Miele
PROFESSIONAL

Installation plan
Commercial Washing Machine
PW 413
PW 418

To avoid the risk of accidents or damage to the machine, it is **essential** to read these instructions before it is installed and used for the first time.

en-GB

M.-Nr. 10 681 960

Contents

Contents

Installation requirements

The washing machine must be installed and commissioned by a Miele Service technician or by an authorised dealer.

▶ The washing machine must be installed in accordance with applicable regulations and standards. Local energy supplier and water authority regulations must also be observed.

▶ This washing machine must only be operated in a room that has sufficient ventilation and which is frost-free.

This machine should not be installed or operated in any area where there is a risk of explosion!

Storage / Transport

The following conditions must be observed for transport and storage:

– Ambient temperature: 0 - 40 °C

– Humidity: non-condensing

General operating conditions

This washing machine is intended only for use in a commercial environment and must only be operated indoors.

– Ambient temperature of location: 0 - 40 °C

– Relative humidity: non-condensing

– Maximum height above sea level of location site: 2000 m

Depending on the nature of the installation site, sound emissions and vibration may occur.

Tip: Have the installation site inspected and seek the advice of a professional in instances where increased noise may cause a nuisance.

Installation

Transport the washing machine to its installation site using a suitable pallet truck and remove the transport packaging.

The washing machine must be set up on a level and firm surface with the minimum stated load bearing capacity (see "Technical data").

The floor load created by the washing machine is concentrated and transferred to the installation footprint via the machine feet.

Tip: A concrete floor is the most suitable installation surface, being far less prone to vibration during the spin cycle than wooden floorboards or a carpeted surface.

The washing machine requires a gap of at least 50 mm at each side to allow for movement during operation. To ensure suitable access for further maintenance and service work, please ensure a minimum distance of 400 mm is maintained between the back of the machine and the wall.

Installation on concrete plinth

The washing machine can be installed on a concrete plinth if desired.

The concrete materials and the durability of the concrete plinth must be assessed in accordance with the floor load bearing capacity given in "Technical data".

- To guarantee the stability of the washing machine, make sure that the concrete plinth is sufficiently stable on the floor and that it is capable of withstanding any burden or force from the washing machine.
- The washing machine must be secured to the concrete plinth using the fixtures and fastenings supplied.

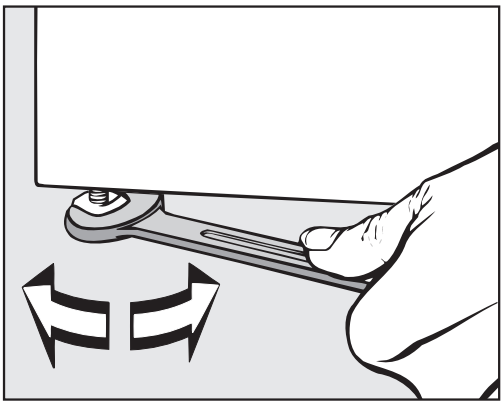
⚠ The washing machine must be secured to the plinth immediately after installation!
There is a risk of the washing machine falling off a raised plinth during a spin cycle if it is not secured.

Levelling the machine

- Align the washing machine vertically and horizontally using the adjustable feet and a spirit level.

The washing machine must stand evenly and horizontally on all four feet to ensure trouble-free and energy-efficient operation. Otherwise the water and energy consumption increases and the washing machine might move around.

- After aligning the machine, tighten the lock nuts by turning them in an counterclockwise direction with a wrench. This will prevent the feet from adjusting themselves.



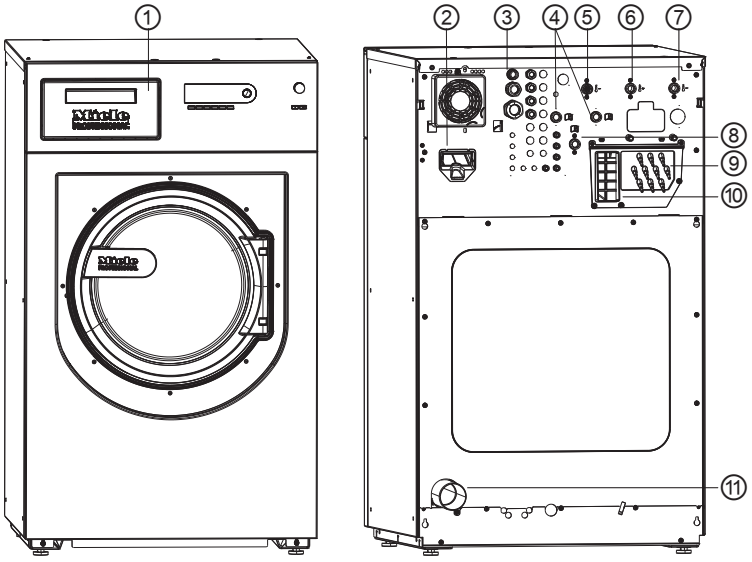
Securing the machine

- The feet of the washing machine must be secured to the concrete plinth using the fixtures and fastenings supplied.

Fittings supplied are for installation on a concrete floor. For other types of flooring, please purchase suitable fastening materials separately.

Machine connections

Models with detergent dispensing compartment (WEK)



① **Detergent dispensing compartment (WEK)**

② **Communication module slot**
The XKM RS232 communication module is available as an optional accessory.

③ **Electrical connection**

④ **2 x hard water connection**
(Optional)

⑤ **Cold water connection**

⑥ **Hot water connection**
Water temperature to maximum 60 °C.

⑦ **Cold water connection**

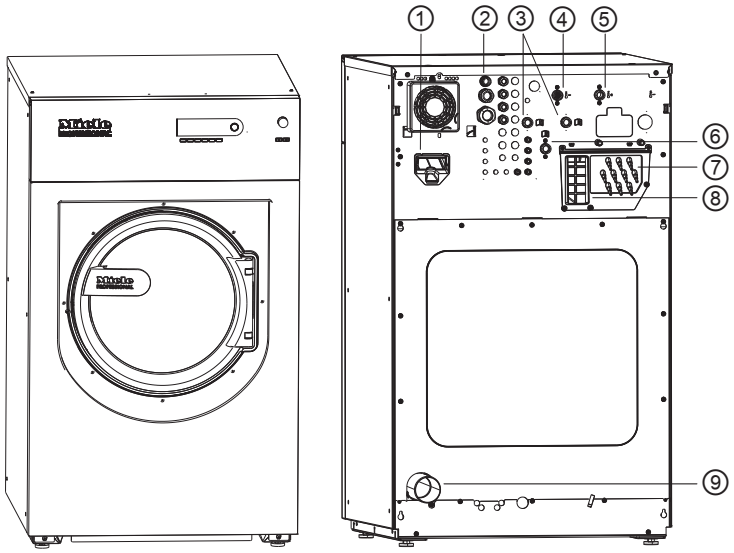
⑧ **Cold water connection for liquid dispensing**
(Optional)

⑨ **Connections for external dispenser pumps**
For up to 12 dispenser pumps.

