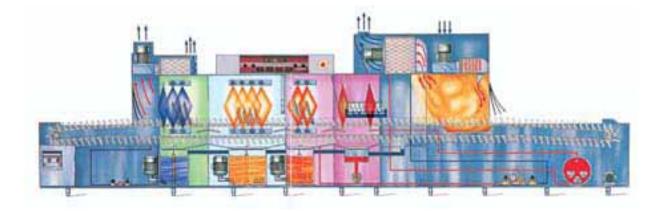
# TUNNEL DISHWASHERS, "N" SERIES



# **ONGELO PO**

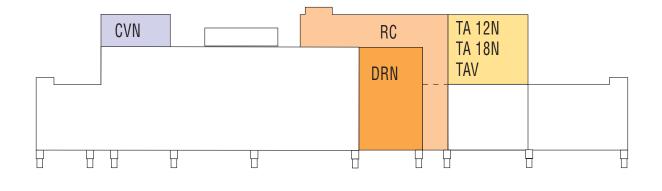
ELECTRIC MODEL		N 3	303	N 354		N 506		N 607		N 760		N 886		
STEAM MODEL		N 3	03 V	N 354 V		N 506 V		N 607 V		N 760 V		N 886 V		
SECTIONS		• washin • rinsing		• prewashing • washing • rinsing		prewashing     washing     forced     prerinsing     rinsing		• prewashing • 1° washing • 2° washing • rinsing		prewashing     1° washing     2° washing     forced     prerinsing     rinsing		prewashing     1° washing     2° washing     3° washing     forced prerinsing     rinsing		
OUTPUT	1° speed	2020 d	lishes/h	2360 dishes/h		3370 dishes/h		4050 dishes/h		5060 dishes/h		5900 dishes/h		
UUIFUI	2° speed	3030 d	lishes/h	3540 dishes/h		5060 dishes/h		6070 dishes/h		7600 dishes/h		8860 dishes/h		
PREWASHING	tank capacity			Lt 70		Lt 70		Lt 70		Lt 70		Lt 70		
	pump power			kW 1,1		kW 1,1		kW 1,1		kW 1,1		kW 1,1		
	tank capacity	Lt 100		Lt 100		Lt 100		Lt 100		Lt 100		Lt 100		
1° WASHING	pump power	kW	2,7	kW 2,7		kW 2,7		kW 2,7		kW 2,7		kW 2,7		
	tank heating	kW 12	kg 20,5	kW 12	kg 20,5	kW 12	kg 20,5	kW 12	kg 20,5	kW 12	kg 20,5	kW 12	kg 20,5	
2° WASHING	tank capacity					1		Lt 110		Lt 110		Lt 110		
	pump power							kW 2,7		kW 2,7		kW 2,7		
	tank heating							kW 14	Kg 20.5	kW 14	Kg 20,5	kW 14	Kg 20,5	
3° WASHING	tank capacity											Lt 1		
	pump power											kW 2,7		
	tank heating											kW 16	Kg 20,5	
FORCED PRERINSING	tank capacity					Lt 90				Lt 90		Lt 90		
	pump power						kW 1,1				kW 1,1		kW 1,1	
	tank heating					kW 16	Kg 20,5			kW 16	kW 20,5	kW 16	Kg 20.5	
RINSING	water supply 55°C	Lt/h	350	Lt/h 380		Lt/h	460	Lt/h	Lt/h 550		Lt/h 600		Lt/h 670	
	boiler	kW 24	Kg 30	kW 24	Kg 30	kW 27	Kg 30	kW 30	Kg 40	kW 36	Kg 40	kW 40	Kg 40	
MOTORGEAR		kW 0,3		kW 0,3		kW 0,3		kW 0,3		kW 0,3		kW 0,3		
TOTAL EL. INPUT		kW 39		kW 40		kW 63		kW 63		kW	86	kW 108,5		
STEAM 0,5 ÷ 2 bar		kW 3	kg 50,5	kW 4,1	kg 50,5	kW 5,2	kg 71	kW 6,8	kg 71	kW 8	kg 102	kW 10,7	kg 122	
INCLUDED BASKETS		n. 4 mod. IP8 + n. 2 mod. CG n. 1 mod. CG						n. 4 mod. IP8 + n. 2 mod. CG n. 2 mod. CG			n. 6 mod. IP8 + n. 3 mod. CG + n. 2 mod. CG			



# INNOVATIVE TECHNOLOGY FOR HIGH PERFORMANCE

# **ONGELO PO**

MODEL			/N <sup>r</sup> )	TA12N	TA18N	TAV		DRN Replacing standard rinsing unit		RC (*)
DESCRIPTION			vacuum tem	dryer				doub	heat recov. device	
			l/h	kW	kW	kW	kg	kW	kW vasca	kW
MOTOR POWER				0,75	1,1	1,1		0,1		0,5
BATTERIES AND	ELECTRIC			12	18				(4,5)	
HEATING ELEMENT POWER	STEAM						25			
WATER CONSUPTION 12°C			400							
TOTAL			400	12,75	19,1	1,1	25			
MACHINES DIM. MODIFICATIONS	L cm			+ 40			+ 20		+ 40	
	N 303									
	N 354									
AVAILABLE ON	N 506									
MODELS	N 607									
	N 760									
	N 886									
* To be assembled with drying tunnel - water supply at 12°C										



Designed to offer high throughput, shorter cycle time, excellent reliability with every type of dish, pans or trays. Fully electric with low pressure steam.

