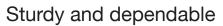
## **Hood dishwashers**







# **The Benefits**

### **Productivity**

Anyone purchasing an industrial dishwasher has a specific purpose: TO WASH LARGE QUANTITIES OF DISHES IN THE SHORTEST POSSIBLE TIME. When you choose a machine and consult the sales brochures of various manufacturers, you will see that the figure most often quoted is the

### **Theoretical productivity**

This value does not reflect the real-life use of the machine as it only takes into account the shortest wash cycle; for example, a dishwasher with a 60" cycle will have a theoretical productivity of 60 racks (1080 dishes) per hour. However, in reality, a cycle can never be shorter than the recovery time determined by the thermostop, i.e. the time taken by the boiler to bring the water up to the correct temperature for rinsing. The recovery time for any type of dishwasher can be calculated using a simple formula from the following parameters: rinse temperature, water supply temperature, boiler power and water consumption per cycle.

For example, given a rinse temperature of 80°C, a water supply temperature of 15°C and 6 kW boiler, the recovery time will vary as follows according to the water consumption per cycle: 136" for 3 litres, 113" for 2.5 litres, 91" for 2 litres. So, the machine you bought thinking it was capable of washing **1.080 plates per hour** will in reality only be able to wash **between 468 and 702, which is 57% to 35% LESS.** 

Sales brochures often contain phrases of the type "Important: the Thermostop may reduce productivity if the water supply temperature is less than 50 °C", which may serve to justify this shortfall, but fail to give an idea of what sort of productivity the user might reasonably expect to achieve.

### **Practical productivity**

This figure takes into account the recovery time required to unload and load the machine between cycles and is an indication of the maximum productivity that can be obtained in the best real-life operating conditions when several cycles are performed in succession. Colged provides this information based on a water supply temperature of 15°C (as the majority of installations run on cold water) and an average load/unload time of 10".

### **Colged productivity**

The new generation of Colged dishwashers has been designed to offer the highest real-life productivity thanks to the application of technologies to shorten the recovery time, particularly by reducing water consumption. Shorter wash cycles mean higher temperatures are needed to obtain good results, and for this reason our new dishwashers use an electrical power division system, with total consumption always below 16 amp, and an effective tank temperature that is 10 °C higher than previous generation machines in the case of repeated washes. We are therefore able to offer dishwashers with a practical productivity ranging from 45 to 50 racks/hour, depending on the model. These are absolutely the highest values on the market for the respective product classes.

Furthermore, to reduce the time needed to prepare the machine at the start of the work shift, we offer **QuickReady** technology, which utilises all the available electrical power to heat the tank water.





#### Maximum theoretical productivity with a rinse temperature of 80°C and water supply temperature of 15°C (racks/hour)

		Boiler heating element power in kW - power consumption < 16 amp					Boiler heating element power in kW - power consumption > 16 amp				
		6,0	7,0	8,0	9,0	9,5	10,0	11,0	12,0	13,0	14,0
litres per cycle	1,6	49	57	66	74	78	82	90	99	107	115
	1,8	44	51	58	66	69	73	80	88	95	102
	2,0	39	46	52	59	62	66	72	79	86	92
-E	2,2	36	42	48	54	57	60	66	72	78	84
consumption	2,4	33	38	44	49	52	55	60	66	71	77
Insuc	2,7	29	34	39	44	46	49	53	58	63	68
Water co	3,0	26	30	35	39	41	44	48	52	57	61
W	3,5	22	26	30	34	35	37	41	45	49	52

Water supply temp. 15°C - Rinse temp. 80°C.

### **Operational flexibility**

Space is a valuable resource in any kitchen, and this is why Colged has created truly multifunctional dishwashers that are able to fulfil a variety of very different functions as the need arises. All our under-counter machines have three standard programmes for dishes, up to three programmes for self-cleaning and tank water changing and up to seven specialised programmes. All machines offer the automatic start function, where the cycle is started simply by lowering the hood.