⑩ **Vapour extraction / free outlet Type AB**

⑪ **Dump valve**
Connection for plastic pipe HT DN 70.

Models without detergent dispensing compartment (WEK)



① **Communication module slot**
The XKM RS232 communication module is available as an optional accessory.

② **Electrical connection**

③ **2 x hard water connection**
(Optional)

④ **Cold water connection**

⑤ **Hot water connection**
Water temperature to maximum 60 °C.

⑥ **Cold water connection for liquid dispensing**

⑦ **Connections for external dispenser pumps**
For up to 12 dispenser pumps.

⑧ **Vapour extraction / free outlet Type AB**

⑨ **Dump valve**
Connection for plastic pipe HT DN 70.

Electrical connection

The electrical connection must only be carried out by a qualified electrician who must ensure that all electrical work is carried out in accordance with applicable electrical regulations and standards (BS 7671 in the UK).

▶ This washing machine must be connected to an electrical mains supply that complies with local and national regulations. Please also observe your insurance and energy supplier's regulations as well as any health and safety at work regulations.

▶ The required voltage, connected load and fusing rating can be found on the data plate on the washing machine. Before connecting the machine to the power supply, please ensure that the mains supply voltage complies with the values given on the data plate.

Connection to a supply voltage other than the one quoted on the data plate can lead to functional faults and damage the washing machine!
If more than one voltage is quoted on the data plate, the washing machine can be converted for connection to the voltages stated.

▶ Conversion to a different voltage must only be carried out by a Miele Service engineer or by an authorised Service Dealer. The wiring instructions given on the wiring diagram must be followed.

Tip: We recommend connection to the power supply via a suitably rated plug and socket which must be easily accessible for servicing and maintenance work after the machine has been installed. An electrical safety test must be carried out after installation and after any service work.

The machine can either be hard-wired or connected using a plug-and-socket connection in accordance with IEC 60309-1. For a hard-wired connection an all-pole isolation device must be installed on site.

For hard-wired machines connection should be made via a suitable mains switch with all-pole isolation which, when in the off position, ensures a 3 mm gap between all open contacts. These include circuit breakers, fuses and relays (IEC/EN 60947).

If the mains supply cannot be permanently disconnected, the isolator switch (including plug and socket) must be safeguarded against being switched on either unintentionally or without authorisation.

▶ If it is necessary to install a residual current device (RCD) in accordance with local regulations, a residual current device type B (sensitive to universal current) must be used.

An existing type A residual current device, (RCD) must be exchanged for a type B RCD.

▶ If necessary, equipotential bonding with good galvanic contact must be guaranteed in compliance with all applicable local and national installation specifications.

Equipotential bonding must have an earth current rating > 10 mA
Accessories for equipotential bonding are not supplied and need to be ordered separately.

Plumbing

The washing machine complies with current local and national safety regulations. In the UK it must be connected to the drinking water supply using the non-return valve supplied.

The water flow pressure must be at least 1 bar and should not exceed 10 bar. If it exceeds 10 bar a pressure reducing valve must be used.

The machine must be connected to the water supply using the inlet hoses provided. Extension hoses are available from Miele as spare parts.

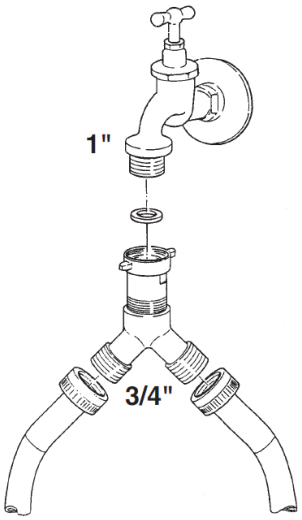
⚠ The connection points are subject to water supply pressure.
Turn on the tap slowly and check for leaks.
Correct the position of the washer and union if appropriate.

Cold water connection

Use the inlet hose supplied (cold - blue stripes) for the cold water connection. For the cold water connection (single or double) one water tap each with a 3/4" external thread is required. If this is not available, only a qualified installer may connect the washing machine to the mains water supply.

The inlet hose for cold water (blue stripes) is not intended to be used for a hot water connection.

If the hot or hard water connection is missing, cold water consumption increases accordingly to account for the missing water intake.



A Y-piece for connecting two inlet hoses to a single cold water line is supplied.

Hot water connection

To minimise energy consumption during operation with hot water, the washing machine should be connected to a suitable hot water ring circuit if present.

So-called "transmission pipes" (single pipes to hot water generators) can result in cooling down of the water remaining in the pipes if not in constant use. More energy would then be consumed to heat the liquid up again.

Use the inlet hose supplied (hot - red stripes) for the hot water connection.

The temperature of the water intake must not exceed 60 °C.

If there is no hot water supply at the installation location for the washing machine, the connection hose must be connected to the cold water supply. A Y-piece is required in this case. The cold water consumption increases accordingly to account for the missing hot water intake.

For functional and technical reasons it is not possible to operate the machine exclusively with a hot water connection (without a separate cold water intake).
Even if a hot water connection is present, the washing machine must be connected to a cold water intake.

Dump valve

A motorised dump valve is used to drain the machine. An HT DN 70 angle connector can be used for draining the machine directly into the waste water system (without a siphon) or into an on-site gully (with odour trap).

Thanks to an improved closing mechanism and a larger cross-section, even the coarsest of soil does not leave any deposits or debris behind which could result in blockages. The dump valve can also be operated manually to allow the suds container to be emptied in the event of a power outage.