#### **CONSTRUCTION FEATURES**

Our tunnel dishwashers have a 3 mm thick stainless steel support structure fixed to height adjustable feet. All panel cladding is in 18-10 satin-finish stainless steel. The pre-wash, wash and rinse chambers are all in 18-10 stainless steel with sloped bottom to facilitate drainage at the end of each wash cycle.

Tub overflows can be operated with a lever located at the top of the tubs.

The snap-mounting spray wash and rinse arms and the intake and delivery pipelines are in 18-10 stainless steel.

All the materials used are unaffected by detergents and will not be warped by high temperatures.

All tunnel dish washers carry the CE certificate.

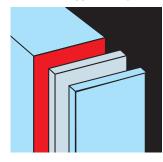
**THE DISH DRIVE BELT** is in 18-10 stainless steel with drive wheels and plastic dish holding bins. The working space between the dish supports is 45 mms. These supports are easily replaced if broken. Belt drive is provided by a 2-speed gear unit with clutch. A limit switch at the end of the tunnel stops belt movement if the dishes have not been removed.

The dimensions of the belt and the internal construction of the washer give a working space of 640X485 mm for all models.



The strength of the appliance is assured by the 3 mm thick stainless steel base.

The cladding in AISI 304 stainless steel panels and insulating material reduces heat loss and makes the appliance quieter.





### ALL MODELS HAVE THE FOLLOWING CONTROLS AND SAFETIES:

- START/STOP buttons on the control board and at both ends of the tunnel washer;
- electric control at the top of the machine with all controls. The board is protected from splashes and supplied at low voltage (24V);
- factory set pressure reducer to ensure the required volume of rinse water and to eliminate the risk of excessive flow rate;
- stop device at the end of dish output connected to belt movement and the rinse solenoid;
- pressure switch for automatic water level control in the tubs to protect the pump and the heating elements;
- motors and electric pumps protected by thermal relays and circuit breakers controlled by overload cutouts;

- heating elements controlled by overload cutouts and circuit breakers;
- leds to signal fault in any motor;
- thermometers to check work temperature visually (pre-wash, wash, rinse);
- temperature control and automatic cold water feed in the pre-wash tubs (to keep the temperature at 40°C for improved results);
- vertically hinged inspection and machine interior access hatches with safety interlocks to stop operation when opened;
- economiser connected to the rinsing section, to ensure it only operates when dishes are passing.
- rinse water is recovered by a by-pass or overflow system and delivered to the pre-wash or wash tubs. This offers continuous and through dilution of the dirt dissolved in the water.



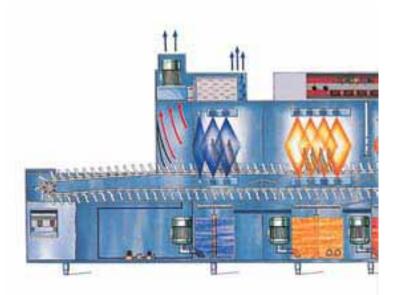
The self-emptying vertical washing pumps ensure no water remains in the circuit at the end of the cycle, preventing unpleasant smells from forming.



# FAST, POWERFUL AND RELIABLE DISHWASHERS

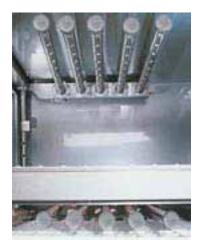


Electrical panel with protected control devices supplied at low voltage.





Effective washing is assured by a double bank of spray wash arms allowing the water to reach all parts of the dishes. The spray wash arms are removable without the aid of tools and are easy to clean.



# ROUTINE AND EXTRAORDINARY MAINTENANCE IS FACILITATED BY:

- the filters on the tubs and on pump suction lines;
  all the controls accessed from the front;
- two inspection hatches, one at either end of the tunnel;
- easy cleaning spray wash and rinse arms. These snap into place and are equipped with plugs for scale removal.

## ACCESSORIES

Depending on specific work needs, all models can be equipped with the following accessories:

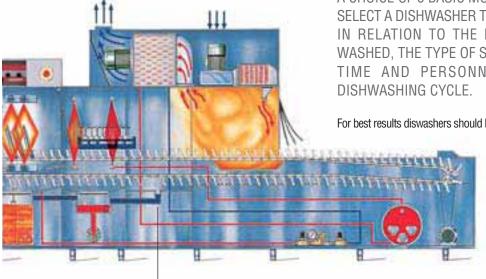
## STEAM AND CONDENSATION EXHAUSTING CVN

This should be located at machine intake. It suctions the steam from the machine and condenses it on the cooling unit supplied with cold water. This unit reduces the amount of steam in the work area.

