



Washing machine / Waschmaschine  
WMA403E

Tel.: +49 40 600 094 680 E-Mail.: [info@wesco-navy.de](mailto:info@wesco-navy.de)

## Washing machine WMA403E

Heating.....27,00KW

Motor.....4,00KW

-----  
Total capacity.....31,00 KW

### =====

#### **Marine Execution**

Heating : 27 kW

Capacity : 40 Kg (dry linen/charge)

Drum volume : 350 Litres

Water inlet : max. 518 l/min.

Extraction : Up to 540 r.p.m.

Motor : 4,0 kW

Noise level : <65 db

**Drain system : Gravity Drain**

- Inner- and outer drum as well as top and front panel of stainless steel.
- Operating instructions on the front as international signs.
- Fully automatic operation with spin dryer.
- Solid A-frame construction, minimizing vibrations and maximizing stability.
- Fully electronic control.
- Big door opening.
- "Heavy Duty" industrial bearing house.
- Simple maintenance.
- Hoses for water inlet and drain delivered.

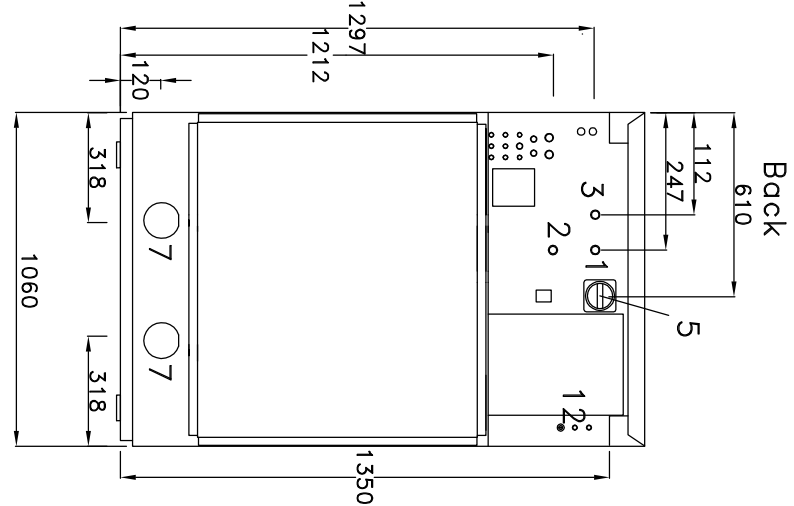
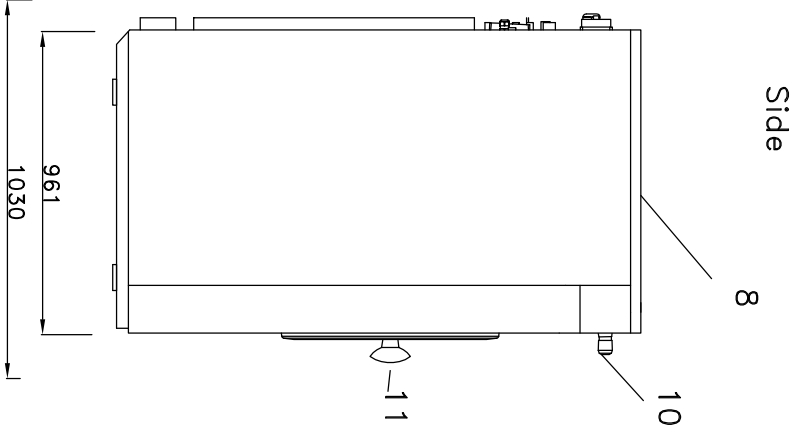
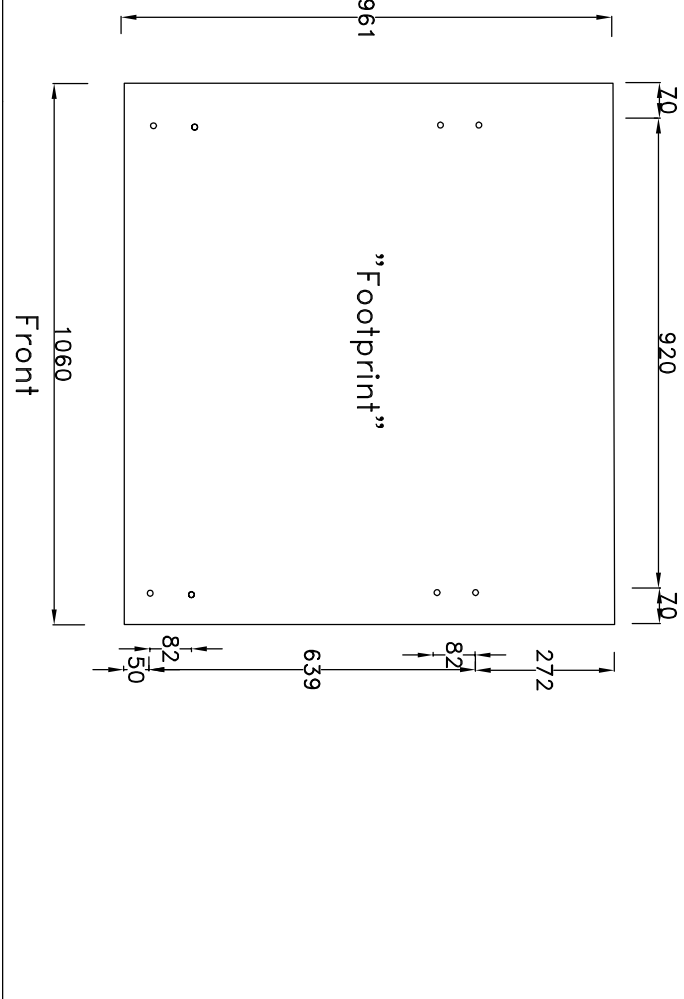
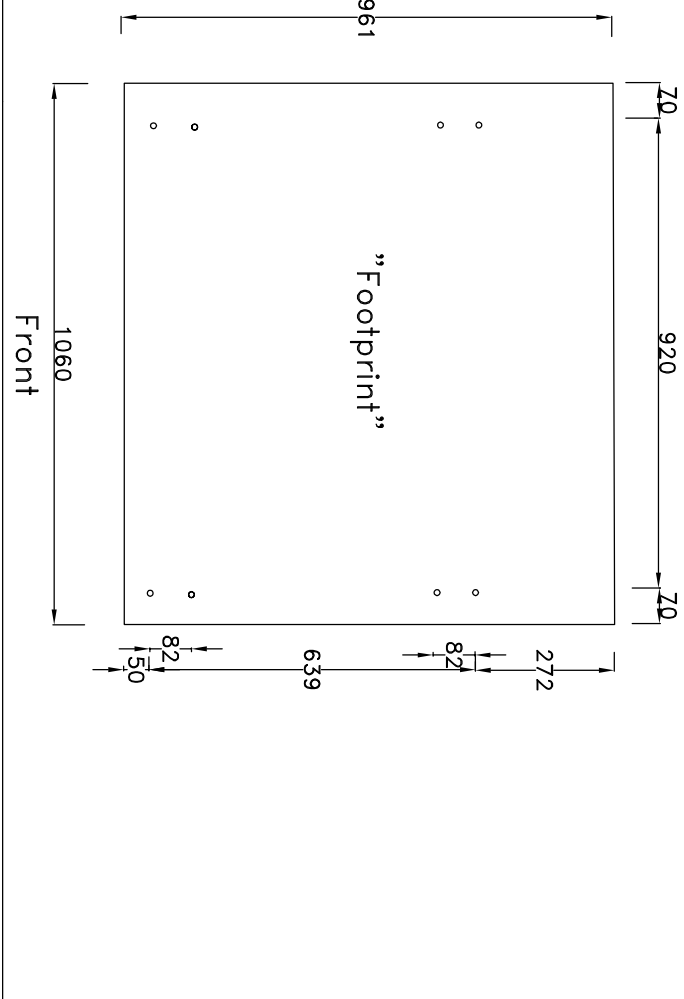
#### **Installation:**

Please follow our instructions very well.

The foundation must be free of vibrations.

