

Tumble-Dryers

Heat Pump

190 Liters (9 Kilograms) Capacity

195 Liters (9 Kilograms) Capacity

250 Liters (11 Kilograms) Capacity

285 Liters (13 Kilograms) Capacity

345 Liters (16 Kilograms) Capacity

Refer to Page 9 for Model Identification

Original Instructions

Keep These Instructions for Future Reference.

CAUTION: Read the instructions before using the machine.

(If this machine changes ownership, this manual must accompany machine.)


Table of Contents


Safety Information.....	5
Safety Instructions.....	5
 Introduction.....	 8
Serial Plate Location.....	8
Manufacturing Date.....	8
Replacement Parts.....	9
Customer Service.....	9
Model Identification.....	10
 Specification and Dimensions.....	 14
General Specifications.....	14
Machine Dimensions and Components.....	16
Space Requirements.....	19
 Installation.....	 21
Important Information Before Installation.....	21
Machine Type.....	21
Material Required (Obtain Locally).....	21
Handling, Transport and Storage.....	21
Machine Positioning.....	22
Electrical Connections.....	23
Electrical Specifications.....	28
Water Connection for Rinsing System of the Heat Pump Exchanger (on Request)	30
Heat Pump Cooling System Water Connection.....	30
Condensate Drain.....	31
Putting the Machine into Service.....	32
Wheels of Heat Pump Unite for Service Purposes (on Request).....	33
 Operation.....	 35
Symbols on the Machine.....	35
Instructions for Drying.....	35
Incorrect Use of Machine.....	36
Start the Machine.....	36
Power Supply.....	36
Starting the Drying Process.....	36
Flex / Full Control Version.....	37
Easy Control Version.....	37
Finishing the Drying Cycle.....	38


Emergency Stop of the Machine.....	38
How to Proceed On Error Messages.....	38
Power Supply Interruption.....	38
Maintenance and Adjustments.....	40
Safety Instructions for Maintenance.....	40
Daily.....	40
Monthly or After 200 Working Hours.....	40
Every Three Months or After 500 Working Hours.....	40
Every Six Months or After 1000 Working Hours.....	41
Door Switch.....	41
Belts Tightening.....	41
Troubleshooting.....	43
Humidity Control.....	43
Occured Problems.....	43
Recommended Spare Parts.....	44
Disposal of Unit.....	45
Disconnecting the Machine.....	45
Machine Disposal.....	45
China Restriction of Hazardous Substances (RoHS).....	46

Safety Information

Safety Instructions

	WARNING
<p>To reduce the risk of fire, electric shock, serious injury or death to persons when using your tumble dryer, follow these basic precautions.</p>	
W776R1	

	WARNING
<p>Save these instructions for later use. Failure to comply with the instructions may lead to incorrect use of the appliance, and may result in risk of fire, bodily injuries or death and/or damage to the laundry and/or the appliance.</p>	
C003	

	WARNING
<p>Read the important safety instructions in this manual carefully before operating the appliance. Improper use of the appliance may cause risk of fire, electrical shock or serious body injuries or death as well as serious damage to the appliance.</p>	
C244	


- This English version is the original version. Without this version, the instructions are incomplete.
- Install the tumble dryer according to the INSTALLATION instructions. Refer to the EARTHING (grounding) instructions for the proper earthing (grounding) of the tumble dryer. All connections for electrical power, earthing (grounding) and gas supply must comply with local codes and be made by licensed personnel when required. It is recommended that the machine be installed by qualified technicians.
- Do not install or store the tumble dryer where it will be exposed to water and/or weather. The tumble dryer cannot be used in a closed room where the air supply is insufficient. If necessary, ventilation grids must be installed in the doors or the windows.
- This appliance must not be activated without lint/foam filter.
- When you perceive a gas odor, immediately shut off the gas supply and ventilate the room. Do not switch on electrical appliances and do not pull electrical switches. Do not use matches or lighters. Do not use a phone in the building. Warn the installer, and if so desired, the gas company, as soon as possible.
- To avoid fire and explosion, keep surrounding areas free of flammable and combustible products. Regularly clean the dryer drum and exhaust tube should be cleaned periodically by competent maintenance personnel. Daily remove piled up debris from filter and inside of filter compartment.
- Read all instructions before using the tumble dryer. Follow the instruction written in manuals and keep the manuals in a proper place by the machine for later use.
- Before installation, operation and maintenance of the machine read carefully the complete instructions, i.e. this "Installation/ Operation/Maintenance Manual", "Programming manual" and "Spare parts manual".
- Install the tumble dryer according to the INSTALLATION instructions. Otherwise, the supplier and manufacturer are not responsible for potential injuries to operators or for any damages. Any changes concerning the installation, which are not described in Installation and maintenance manual, must be approved by the supplier or manufacturer.
- The machine is in line with standard EN 60204-1 Safety of mechanical machinery - Electrical devices of machines. The machine must be connected to the power, ground, ventilation, and gas/steam supply according to the installation manual, in compliance with the local standards and codes, done by qualified technicians with proper authorisation. It is recommended that the machine be installed by qualified technicians. The valid standards for connecting to the local power network (TT / TN / IT) must be followed.
- Do not bypass the instructions stated in the instruction manual, and warnings on the labels.
- Follow all basic and valid safety instructions and laws.
- Do not install the dryer, where it will be exposed to water and/or weather. Dryer must be exhausted outdoors and area around dryer must be free of lint because dryer produces combustible lint.
- Ensure minimal air vent of room recommended by manufacturer.
- Solvent vapours from dry-cleaning machines create acids when drawn through the heater of the drying unit. These acids are corrosive to the tumbler as well as to the laundry load being dried. Be sure that make-up inlet air is free of solvent vapours.
- Do not remove warning signs placed on the appliance. Observe signs and labels to avoid personal injuries.
- To avoid fire and explosion, keep surrounding areas free of flammable and combustible products. Always clean the lint filter daily. Keep the top of the machine clean, without the presence of flammable materials. Keep the area around the exhaust opening and its surrounding area free from lint, dust, and lint. Always clean the lint filter daily. The interior of the drum and the exhaust duct should be cleaned periodically by qualified service personnel.

- Do not dry articles that have been cleaned in, soaked in, washed in or spotted with gasoline, machine oils, vegetable or cooking oils, massage oils, cleaning waxes, dry cleaning solvents, thinner or other flammable/explosive substances as they give off vapours that could ignite, explode or cause fabric to catch on fire by itself.
- Chemical cleaned laundry with chemical vapour and evaporated gas could lead to toxic and rust danger. It is necessary to take maximal care to prevent such situation.
- Various chemicals used in laundries contain chlorine (some dry cleaning fluids, aerosols, bleaches). When decomposed in a flame, these materials may rapidly corrode and destroy this appliance.
- Do not dry fibreglass curtains and draperies unless the label says it is possible. If they are dried, wipe out the cylinder with a damp cloth to remove particles of fibreglass.
- Items such as foam rubber (latex foam), shower caps, waterproof textiles, plastics or articles containing foam rubber or similarly textured rubber like materials rubber backed articles and clothes or pillows filled with foam rubber pads should not be dried in the tumble dryer. Do not use the appliance to dry materials with a low melting temperature (PVC, rubber, etc.).
- Do not store flammable materials around the machine.
- Do not spray or store aerosols in the vicinity of this appliance while it is in operation.
- Children can not operate this machine. Before turning the machine "ON", make sure that there are no people or animals present in or around the machine. Do not allow children to play on, around or in the dryer. This appliance is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
- DO NOT reach into tumbler if tumbler is revolving.
- Use the dryer only for its intended purpose, drying water-washed fabrics. Always follow the fabric care instructions supplied with by the garment manufacturer. Only insert spin-dried linen in the dryer.
- Always follow the manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings or precautions. To reduce the risk of poisoning or chemical burns, keep them out of the reach of children at all times (preferably in a locked cabinet).
- Do not use fabric softeners or products to eliminate static electricity unless recommended by their manufacturer.
- Respect the correct filling ratio according the type of linen. Do never overload the machine.
- Remove laundry immediately after the dryer stops or the drying cycle was interrupted. Never leave the laundry inside the dryer even if the loading door is open.
- Do never stop the machine before the complete cooldown cycle is completed.
- Do not tamper with the machine's control. DO NOT bypass any safety devices. Do not operate the machine with broken / missing parts, opened covers, also do not operate a machine that was not installed and put in operation according to instructions stated in the "Installation and maintenance manual".
- The dryer will not operate with the loading door open. Do not bypass the door safety switch to permit the dryer to operate with the door opened or starts tumbling without pressing the START mechanism.
- The dryer will stop tumbling when the door is opened. Do not use the dryer if it does not stop rotating when the door is opened. Put the dryer out of service and call the service person.
- The dryer will not operate with lint screen panel open. Do not bypass front panel safety switch to permit the dryer to operate with the front panel open.
- Do not modify this appliance. Interventions into the machine functions are not allowed, and the manufacturer refuses any responsibility in such cases.
- Machine version OPL (without coin meter) is intended for qualified operator.
- The emergency stop device is omitted on machines design for coin, token, external payment system or similar operation for use in self-service situation. The owner-installer-user must provide a remote-located emergency stop device that is connected to each machine.
- Only qualified service personnel may open the appliance to carry out servicing.
- Always disconnect the electrical power before servicing.
- When the main switch is "OFF", the supply terminals are still under current.
- Do not repair or adjust the belt drives when the machine is in operation, turn off the main switch.
- Regularly check the proper function of ground, ventilation of the machine, and emergency stop.
- The dryer produces equivalent continuous (A-weighted) sound power level which doesn't exceed 70 dB (A).
- Follow all valid basic safety rules and laws. The instructions in this manual cannot cover every possible dangerous situation. They must be generally understood. Caution and care are factors which can not included in the design of the appliance and all persons who install, operate or maintain the appliance must be qualified and familiar with the operating instructions. It is up to the user to take proper care when operating the appliance.
- The manufacturer reserves the right to change the manuals without previous notice.
- If any problems or failures should arise, immediately contact your dealer, serviceman or manufacturer.
- At the end of each working day, close off all main supplies of gas, steam and current.
- Do not repair or replace any part of the tumble dryer, or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that the user understands and has the skills to carry out. ALWAYS disconnect and lockout the electrical power to


the tumble dryer before servicing. Disconnect power by shutting off appropriate breaker or fuse.


- Before the tumble dryer is removed from service or discarded, remove the door to the drying compartment and the door to the lint compartment.
- Failure to install, maintain, and/or operate this tumble dryer according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.


NOTE: The WARNINGS and IMPORTANT SAFETY INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Observe and be aware of other labels and precautions that are located on the machine. They are intended to provide instruction for safe use of the machine. Common sense, caution and care must be exercised when installing, maintaining, or operating the tumble dryer.

	WARNING
<p>Original or identical parts must be used for replacement in this machine. After servicing replace and secure all panels in the original way. Take these measures for continued protection against electrical shock, injury, fire and/or property damage.</p>	
C310	

NOTE: All appliances are produced according the EMC-directive (Electro-Magnetic-Compatibility). They can be used in restricted surroundings only (comply minimally with class A requirements). For safety reasons there must be kept the necessary precaution distances with sensitive electrical or electronic device(s). These machines are not intended for domestic use by private consumers in the home environment.

	WARNING
<p>Installation and repair can only be done by a technician with manufacturer's consent. If the instructions in this manual are not met, the warrantee may be canceled.</p>	
C307	

	WARNING
<p>Failure to install, maintain, and/or operate this machine according to the manufacturer's instructions may result in conditions which can produce serious injury and/or property damage.</p>	
C308	

	WARNING
<p>If the installed appliance operate with coin, token or similar operation for use in self-service situations, then the the owner-installer must provide a remote-located emergency stop device. This device must be placed in such a way that it is easy and safely accessible for the users. The emergency stop device takes care that at least the control circuit of the appliance is interrupted.</p>	
C309	

Introduction

Serial Plate Location

The serial plate is located on the rear side of the machine.