## DRYING TUNNEL TA 12N - TA 18N - TAV

This is heated by electric heating elements or steam heaters. A fan directs a powerful jet of air on the dishes at exit. To reduce energy needs, only part of the air required is aspirated from the outside and drawing hot air into the washing tunnel. Drying is particulary efficient for trays, silverware and stainless steel pans. Drying power varies depending on the model chosen. WITH THE DRYING TUNNEL THE **CVN MODEL IS SUGGESTED**.





A CHOICE OF 6 BASIC MODELS ENABLES THE USER TO SELECT A DISHWASHER THAT GIVES THE BEST RESULTS IN RELATION TO THE NUMBER OF PIECES TO BE WASHED, THE TYPE OF SOILING AND THE AMOUNT OF TIME AND PERSONNEL AVAILABLE FOR THE DISHWASHING CYCLE.

For best results diswashers should be supplied with water softened to 7 - 12 F.

Neutral elements (40 or 60 cms) always between pre-wash and wash cycles.

### **HEAT RECOVERY UNIT RC**

It permits the machine to be supplied with cold water and to use the heat generated by the hot air drier, the hot steam from the wash tubs and the outside environment. It must be combined with a drying tunnel.

#### **DOUBLE RINSE DRN**

The rinse water is recovered in a special 14 liter tank from where an electric pump delivers it to the two top and bottom pre-rinse spray arms. This device saves on the amount of rinse water needed and improves the results by increasing the heat absorbed by the dishes and thus improving their drying.

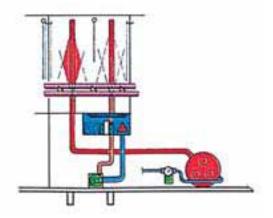
#### **NEUTRAL SECTIONS**

Neutral further element for tunnel dishwasher. It separates pre-wash and washing phases avoiding the mixing of cold and hot water. Especially recommended to be installed on dishwashers with high output of trays and isothermal trays interchanged with different crockery. Made in 18-10 stainless steel it is supplied already assembled with the washing machine.

### **SPECIAL VERSIONS**

Special versions are available to meet specific needs. For example:

- additional drying tunnel if the type of items washed or service needs impose perfect drying parameters;
- the unit is shipped in a number of parts to facilitate delivery and installment.

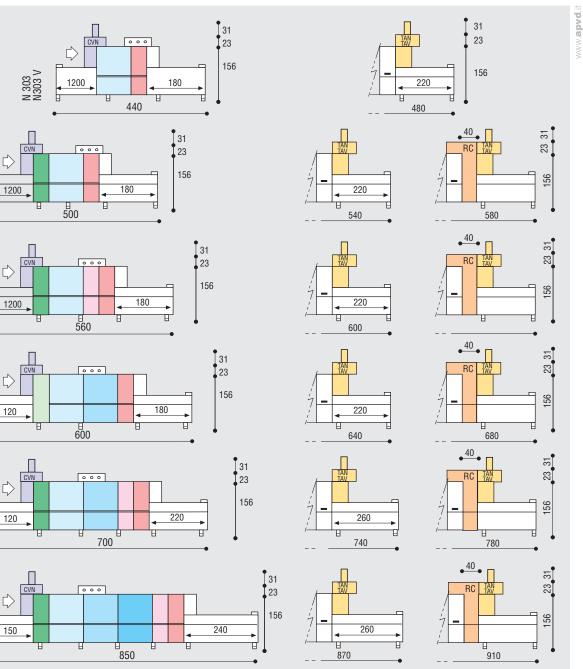


The double rinse DRN cycle with an electric pump for the recovery of rinse water and an economy device.

Each appliance is supplied by solenoid valves with reinforced coils to ensure optimum performance.

A pressure reducer regulates the pressure of intake water, thus improving the performance of the appliance and preventing unnecessary waste.





WIDTH OF MACHINES: CMS 91 - HEIGHT CMS 235



ANGELO PO Grandi Cucine SpA 41012 CARPI (MO) - ITALY S/S Romana Sud, 90 Tel. +39/059/639 411 Fax +39/059/642 499 http:www.angelopo.it E-mail: angelopo@angelopo.it

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In line with policy to continually improve its products Angelo Po Grandi cucine reserves the right to change specifications and design without notice.



Представительство на территории РФ:

a/я 7, 117485, Россия, Москва, Миклухо-Маклая, 23 Б, т/факс: 007+495+101 3986 e-mail: gabel@dol.ru, www.praktika.df.ru

Quality System Certified UNI EN ISO 9001:2000

Certification n ° CSQ 9190.ANPO