A vented drainage system is vital for unimpeded drainage.
If several machines are connected to a single drain pipe, this should be sufficiently large to allow all machines to drain simultaneously.
The appropriate Miele installation set M.-No.: 05 238 090 is available from Miele for venting a HT DN 70 pipe.
If the slope for drainage is extremely steep, the piping must be vented to prevent formation of a vacuum in the machine's drain system.

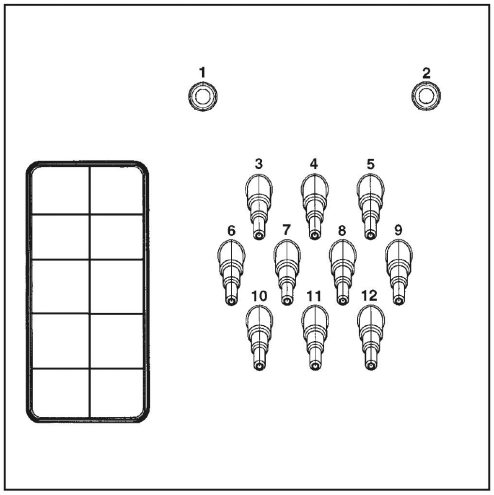
Slow or obstructed drainage or a backup of water in the drum as a result of undersized pipework can result in faults occurring during programmes, which will result in error messages appearing in the display.

⚠ Outflowing suds can be as hot as 95 °C. Danger of burning!
Avoid direct contact.

Dispenser pump connections

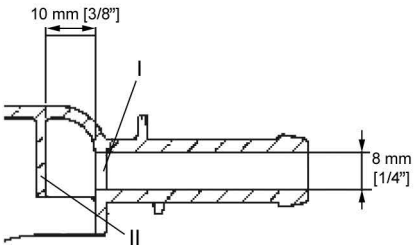
Up to 12 dispenser pumps can be connected to the washing machine.

It is particularly important to observe manufacturer's instructions when using a combination of cleaning agents and special application products.



Dispenser pump connections on the back of the machine

Connections **1** and **2** are provided for viscous agents. These connections are sealed and need to be drilled open using a 8 mm drill bit before connecting.



Make sure that you only drill through the first panel (**I**) as there is a deflecting panel (**II**) 10 mm behind it.

Connections **3** to **12** are provided for liquid detergent. These connections are sealed and must be cut to the diameter of the hose with a small saw.

If opened connections are no longer required, they must be resealed using a suitable sealant (e.g. silicone).

Connection terminals for four time-controlled dispenser pumps, which can be operated without a multifunction module, are located behind the cover adjacent to the electrical connection.

Calibration of the dispenser pumps and regulation of dispensing quantities is carried out automatically for washing machines fitted with a multifunction module.

A flowmeter or throughput sensors can be connected for precise monitoring of the dosage quantity.

Connections for level monitoring are available for every agent dispensed. A message is displayed if empty.

Optional accessories

Only use genuine Miele spare parts and accessories with this machine.
Using spare parts or accessories from other manufacturers will invalidate the guarantee, and Miele cannot accept liability.

Payment system or peak-load management

The machine can optionally be connected to a payment system or alternatively to peak-load management.

Payment system

The washing machine can be equipped with a payment system (e.g. in launderettes). This must be connected and programmed by a Miele Service technician. Payment systems for cash-free transactions and payment systems with mechanical or electronic coin validator are available from Miele as optional accessories for individual target groups.

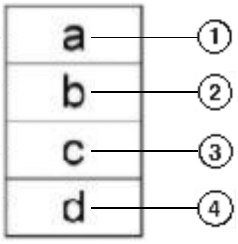
The programming required for connecting a payment system must be carried out by Miele Service or an authorised Miele dealer only. A separate electrical connection is not required for a payment system.

Peak load cut-out

The washing machine can be connected to a peak-load shut-off or an energy management system using a kit which is available as an optional accessory.

The peak-load cut-out monitors the energy consumption of a system and deactivates individual pieces of equipment temporarily in order to ensure that certain total load limits are not exceeded. Monitoring is externally controlled.

The kit provides three signal contacts and a neutral conductor via a terminal block. The terminal block is marked with "a", "b", "c", and "d".



① Output signal, start of machine operation

② Output signal, machine heating request

③ Peak-load input signal, machine heating deactivated

④ Neutral conductor

When the peak-load function is activated the current programme is stopped and a message appears in the display. At the end of the peak-load function the programme resumes automatically.

XKM RS232 communication module

The serial interface RS-232 can be retrofitted to the washing machine via an XKM RS 232 (optional accessory available from Miele). This communication module must only be used with Miele Professional machines that are fitted with an appropriate slot for the module.

The data interface provided via communication module XKM RS232 complies with SELV (Safety Extra Low Voltage) in accordance with EN 60950.
Appliances connected to this interface must also be SELV compliant.

Communication module XKM RS 232 is supplied with a connection cable and a D-sub-connector.

Plinth

The machine can be installed on a plinth (open or box plinth, available as an optional Miele accessory).

Elevating the washing machine gives a better ergonomic working position when loading or unloading. It also simplifies the installation of a waste water connection.