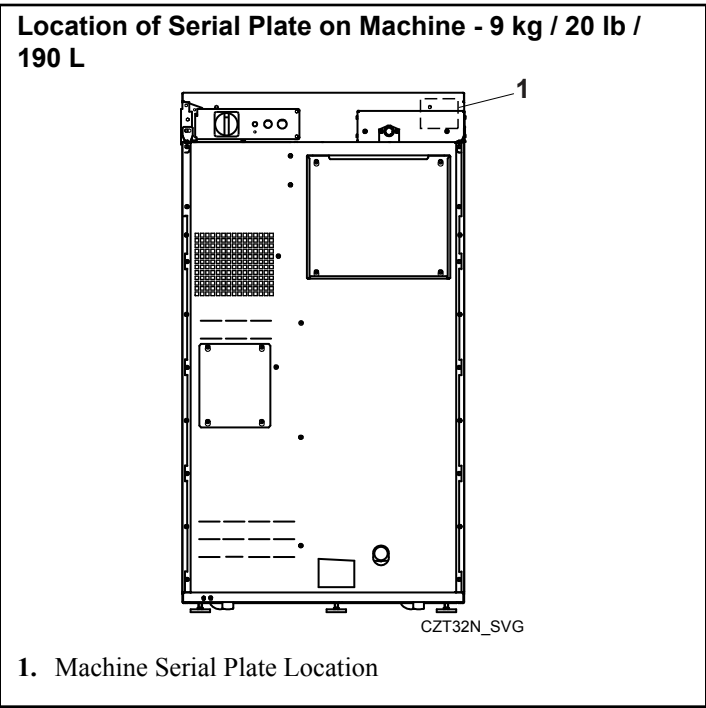


Figure 1

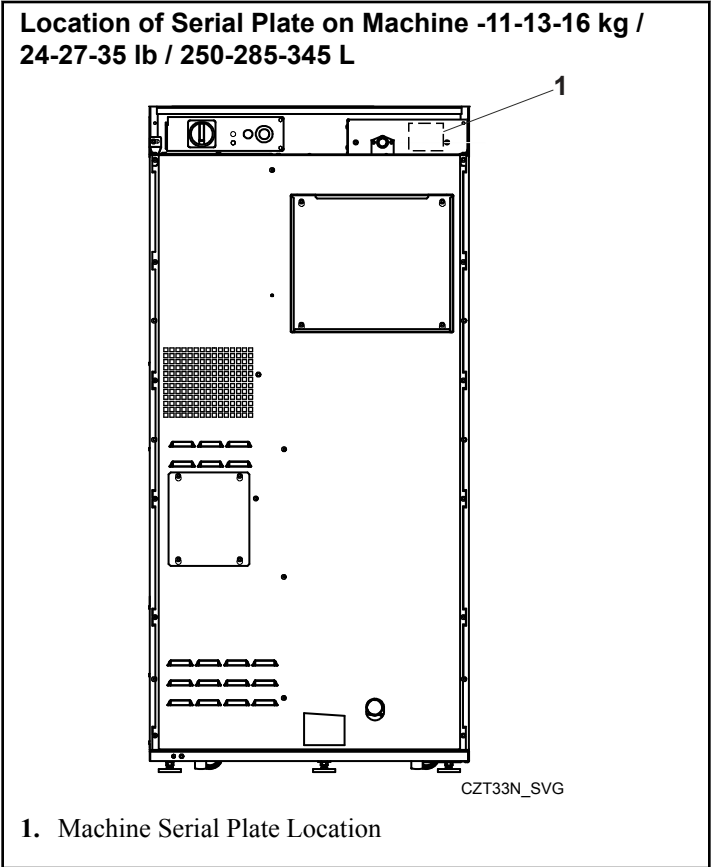


Figure 3

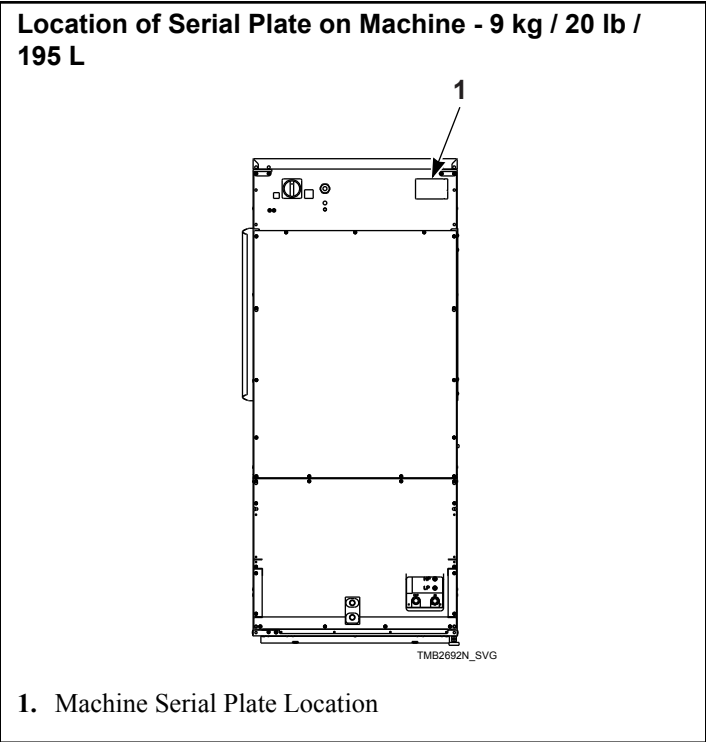


Figure 2

Manufacturing Date

The manufacturing date for your unit can be found on the serial number. The last two characters indicate first the year and then the month. Refer to *Table 1* and *Table 2*. For example, a unit with serial number 520I000001QK was manufactured in May 2020.

Manufacturing Date - Year	
Year	Serial Number Character
2020	Q
2021	S
2022	U
2023	W
2024	Y
2025	Z

Table 1 *continues...*

Manufacturing Date - Year	
2026	A

Table 1

Manufacturing Date - Month	
Month	Serial Number Character
January	A or B
February	C or D
March	E or F
April	G or H
May	J or K
June	L or M
July	N or Q
August	P or S
September	R or U
October	T or W
November	V or Y
December	X or Z

Table 2

Replacement Parts

If literature or replacement parts are required, contact the source from which the machine was purchased or contact Alliance Laundry Systems at +1(920)748-3950 for the name and address of the nearest authorized parts distributor.

Customer Service

For technical assistance, contact your local distributor or contact:

Alliance Laundry Systems

Shepard Street

P.O. Box 990

Ripon, Wisconsin 54971-0990

U.S.A.

www.alliancelaundry.com

Phone: +1(920)748-3121

Ripon, Wisconsin

or

Alliance Laundry CE s.r.o

Mistecka 1116

Přibor, 742 58

Czech Republic Europe

Model Identification

Information in this manual is applicable to these models:

EC_HYDROS_ST11HP	LC345HF	PUHP345E	T13HP
EC_HYDROS_ST14HP	LH190HE	PUHP345F	T16HP
EC_HYDROS_ST16HP	LH190HF	PX190HE	T9HP
EC_HYDROS_ST19HP	LH250HE	PX190HF	UC190HE
IC190HE	LH250HF	PX250HE	UC190HF
IC190HF	LH285HE	PX250HF	UC250HE
IC250HE	LH285HF	PX285HE	UC250HF
IC250HF	LH345HE	PX285HF	UC285HE
IC285HE	LH345HF	PX345HE	UC285HF
IC285HF	LU190HE	PX345HF	UC345HE
IC345HE	LU190HF	SC190HE	UC345HF
IC345HF	LU250HE	SC190HF	UE190HE
IE190HE	LU250HF	SC250HE	UE190HF
IE190HF	LU285HE	SC250HF	UE250HE
IE250HE	LU285HF	SC285HE	UE250HF
IE250HF	LU345HE	SC285HF	UE285HE
IE285HE	LU345HF	SC345HE	UE285HF
IE285HF	LX190HE	SC345HF	UE345HE
IE345HE	LX190HF	SE190HE	UE345HF
IE345HF	LX250HE	SE190HF	UGHP190E
IGHP190E	LX250HF	SE250HE	UGHP190F
IGHP190F	LX285HE	SE250HF	UGHP250E
IGHP250E	LX285HF	SE285HE	UGHP250F
IGHP250F	LX345HE	SE285HF	UGHP285E
IGHP285E	LX345HF	SE345HE	UGHP285F
IGHP285F	PC190HE	SE345HF	UGHP345E
IGHP345E	PC190HF	SGHP190E	UGHP345F
IGHP345F	PC250HE	SGHP190F	UH190HE
IH190HE	PC250HF	SGHP250E	UH190HF
IH190HF	PC285HE	SGHP250F	UH250HE
IH250HE	PC285HF	SGHP285E	UH250HF
IH250HF	PC345HE	SGHP285F	UH285HE

Table continues...

IH285HE	PC345HF	SGHP345E	UH285HF
IH285HF	PE190HE	SGHP345F	UH345HE
IH345HE	PE190HF	SH190HE	UH345HF
IH345HF	PE250HE	SH190HF	UHP190
IHP190	PE250HF	SH250HE	UHP250
IHP250	PE285HE	SH250HF	UHP285
IHP285	PE285HF	SH285HE	UHP345
IHP345	PE345HE	SH285HF	UU190HE
IU190HE	PE345HF	SH345HE	UU190HF
IU190HF	PGHP190E	SH345HF	UU250HE
IU250HE	PGHP190F	SHP190	UU250HF
IU250HF	PGHP250E	SHP250	UU285HE
IU285HE	PGHP250F	SHP285	UU285HF
IU285HF	PGHP285E	SHP345	UU345HE
IU345HE	PGHP285F	SU190HE	UU345HF
IU345HF	PGHP345E	SU190HF	UUHP190E
IUHP190E	PGHP345F	SU250HE	UUHP190F
IUHP190F	PH190HE	SU250HF	UUHP250E
IUHP250E	PH190HF	SU285HE	UUHP250F
IUHP250F	PH250HE	SU285HF	UUHP285E
IUHP285E	PH250HF	SU345HE	UUHP285F
IUHP285F	PH285HE	SU345HF	UUHP345E
IUHP345E	PH285HF	SUHP190E	UUHP345F
IUHP345F	PH345HE	SUHP190F	UX190HE
IX190HE	PH345HF	SUHP250E	UX190HF
IX190HF	PU190HE	SUHP250F	UX250HE
IX250HE	PU190HF	SUHP285E	UX250HF
IX250HF	PU250HE	SUHP285F	UX285HE
IX285HE	PU250HF	SUHP345E	UX285HF
IX285HF	PU285HE	SUHP345F	UX345HE
IX345HE	PU285HF	SX190HE	UX345HF
IX345HF	PU345HE	SX190HF	UX190HE
LC190HE	PU345HF	SX250HE	UX190HF
LC190HF	PUHP190E	SX250HF	UX250HE

Table continues...

LC250HE	PUHP190F	SX285HE	UX250HF
LC250HF	PUHP250E	SX285HF	UX285HE
LC285HE	PUHP250F	SX345HE	UX285HF
LC285HF	PUHP285E	SX345HF	UX345HE
LC345HE	PUHP285F	T11HP	UX345HF
IC195HE	PC195HE	TX9HP	IHP195
IE195HE	PE195HE	PX195HE	IX195HE
IC250ZE	IH250ZE	IU250ZE	IX250ZE
IC250ZF	IH250ZF	IU250ZF	IX250ZF
IC285ZE	IH285ZE	IU285ZE	IX285ZE
IC285ZF	IH285ZF	IU285ZF	IX285ZF
IC345ZE	IH345ZE	IU345ZE	IX345ZE
IC345ZF	IH345ZF	IU345ZF	IX345ZF
PC250ZE	PH250ZE	PU250ZE	PX250ZE
PC250ZF	PH250ZF	PU250ZF	PX250ZF
PC285ZE	PH285ZE	PU285ZE	PX285ZE
PC285ZF	PH285ZF	PU285ZF	PX285ZF
PC345ZE	PH345ZE	PU345ZE	PX345ZE
PC345ZF	PH345ZF	PU345ZF	PX345ZF
SC250ZE	SH250ZE	SU250ZE	SX250ZE
SC250ZF	SH250ZF	SU250ZF	SX250ZF
SC285ZE	SH285ZE	SU285ZE	SX285ZE
SC285ZF	SH285ZF	SU285ZF	SX285ZF
SC345ZE	SH345ZE	SU345ZE	SX345ZE
SC345ZF	SH345ZF	SU345ZF	SX345ZF
UC250ZE	UH250ZE	UU250ZE	UX250ZE
UC250ZF	UH250ZF	UU250ZF	UX250ZF
UC285ZE	UH285ZE	UU285ZE	UX285ZE
UC285ZF	UH285ZF	UU285ZF	UX285ZF
UC345ZE	UH345ZE	UU345ZE	UX345ZE
UC345ZF	UH345ZF	UU345ZF	UX345ZF
T9VP	T10VP	T11VP	T13VP
T16VP			

Specification and Dimensions

General Specifications

Tumble Dryers Heat Pump 9-11-13-16 kg / 20-24-27-35 lb / 190-195-250-285-345 L

Machine kg / lb / L	9 / 20 / 190	9 / 20 / 195	11 / 24 / 250	13 / 27 / 285	16 / 35 / 345
Weight and Shipping Dimensions					
Net weight, lb [kg]	640 [290]	425.5 [193]	772 [350]	794 [360]	827 [375]
Shipping weight, lb [kg]	672 [305]	458.6 [208]	794 [360]	882 [400]	882 [400]
Shipping width, in [mm]	34.64 [880]	29.61 [752]	33.66 [855]	33.66 [855]	33.66 [855]
Shipping depth, in [mm]	52.60 [1335]	38.19 [970]	60.63 [1540]	64.37 [1635]	68.90 [1750]
Shipping height, in [mm]	61.81 [1570]	71.47 [1815]	70.28 [1785]	70.28 [1785]	70.28 [1785]
Dimensions (Standard) - maximum dimensions including protruding parts					
Width in [mm]	31.30 [795]	27.95 [710]	31.30 [795]	31.30 [795]	31.30 [795]
Depth in [mm]	50.20 [1275]	36.42 [925]	60.04 [1525]	63.58 [1615]	68.31 [1735]
Height in [mm]	57.68 [1465]	67.91 [1725]	66.14 [1680]	66.14 [1680]	66.14 [1680]
Drum Dimensions					
Diameter, in [mm]	29.92 [760]	26.38 [670]	29.92 [760]	29.92 [760]	29.92 [760]
Depth, in [mm]	16.54 [420]	21.85 [555]	21.26 [540]	24.8 [630]	29.53 [750]
Drum capacity, cu.ft [dm³]	6.71 [190]	6.89 [195]	8.83 [250]	10.06 [285]	12.18 [345]
Door opening, in [mm]	23.62 [600]	19.69 [500]	23.62 [600]	23.62 [600]	23.62 [600]
Electrical Data – Refer to Table 7					
Motor Powers - Refer to Table 7					
Electrical System - Refer to Table 7					
Heating					
Type of heating	Heat pump (HP)				
Heating power (kW)	Refer to Table 7				
Connection					

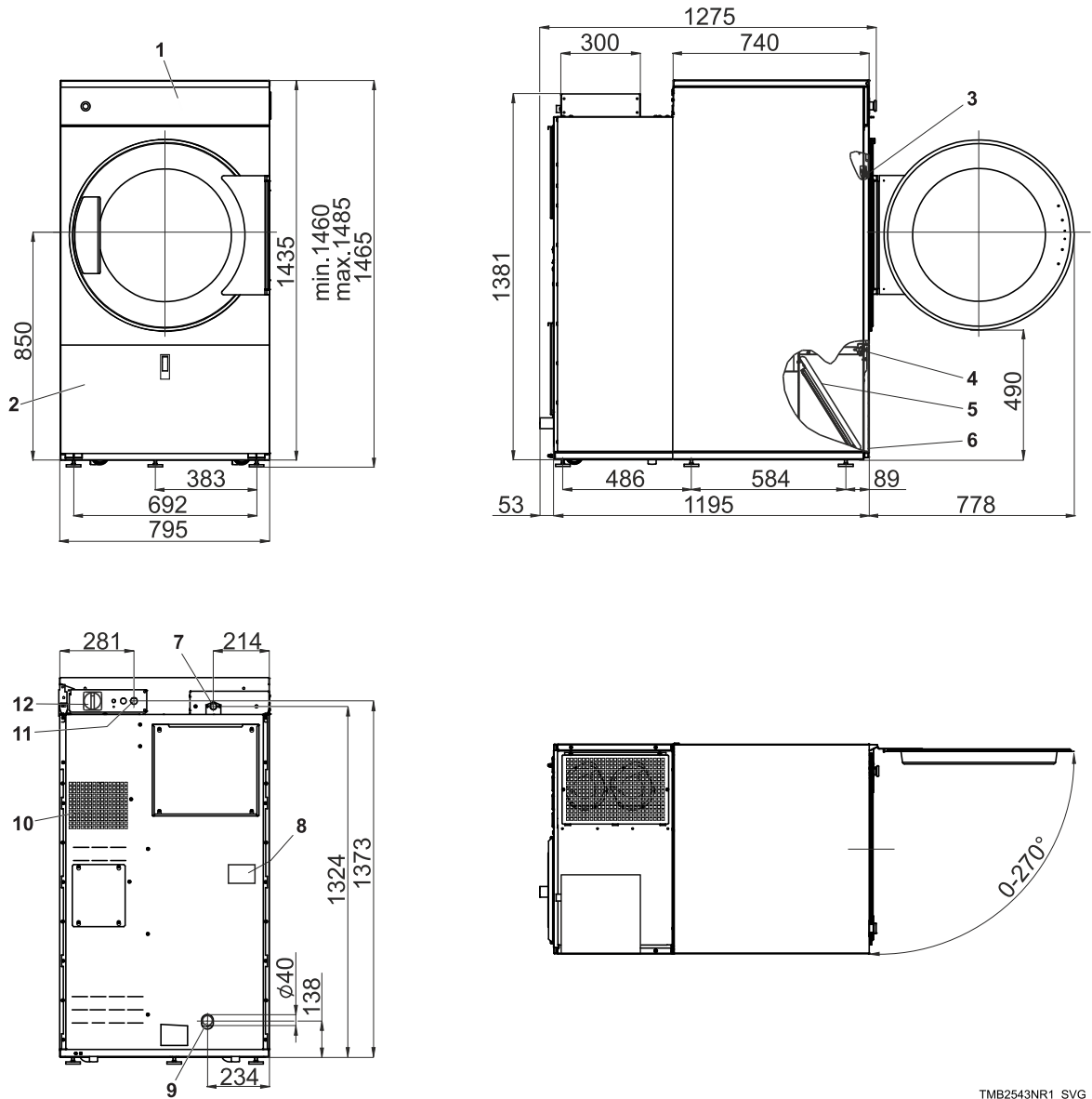
Table 3 continues...