- 1 Electrical connection
- 2 Hot water
- 3 Cold water hard
- 5 Main switch
- 7 Drain (2x)
- 8 Soap dispenser
- 9 Control panel
- 10 Button CENTRALSTOP
- 11 Door opening
- 12 Fuses

Point 4 and 6 are not existing on this machine.



ITEM:		DRAW.	
Washing machine		AW	
Waschmaschine		REV.	
WMAA403E		08.10.14	
THIS DRAWING REMAINS THE PROPERTY OF WESCO Navy			
Tel.: +49 40 600 094 680 Fax.: +49 40 536 75 01		WESCO Navy	
E-mail.: Info@wesco-navy.de		Hamburg	

PILOT OUT OF SCALE

Wir behalten uns vor, die technischen Spezifikationen im Interesse der Weiterentwicklung zu verändern.  
We reserve the right to modify the specifications if necessary.

- Included in scope of supply:
- Drain pipe
  - 2 water inlet hoses, each 150 cm long

## Installation

### Rigid-mount machines

#### Transportation and unpacking – rigid-mount machines



#### WARNING!

ALWAYS CONSULT THE STATIC REQUIREMENTS WITH A STATIC ENGINEER IN ORDER TO MEET THE REQUIREMENTS OF PERMISSIBLE LOADS, VIBRATIONS AND NOISE LEVEL IN THE BUILDING! THE MANUFACTURER DOES NOT RECOMMEND INSTALLING THE WASHING MACHINE IN A ROOM WITH A CELLAR UNDERNEATH OR ON A FLOOR HAVING ROOMS UNDERNEATH. IT IS OF UTMOST IMPORTANCE THAT THE MACHINE IS PLACED IN LEVEL, FROM SIDE TO SIDE AS WELL AS FRONT TO REAR. IF THE MACHINE IS NOT PROPERLY LEVELED, IT MAY RESULT IN OUT-OF-BALANCE WITHOUT A REAL OUT OF BALANCE IN THE DRUM. NEVER INSTALL THE MACHINE ON SURFACE CONSISTING OF VINYL!

- The machine is delivered bolted onto the transport pallet and packed in a shrink-wrap foil or box.
  - Remove packing from the machine.
  - Remove front and rear panel. Remove the bolts between the machine and pallet.
  - When the machine is lifted off the pallet: Make sure that the machine does not come down on the floor with either of the rear corners first. The side panel of the machine can be damaged.
- Two self-adhesive rubber stop-blocks are supplied with the machine. They might be applied as paint protection when opening the door.

#### Siting – rigid-mount machines

- Install the machine close to a floor drain or open drain.
- In order to make installation and servicing the machine easier the following clearances are recommended, see figure 9.
  - At least 500 mm between the machine and the wall behind.
  - And min. 20 mm on both sides of the machine whether installed next to the wall or other machines.

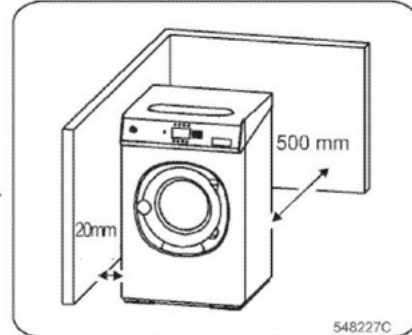


Figure 9 – Rigid-mount machines

#### Location of anchor bolts – rigid-mount machines

- Use spacing washers in order to install the machine in a level and stable manner in all its corners. See figure 17.
- "○" – drilling points for anchoring bolts, or chemical anchor bolts, see figure 10.

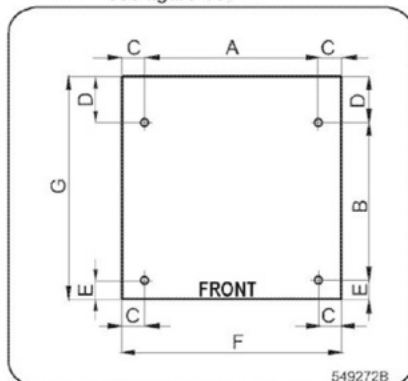


Figure 10 – Rigid-mount machines

#### Capacities

WMA73	: 7 kg
WMA83	: 8 kg
WMA103	: 10 kg
WMA123	: 12 kg
WMA153	: 15 kg
WMA203	: 20 kg
WMA253	: 25 kg
WMA303	: 30 kg
WMA403	: 40 kg