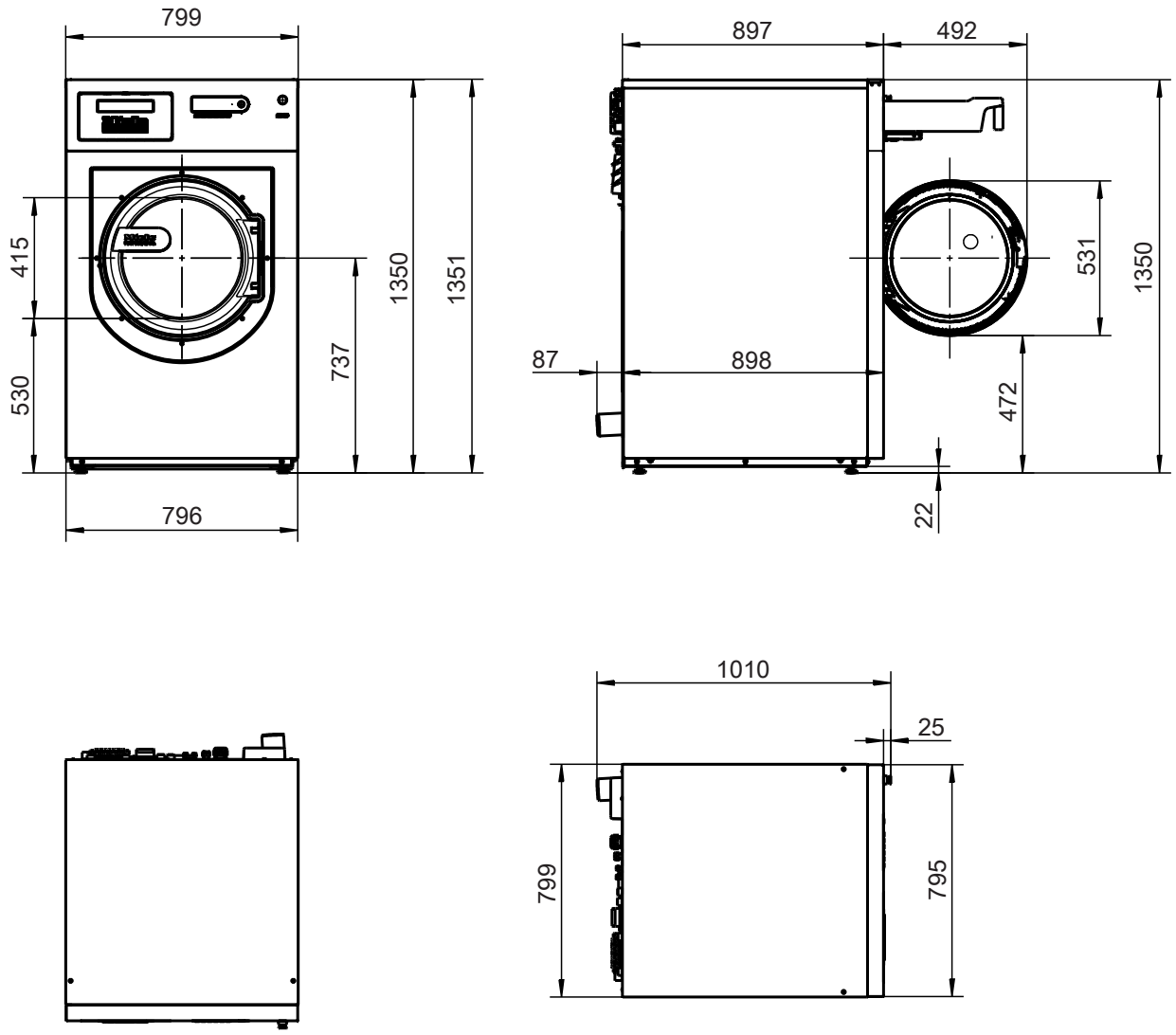
⚠ The washing machine must be secured to the plinth immediately after installation! The plinth must be secured to the floor!
There is a risk of the washing machine falling off a raised plinth during a spin cycle if it is not secured.

Vapour and foam venting kit (BWS)

If excessive suds form, foam may escape from the vapour vent. To remove the foam, an optional vapour and foam venting kit (BWS) can be used.