Machine kg / lb / L	9 / 20 / 190	9 / 20 / 195	11 / 24 / 250	13 / 27 / 285	16 / 35 / 345
Condensate drain connection, in [mm]	ø 1.57 [40]	ø 0.79 [20]	ø 1.57 [40]		
Drain flow rate, (l / min)	0.15	0.15	0.15		
Heat Pump rinsing system	on request	N/A	on request		
Water valve connection, (BSP)	¾ inches	2 x ¾ inches	¾ inches		
Water pressure, (kPa)	100 - 800	100-800	100 - 800		
Recommended water pressure, (kPa)	300 - 500	300-500	300 - 500		
Maximal drain flow rate, (l / min)	3.3	N/A	3.3		
Water temperature for rinsing system	≤25°C	N/A	≤25°C		
Cooling system water temperature	N/A	≤25°C	N/A	N/A	N/A
Maximal average cooling water drain flow (l/min)	N/A	0.16	N/A	N/A	N/A
Noise Emissions (ISO 3744)					
Drying sequence, db	54				
General Data					
Ambient temperature, °F [°C]	40-104 [15-59]				
Average ambient temperature in 24 hours °F [°C]	up 95 [35]				
Relative humidity	30% to 90% without condensation				
Height above sea level, ft [m]	to 3280 [1000]				
Ingress protection	IP 43				

Table 3

Machine Dimensions and Components

Dimensions and Components - Machine 9 kg / 20 lb / 190 L



TMB2543NR1_SVG

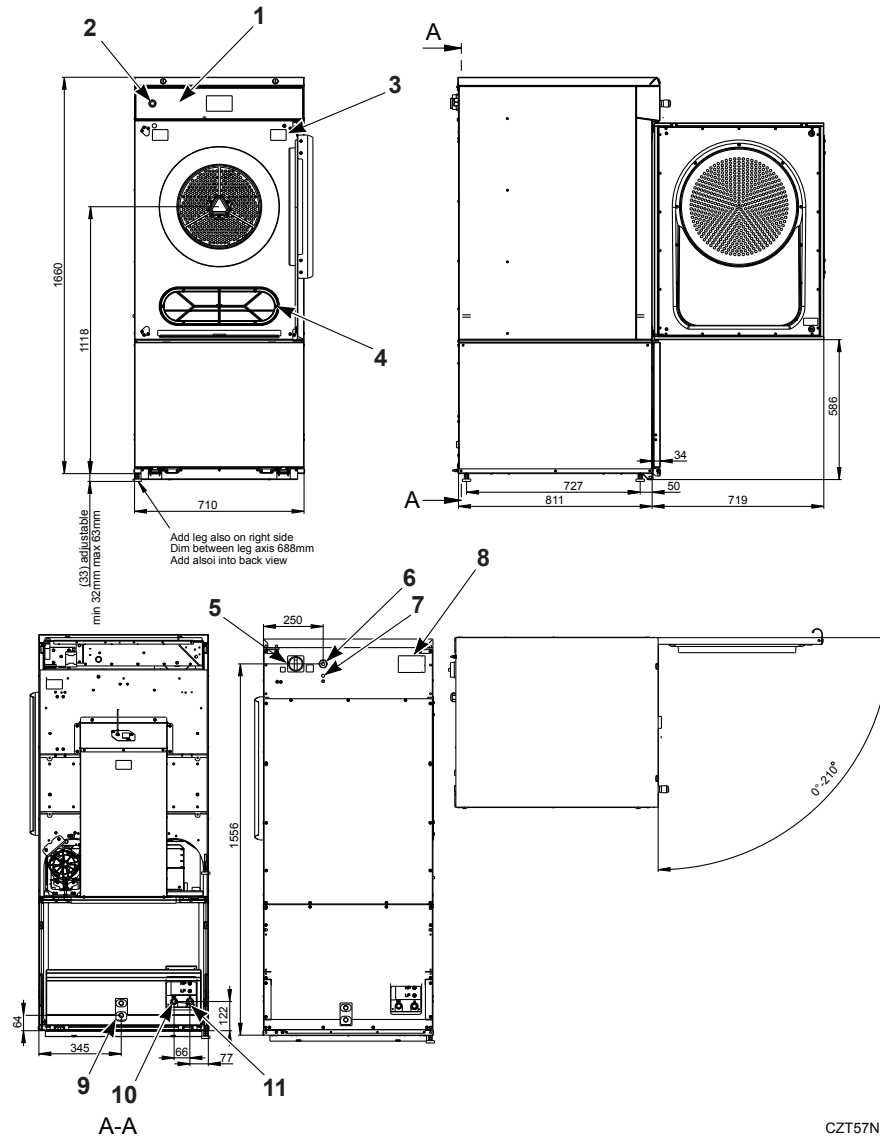
NOTE: For callout descriptions, refer to the following legend.

Figure 4

Legend

- | | |
|---------------------------|---|
| 1. Control panel | 7. Water inlet for rinsing system of the heat pump exchanger – on request |
| 2. Lint screen cover | 8. Serial plate |
| 3. Door lock microswitch | 9. Condensate drain |
| 4. Lint cover microswitch | 10. Suction |
| 5. Lint screen | 11. Main power supply |
| 6. Serial plate | 12. Main switch |

Dimensions and Components - Machine 9 kg / 20 lb / 195 L



CZT57N

NOTE: For callout descriptions, refer to the following legend.

Figure 5

Legend

1. Control panel
2. Emergency stop button (not applicable for version with coin meter)
3. Door switch
4. Lint screen
5. Main switch

6. Main power supply
7. External payment system connection
8. Serial plate
9. Condensate drain 0.79 inch [20 mm]
10. Water outlet (3/4 inches)
11. Water inlet (3/4 inches)

Machine Dimensions and Components, in. [mm]			
Specification	Machine kg / lb / L		
	11 / 24 / 250	13 / 27 / 285	16 / 35 / 345
A	56.69 [1440]	60.24 [1530]	64.96 [1650]
B	60.04 [1525]	63.58 [1615]	68.31 [1735]
C	30 [762]	33.54 [852]	38.26 [972]

Table 4

Space Requirements

Total space requirements for the system installation are usually determined by a detailed plan of the building.

Be aware that there may be local codes and safety precautions, which the installation must be complied with. To reduce the risk of serious injury in laundromats, install lockable door(s) to prevent public access to rear of dryers.

IMPORTANT: Keep dryer area clear and free from gasoline, combustible materials and other flammable vapours and liquids.

IMPORTANT: Do not block the exhaust airflow of the dryer.

IMPORTANT: Make sure the condensate drain at the back of the machine is not blocked.

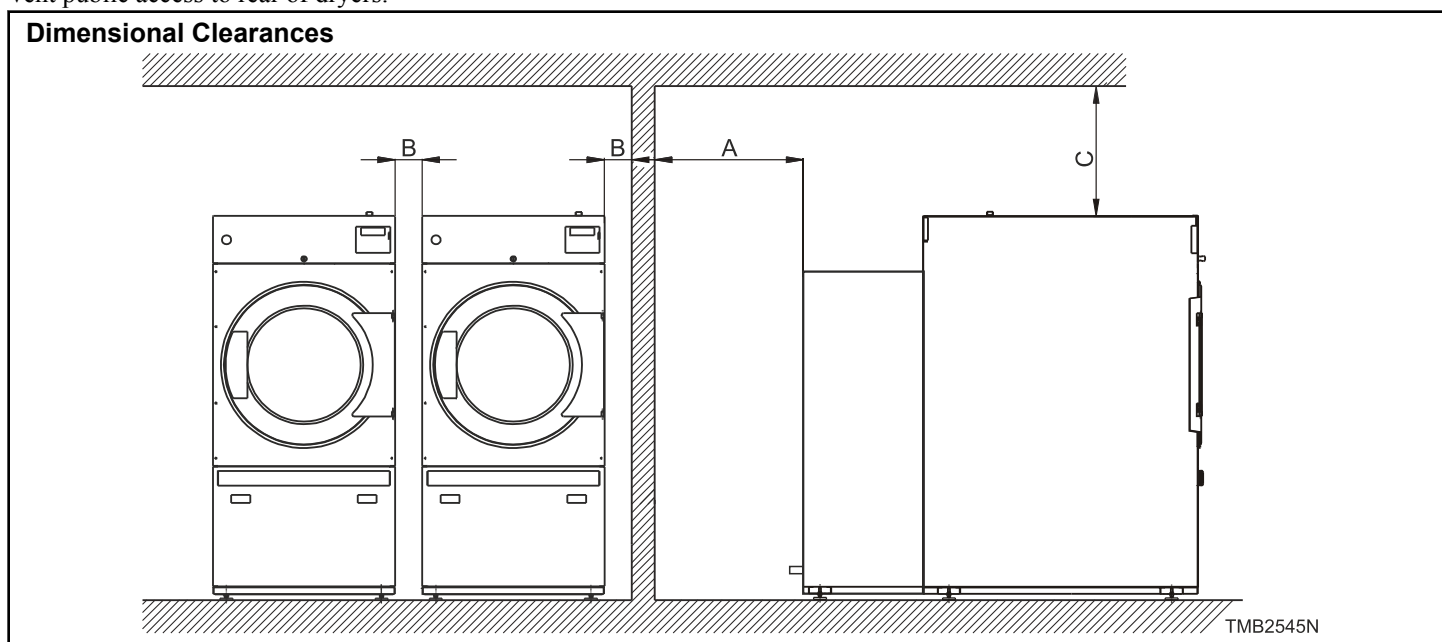


Figure 7

Minimum Dimensional Clearances, in. [mm]	
Specification	Machine kg / lb / L
	9-11-13-16 / 20-24-27-35 / 190-195-250-285-345
A*	23.62 [600]
B	0.79 [20]
C	19.68 [500]
* Recommended 35.42 [900]	

Table 5

Installation

Important Information Before Installation


For Transportation, Storage and Installation

IMPORTANT: In case of transportation and storage, watch components protruding from the contour line of machine (door locks etc.), to avoid injuries.

- Never push, pull or exert pressure on components protruding from the machine contour line (controls, door locks etc.).
- Make sure that these components are secured so as to avoid damages during machine manipulation and installation.
- In case of the machine transportation by the customer, follow the manufacturer's instructions for transportation, handling and storage of the product. In case of transportation of machine by the customer the manufacturer is not responsible for possible damage of the machine in course of transportation.
- In case of storage the machine in a free area, it must be protected against mechanical damage, water, and weather condition factors.
- The ambient temperature of transportation and storage must be between -13°F [-25°C] to 131°F [55°C] . Relative humidity must be among 30 to 80% without condensation.
- The machine is not designed to be placed in an environment where it can come into contact with splashing or spraying water. Do not store the machine where it can be subject to environmental conditions (rain, wind) or extreme humidity. When moisture condensates on the machine due to a sudden temperature change, water must not run over the walls and covers of the machine nor to cover the floor under and around it.
- The manufacturer is not responsible for machine corrosion caused by non-fulfilment of determined air ventilation in the room (for example: vapours, invasive chemical elements or dry cleaning process).

Check before Installation

1. Upon delivery, visually inspect crate and parts for any visible shipping damage.
2. If the crate, cover is damaged or signs of possible damage are evident, have the carrier note the condition on the shipping papers before the shipping receipt is signed, or advise the carrier of the condition as soon as it is discovered.

	WARNING
<p>TO ACHIEVE A FAILURE-FREE OPERATION, THE DRYER MUST BE CORRECTLY BUILT IN ACCORDING TO THIS INSTALLATION MANUAL. ANY CHANGES IN THE INSTALLATION NOT DESCRIBED IN THIS INSTALLATION MANUAL MUST BE APPROVED BY THE SUPPLIER OR MANUFACTURER OF THE DRYER.</p>	
C320	

Machine Type

All Models:

1. Before you start the installation, check the type of your dryer and electrical connection according to the name plate. Refer to *Figure 1* , *Figure 3* .


Material Required (Obtain Locally)

All Models :

- One fused disconnect switch or circuit breaker.

Handling, Transport and Storage

Transport and Storage

	WARNING
<p>Forks of lift truck must have sufficient length.</p>	
W920	

Use a lift truck or a manual skid cart for handling with the machine in transporting package.

If possible, leave the machine in the transporting package or at least let it set on the transporting wooden skid until the time of final installation on the foundation according to instructions.