## Installation

Table 22 – Rigid-mount machines, (dimensions stated in mm)

Rigid-mount machines							
MACHINE	A	B	C	D	E	F	G
WMA73 WMA83	522	474	69	139	57.5	660	670.5
WMA103 WMA123	615	474	67.5	139	57.5	750	670.5
WMA153	615	574	67.5	154	57.5	750	785.5
WMA203	751	569	69.5	220,5	50	890	838.5
WMA253	751	714	69.5	220,5	50	890	984.5
WMA303	751	789	69.5	220.5	50	890	1059.5
WMA403	920	639	70	272	50	1060	1059.5

### Providing elevated concrete pad – rigid-mount machines

- This method comes into consideration in case that the existing floor is thinner than 120mm / 4.72" or in case that the machine should be positioned above the existing floor level. The height of the elevated pad could be 150-200 mm / 5.9-7.87", see figure 12.

#### Procedure:

- Break and remove the existing floor down to the depth of approx 75mm / 2.95", see figure 13. The longest dimensions of the lower part of the hole must be by 120 mm / 4.72" longer than the dimensions of the upper part of the hole. G and F dimensions - see table 22.
- Wet the complete hole and spread over with cement.
- In order to increase the load-bearing capacity and reduce the concrete deformations, we recommend inserting an armature into the base of the pad. In order to achieve adequate connection of the new pad with the existing floor, insert a reinforcing bar or reinforcing bars.
  - NOTE:** When inserting the reinforcing elements, take into consideration the locations (and space requirements) for drilling holes which will be used for the chemical anchor bolts.
- Pour concrete into the prepared base. Level the surface carefully into a horizontal plane.
- Let the concrete harden for at least one week before installation of the machine.

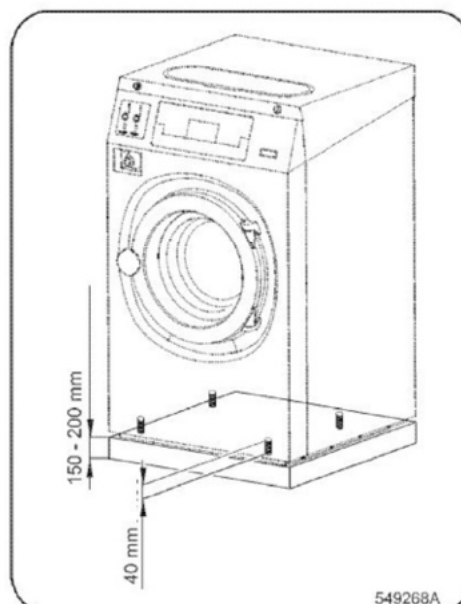


Figure 12 – Rigid-mount machines

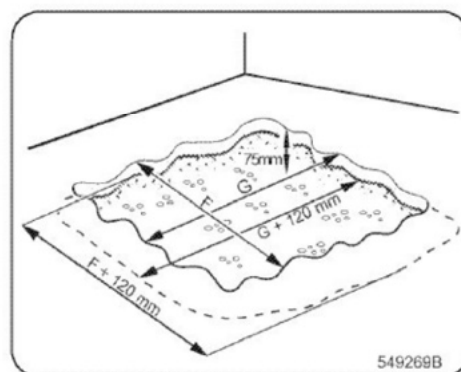


Figure 13 – Rigid-mount machines,  
G, F – see table 22

## Installation

### Installation on floor or steel base – rigid-mount machines

- The drum of rigid-mount machines is fixed to the frame. The floor and steel base (if used) underneath the machine **MUST** be stable enough to be able to absorb the dynamic loads which are created during the spinning sequence, see the values for each machine specified in table 1, 2. Therefore, M16 anchor bolts - pos.4 – see figure 14 and 15 and washers  $\varnothing 60 / \varnothing 16.5 \times 6\text{mm}$  - pos.2 and M16 self locking nuts - pos.1 must be used so that the machine, the steel base (if used) and floor form one integral unit – see figures 14 and 15.