### **Standard programmes**

Differ not only for their contact time (cycle duration), but also for their wash and rinse temperatures and water consumption. Each programme is designed for a specific purpose: **ProSpeed**: for fresh, light soiling; **ProFessional**: for general use; **ProTemp**: high temperature wash for heavy soiling.

### **Specialised programmes**

Can transform a plate washer into a glass washer, into versatile small utensil washer, into a cutlery washer and even into a machine for sanitization to current European standards. **ProGlass**: for glass and crystal; **ProWater**: special programme for osmosis water; **ProActive**: with automatic prewash for heavily soiled pans and dishes; **ProSteel**: for steel cutlery; **ProSan**: sanitization to EN ISO 15883-1/3; **ProEco**: low temperature wash for blood and starch; **ProLong**: continuous wash for dried-on dirt.

### Self-clean programmes

These programmes simplify and speed-up end-of-shift operations and allow rapid changeover of all the water contained in the wash tank. Depending on the model and the version, the machine may offer up to three programmes of this type.

**ProSelf:** self-clean cycle for machines with gravity drain; **ProNew**: total water changeover; **ProClean**: self-clean cycle with high-pressure jets for machines with **EvoLution** draining; **ProDrain**: automatic tank draining.

### **Rack dimensions**

The Colged product range comprises models with the traditional  $50 \times 50$  cm rack capable of accommodating 18 standard plates, and also models with a  $60 \times 50$  cm rack that can take 22 plates. Special racks are available for trays and glasses, with both flat and sloping bases, with and without separators and with different heights, which can be used to both wash and store glasses.

### **Hood opening width**

Operational flexibility is enhanced by the ample opening width of 45.0 cm for the **SteelTech** and **IsyTech**, models, and 46.5 cm for he **TopTech** model, which is wide enough to accommodate Gastronorm and Euronorm trays as well as miscellaneous utensils and smaller pans. These are highest values available on the market for the respective product classes.

### The service table system

Colged offers an ample choice of service tables and accessories, the majority of which may be used with any of our ranges and models, to create a work area precisely tailored to suit the needs of the user and the space available. The machines can installed in-line or as corner units without the need for additional components, and the height of the entire machine/table system from floor level can be adjusted for optimum ergonomics.

PROGRAMME	MAIN USE	Duration min. sec.	Washing °C *	Rinsing °C *	Consump min. It/cycle*
ProSpeed	Light, fresh soiling	55 - 60	55	80	1,6 - 1,8 - 2,0 - 2,2
<b>ProFessional</b>	General use	90	60	82	1,8 - 2,0 - 2,2
ProTemp	Heavy soiling - high temperature cycle	180	60 - 65	85 - 88	2,5
<b>ProGlass</b>	Glass and crystal	90	60	67	2,0
ProWater	Glass and crystal with osmosis-treated water	120	65	70	2,0
ProLong	Heavy soiling - continuous wash	600	60	82	2,5
ProEco	Blood and starch - low temperature cycle	150	45	80	2,5
ProActive	Pans and utensils - with automatic prewash	300	70	82	4,1
ProNew	Rapid water changeover	540	n.a.	60	15,0 - 22,0 - 32,0
ProSteel	Cutlery	360	72	88	2,5
ProSan	Sanitization to EN-ISO 15883-1/3	automatic	70	85	2,5
<b>ProSelf</b>	Self-cleaning	120	n.a.	n.a.	3,5
ProClean	Self-cleaning and automatic draining	300	n.a.	n.a.	12,0 - 15,0
ProDrain	Automatic draining	90 - 120	n.a.	n.a.	n.a.