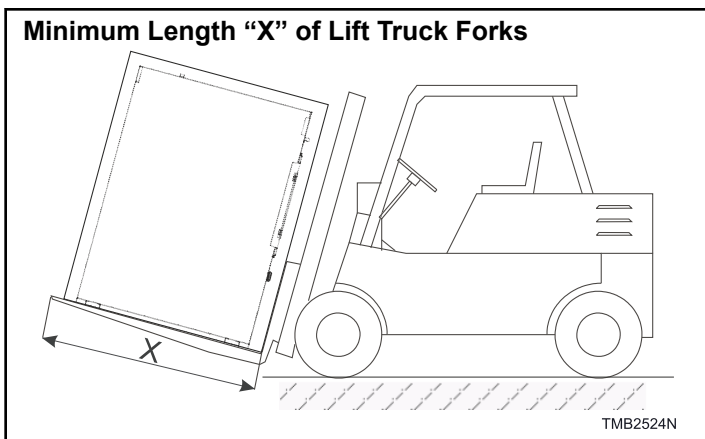


Figure 8

Minimum Length of Lift Truck Forks					
Speci fica- tion	Machine kg / lb / L				
	9 / 20 / 190	9 / 20 / 195	11 / 24 / 250	13 / 27 / 285	16 / 35 / 345
X, in. [mm]	47.24 [1200]	39.37 [1000]	55.12 [1400]	55.12 [1400]	59.05 [1500]

Table 6

Handling during Installation

All activities can be done only by qualified personnel. Machine is delivered to the customer in wooden packing or a wooden crate, and protected with polyethylene film. The machine is attached to the skid by means of three bolts (M10).

To remove the machines to its final location follow these precautions:

1. All passages and spaces the machine has to be transported through at installation should be reasonably dimensioned to meet the height and width of the machine including the package.
2. Make sure that the filling door is secured to avoid its opening during the handling.
3. Lift the machine up by the fork-lift or by pallet trucks using a transport skid to which the machine has been attached.

Unpacking

1. After unpacking, check if the machine has not been damaged and if all the accessories are included according to your order. The accessories and the manuals are located inside the drum.
2. Remove the packaging.
3. Handle the machine carefully with a forklift or with a hand pallet truck.

Machine Positioning

Carrying Capacity of the Floor

The dryer must be installed on a level floor capable of supporting 992 lbs/ft² [450 kg/m²]. Floor covering materials such as carpeting must be removed. To assure compliance, consult local building code requirements.

Position and Level the Machine

1. Machine 9 kg / 20 lb / 190 L: Unscrew the two shipping bolts (one at each corner).
 2. Machine 9kg / 20 lb / 195 L: Unscrew the two shipping brackets (one at each corner).
 3. Machines 11-35 kg / 24-77 lb / 250-680 L: Unscrew the four shipping bolts (one at each corner).
 4. Pull the dryer out of the skid on two canned lengthwise timbers such way, that a pair of front and rear leveling legs can be mounted on the dryer bottom.
 5. Mount the leveling legs including safety nut.
 6. Blind the holes of shipping bolts by the plug.
 7. The dryer can be slightly tilted forward or backwards for easy mounting.
 8. Use the lift truck for locating the dryer to its position.
 9. Place the dryer on two canned lengthwise timbers again.
 10. Remove timbers from underneath the machine by lifting/tilting one side of the machine first and removing them. Then do the same on the other side of the machine.
 11. Place the machine on the floor.
 12. Adjust the leveling legs so as the dryer was in horizontal position as close to floor as possible.
- IMPORTANT: Keep the dryer as close to floor as possible. Dryer must rest firmly on floor so weight of dryer is evenly distributed.**
13. Check the correct positioning with a water level placed on a machine top. The dryer must not sway.

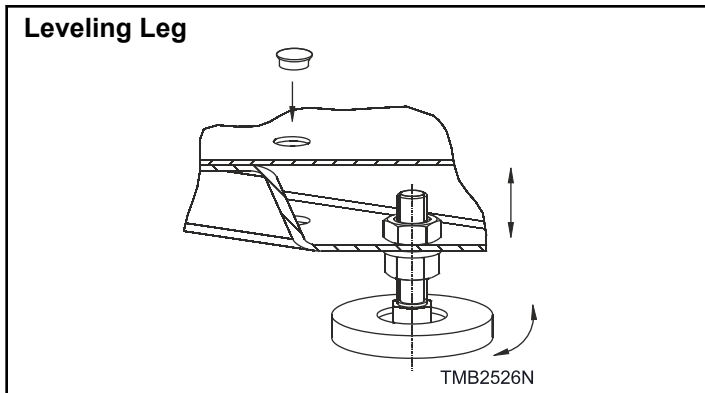



Figure 9

Electrical Connections

	WARNING
<p>THE MACHINE MUST BE CONNECTED TO THE POWER, GROUND, VENTILATION AND STEAM, GAS SUPPLY ACCORDING TO THE INSTALLATION MANUAL, IN COMPLIANCE WITH THE VALID LOCAL STANDARDS DONE BY QUALIFIED TECHNICIANS WITH PROPER AUTHORIZATION. THE VALID STANDARDS FOR CONNECTING TO THE LOCAL POWER NETWORK (TT / TN / IT...) MUST BE FOLLOWED. THE DRYER IS INTENDED TO BE PERMANENTLY CONNECTED TO THE ELECTRICAL SUPPLY.</p>	
<p>C330</p>	

Connection to Electrical Network

IMPORTANT: The machines have been designed for connecting to the electrical network according to the specifications of your order. Before connection check if the electrical values stated on the serial plate of the machine correspond to your electrical network.

IMPORTANT: If the machine is not equipped with a supply disconnecting device, like a main switch then a supply disconnecting device needs to be provided in the installation for all electrical supplies connected to the machine, in accordance with EN 60204-1 standard, point 5.3. This device shall disconnect the electrical equipment of the machine from the supply when required for example maintenance.

Emergency Stop Device

The machines are equipped with an emergency stop device in accordance with ISO13850 - category 0 stop function. Nevertheless, the emergency stop device is omitted on machines design for coin, token, external payment system or similar operation for use in self-service situation. The owner-installer-user must provide remote-located emergency stop device(s). This emergency stop device(s) needs to stop each machine in accordance with ISO13850 - category 0. There are made provisions in the wiring harness, were immediate removal of power to the actuators can be accomplished. Refer to the electrical schematic of the machine for correct connection of the device.

3-phase Machine Connection to Electrical Network

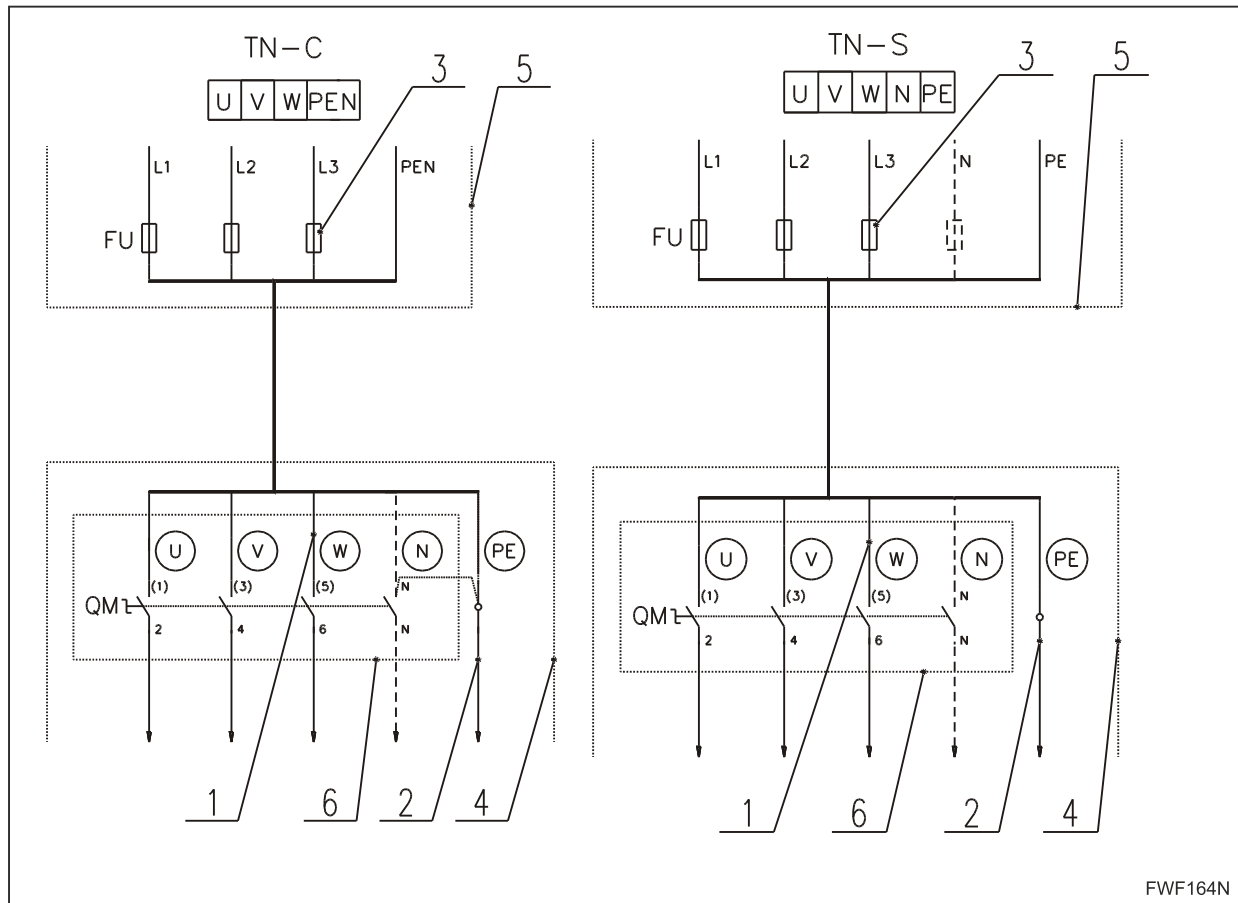


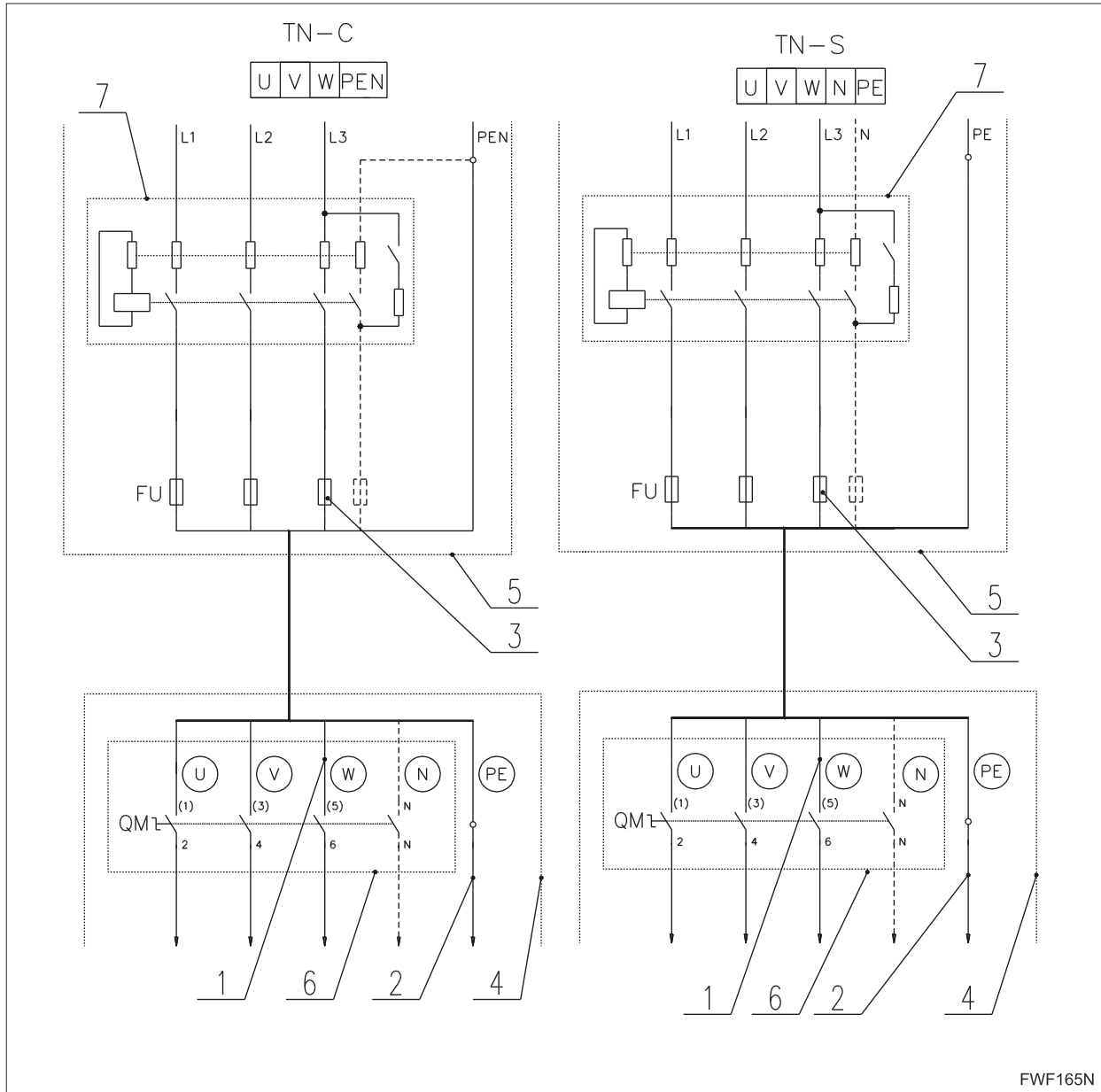
Figure 10

Connection of Machine with a Laundry Room Earth Leakage Trip

In order to increase the safety of operators and service men during work and maintenance on the machine, the manufacturer recommends mounting an earth leakage trip (ground) in the laundry

room's switchboard (with an equipped current 30 mA). Main contacts of the earth leakage trip must correspond to the stated power supply. The earth leakage trip connection and machine connection to such a network is shown on *Figure 11*.

3-phase Machine Connection to Electrical Network



1. Phase conductors
2. Protection conductor
3. Power supply protection
4. Machine
5. Laundry switchboard
6. Main switch = supply terminal board
7. Earth leakage trip

Figure 11



WARNING

IF IN THE PLACE OF INSTALLATION THE STANDARD EN 60519 OBSERVANCE IS REQUIRED, THE MACHINE MUST BE CONNECTED VIA AN EARTH LEAKAGE TRIP.

