.0 / 8.6
	62551	21.0 / 9.5
	71599	16.5 / 7.5
	71627	18.0 / 8.2
	71639	23.0 / 10.4
	71890	30.5 / 13.8
Elbow	71597	16.0 / 7.3
Tee	80827	20.0 / 9.1
Siamese	71601	59.0 / 26.8
	71640	59.0 / 26.8
	71932	53.0 / 24.0
	71933	53.0 / 24.0
Blind Flange	52042	6.0 / 2.7

Table 10. Pump Shift

TYPE	INDICATING LIGHTS	WEIGHT Pounds/Kilograms
Electrical	No	15.0 / 6.8
	Yes	16.0 / 7.3
Pneumatic	Yes	7.5 / 3.4

Table 11. Drain Valves

MOUNTING	WEIGHT Pounds/Kilograms
Panel (Separately)	2.0 / 0.9
Transmission (cable operated)	3.0 / 1.4

Table 12. Miscellaneous

ITEM	PART NUMBER	WEIGHT Pounds/Kilograms
Control Plate Kit	K 708	.5 / 0.2
Control Rod (61-3/8)	51302-61	3.5 / 1.6
Control Rod (10-3/4)	51302-10	.5 / 0.2
Hose Adapter, 2-1/2 NPT (F) x 2-1/2 NH (M)	51042-CR	1.5 / 0.7
Hose Adapter, 2-1/2 NPT (M) x 2-1/2 NH (M)	51105-CR	1.5 / 0.7
2-1/2 Nipple (Galvanized)	W 6040-160G	3.0 / 1.4
2-1/2 Nipple (Brass)	W 6040-160B	4.5 / 2.0
Tapped Flange, 3" NPT	51744	7.0 / 3.2
Tapped Flange, 3-1/2" NPT	51744-1	6.0 / 2.7