

# CMT270

## Rack Conveyor Dishwasher Up to 270 Racks Per Hour



### CMT 270 Rack Conveyor Dishwasher - Key Features

#### The CMT 270 Features:

- Heavy duty prewash (820mm long module)
- Integrated Power wash and rinse (Power wash - 950mm, final rinse - 200mm) (1150mm in total)
- Optional Heat recovery system and drying tunnel.

#### Proportional Rinse System

This exclusive system has a rinse booster pump to ensure constant rinse water pressure during operation. It also uniquely adjusts the water usage to match the output speed of the machine; significantly reducing the water consumption when the dishwasher is operated at intermediate speeds.

#### WRC Approved

Water is fed via a WRC approved circuit with a stainless steel break tank

**Extremely Low Water Consumption,** The CMT 270 operates from 1.1L per rack, making it one of the most efficient machines on the market.

#### Patented Double Flow Pumps

The Prewash and wash modules use a wash system with powerful patented double flow pumps to create a 'hydraulic brush' and 'water box' effect ensuring perfect cleaning.

#### Three-Stage Water Filtering System

The three-stage water filtering system ensures the best quality results and also comes with a strainer that can be removed for cleaning without opening the modules door.

#### Full Double Wall Construction

The CMT range all feature noise reducing and heat retaining double wall construction, plus insulated counter-balanced doors, giving full access for all internal cleaning.

- Wash temperature between 60 - 63°C and rinse temperature between 65 - 82°C (depending on wash program)
- Available in three versions – Cold Feed, cold feed with heat recovery and hot feed (>45°C).
- LED numeric screen and soft touch operation for ease of use.
- Standard USB connection to external controls and optional plug-in connection module for Bluetooth and WiFi connections.
- Four specialised wash programs for maximum flexibility. Max capacity – 270 racks/hr.

## Main Features

- **Prewash Module**
  - 820 mm long, double skinned with insulated full-length counter-balanced inspection door.
  - 70 L deep drawn tank,
  - 3 stage progressive water filtering concept:
    1. drawer-like strainer with 3 mm mesh,
    2. integral tank strainer with 2.5 mm mesh, both in stainless steel,
    3. safety strainer on the pump intake.
  - Double flow 1.500 W wash pump (as effective as a 2.000 W traditional single-flow unit),
  - Three wash arms in stainless steel with 12 specially conformed Idrowash nozzles each. Maximum soil removal action ensured by the "water box" and "hydraulic brush" effects.
- **Integrated Wash and Rinse Module**
  - 1.150 mm long, double skinned with insulated full-length counter-balanced inspection door.
  - 70 L deep drawn tank,
  - 3 stages progressive water filtering concept:
    1. drawer-like strainer in stainless steel with 1 mm mesh.
    2. integral tank strainer with 2.5 mm mesh in procomposit composite material.
    3. safety strainer on the pump intake.
  - Double flow 2.700 W wash pump (as effective as a 3.200 W traditional single-flow unit), five wash arms in stainless steel with 12 specially conformed IdroWash3 nozzles each. Maximum soil removal action ensured by the "water box" and "hydraulic brush" effects. Wash temperature between 60 and 63 °C depending on the selected wash program, 10.500 W high power heating element.
- **The Rinse Module**
  - 550 mm long and equipped with the well known UltraRinse<sub>3</sub> system using four lines of water sprayers. The fourth one is fed by fresh hot water, the third and the second use an high volume of recirculated water, powered by a dedicated pump, the first line is located at the end of the wash tank and removes most of the detergent before the plates reach the rinse zone. This highly efficient use of rinse water allow to reduce the water consumption to really minimum values. Deep drawn water collection tank with integral tank strainer is s/s.
- **Final Rinse**
  - Uses fresh external water and is located in a 200 mm long section; it includes an upper and a lower arm fed by a dedicated 17L boiler with electrical heating elements in incoloy alloy. The boiler is fed through a prorinse hydraulic circuit including a WRC approved break tank and an high power rinse booster pump to grant a consistent rinse pressure in operation.
- **Proportional Rinse System**
  - This exclusive system has a rinse booster pump to ensure constant rinse water pressure during operation. It also uniquely adjusts the water usage to match the output speed of the machine; significantly reducing the water consumption when the dishwasher is operated at intermediate speeds. Enormously increasing the rinse efficiency and up to 25% savings on running costs.
- **Hi-Tech Rinse Arms** in composite material with flow conformal water channel to minimize the loss in pressure and maximize efficiency. Spray nozzles are high precision units in stainless steel. Easy to fit in place.
- **Prowind Drying Area**
  - 600 mm long operating with dry air from outside the machine. 3 upper splits originate high pressure air blades at a temperature of approximately 65°C. The air is powered by a 550 W fan with a delivery of 1.400 m<sup>3</sup>/hr and heated by a 6.000 W (optional 9.000 W) electrically operated unit. This external module is equipped with a dedicated drain circuit and is available as a factory mounted option or as an after market kit.
- **Total Clean Construction Concept**
  - With deep drawn tanks, internal chambers without pipes or dirt traps, fully accessible tanks due to the side rack drive rails, multiple removable strainers that keep most of the dirt out of the tanks, self cleaning wash pumps, full access underneath the machine for cleaning and adjustable feet.
- **Optional Built-in Proheat System** recovers the latent condensation heat of the steam and uses it to heat the incoming cold water for the final rinse from 15 °C to approx.. 40 °C with a significant energy saving. There are 2 alu/copper heat exchange batteries with a total surface of 50 m<sup>2</sup>, easily accessible for cleaning, and the steam is moved by a 180 W fan with a delivery of 700 m<sup>3</sup>/hr. Available as factory mounted device only.