C331

IMPORTANT: Check the sense of impeller motor revolutions.

The motor must revolve in indicated direction. Refer to the arrow above the motor. Should the motor turn in opposite direction the machine will not work properly. The impeller can not create the required airflow in such a case. In case of wrong motor revolutions replace the phases L1-L2.

Supply Cable and Protection

Use a cable or cord with copper conductors to connect the machine to the electrical network. Supply cable cross section depends on the dryer's type of heating and total power consumption. Protection of the cable against a short circuit or over load must be done with fuses or breakers in the laundry room switchboard. Recommended cross sections of supply cables and fuse values for their guarding for various types of machines are stated in Chapter *Electrical Specifications*.

Cable Preparation



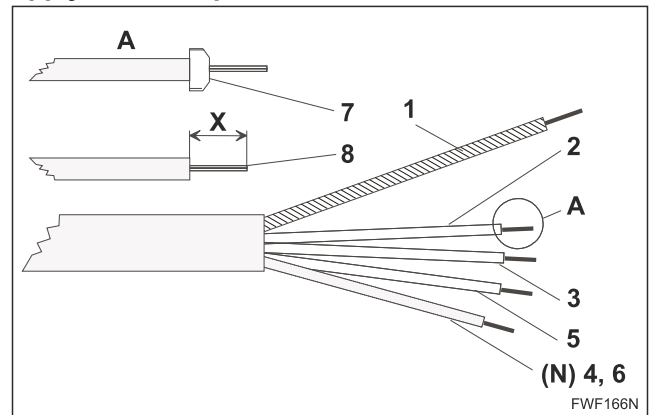
WARNING

THE PROTECTIVE CONDUCTOR MUST BE LONGER SO THAT WHEN THE CABLE IS PULLED OUT ACCIDENTALLY, THIS CONDUCTOR IS DISCONNECTED AS THE LAST ONE!

C099

When using the cable (hard copper conductors), strip the individual cores in such a way to avoid the protrusion of a stripped part from the terminal when the conductor is connected into the device. Refer to *Figure 12*, (8) - dimension X. When using a cord (stranded copper conductors) the individual cores can be stripped in a similar way as in the case of a cable, or moulded tubes (7) can be used. In this case use tubes with an insulated neck to avoid any contact to a part under current after the conductor connection.

Supply Cable Preparation



1. Green-yellow protection conductor
2. Black-phase conductor
3. Brown-phase conductor (3 phase execution)
4. Blue-neutral conductor (single phase execution)
5. Black-phase conductor (3 phase execution)
6. Blue-neutral conductor (3 phase gas heating execution)
7. The neck of the moulded tube must be insulated to avoid any contact to a part under current (conductor) when the main switch is disconnected
8. The stripped length of the conductors must not protrude from the main switch terminal (supply switchboard)

Figure 12

Supply Cable Attachment

The cable can be attached to the machine in two ways:

1. From a cable channel (from below).
2. From a cable grate (from above).
 - a. If the cable is attached from above it is recommended to ensure the cable sagging in front of the entry into the cable bushing. Refer to *Figure 13*. In this way any running condensed water into the bushing and/or machine can be avoided.

Connection of the machine with aid of a plug for connection to power supply plug-in distribution network is also possible.

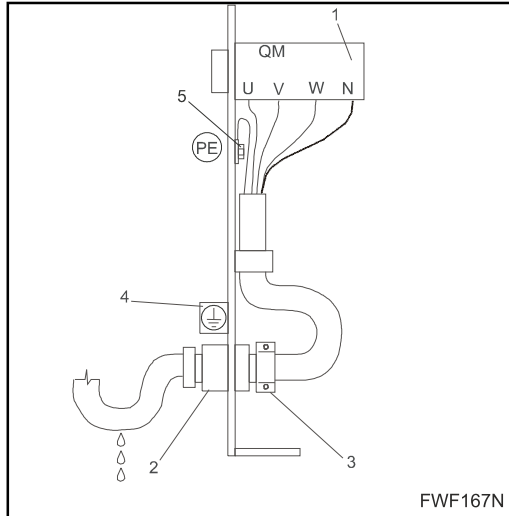
Mechanical Cable Securing and Connection Point

Refer to *Figure 13*.

When the cable is threaded through the bushing (2), tighten the sealing nut of the bushing. In this way the rubber ring in the bushing is pressed, thus securing the cable mechanically and against the water. Provided that this mechanical sealing is insufficient, use the securing clamp (3).

The supply cable is connected to the main switch of the machine (1). The phase terminals are identified by U, V, W or L(L1) and A(L2). Connect the protection conductor directly to the protection terminal located on the internal side of the left stand of the machine. The terminal is identified by PE.

Main Power Supply Connection



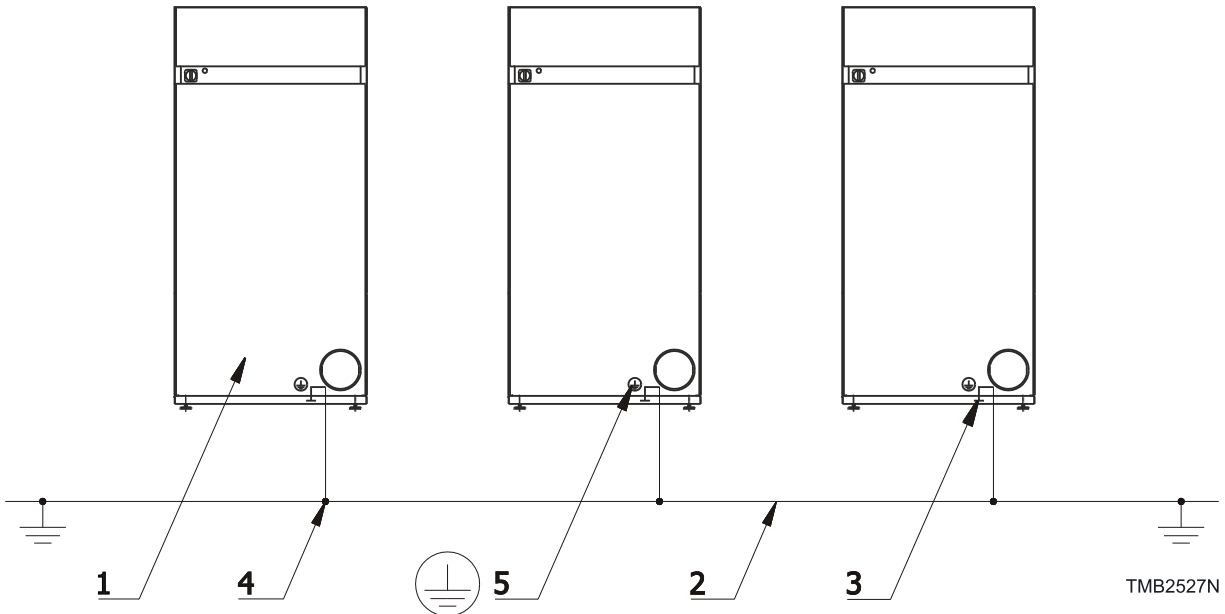
1. Main switch
2. Cable bushing
3. Securing clamp
4. External protective terminal
5. Internal protective terminal

Laundry Room Protective Machine Connection

For safety reasons it is necessary to connect the machine to the laundry protection system. The external protective terminal of the machine (M6) located on the rear part of the machine bottom serves for this purpose and it is marked with an earthing mark. Refer to *Figure 14* (4). The protection conductor enabling this connection is not part of the delivery with the machine. The protection conductor cross section must at least correspond to the figures described in Chapter *Electrical Specifications*. However, for protection purposes, with a supply cable cross section below 0.004 in² [2.5 mm²] we recommend to select a larger conductor cross-section at least 0.006 in² [4 mm²]. The protective connection and earthing of machines prevents unfavourable effects of static electricity which may adversely affect the machine operation.

Figure 13

Protective Machine Connection



1. Machine (rear view)
2. Room protective connection
3. Machine external protective terminal
4. Protective conductor – machine connection
5. Earthing mark

Figure 14

IMPORTANT: If the machine protective connection is not allowed by your national (local) standards, you must earth the machines according to your valid standards.

Electrical Specifications

Electrical Values							
Dryer	Voltage	Motor power (kW) fan / drive	Heating elements power (kW)	Total power supply (kW)	Nominal current	Fuse	Cable cross section
3 Phase – Reversing Model							
9 kg /20 lb / 190 L	380-415V+N 50Hz	0.3 / 0.18	3.6	4.2	11.3A	16A	5 x 2.5
	400V+N 50Hz		3.6	4.2	9.7A	10A	5 x 2.5
	208-240V 50Hz		3.2	4	19.1A	20A	4 x 2.5
	440V, 60Hz		3.6	4.2	9.5A	10A	4 x 2.5
9 kg / 20 lb / 195 L	380-415V+N 50Hz	0.17/0.25	1.5	2	11A	16A	5 x 2.5
	220-240V 50Hz				12.3A	16A	4 x 2.5
11-16 kg / 24-35 lb / 250-345 L	380-415V+N 50Hz	0.3 / 0.25	3.6	4.3	11.5A	16A	5 x 2.5
			3.6 + 3*	7.3	16A	20A	5 x 2.5
	400V+N 50Hz		3.6	4.3	9.8A	10A	5 x 2.5
	208-240V 50Hz		3.4	4.1	19.8A	20A	4 x 2.5
			3.4 + 3*	7.1	27.7A	32A	4 x 6
	440V, 60Hz		3.6	4.3	9.6A	10A	4 x 2.5
* Electric booster 3 x 1kW							

Table 7

Electrical Values							
Dryer	Voltage	Motor power (kW) fan / drive	Heating elements power (kW)	Total power supply (kW)	Nominal current	Fuse	Cable cross section
3 Phase – Non-Reversing Model							
9 kg /20 lb / 190 L	380-415V+N	0.3 / 0.18	3.6	4.2	11.3A	16A	5 x 2.5
	400V+N		3.6	4.2	9.7A	10A	5 x 2.5
	208-240V 50Hz		3.2	4	19.1A	20A	4 x 2.5
	440V, 60Hz		3.6	4.2	9.5A	10A	4 x 2.5
9 kg /20 lb / 195 L	380-415V+N 50Hz	0.17/0.25	1.5	2	11A	16A	5 x 2.5
	220-240V 50Hz				12.3A	16A	4 x 2.5
11-16 kg / 24-35 lb / 250-345 L	380-415V+N 50Hz	0.3 / 0.25	3.6	4.3	11.5A	16A	5 x 2.5
			3.6 + 3*	7.3	16A	20A	5 x 2.5
	400V+N 50Hz		3.6	4.3	9.8A	10A	5 x 2.5
	208-240V 50Hz		3.4	4.1	19.8A	20A	4 x 2.5
			3.4 + 3*	7.1	27.7A	32A	4 x 6
	440V, 60Hz		3.6	4.3	9.6A	10A	4 x 2.5
* Electric booster 3 x 1KW							

Table 8

Electrical Values							
Dryer	Voltage	Motor power (kW) fan / drive	Heating elements power (kW)	Total power supply (kW)	Nominal current	Fuse	Cable cross section
1 Phase – Reversing Model							
11-16 kg / 24-35 lb / 250-345 L	208-240V/ 50Hz	0.3 / 0.25	3.4	4.1	31.5A	32A	3 x 6
	208-240V/ 60Hz				31.8A	32A	3 x 6

Table 9

Electrical Values							
Dryer	Voltage	Motor power (kW) fan / drive	Heating elements power (kW)	Total power supply (kW)	Nominal current	Fuse	Cable cross section
1 Phase – Non-Reversing Model							
11-16 kg / 24-35 lb / 250-345 L	208-240V/ 50Hz	0.3 / 0.25	3.4	4.1	31.5A	32A	3 x 6
	208-240V/ 60Hz				31.8A	32A	3 x 6

Table 10

Water Connection for Rinsing System of the Heat Pump Exchanger (on Request)

Water connection is on the rear part of the dryer, refer to *Figure 1* and *Figure 4*. It is recommended to use a water filter in water inlet (filter not supplied with machine).

Water temperature for water connection to the HP spray system shall be cold water.

Connecting Hoses

1. Before installing hoses, flush the water pipes and hoses clean.
2. In order to facilitate installation and servicing, the water intake connection to the machine must be fitted with a manual shut-off valve and filter.
3. After installation hoses should hang in gentle arcs. Hoses are to be of an approved type and grade and comply with IEC 61770. Machines shall be connected with new water hoses. Reused water hoses must not be used.

Connecting Hoses - WRAS

The appliance has been designed with a built-in "AA" airgap system according to EN1717. Nevertheless, when portable water will be connected to the appliance, a WRAS approved single check valve or some other no less effective device providing backflow prevention protection to at least fluid category three shall be fitted at the point of connections between the water supply and the appliance.

To connect water service to a machine with hose, use the following procedure and refer to *Figure 15* :

1. Before installing hoses, flush the building's water system at the machine connection valves for at least two (2) minutes.
2. Check filters in the machine's inlet hose for proper fit and cleanliness before connecting.
3. Hang hose in a large loop. Do not allow them to kink.

If additional hose lengths are needed or using hoses other than those supplied by manufacturer, flexible WRAS approved hoses with screen filters are required.