3

<sup>\*</sup> Depending on model and version

## The Benefits

### **Easy cleaning**

Colged dishwashers are constructed in accordance with the **TotalClean** design philosophy to make end-of-shift cleaning operations as quick and easy as possible. This entails a number of important design features:

### Construction

No pipes inside the wash chambers, stainless steel rack guides, unblockable integral surface strainers, with 2.5 mm diameter mesh and dish-shaped to trap dirt during emptying. The hood is constructed with three movable sides and one fixed so as to convey the vapour towards the rear, thereby ensuring that the operator is not engulfed in a cloud of steam when the hood is opened.

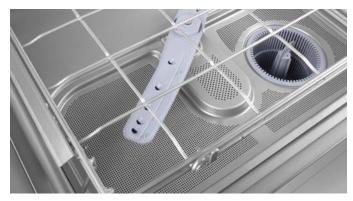
### **Functionality**

Progressive triple-stage filtration of the tank water with elimination of particles down to a diameter of 0.8 mm; programme for self-cleaning of the wash chamber; wash arms with the **EasyHandling** system, which means they can be removed simply by pressing a button and then clicked back into place.











### **Lower operating costs**

Reduced costs for water, electrical power and chemicals are an immediate benefit for users of Colged dishwashers. The cost of washing 1800 plates (100 standard racks) ranges from 5.29 to 6.46 €, according to the model; the lowest costs in their product category.

The operating cost depends greatly on water consumption, of which the greater part occurs during the rinse cycle. Colged has conducted its own research into the reduction of water consumption: even 10 years ago our **TopTech** dishwashers had a water consumption of just 1.9 litres cycle, when the majority of our competitors could do no better than 2.5 litres.

Thanks to the use of new technologies, such as the **HiTech** spray arm and **UltraRinse**<sub>3</sub> geometry, our dishwashers can now offer a water consumption of just 1.6 litres per cycle (TopTech 38-23), a reduction of over 15%.

For the other models in our range, water consumption is between 1.8. and 2.0 litres per cycle, equivalent to a reduction of between 22 and 25%.

By way of example, the table below shows the comparative costs for washing 1800 plates (100 standard racks) for various levels of water consumption, with a water supply temperature of 15  $^{\circ}$ C.

litres / cycle	€	litres / cycle	€
1,6	5,29	2,4	8,10
1,8	6,12	2,7	9,10
2,0	6,78	3,0	10,09
2,2	7,44	3,5	11,75

Some models feature the **EnergySaving** function which decreases electrical power consumption during stand-by periods by reducing the boiler temperature to the lowest possible value that allows return to the preset temperature for the selected programme before rinsing.

**NRG** models are equipped with an efficient system that recovers heat from the steam produced during the wash and rinse cycles, thereby significantly reducing energy consumption.

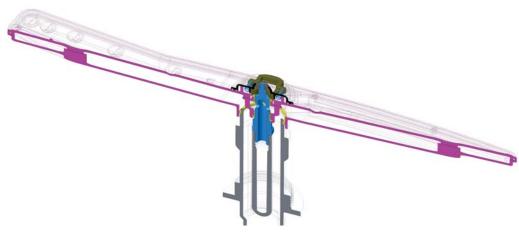
\* Costs used: water 2.0 C / m<sup>3</sup>, energy 0.17 C / kWh, detergent 3.75 C / kg, rinse aid 4.5 C / kg.

# The Technologies

### **Water distribution system**

The main component is the **HiTech** arm made from a composite material called **ProComposit** (30% fibreglass, 30% talcum microparticles, 40% organic resin). During rinsing, patented **UltraRinse**<sub>3</sub> geometry ensures that the water is used more effectively and efficiently, thereby helping to minimise consumption. The washing nozzles are at the same level as the rinse nozzles; this means that the spray is not obstructed, as is the case with the normal arrangement of separate wash and rinse arms. The arm rotates on 3 graphite bearings which reduce friction to virtually zero; this means the full force of the water from the pump is applied to wash the dishes rather than to rotate the arm via the reaction holes.

Th **HiTech** arm features a snap-fit attachment system, which makes it easy to install and remove for cleaning, even with just one hand. Its mechanical strength, elasticity, resistance to chemical attack and simplicity of cleaning make this component particularly effective.