PW 413

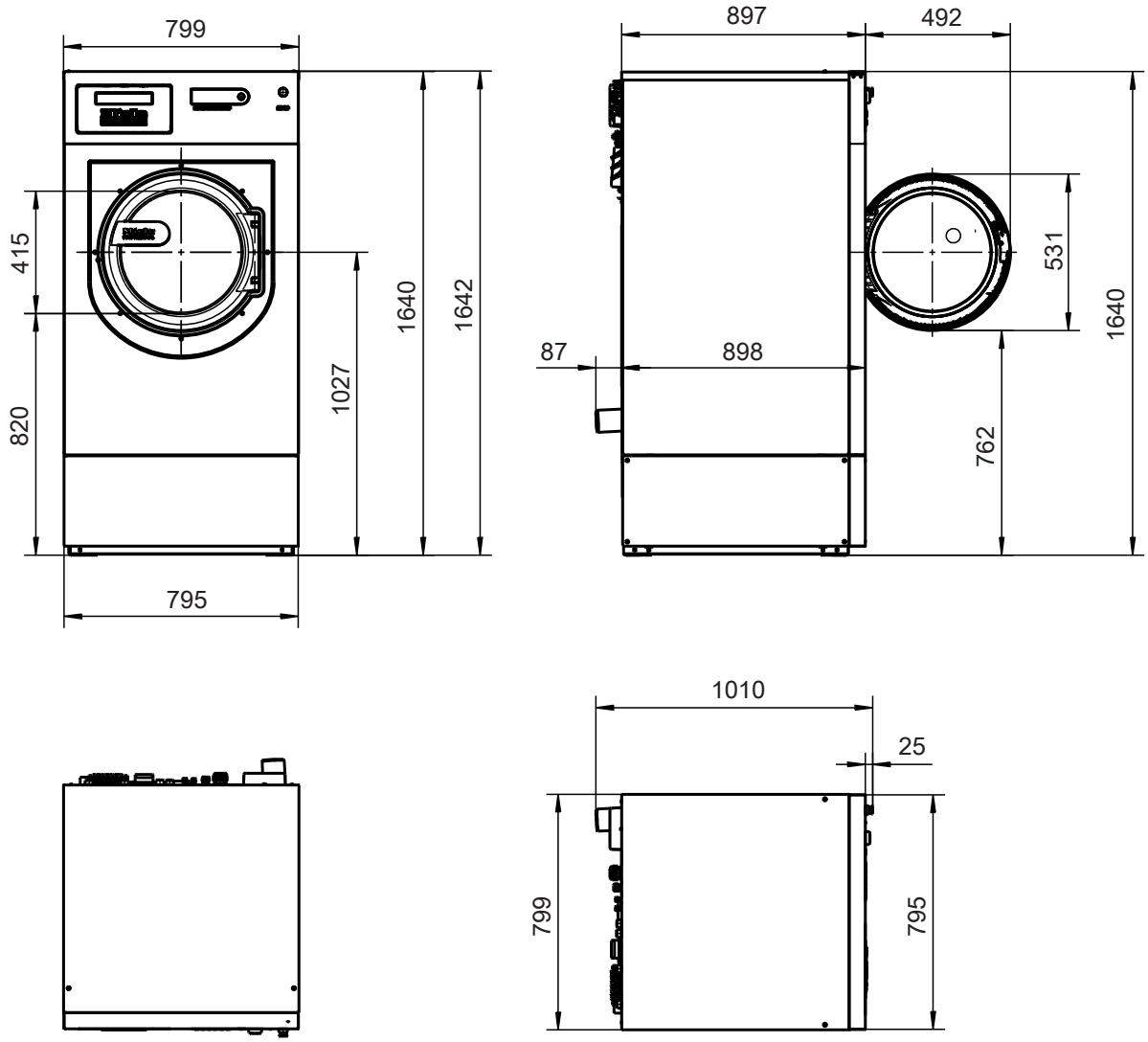
Dimensions



Dimensions quoted in millimetres

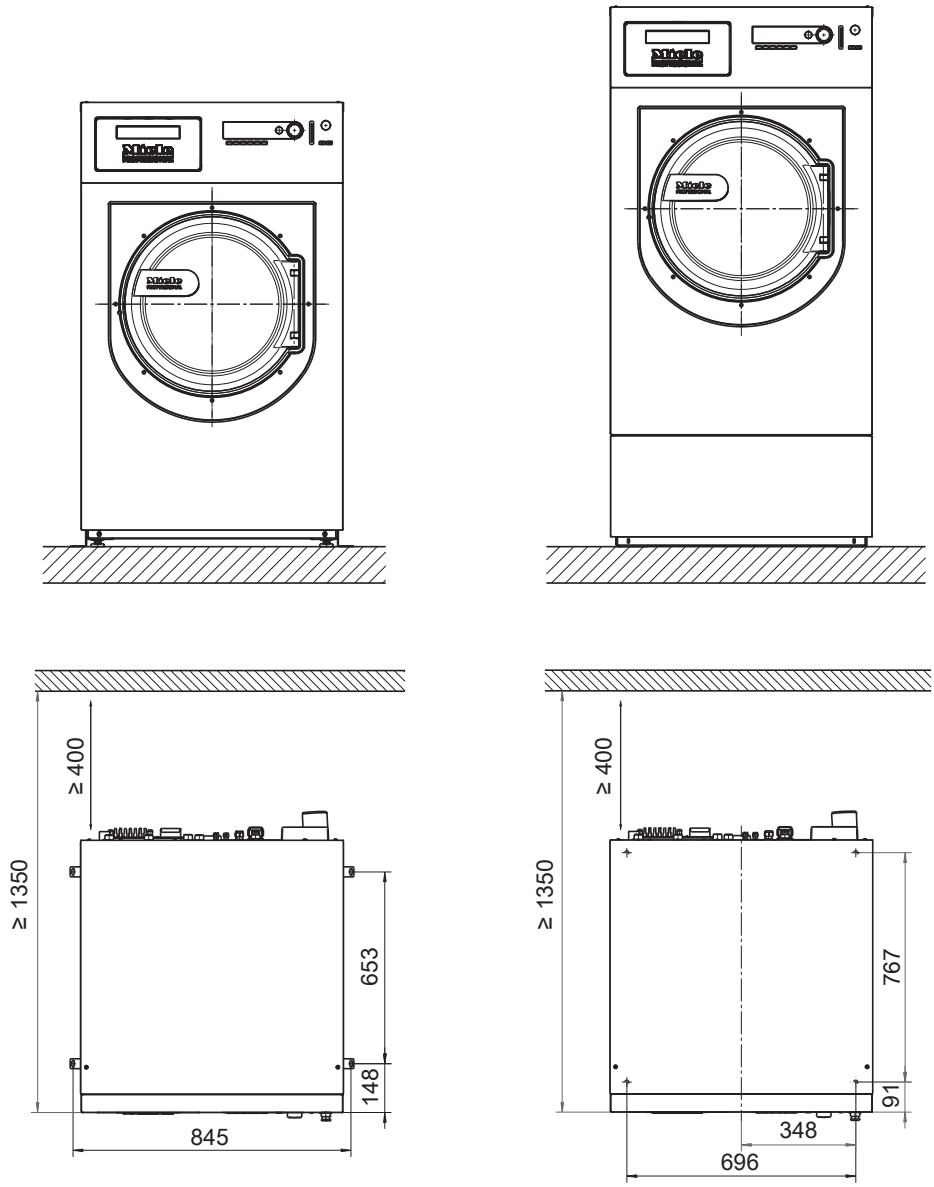
Technical drawings

PW 413 with Miele plinth (UG/UO)