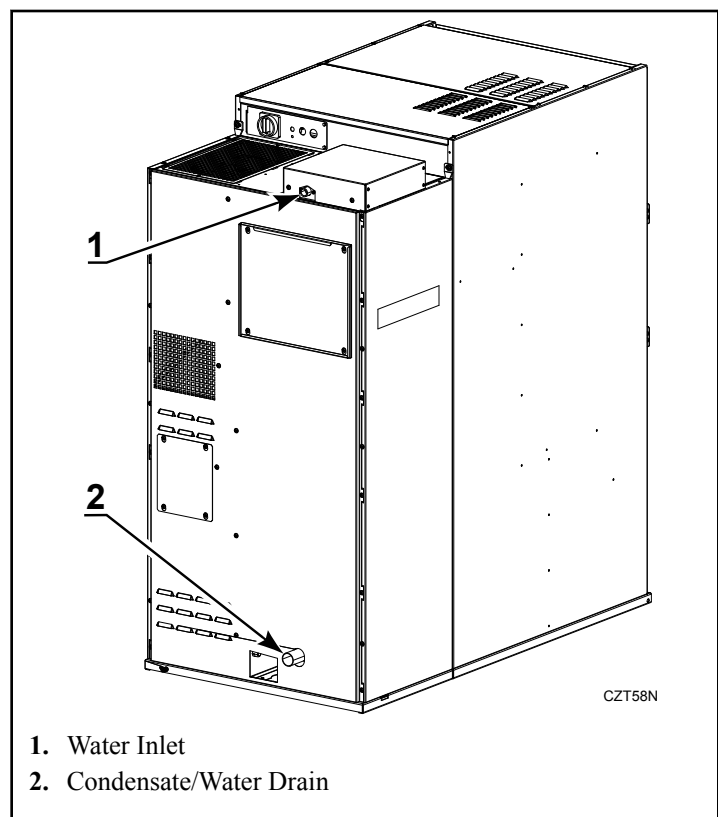
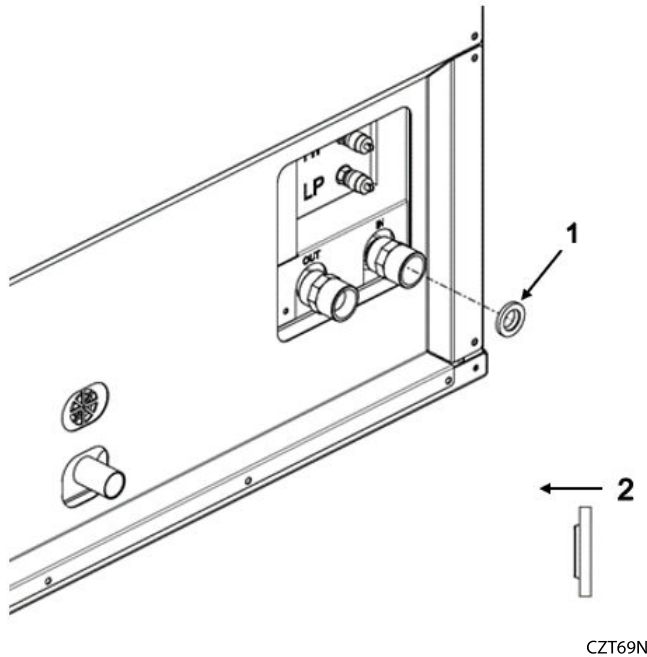


Figure 15

Heat Pump Cooling System Water Connection

Valid to 9kg/ 20 lb/ 195 L Tumble Dryers

1. Install the supplied water filter to the water inlet connection as shown below.

Water inlet filter

1. Water inlet filter
2. Mounting direction

CZT69N

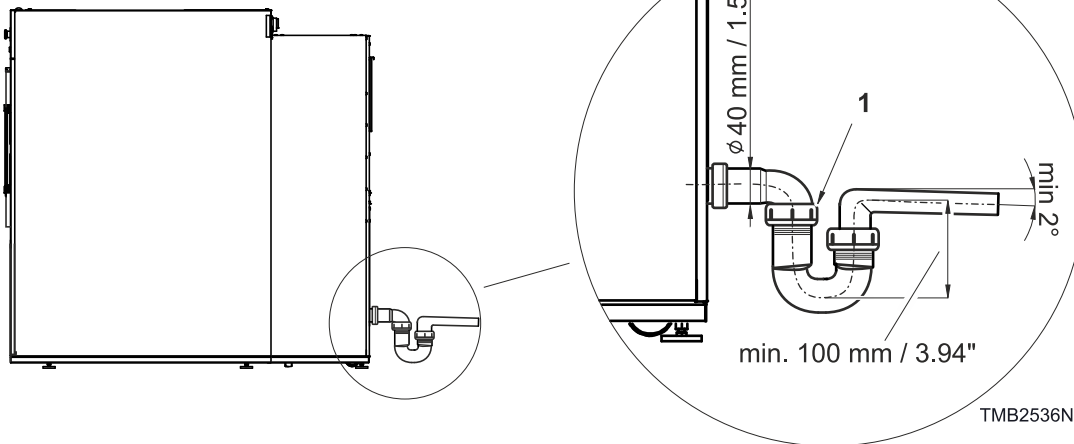
Figure 16

Condensate Drain**WARNING**

RISK OF INJURY BY ELECTRIC SHOCK! MAKE SURE THE CONDENSATE DRAIN IN THE BACK OF THE MACHINE IS NOT BLOCKED AND CLEAN IT REGULARLY. REGULARLY CLEAN THE DRAIN PIPE.

C345

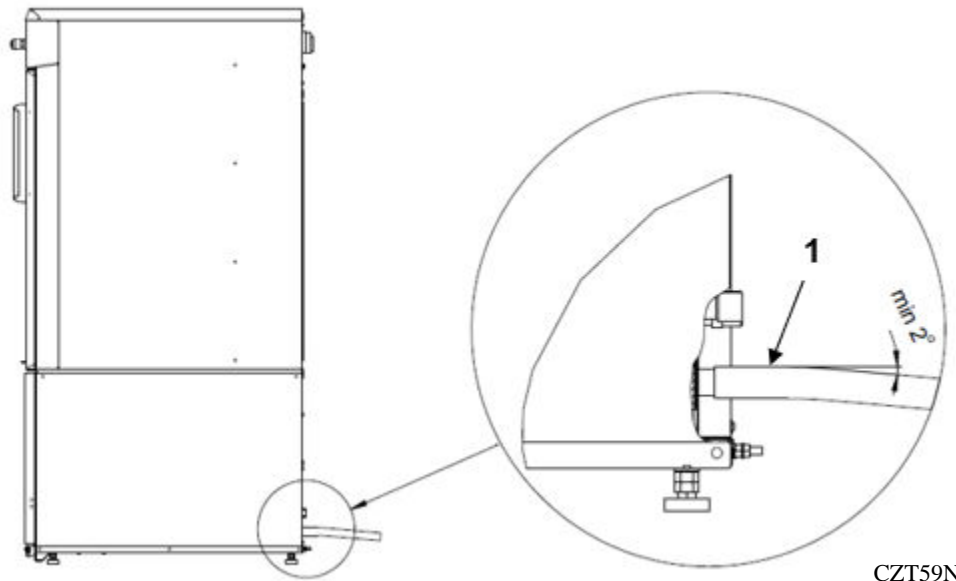
Condensate drain in the back of the dryer. Refer to *Figure 4*, pos. 9 and *Figure 6*, pos.11. For 9 kg / 20 lb / 195 L refer to *Figure 5*, pos.9. The dryer produces condensate which must be drained from the machine. Refer to *Figure 17*. The drain pipe must be designed in a manner ensuring that the condensate formed during the machine operation is sufficiently drained off. In case that a blockage or clogging of the condensate drain occurs, a risk of flooding the motor with condensate arises. (Not valid for 9 kg / 20 lb / 195 L)

Condensate Drain

1. Siphon (not supplied with the machine)

Figure 17

Condensate Drain (9kg / 20 lb / 195 L)



1. Drain tube (not supplied with the machine)

Figure 18



WARNING

DO NOT REDUCE DRAIN TUBE DIAMETER! MAKE SURE THE CONDENSATE DRAIN IN THE BACK OF THE MACHINE IS NOT BLOCKED AND CLEAN IT REGULARLY. REGULARLY CLEAN THE DRAIN PIPE.

Putting the Machine into Service

1. Remove the cabinet protective foil (stainless steel cabinet only)
2. Remove the front bottom cover and make sure the lint filter is fixed in proper position.
3. Put the front cover back.
4. Remove the rear cover and check accessible bolts, nuts, screws, and fittings for tightness.
5. Check the protective connection (earthing) - "PE" or "PEN".
6. Connect the dryer to a drain pipe.
7. Wipe out the drum using a non inflammable cleaning detergent. Load the drum with a full load of clean rags and run to remove oil or dirt from drum without heating.

Inner Drum Cleaning

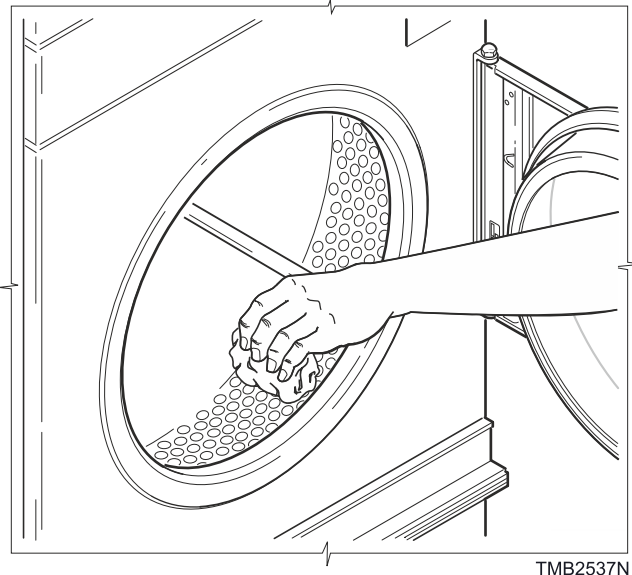


Figure 19

8. Carefully read all manuals before and starting the machine. Carefully follow all instructions.



WARNING

BEFORE STARTING THE MACHINE, CHECK WHETHER MACHINE INSTALLATION (SUPPLY OF MEDIA, EVACUATION OF BURNT GAS, MACHINE LAYOUT, SUFFICIENTLY VENTILATED ROOMS ETC.) WAS CARRIED OUT ACCORDING TO THIS INSTALLATION MANUAL AND IN ACCORDANCE WITH THE RULES SPECIFIC FOR THE RESPECTIVE COUNTRY.

C173

9. Turn on electrical supply to dryer.



WARNING

CHECK ALL PIPE CONNECTIONS, INTERNAL AND EXTERNAL FOR LEAKS. DO NOT OPERATE THE MACHINE WHEN ANY LEAKAGE IS DETECTED.

C175

10. Turn the dryer on.

Perform following checks during dryer run. Restart the dryer between each steps (if necessary):

1. Open the drum door. The drum should stop rotating within several seconds after the door is opened approximately 0.79 in. [20 mm] .
2. Check a proper function of main switch and emergency stop button.
3. Mount the rear covers back on the machine.



WARNING

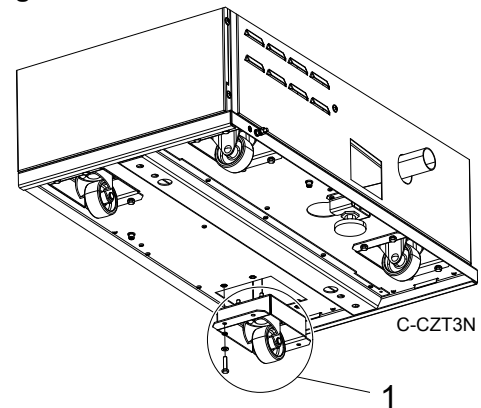
WHEN WORKING WITH FLAMMABLE PRODUCT, DO NOT USE OPEN FLAME, VENTILATE, DO NOT SMOKE AND DO NOT EAT.

C176

If the dryer does not meet any of the requirements mentioned above, put the dryer out of service.

2. Mount the wheels to the heat pump base. Refer to *Figure 20* (1).

Mounting the Wheels

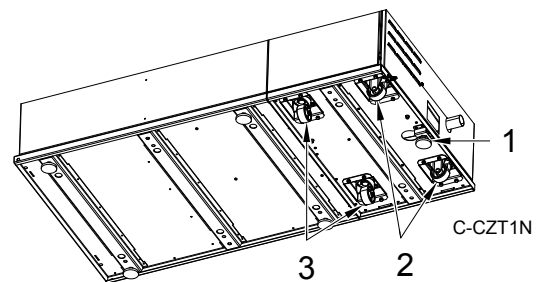


1. Wheel

Figure 20

3. Mount the two moveable wheels (SP541494) to the heat pump base. Refer to *Figure 21* (1).
4. Mount the two not moveable wheels (SP551864) to the heat pump base. Refer to *Figure 21* (2).

Location of the Wheels



1. Middle Foot
2. Not Movable Wheels
3. Movable Wheels

Figure 21

5. Remove the middle foot of the heat pump base. It is not necessary to dismantle the rear cover. Refer to *Figure 22* .

Wheels of Heat Pump Unite for Service Purposes (on Request)

The wheels are used for simpler manipulation of the heat pump unite for service purposes. They allow to move the heat pump unit away from the dryer to get access to the belts, motor etc. Not valid for 9 kg / 20 lb / 195 L.

The wheels are not part of the delivery.

Installation of the Wheels

1. Lift up the dryer.

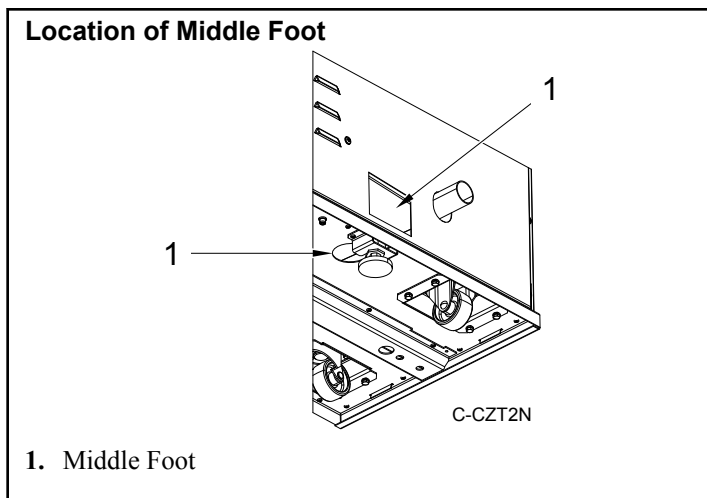


Figure 22

6. Move the heat pump unit away from the dryer and proceed the service operation.
7. Connect the heat pump unit back to the dryer.
8. Secure with middle foot and adjust the height of the foot.

Operation

Symbols on the Machine





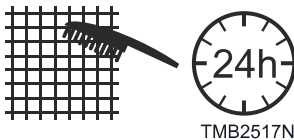

Used Symbols	
 CHM2439N_SVG	Warning, dangerous electrical current, electric device. Disconnect the power supply to the machine before doing any interventions into the machine. When the main switch is “OFF”, the supply terminals are still under current.
 CHM2523N	Warning, high temperature.
 BAR65N	Do not touch the area after the machine has been heated up.
 CHM2440N_SVG	Warning, read and keep written instructions.
 TMB2517N	Filter label.
 BAR111N	Main switch.