- The anchor bolts are not supplied with the machine. The washers and nuts are supplied with the machine. The torque is 100Nm.
- The existing concrete floor must be at least 120mm / 4.72" thick. Dimensions for anchoring – see figures 10 and table 22.
- Check that the machine is installed in a level and stable manner in all its corners. If necessary, level it up by means of stainless or galvanised spacing washers, see figures 14, 15, 17, pos.3 (washers are not supplied with the machine) inserted in between the machine frame and the floor – see figures 16, 17. The dimensions of the spacers must be the same as the dimension of the machine frame in the place where the anchor bolts are located – 80x80mm.
- Fit a washer and self locking nut on the anchor bolt and tighten it with a torque wrench to a torque of **100Nm**. It is advisable to recheck the torque after a short period of the machine operation.
- The bottom frame of the machine shall be used for the purpose of lifting the whole machine.
- Place the machine over the four drilled holes.
- Check that the machine is seated in a perfectly level manner.
- The anchoring of the machine or the steel base can be carried out by means of mechanical or chemical anchor bolts which must be able to form one integral unit with the floor (they are not supplied with the machine).

### Capacities

WMA73	: 7 kg
WMA83	: 8 kg
WMA103	: 10 kg
WMA123	: 12 kg
WMA153	: 15 kg
WMA203	: 20 kg
WMA253	: 25 kg
WAM303	: 30 kg