- **Energy Saving Rinse Economizer** that stops the water spraying when there isn't any rack in that specific area of the machine.
- **Energy Saving Time Controlled Wash Autotimer** Stops all the pumps and services if there are no racks to wash inside the machine. The temperatures are kept at the correct level so that the machine can be restarted at any moment by simply introducing a rack.
- **Thermostop Device**  
Automatically stops the advancing of the racks until the correct temperature in the boiler is restored.
- **High Clearance Height**  
Clearance enhanced up to 45 cm allowing an easy wash even of the tallest thermos insulated trays.
- **Optional ProDose Chemical System**  
Pre-arrangement for the installation of chemical pumps is available the prodose system composed of detergent and rinse aid peristaltic pumps electronically controlled and fully adjustable from the control panel
- **Double Rail System** with side sled with alternative movement. High resistance and high rigidity side rails with 30/10 AISI 304 advance teeth
- **Clog-proof Drive Motor** installation without friction elements. Multiple motor speeds allowed.
- **ProSmart Advanced Soft Touch Interface** including a wide easy to read four digits LED screen; two color changing bars to supply all-at-a-glance information about the machine status. Allows to manage any function and module of the machine, as well as to record functional data and to connect the dishwasher to external equipment and to the web. Built in USB connection, optional plug-in internal board for Bluetooth and Wi-Fi connection.

**Optional emergency stop switch**

**Optional built-in main switch**

**IPX 5 water protection**

**User interface ergonomically placed at eye's level**

**All parameters are fully adjustable**

## Performance and Connections

- Up to four different selectable programs (depending on the model), different for capacity, wash temperature, wash pump power, rinse temperature, hourly rinse water consumption.
  - 1. High Capacity:** for freshly, lightly soiled items
  - 2. General Purpose:** suitable for most applications
  - 3. Prolonged Contact:** allows a contact time of 120" (**DIN spec 10534**)
  - 4. Glasses:** lower rinse temperature, more delicate wash
- Water consumption is extremely limited, with a minimum of 0.8 ltrs/rack and a maximum of 1.6 ltrs/rack. The consumption depends on the selected program as shown in the specific table.
- Electrical connection 400V – 50 Hz – 3 ph + N
- Maximum electric load with cold feed W 37.700
- Maximum electric load with heat recovery W 31.100
- Maximum electric load with hot feed W 28.200
- Minimum feed water temperature 15°C
- Minimum feed water temperature for hot feed power 45°C
- Maximum feed water feed 60°C
- Minimum dynamic water pressure 1.0 bar

## Programs

CMT 270	Wash temp approx. °C	Rinse temp. °C	Capacity racks/hr	Rinse Ltrs/hr	Rinse Ltrs/rack
High Capacity	63	85	270	220	0.8
General purpose	60	85	200	160	0.8
Prolonged contract	63	85	140	160	1.1
Glasses	60	65	140	220	1.6