Table 11

Instructions for Drying

- The machine is intended only for drying the flat linen (bed-linen, table-cloths, dish-towels, towels, handkerchiefs and other kinds of flat linen) and garments made of flax, wool, cotton, silk, polyacryl and polyester fibre. Before drying make sure whether manufacturer labelled the linen as possible to dry in the dryer. The manufacturer is not responsible for any fabric damage caused by improper drying action.
- The machine is not intended for drying the linen containing parts of plastics, glass fibres and foam rubber. Before starting the drying action, remove any articles from garments, as e.g. nails, pins, screws, etc. which could damage the garments as well as the machine. Linen must be rinsed and spin-dried properly. Recommended residual moisture of linen before drying should be 50 - 70% to get an optimal result.

To achieve optimal performance and correct function of the machine:


- Clean the lint filter once a day at least.
- Clean the filter after each drying cycle.
- Stop the machine before you clean the filter.
- Remove cover of lower panel.
- Remove the lint filter and clean it. Clean area in front of the lint filter. Pieces of lint on this area would pollute the lint filter and reduce effectiveness of drying process.
- Put the filter back and close the cover.
- Always finish the drying cycle by cooling down the linen.
- Remove the linen immediately after finishing the drying cycle.

Load Volume at Filling Ratio	
Machine kg / lb / L	Load Volume (Approximately)
9 / 20 / 190	1:21
9 / 20 / 195	1:21
11 / 24 / 250	1:22
13 / 27 / 285	1:22
16 / 35 / 345	1:21

Table 12

NOTE: Higher filling ratio such as 1:25 is recommended for better drying conditions.

Incorrect Use of Machine

	WARNING
<p>This machine is designed for industrial drying of linen. It is not intended for household use. Any usage different than mentioned above, without written agreement of the supplier, will be considered as improper usage.</p>	
C311	

Starting the Drying Process

Drying Programs		
1. High	Easy Control	158°F [70°C]
1. Cold	Flex / Full Control	20 minutes
2. Medium	Easy Control	104°F [40°C]
2. Low	Flex / Full Control	86°F [30°C]
3. Low	Easy Control	95°F [35°C]
4. Medium	Flex / Full Control	104°F [40°C]
5. Medium	Flex / Full Control	113°F [45°C]
6. Medium	Flex / Full Control	122°F [50°C]
7. Hot	Flex / Full Control	140°F [60°C]
8. Hot	Flex / Full Control	149°F [65°C]
9. Hot	Flex / Full Control	158°F [70°C]
10. Hot	Flex / Full Control	158°F [70°C]

Table 13 continues...

1. Do not load the machine with bigger amount of linen than it is designed for.
2. Do not forget to clean the lint filter regularly.
3. Do not stop the machine until the drying cycle including cooling down is finished, except of emergency events. Machines with a heat pump: Stopping the machine operation while the drying cycle is still in progress shortens the service life of the machine.
4. Do not dry synthetic fabrics at high temperature.
5. Do not leave the linen in the machine after the drying cycle is finished.

Start the Machine

Before the first start-up, use this manual to make sure the machine is installed properly. Check the lint filter and other parts of the machine as well.

Power Supply

Turn the main switch on the machine rear cover to position “on”. If the machine is equipped with emergency button, turn it slightly on the right. Display will light up. After few seconds it will fade - valid for Easy control version. The machine remains in stand-by mode.

Drying Programs		
11. Hot	Flex / Full Control	158°F [70°C]
12. - 20. Drying	Flex / Full Control	113°F [45°C]

Table 13

Flex / Full Control Version

1. Open tumbler door, load with laundry and securely close door.
2. Press the Program Selection button.
3. Choose the desired drying program by pressing the Program Selection button repeatedly. The program number will light on the display.

NOTE: For manual set-up of drying, press repeatedly the Program Selection button until you overstep program 20.

- a. Press the Drying Time button to set the time of drying using the button arrow up or arrow down.
- b. Press the Drying Temperature button to set the desired temperature using the button arrow up or arrow down.

IMPORTANT: Do not select temperature that is higher than the laundry maximum temperature. For details on pre-set drying temperatures and times refer to “Programming manual Flex / Full Control”.

- c. Press the Cooldown Time to set the cooldown time using the button arrow up or arrow down.
 - d. Press the Moisture Level button to set the residual moisture level using the button arrow up or arrow down (depending on selected cycle and model).
 - e. Press Confirm the Selection to confirm the values.
4. Press the Start button to activate the drying program.
 5. Select the Reverse button to choose reversing or non-Reversing. This selection is optional. Not applicable for Non-Reversing model.
 6. To load or unload tumbler during drying cycle, follow these steps:
 - a. Stop tumbler by opening tumbler door or press the Stop button.

NOTE: To interrupt program, press stop once. To cancel program, press stop twice.

 - b. Load or unload tumbler.
 - c. Restarting dryer:
 - Close tumbler door.
 - Press Start.
 7. Cycle is finished as soon as the sign “!UNLOAD!” is displayed.
 8. Remove load immediately after cycle is finished.

Easy Control Version

Models without Coin Meter

IMPORTANT: All manually operated dryers are factory equipped with an emergency stop button located on the front panel.

Emergency Stop Button

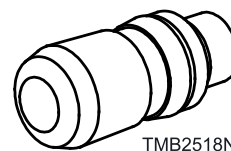


Figure 23

1. Open the door and load the laundry into the drum.
 2. Close the door.
 3. Select the drying program by pressing the temperature button. The program number will light on the display.
- NOTE: Do not select temperature that is higher than the laundry maximum temperature. (For details on pre-set drying temperatures and times revert to “Programming manual Easy Control”).**
4. Press the flashing LED Start button to start the drying program.
 5. Changing the drying programs while drying process:
 - a. Select another program by pressing the relevant temperature button. The program will increase or decrease the drying temperature. The drying time remains unchanged.
 6. Increasing the drying temperature:
 - a. Press the active temperature button. The dot on the display will stop flashing.
 - b. Press the button again to increase the drying time.
 7. Advancing the drying program:
 - a. Press the START button while the machine is working. The program will be advanced to further step.
 8. Loading and unloading the machine during drying process:
 - a. Stop the dryer by opening the door.
 - b. Load or unload the linen in or from the dryer. Be careful since the linen load can be significantly hot.
 - c. Close the door.
 - d. Press the START button.
 9. Interrupting of the drying process:

- a. Advance the drying program into next step by pressing the START button.
 - b. Repeat the sequence until the end of the program is reached.
10. Program end:
- a. The time on the display will count down until "0". When "0" is reached, the drying cycle is finished.
 - b. Open the door.
 - c. Remove the load immediately after the drying process is finished to avoid risk of linen burning.

Models with Coin Meter

1. Open the door and load the laundry into the drum.
2. Close the door.
3. Select the drying program by pressing the temperature button.

NOTE: Do not select temperature that is higher than the laundry maximum temperature.

4. Insert a coin. The pre-paid time value will be displayed.
5. Insert further coins until the required drying time is reached.
6. Press the flashing LED Start button to start the drying program.
7. Changing the drying programs while drying process:
 - a. Select another program by pressing the relevant temperature button. The program will increase or decrease the drying temperature. The program will recalculate the remaining amount of money. The drying time will be adapted accordingly.
8. Loading and unloading the machine during drying process:
 - a. Stop the dryer by opening the door.
 - b. Load or unload the linen in or from the dryer. Be careful since the linen load can be significantly hot.
 - c. Close the door.
 - d. Press the START button.
9. Program end:
 - a. The time on the display will count down until "0". When "0" is reached, the drying cycle is finished.
 - b. Open the door.
 - c. Remove the load immediately after the drying process is finished to avoid risk of linen burning.


NOTE: Increasing of the drying temperature is not possible.

NOTE: Advancing the program is not possible.

NOTE: Interrupting of the drying process is not possible in operation mode.

Finishing the Drying Cycle

After the drying cycle is finished, the machine is prepared for another cycle. If you want to switch the machine off, press emergency stop button (not valid for Easy Control with coin meter). To switch off the machine completely, turn the main switch on the machine rear panel to position "OFF".

	WARNING
Do not interrupt drying program and do not skip the step "cool down" at the end of drying cycle.	
C313	


Emergency Stop of the Machine

Versions - Flex / Full Control and Easy Control without coin meter:

- If operator's safety or health is endangered, it is possible to stop the machine by pressing the button of emergency stop. Emergency stop button is located on the machine upper front panel.

Version - Easy Control with coin meter:

- The machine is not equipped with central stop button. The laundry owner must be make arrangements for remote-located emergency stop device.

	WARNING
As soon as the reason for the machine stoppage is eliminated, unload the linen from the drum immediately. Risk of fire!	
C347	

How to Proceed On Error Messages

Version - Flex / Full Control:

- Error message occurs on the machine display in the form of Er: and no. of failure (001 - 999). In some cases the programmer buzzer sounds. In some cases the drum goes on turning but the heating is off. The machine cools down and stops itself after it has reached safety temperature. After the machine has been stopped, the error message is possible to delete by opening and closing the door, possibly by pressing the button of emergency stop. If failure state continues, the error message is displayed again. For detailed information concerning error messages. Refer to Programming Manual.

Version - Easy Control without coin meter and with coin meter:

- When there is an error the fault LED lights on. The number on the display corresponds with specific fault. In some cases the drum goes on turning but the heating is off. The machine cools down and stops itself after it has reached safety temperature. For detailed information concerning error messages. Refer to Programming Manual.

Power Supply Interruption

Version - Flex / Full Control


When the power supply interruption occurs and the power is re-stored the machine will be in stand-by mode. The display is counting down. Once the display reaches 0 the machine will be waiting for further instruction.

1. Close the door in case it is open. On the display the program number will be shown.
2. Press the START button to continue on the program.
3. Press the STOP button to end the drying cycle.

Version - Easy Control without Coin meter and with Coin Meter


When the power supply interruption occurs and the power is re-stored the machine will be in stand-by mode. The display is counting down. Once the display reaches 0 the machine will be waiting for further instruction.

1. Close the door in case it is open. On the display the program number will be shown and the LED on START button is flashing.
2. Press the Start button to continue on the program.

	WARNING
Unload the linen from drying drum. Risk of fire at high temperature of drying!	
C314	

Maintenance and Adjustments


Safety Instructions for Maintenance

	WARNING
<p>ONLY WELL-TRAINED PERSONNEL CAN EXECUTE MACHINE MAINTENANCE. BEFORE MAKING ANY MANIPULATION WITH THE MACHINE'S MECHANISM, MAKE SURE:</p>	
C274	

Before performing any maintenance procedures, please make sure of the following:

1. That the main machine switch is in "off" position.
2. That the section switch of electric distributor in laundry is off, and mechanically blocked.
3. That some of the components are not in motion due to delayed action.
4. That the machine is completely cooled down.
5. That there is a sign hung on the machine or electrical box which reads "DEVICE UNDER REPAIR!" and that all other operators and workers are informed about it.

Daily

	WARNING
<p>DUE TO THE DANGER OF SERIOUS INJURY DO NOT OPEN THE LINT SCREEN COVER DURING MACHINE OPERATION. OPEN THE LOADING DOOR AND WAIT UNTIL THE DRYER COMPLETELY STOPS BEFORE LINT SCREEN CLEANING.</p>	
C155	

1. Open the lint screen cover. Take away the dust lint screen.
2. Remove all dust in the dust chamber. Gently clean the lint screen with the brush from the sediment dust. Models with a heat pump are fitted with two lint screens. Gently clean both lint screens. The dust left in this area would be sucked back on the lint screen which would worsen the air circulation.
3. If the lint screen is torn, replace it immediately. A torn lint screen will allow the dust to reach the pipe line which would worsen air circulation.
4. The lint screen must cover the panel hole. Possible gaps between the frame and the filter would allow the dust to get into the pipe line.

5. Position the lint screen back and secure it. The machine must not be operated without lint screen.

Monthly or After 200 Working Hours


Lubrication

Motor and shaft bearings, sealed and self lubricated. They do not require additional lubrication.

1. Remove dust from all openings in rear panels of the machine using only a soft tool such as a brush or broom.
2. If the openings are clogged with bigger amount of dust, remove the rear panels and clean the whole rear space of the machine from dust.
3. Remove the rear cover and check whether the exchanger is not clogged with dust; also check the state of the condensate drain system. You can use water for the cleaning purposes.

Every Three Months or After 500 Working Hours

Dust Removal

	WARNING
<p>IN ORDER TO REDUCE DANGER OF SERIOUS OR FATAL INJURIES, DISCONNECT THE CURRENT SUPPLY IN THE MACHINE BEFORE EXECUTING THE FOLLOWING ACTIVITIES.</p>	
C199	

1. Remove dust and other articles from the air impeller as well as from the motor cooling fans. The motors are cooled by air and accumulation of dust on the cooling fans would cause motor overheating. In this case, motor protection will shut down the machine.
2. It is necessary to check the dryer surroundings to find out possible airflow obstacles.
3. Remove the front panel and clean the dust sediments.
4. Remove the lint filter cover.
5. Remove the cover below the drying drum. Refer to *Figure 24*. Not valid for 9 kg / 20 lb / 195 L.
6. Clean the inner space with vacuum cleaner.
7. Return the lint filter cover to its original place.