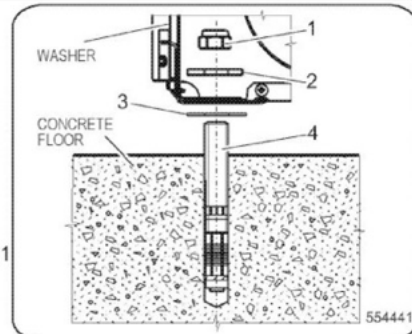


Figure 14 – Rigid-mount machines, Installation on floor

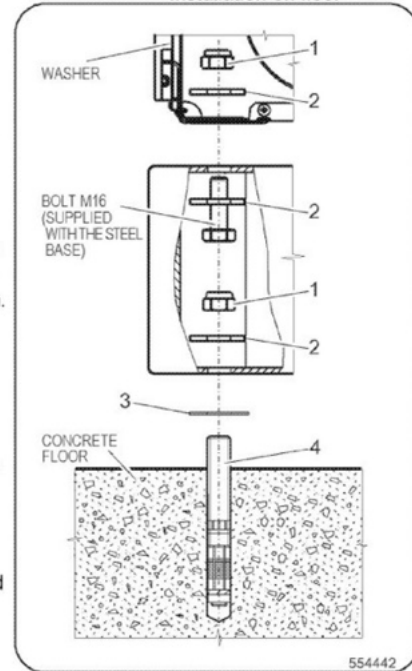


Figure 15 – Rigid-mount machines, Installation on a steel base and floor

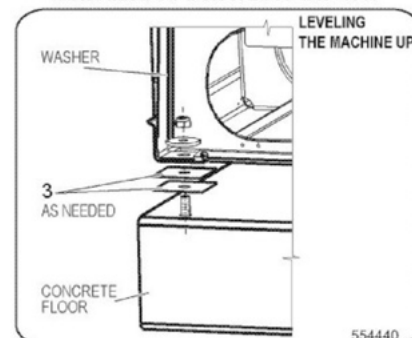


Figure 17 – Rigid-mount machines, 7 - 8 - 10 - 12 - 15 - 20 - 25 - 30 kg

## Technical data

### Technical data

MACHINE	Liter	80	105	135	180	240	300
Inner drum							
volume	l	75	105	135	180	240	280
diameter	mm	530	620	620	750	750	750
depth	mm	350	350	450	410	545	620
G-factor							
Standard		100	100	100	100	100	100
Optional		175	175	175	175	175	175
Dimensions (Standard)		Refer to Table 3					
Drum speed							
wash		50	46	46	42	42	42
extraction							
(G-factor 100)	RPM	580	540	540	490	490	490
(G-factor 175)	RPM	770	710	710	645	645	645
Heating							
electricity	kW	6/9 (4.6)	6/9/12	9/12	12/18	18	21.9
steam	bar	1 - 8	1 - 8	1 - 8	1 - 8	1 - 8	1 - 8
hot water	°C	90	90	90	90	90	90
Motor size							
(G-factor 100)	kW / HP	0.5 / 0.67	0.5 / 0.67	0.75 / 1	0.75 / 1	1.1 / 1.48	1.5 / 2.01
(G-factor 175)	kW / HP				1.1 / 1.48	1.5 / 2.01	
Shipping Dimensions							
Height	mm	1245	1355	1355	1550	1550	1550
Width	mm	710	800	800	925	925	925
Depth	mm	835	835	950	970	1130	1190
Net Weight							
(G-factor 100)	kg	135	170	190	255	275	290
(G-factor 175)	kg				315	330	355
Shipping Weight							
(G-factor 100)	kg	145	185 / 408	200 / 441	270	290	305
(G-factor 175)	kg				335	355 /	385
Sound level (1)							
L <sub>Aeq</sub> wash seq. /							
extraction seq.							
(G-factor 100)	dB	49 / 53	49 / 53	50 / 65	48 / 55	50 / 65	50 / 65
(G-factor 175)	dB				50 / 65		

(1) ISO 3744

Table 1

## Technical data

MACHINE	Liter	80	105	135	180	240	300
Maximum static load on floor							
(G-factor 100)	kN / lb	1.9	2.2	2.7	3.4	3.9	4.2
(G-factor 175)	kN / lb	1.9	2.2	2.7	4.0	4.5	4.9
Maximum dynamic load on floor							
(G-factor 100)	kN / lb	1.6±1.5	1.9±2.0	2.2±2.5	2.7±3.2	3.0±4.3	3.2±5.0
(G-factor 175)	kN / lb	1.6±2.5	1.9±3.4	2.2±4.4	3.4±5.6	3.7±7.4	3.9±8.7
Frequency of dynamic load	Hz						
(G-factor 100)	Hz	9.7	8.9	8.9	8.2	8.2	8.2
(G-factor 175)	Hz	12.8	11.8	11.8	10.8	10.8	10.8