Dimensions quoted in millimetres

Installation

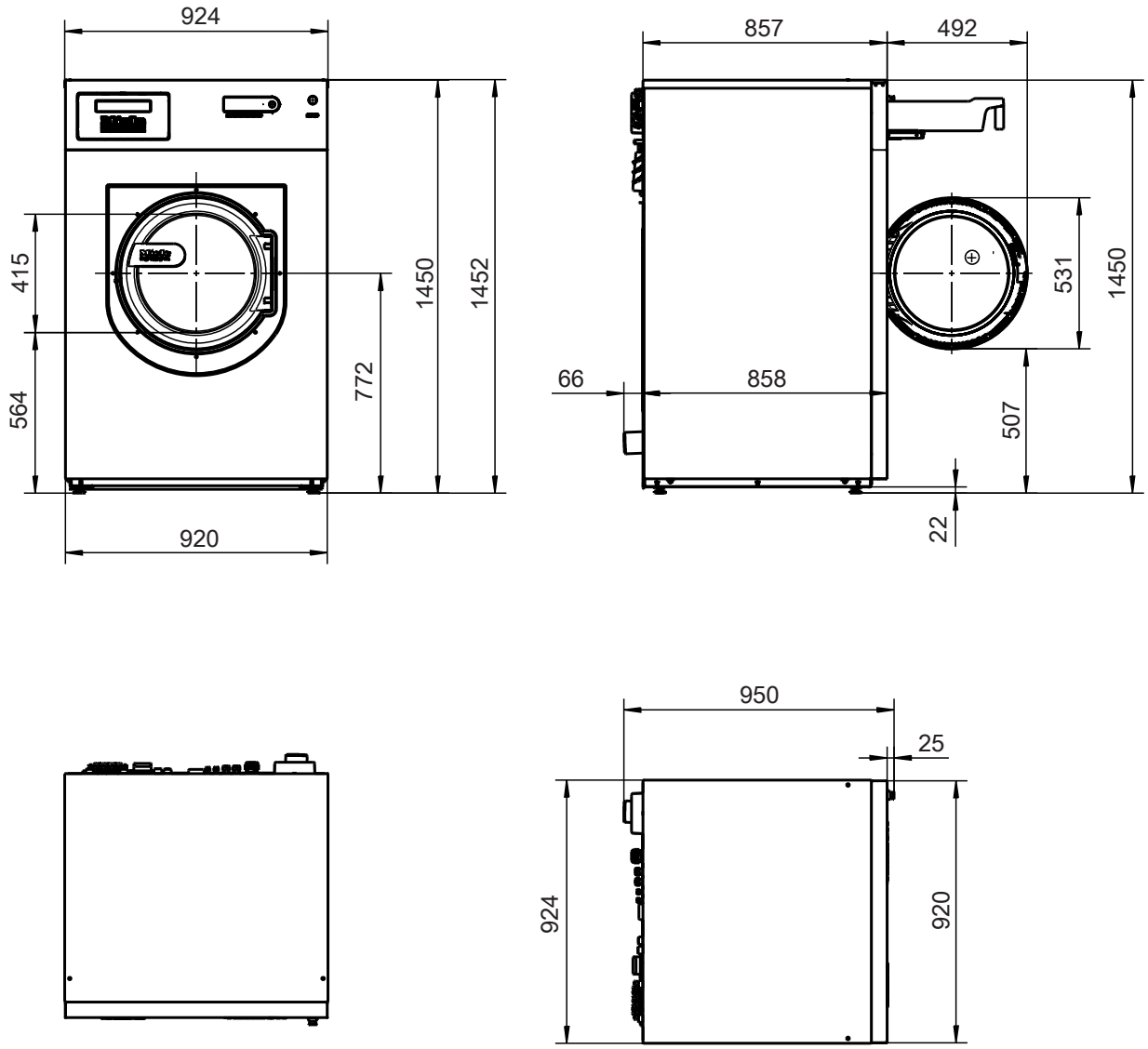


Dimensions quoted in millimetres

Technical drawings

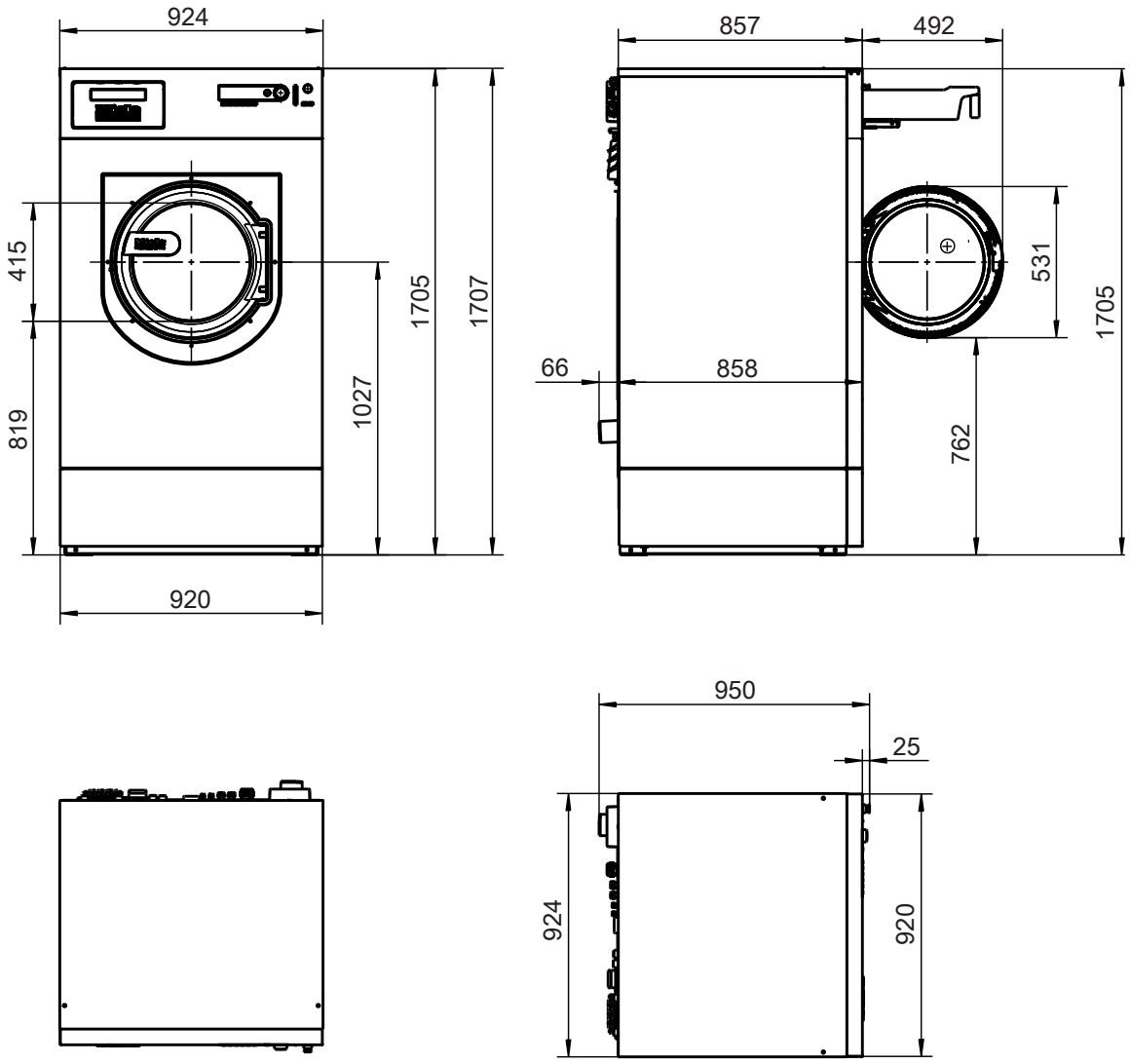
PW 418

Dimensions



Dimensions quoted in millimetres

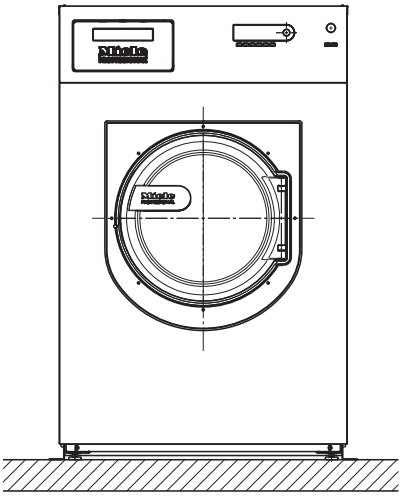
PW 418 with Miele plinth (UG/UO)