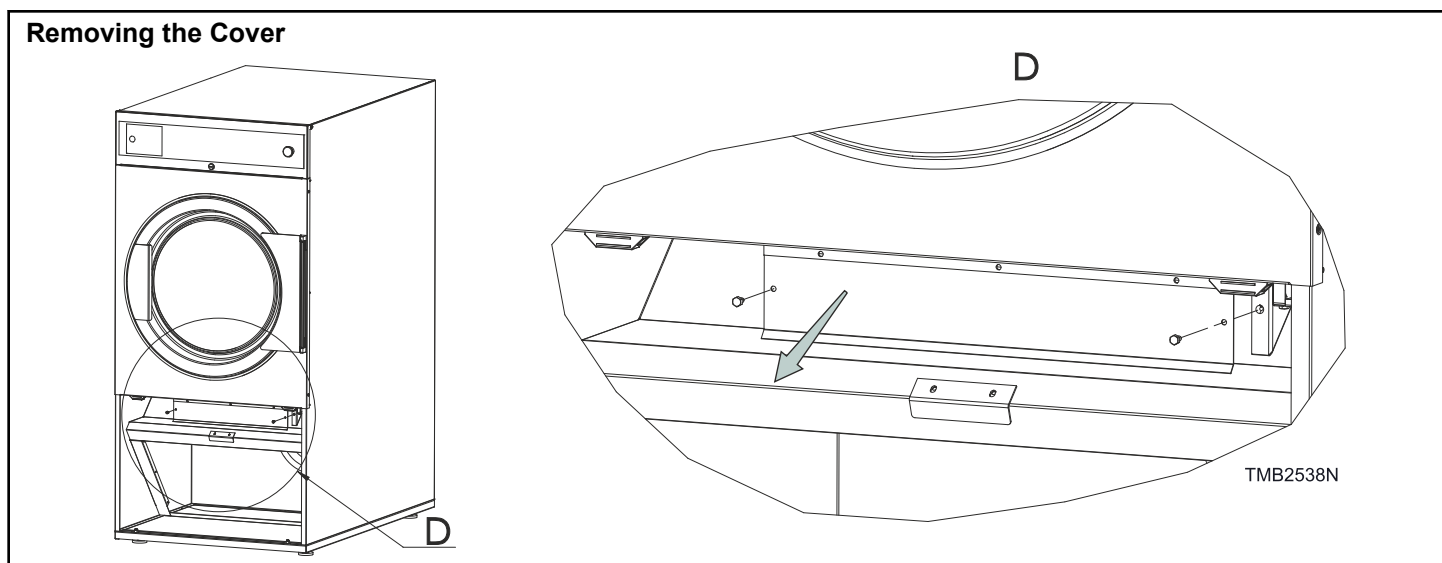


Figure 24

Belts Tightening

1. Check the belts tension. If necessary, tighten them according to relevant instructions.

Every Six Months or After 1000 Working Hours

Overall Inspection

1. Clean the machine properly from the dust and any articles using only a soft tool such as a brush or broom. Refer to *Every Three Months or After 500 Working Hours*.
2. Check the bolts, nuts, gas and steam pipeline and electrical connections. Tighten them in case of need.
3. It is necessary to inspect electrical and grounding connections. Tighten them in case of need.
4. Inspect all safety switches (door, lint screen panel and air switch) functionality. Adjust the position in case of need.
5. Remove the service cover and check (through the inspection window) the coolant of the heat pump. The coolant must be dry (without moisture).

Water Inlet Filter

Valid to 9kg/ 20 lb/ 195 L

Every six months the filter at the water inlet must be cleaned.

1. Turn off the water supply.
2. Unscrew the hoses at the back of machine.
3. Take out filter at center with pointed pliers.
4. Clean the filter and re-insert.

Door Switch

Not valid for 9 kg / 20 lb / 195 L

The door switch is set up in the factory. The machine drum will stop during opening of the door at approximately 0.78 in. [20 mm] .

If there is a need to set up the position, follow the below procedure:

1. Disassemble the door hinges.
2. Remove the door.
3. Remove the front panel.
4. Hang the door on the side wall.
5. Close slowly the door and inspect the micro switch action.
6. To set up the microswitch position release slightly the fixing bolts.
7. Tilt the micro switch body until it switches on/off properly.
8. Disassemble the door.
9. Assemble the front panel and fix the door to its original position.

Belts Tightening

	WARNING
<p>IN ORDER TO REDUCE DANGER OF SERIOUS OR FATAL INJURIES, DISCONNECT THE CURRENT SUPPLY IN THE MACHINE BEFORE EXECUTING THE FOLLOWING ACTIVITIES.</p>	
C199	

To tighten the belts, follow the below procedure:

1. Remove the back covers.
2. Release securing bolts on the middle pulley holding plate.
3. Release the nuts on the tightening bolt.

Maintenance and Adjustments

4. Shift the middle holding plate by the tightening bolt at the side of the drive.
5. Tighten the belts.
6. Fix the position by fixation bolts.
7. Secure the tightening bolts by nuts.
8. Tighten securing bolts on the middle pulley holding plate.

Force of Belt Tightness		
9 - 16 kg / 20-35 lb / 190 - 345 L		9 kg / 20 lb / 195 L
Drum / tensioning	200 - 220 N	65 N
Tensioning / motor	180 - 200 N	-

Table 14

Troubleshooting

Humidity Control

The analogue value humidity sensor can be watched while drying the linen. This can be helpful for diagnostic purposes. While dryer is running, key switch in Program mode, press High Temperature Button and the analogue value humidity sensor is shown for 2 seconds.

NOTE: The humidity control system is not made to run without load or with a very small load. The system can only function in a normal way when there is sufficient evaporation to be measured by the air humidity sensor. Check correct dryer operation with a normal amount of wet linen.

Humidity Control Problems:

1. Check dust filter cap.
 - When humidity control doesn't work at all, probably the dust filter cap is missing. The dust filter cap is a white cover that must not be removed from the sensor device. Nevertheless it doesn't look in this way, the dust filter cap allows to pass the air.
2. Check door lock system.
 - When the dryer door is not completely closed, air from the room is sucked in the dryer. This causes a wrong air humidity measurement. Make sure that the dryer can only run when the door is in it's closed (locked) position. When door is still 0.39 in. [10 mm] open, it should not be possible to start a dryer program.
3. Check heating and airflow.
 - The air humidity measurement can only function when there is sufficient water evaporation from the linen. Evaporation can only happen when the air and indirectly the linen is sufficiently heated. Suppose that the dryer has to run with reduced heating power, the airflow must be sufficiently reduced so that there is still evaporation.

Example:

- There is not sufficient Electrical Current available at the building.
 - The dryer works with only 50% of it's electrical heating power.
 - The airflow must be sufficiently reduced so that there is still enough evaporation inside the dryer to allow optimal humidity control.
4. Check final drying temperature.
 - At a normal drying process the outlet air temperature reaches it's programmed target value when the linen gets dry. For a correct drying process: when humidity control stops the dryer the dryer must have reached, before the end of the drying cycle, the programmed target temperature value. If this is not the case, probably there will not

have occurred sufficient evaporation at the drying process because of reduced heating power. And the air humidity measurement will not have been accurate to allow optimal humidity control.

5. Sort the linen: Cotton and Synthetic.
 - A mixture of linen in the dryer can not result in an equal drying result. It is a good practice that the same kind of linen is sorted and dried together. In case of Humidity Control a mixture of all kinds of linen will not give a good overall drying result.
6. Thin and thick fabrics.
 - Thick fabrics like jeans trousers need a long drying time. Dryer program will probably be stopped when fabrics is mostly dry, but inside pockets it will still feel humid. In case of thin fabrics it can happen that were the linen is sewed together there are a few humid spots. This will dry overnight. Humidity Control stops the dryer when the linen is dry based on the measured air humidity.
7. Correct load in drum.
 - Some fabrics need more space in dryer then others. It is important to choose the right size of dryer to obtain a good airflow. If the linen is strenghtled this will restrict the air flow and the linen will not be dried equally.

Occured Problems

Display does not Light after Start of Machine

1. Check external link of power supply.
2. Switch on the main switch.
3. Deactivate the button of emergency switch (Central stop).
4. Check the machine electrical fuses.
5. Check, if the voltage is in accordance with the machine type. Voltage must not exceed +/- 10% of nominal value. In case of discrepancy, it is possible to switch the voltage input over to transformer primary.

Text on Display is Difficult to Read

1. Open the machine upper cover.
2. Switch over an option button "Programming / Operational mode" to programming mode.
3. Set the display brightness on required value in the menu for configuration. Refer to Programming Manual.

Machine does not Start

Program menu is not displayed.

1. Open the machine upper cover.
2. Switch over an option button "Programming / Operational mode" to operational position.

Machine does not Start - Error 37

The display indicates Error 37.

1. Open the upper cover of the machine. The phase sequence monitor is lit and the light is red.
2. Switch the phases on the supply cable.

Machine Behaves Differently than Expected

The reason could be that the machine type was selected incorrectly, for example 16 kg / 35 lb / 345 L instead of 13 kg / 27 lb / 285 L.

1. Open the machine upper cover.
2. Switch over an option button "Programming / Operational mode" to programming mode.
3. Check the type of machine and type of heating or further settings in configuration menu. Refer to Programming Manual.

Mode of Waiting Occurs and the Counter Counts OFF

This is a situation when the power supply was interrupted or it is safety sequence of the machine.

1. Wait until the counter reaches the value 0.
2. Do not switch power supply off and on again because the counter would reset.

Error Message "Unload" and "Door is Open"

If the door is closed and there is a message on display "Door is open" or the door is open and there is a message on display "Unload". It is probably a defect on the door microswitch.

1. Check function of the door microswitch.
2. Push pointer of the door microswitch using a screwdriver.
3. If the message "Door is open" disappears, it is necessary to adjust the microswitch position. Refer to Chapter *Door Switch*.
4. If the microswitch does not react, it is necessary to replace it. Procedure for the following adjustment is the same.

Error Message "Door Filter"

1. Check, if the door of lint filter is closed correctly.
2. Push the microswitch button and check if the microswitch is functional.
3. If so, remove the frontal panel and adjust the microswitch box to the correct position.
4. If the microswitch is not functional, replace it.

Warning "Lint Filter"

For the machine correct function it is necessary to clean the lint filter every day. The machine is equipped with the cycle counter, after 15 cycles an error message "Lint filter" is displayed. If the lint filter is not cleaned even after the following 40 cycles, the machine is disabled. Operator must open the panel of lint filter and clean the filter.

1. Stop the machine.
2. Open the lint filter panel.
3. Clean the filter.
4. Close the panel of lint filter.

5. Press the button "Service".
6. Pressing the right arrow, skip the service message and check if the counter of cycles for cleaning the lint filter was reset. In case of the counter failure proceed according to Programming Manual, Failure 28.

Machine Drum does not Rotate

1. Check if the belts are not damaged and if they are tight properly. Refer to Chapter *Belts Tightening*.
2. Check the motor voltage.
3. Check the motor function. Possibly thermal protection of the motor was damaged.

Machine does not Reverse (Valid for Machines with Reverse)

1. Check if reverse is ON. Button "Reverse cycle".

Recommended Spare Parts

- Heating element
- Thermostat
- Microswitch
- V-belts
- Contactor
- Fuses
- Door gasket
- Ventilator

Find more detailed information and order codes, refer to your machine's Parts Manual.

Disposal of Unit


Disconnecting the Machine

1. Switch off the external electric power inlet to the machine.
2. Turn off the main switch on the machine.
3. Shut the external steam or gas inlet to the machine.
4. Make sure that the external electric power, steam or gas inlets are shut off. Disconnect all electric power, steam or gas inlets.
5. Insulate the external electric power inlet conductors.
6. Equip the machine with a sign "OUT OF SERVICE".
7. During transportation follow the instructions stated in chapters: *Important Information Before Installation*, paragraph "For transportation and storage", *Handling, Transport and Storage*.

In case the machine will never be used again, secure it so that injury of persons, damage to health, property, and nature is avoided. Make sure enclosing of persons or animals inside the machine cannot occur, injury of persons by moving or sharp parts of the machine, possibly operating fills, (for example remove the door, secure the drum against turning, ... and similar.)

BE CAREFUL, FALLING DOOR AND GLASS CAN CAUSE INJURIES!


Machine Disposal

	WARNING
TAKE ALL NECESSARY ACTION AND PRECAUTIONS WHEN DOING DISASSEMBLY OF THE MACHINE TO AVOID INJURIES BY GLASS OR SHARP METAL EDGES.	
C144	


POSSIBILITY OF THE MACHINE DISPOSAL BY THE SPECIALIZED COMPANY

Information concerning the WEEE-directive (Waste Electrical and Electronic Equipment, for European Union member states only):

- For the production of the machine that you have purchased, natural resources are being reclaimed and used. The machine can contain substances which are dangerous for health and environment.
- When you dispose of your machine, to avoid spreading of these substances in our environment and to reduce the pressure on our natural resources, we encourage you to use the collection, reuse and recycle system of your region or country. These systems reuse or recycle most of the components.

-  The symbol "crossed out bin on wheels" invites you to make use of these systems.

- If you wish more information concerning the systems for collection, reuse or recycling of disposed machines, you can take contact with the competent administration of your region or country (waste management).
- You can also take contact with us for more information concerning the environmental performances of our products.
- Please, consider that the WEEE directive is generally only valid for household machines. In some countries professional

machines are added, in others not. Therefore the symbol  may not be present.

- Info for dealers: Due to the diversity of the national legislations, manufacturer can not take all the measures to be in accordance with all national legislations of each member state. We expect that each dealer who imports our appliances into a member state (and puts it on the market) takes the necessary steps to be in rule with the national legislation (as the directive requires).

POSSIBILITY OF THE MACHINE DISPOSAL BY OWN POTENTIAL

It is necessary to sort out the parts for metal, non-metal, glass, plastics etc., and bring them to recycle places. The sorted out materials has to be classified in waste groups.

Offer the sorted waste to the company which is competent for further treatment.

China Restriction of Hazardous Substances (RoHS)

The Table of Hazardous Substances/Elements and their Content. As required by China's Management Methods for Restricted Use of Hazardous Substances in Electrical and Electronic Products.

Hazardous substances						
Part Name	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR[VI])	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Motor	O	O	O	O	O	O
Pump	O	O	O	O	O	O
Heater	O	O	O	O	O	O
Door lock	O	O	O	O	O	O
Power cord	O	O	O	O	O	O
Control panel	O	O	O	O	O	O
Cabinet	O	O	O	O	O	O
Belt	O	O	O	O	O	O
Chassis	O	O	O	O	O	O
Fastener component	O	O	O	O	O	O
Other metal	O	O	O	O	O	O
Other plastic	O	O	O	O	O	O

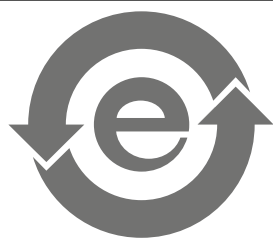
This table is prepared in accordance with the provisions of SJ/T-11364.

O: Indicates that the content of said hazardous substance in all of the homogenous materials in the component is within the limits required by GB/T 26572.

X: Indicates that the content of said hazardous substance exceeds the limits required by GB/T 26572 in at least one homogenous material in the component.

All parts named in this table with an "X" are in compliance with the European Union's RoHS Legislation.

NOTE: The referenced Environmental Protection Use Period Marking was determined according to normal operating use conditions of the product such as temperature and humidity.



CZW34N