Table 1 continuation

### Connections

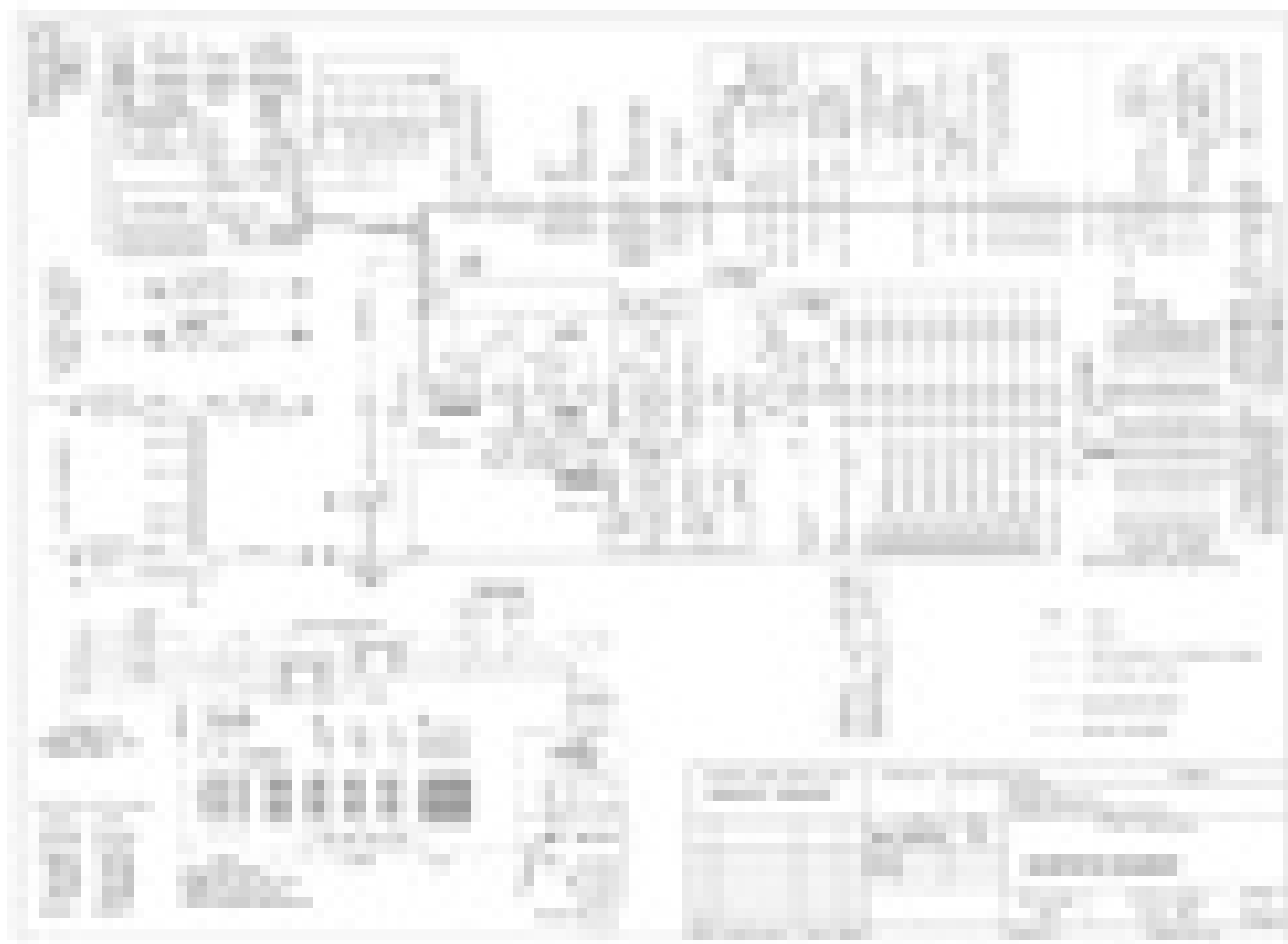
MACHINE	Liter	80	105	135	180	240	280
Water valves connection	BSP	¾"	¾"	¾"	¾"	¾"	¾"
Water pressure	bar / PSI	1 - 8 / 15 - 116	1 - 8 / 15 - 116	1 - 8 / 15 - 116	1 - 8 / 15 - 116	1 - 8 / 15 - 116	1 - 8 / 15 - 116
Recommended water pressure	bar / PSI	3 - 5 / 44 - 73	3 - 5 / 44 - 73	3 - 5 / 44 - 73	3 - 5 / 44 - 73	3 - 5 / 44 - 73	3 - 5 / 44 - 73
Capacity	l/min /	20	20	20	20 66 (1,3) 188 (2,3)	20 66 (1,3) 188 (2,3)	66 (1) 188 (2) 20 (3)
Drain valve outer ø mm		76 / 3	76	76	76	76	76
Flow amount with drain valve	l/min	210 / 55.48	210	210	210	210	210 2 x 210 (3)
Drain pump with a hose internal diameter of hose	mm / inch	19 / 0.75	-	-	-	-	-
flow rate of drain pump	l/min / gal/min	36 / 9.51	-	-	-	-	-
Steam valve connection	BSP	½"	½"	½"	½"	½"	½"
Steam pressure	bar / PSI	1 - 8 / 15 - 116	1 - 8 / 15 - 116	1 - 8 / 15 - 116	1 - 8 / 15 - 116	1 - 8 / 15 - 116	1 - 8 / 15 - 116
General data							
Ambient temperature	°C	5 to 35					
Relative humidity		30% to 90% without condensation					
Height above sea level	m	up to 1000					
Storage temperature	°C	1 to 55					

Table 2

(1) (water pressure 1 bar)

(2) (water pressure 8 bar)

(3) (on request)