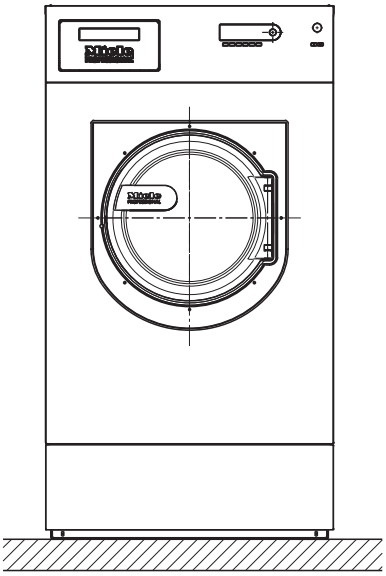


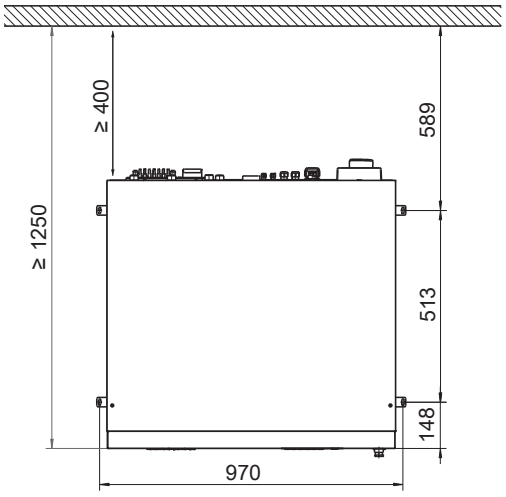
Dimensions quoted in millimetres

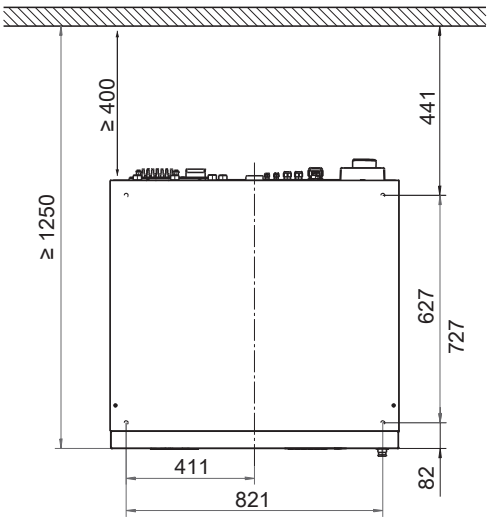
Technical drawings

Installation





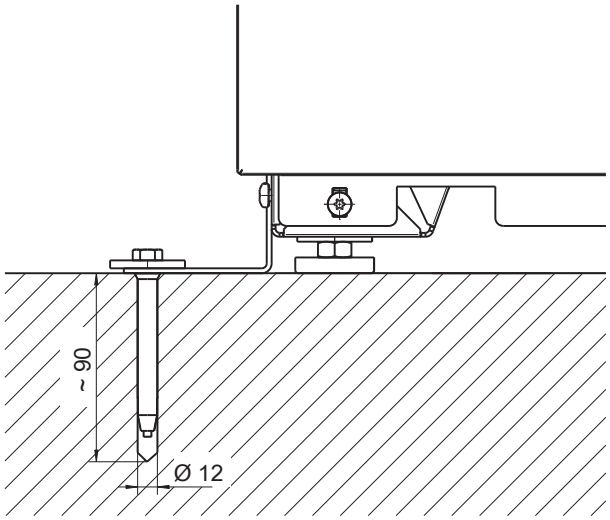




Dimensions quoted in millimetres

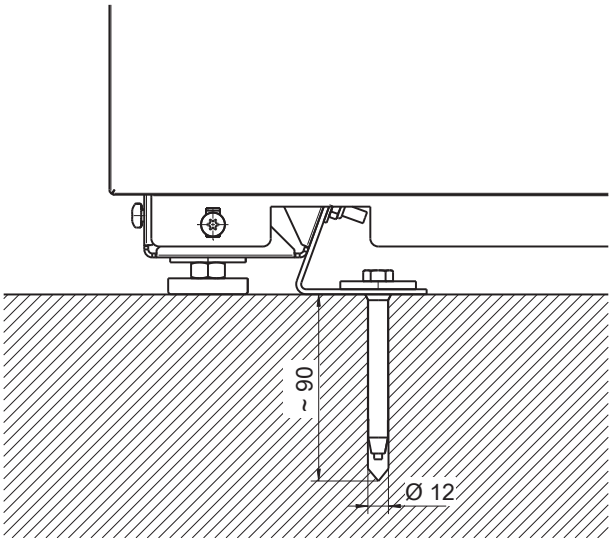
Anchoring the machine

Fixing to floor / concrete plinth



Dimensions quoted in millimetres

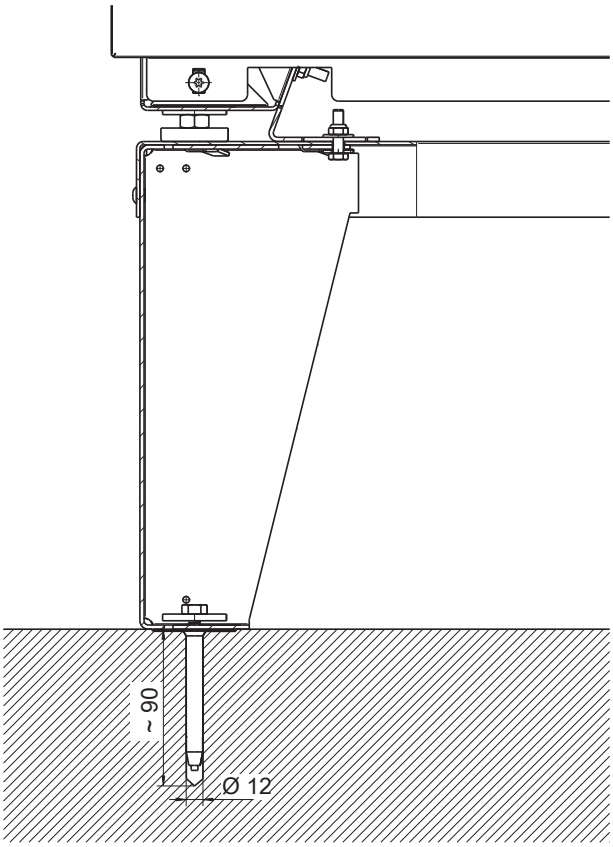
Attaching to the floor / concrete plinth when installing in a run