## Features

Standard features	CMT 270
Modular Construction promont	●
Entry clearance 45 cm	●
Full double wall construction	●
Fully insulate double wall doors	●
Deep drawn tanks	●
Wash chambers without internal piping	●
Internal tank strainers prostrainer	●
Drawer-like additional strainer in each tank	●
Progressive water filtering progressive	●
Safety filters on pumps intake	●
Heavy duty prewash XL	●
Heavy duty wash module	●
Double flow pumps duoflow	●
Wah arms idrowash	●
Hydraulic brush cleaning system	●
Side rack rails	●
Electronic control of rack speed	●
Heavy duty dryer prowind	●
Intergrated rinse isyrinse	●
Intergrated rinse toprinse	●
Water feed via break tank according to WRAS regulation rinse pump duoflow	●
Adaptive rinse proportional	●
Rinse arm itech	●

Standard features	CMT 270
Power management	●
Propower rinse economizer	●
Time controlled wash	●
Autotimer LED interface	●
Prosmart	●
Four wash programs	●
Fully adjustable	●
Advanced self diagnostic	●
Built-in USB Connection	●

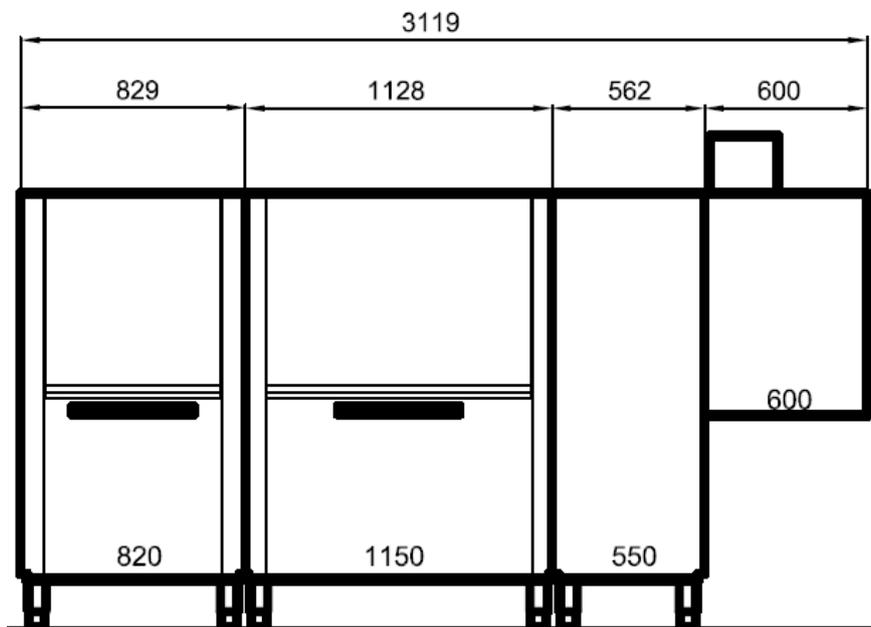
Optional features	CMT 270
Heat recovery system	●
Drying tunnel	●
Drying tunnel on 90 ° curve	●
Corner prewash	●
300mm hood on entry	●
Side detergent dispenser	●
Chemical product's level	●
Probe emergency switch	●
Main switch on board	●
End limit switch	●
USB and Wi-Fi plug in board	●

Supplies	Units	CMT 270
Water		
Inlet water pressure	bar	1,0-4,0
Inlet water hardness	°fH	7-15
Cold water temperature	°C	10-45
Hot water temperature	°C	45-60
Incoming water line size		3/4"GM
Drain line size		1.5"GM
Initial fill requirement	Ltrs	157

Key Information	Unit	CMT 270
Reversible on site		no
Productivity -max-gen.Purp	r/h	270-200
Productivity -with 2' contact time	r/h	140
Productivity - glasses	r/h	145
Water consumption max	Ltrs/h	220
Water consumption min	Ltrs/h	160
Noise level	db	<70

Supplies	Units	CMT 270
Electric		
Electric supply voltage		400V-50Hz-3N ph
Maximum absorbed power (coldfill set) with heat recovery	w	37.700
Maximum absorbed power (coldfill set)	w	31.100
Maximum absorbed power (hot fill set)	w	28.200
Max current absorbed (cold fill set)	A	63 (80 with optionals)
Max current absorbed (hot fill set)	A	50 (63 with optionals)