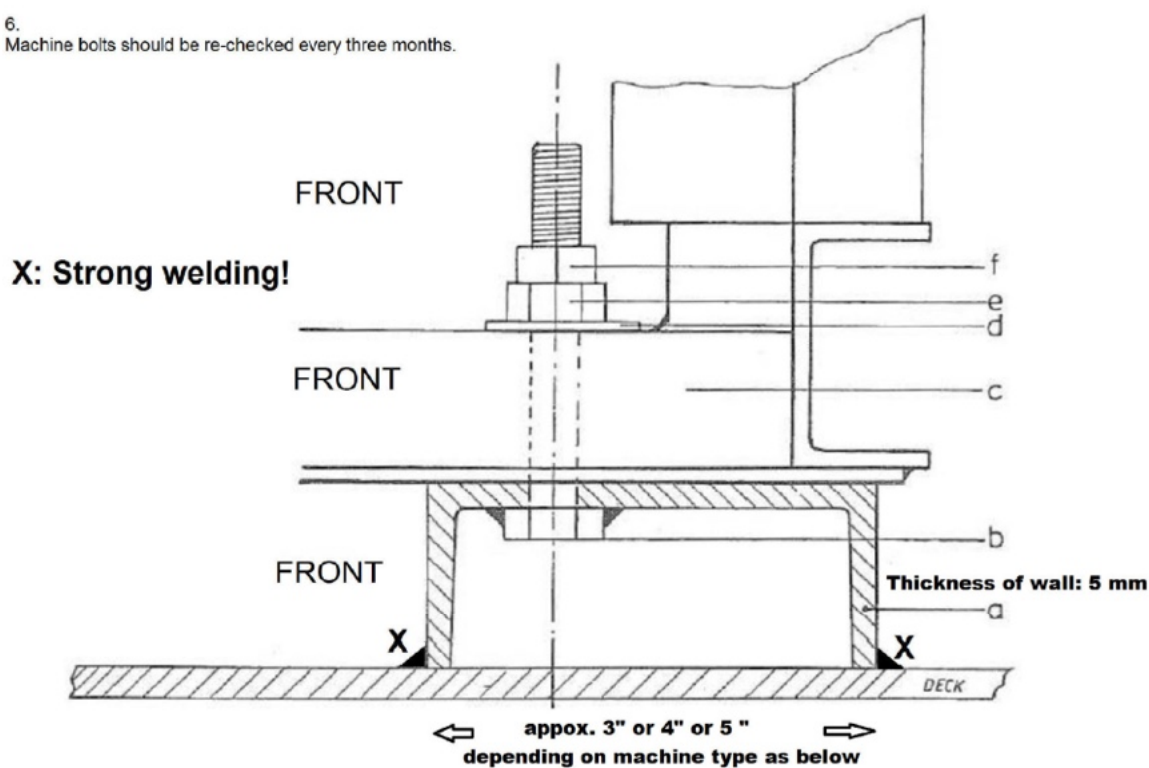
## Instructions for installation on ships

### CAUTION:

Be sure that the washing machines are installed on a level deck with sufficient strength.  
The recommended clearances for inspection and maintenance must be provided.  
Never allow the inspection and maintenance space to be blocked.

### IMPORTANT:

1.  
The washing machines must be securely fastened on a flat metal base.
2.  
The fixing has to be done on the 4 provided places on each washing machine.  
Each corner has a prepared hole.  
(See the separate mounting bolt hole locations).
3.  
The washing machines must be fastened on a strong metal base which is securely welded to ship's deck.
4.  
The base must be free of vibrations when washing machines are extracting.
5.  
Vibrations due to a weak metal base will damage the washing machines.
6.  
Machine bolts should be re-checked every three months.



	a. Foundation	b. Fastening	c. Machine	d. Washer	e. Nut	f. Counter Nut
WMA73E	3" U-iron	M12 x 60		40 x 17 x 4	M 12	M 12
WMA83E	3" U-iron	M12 x 60		40 x 17 x 4	M 12	M 12
WMA103E	3" U-iron	M16 x 60		40 x 17 x 4	M 16	M 16
WMA123E	4" U-iron	M16 x 60		40 x 17 x 4	M 16	M 16
WMA153E	4" U-iron	M16 x 60		40 x 17 x 4	M 16	M 16
WMA203E	4" U-iron	M16 x 60		40 x 17 x 4	M 16	M 16
WMA253E	5" U-iron	M16 x 60		40 x 17 x 4	M 16	M 16
WMA303E	5" U-iron	M24 x 60		40 x 17 x 4	M 24	M 24
WMA403E	5" U-iron	M24 x 60		40 x 17 x 4	M 24	M 24