Dimensions quoted in millimetres

Technical drawings

Attaching to the floor with Miele plinth



Dimensions quoted in millimetres

Plumbing

Models with detergent dispensing compartment (WEK)

Permitted flow pressure	1 - 10 bar
Maximum intake rate	79.5 l/min
Cold water connection (to be provided on site, external thread according to DIN 44991, flat seal)	2 x ¾" or 1 x 1"
Optional cold-hard water connection (to be provided on site, external thread according to DIN 44991, flat seal)	2 x ¾" or 1 x 1"
Hot water connection ≤ 60 °C (on site external thread according to DIN 44991, flat seal)	1 x ¾"
Hot water connection ≤ 60°C, only for hot water heated models (on site external thread according to DIN 44991, flat seal)	1 x 1"
Intake hose length	1500 mm
Y-piece connector for cold water	2 x ¾" to 1 x 1"

Models without detergent dispensing compartment (WEK)

Permitted flow pressure	1 - 10 bar
Maximum intake rate	69.5 l/min
Cold water connection (to be provided on site, external thread according to DIN 44991, flat seal)	1 x ¾"
Optional cold-hard water connection (to be provided on site, external thread according to DIN 44991, flat seal)	2 x ¾" or 1 x 1"
Hot water connection ≤ 60 °C (on site external thread according to DIN 44991, flat seal)	1 x ¾"
Hot water connection ≤ 60°C, only for hot water heated models (on site external thread according to DIN 44991, flat seal)	1 x 1"
Intake hose length	1500 mm
Y-piece connector for cold water	2 x ¾" to 1 x 1"

Dump valve

Maximum drain water temperature	95 °C
Waste water connection (on machine)	Plastic pipe HT DN 70
Drain (on-site)	DN 70 connection
Maximum drainage rate	200 l/min

Technical data

Connection for equipotential bonding

Connection with male thread (machine)	10 mm x 35 mm
Washers and nuts	M 10

Anchoring

Attaching to the floor

Required anchor points	2
DIN 571 wood screw (diameter x length)	12 mm x 90 mm
Rawl plugs (diameter x length)	16 mm x 80 mm

Attaching to the floor with Miele plinth

Required anchor points	4
DIN 571 wood screw (diameter x length)	12 mm x 90 mm
Rawl plugs (diameter x length)	16 mm x 80 mm

Attaching to a concrete plinth (provided on-site)

Required anchor points	2
DIN 571 wood screw (diameter x length)	12 mm x 90 mm
Rawl plugs (diameter x length)	16 mm x 80 mm

PW 413

Voltage versions and electrical data

3N AC 380-415 V, 50 Hz, electrically heated

Voltage	3N AC 380 - 415 V
Frequency	50 Hz
Fuse rating	3 x 16 A
Total connected load	11 kW
Current draw	3 x 14.1 A
Connection cable, min. cross-section	5 x 2.5 mm²
Cable gland	M 25

Installation dimensions

Casing width (without add-on components)	795 mm
Casing height (without add-on components)	1350 mm
Casing depth (without add-on components)	897 mm
Overall machine width	799 mm
Overall machine height	1352 mm
Overall machine depth	1010 mm
Minimum width of transport opening	805 mm
Minimum distance between wall and machine front	1350 mm

Transport data, weight and floor load

PW 413 with detergent dispensing compartment (WEK), electrically heated

Packaging width	1130 mm
Packaging height	1468 mm
Packaging depth	1090 mm
Gross volume	1808 l
Gross weight	294 kg
Net weight	266 kg
Max. floor load in operation	4354 N

Emissions data

Sound pressure level at workplace, washing	53 dB (A)
Sound power level, washing	62.0 dB (A)
Sound pressure level at workplace, spinning	67 dB (A)
Sound power level, spinning	74.2 dB (A)
Average heat dissipation rate to installation site	3.96 MJ/h

Technical data

PW 418

Voltage versions and electrical data

3N AC 380-415 V, 50 Hz, electrically heated

Voltage	3N AC 380 - 415 V
Frequency	50 Hz
Fuse rating	3 x 25 A
Total connected load	18 kW
Current draw	3 x 23,1 A
Connection cable, min. cross-section	5 x 4 mm^2
Cable gland	M 25

Installation dimensions

Casing width (without add-on components)	920 mm
Casing height (without add-on components)	1450 mm
Casing depth (without add-on components)	857 mm
Overall machine width	924 mm
Overall machine height	1452 mm
Overall machine depth	950 mm
Minimum width of transport opening	930 mm
Minimum distance between wall and machine front	1250 mm

Transport data, weight and floor load

PW 418 with detergent dispensing compartment (WEK), electrically heated

Packaging width	1130 mm
Packaging height	1568 mm
Packaging depth	1190 mm
Gross volume	1931 l
Gross weight	406 kg
Net weight	379 kg
Max. floor load in operation	5654 N

PW 418 without detergent dispensing compartment (WEK), electrically heated

Packaging width	1130 mm
Packaging height	1568 mm
Packaging depth	1190 mm
Gross volume	1931 l
Gross weight	402 kg
Net weight	375 kg
Max. floor load in operation	5615 N

Emissions data

Sound pressure level at workplace, washing	54 dB (A)
Sound power level, washing	62,0 dB (A)
Sound pressure level at workplace, spinning	65 dB (A)
Sound power level, spinning	77,3 dB (A)
Average heat dissipation to installation room	6,48 MJ/h

Miele PROFESSIONAL

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