Key Information	Units	CMT 270
Dimensions	mm	
Table to table length	mm	2.519
Depth	mm	770
Height	mm	1,588
Height with open doors	mm	2,088
Adjustable feet range	mm	195 ± 35
Charging width	mm	540
Charging clearance	mm	450
Other items included		
Racks for 18 plates	n°	1
Flat racks	n°	1
Drain hose	n°	1
Fill hose	n°	1
Electric power cable	n°	not included
End limit switch	n°	not included



## Main technical features

Features	Units	CMT 270
Overall dimensions (w x d x h)	mm	1.968 x 770 x 1.588
With drying tunnel add to the total width	mm	600
Adjustable feet's height	mm	195 ± 35
Rack size	mm	500 x 500
Usable height	mm	450,0
Mouth width	mm	540,0
Construction material (tanks and wash chambers)		AISI 304
Construction material (outer panels)		AISI 201
Construction material (back external cover)		skin plated sheet iron
User's inteface	type	pro smart (LED screen)
Interface positioning		on the jamb
Rinse activator		electronic
Auto timer (Timer controlled wash)		electronic
Thermostop (electronic)		electronic
USB slot		standard on the board
Prewash module - width	mm	820
Prewash module - construction		double skin
Prewash module - door		double skin and insulated
Prewash module- tank volume	Ltrs	70
Prewash module - tank strainers		yes - composite material
Prewash module - drawer - like strainer (sieve 3mm)		standard - stainless steel
Prewash module - wash pump's type		double flow
Prewash module - wash pump's power	w	1,500
Prewash module - wash pump's delivery	Ltrs/min	720
Prewash module - wash arms n"/type		3 (2 sup - 1inf)
Toatl number of nozzels		36
Main wash module - lenght	cm	1.150
Main wash module - construction		double skin
Main wash module - door		double skin and insulated
Main wash module - tank's volume	Ltrs	70
Main wash module - tank's heating element	w	10,500
Main wash module - tank's strainers		Standard - Prostrainer
Main wash module - drawer- like strainers		standard - stainless steel
Main wash module - drawer - like strainer ' sieve	mm	3,0
Main wash module - wash pump's type		double flow
Main wash module - wash pump's power	w	2.700
Main wash module - wash pump's delivery	Ltrs/min	1.050
Main wash module - wash arms n"/type		5 (2 sup - 1inf)
Main wash module - total number of wash nozzles		60
Multiple rinse module - length	mm	550
Multiple rinse module - construction		double skin
Multiple rinse module - door		no
Multiple rinse module - tank volume	Ltrs	5
Multiple rinse module - recirculation pump power	w	200

Features	Units	CMT 270
Multiple rinse module - drain pump power	w	40
Flow of rinse water transferred to the wash tank	Ltrs/hr	100
Multiple rinse module - rinse flow variation system	w	yes
Rinse arms		(1 sup/1 inf)=(2 sup/1 inf)+(1 sup)
Multiple rinse module - boiler's type		pressurized by the pump
Multiple rinse module - boiler's volume	Ltrs	17
Multiple rinse module - type of rinse		prorinse
Multiple rinse module - rinse flow variation system		proportional
Multiple rinse module - break tank		yes
Multiple rinse module - rinse booster pump		yes-double flow
Multiple rinse module - rinse booster pump power	w	200
Multiple rinse module - rinse booster pumpflow rate	Ltrs/min	110
Minimum external pressure	bar	1.0
Main wash module - heat recovery system		optional proheat
Main wash module - heat recovery system - N° of batteries		2 - alu/copper
Main wash module - heat recovery system - total exchange surface	m2	50
Main wash module - heat recovery system - fan power	w	180
Main wash module - heat recovery system - air delivery	m3/hr	700
Main wash module - temperature recovery from 15°c	°c	25
Drying module		optional prowind
Drying module - total length	mm	60
Drying module - construction		single skin
Drying module - door		no
Drying module - drain circuit		yes
Drying module - fan power	w	550
Drying module - fan delivery	m3/hr	1.400
Drying module - heating element	w	6.000
Drying module - temperature of blowed air	°c	65
Drying module - n° of upper air blowing ducts		2
Drying module - lower air flow diversion winglets		no

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