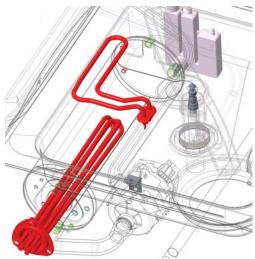
### **Washing system**

The heart of the system is the powerful pump with patented **DuoFlo** technology. Thanks to the pump's two outlets, with one outlet connected directly to the upper arm and the other to the lower arm, this system eliminates the loss of pressure caused by dividing the flow; in this way all the energy absorbed is transferred to the water, thereby achieving an effect equivalent to a conventional pump 25% more powerful. This means the same level of performance for a much lower electrical power consumption.

A shorter wash cycle, with lower water and detergent consumption, is possible only with a higher wash temperature. Unfortunately, the majority of products on the market have tank and boiler heating elements that function alternately, with priority given to the boiler for reasons of hygiene. This means that, with repeated cycles, the tank is not heated sufficiently and its temperature falls rapidly, thereby compromising washing results. On the new Colged dishwashers, the **HotWash** system instead shares the electrical power between two independent heating elements so as to allow numerous repeated wash cycles and constant heating of the tank. The result, compared with a machine with interlocked heating elements, is that the temperature is around 10 degrees higher during repeated wash cycles: this allows a shorter wash time and a shorter drying time as the plates get hotter, lower detergent consumption and consequently lower costs.

With the **ProDose** system, detergent products are dosed by an electronically-controlled peristaltic pump, which can be easily adjusted from the control panel, and which ensures constant, precise dosing of detergent and rinse aid without any wastage. On request, the machine may be equipped special level sensors that signal via a message on the display when the detergent tanks need to be changed, thereby avoiding the risk of the dosing units being damaged by running empty.





# The Technologies

### **Rinse systems**

Colged dishwashers employ a number of different rinsing systems, with different levels of complexity and performance, each of which however is capable of ensuring that certain parameters remain constant:

**Timed rinse:** uses **ThermoStop** to ensure a constant temperature at the start of the rinse cycle; the duration of the cycle is fixed, while the water consumption level depends greatly on the pressure of the mains water supply. It is used on the models 38-00 -10 -20. The minimum water consumption is 2 litres/cycle.

**Volumetric rinse:** uses **ThermoStop** to ensure a constant temperature at the start of the rinse cycle; the duration of the cycle is variable and depends greatly on the pressure of the mains water supply; the average water consumption is constant and independent of the supply pressure. It is used on the models 38-01 -11 -21. The minimum water consumption is 2 litres/cycle.

**ProRinse system:** ensures that the initial and average rinse temperatures, the flow rate, the pressure and the duration all remain constant. All the physical parameters that determine optimal rinsing are controlled and managed, and this why it is possible to get consumption down as low as 1.6 litres/cycle and achieve constant results, regardless of the characteristics of the water supply. The water is supplied via a beak tank, which conforms to WRAS anti-pollution standards, a non-pressurized boiler and a rinse water suction pump.

It is used on the models 38-02 -03 -12 -13 -22 -23.



### **Filtration systems**

Colged dishwashers are equipped with two systems for filtration and drainage of the wash waster with different degrees of complexity:

**ArchiMedes** — A patented system that exploits the principle of communicating vessels to ensure that the dirtiest water at the bottom of the tank is the first to be drained under the pressure of the cleaner water above. This simple but effective device raises the efficiency of the water changeover from the 66% generally obtained with a conventional overflow drain, to 83%; the result is cleaner water in the tank, with the possibility to reduce the amount of water used in the rinse cycle and the concentration of detergent used.

It is used on the models 38-00 -02 -10 -12 -20 -22.

**Evolution**<sub>3</sub> – A complete and effective system which uses 3-stage water filtration with progressively decreasing mesh size down to 0.8 mm. The water is drained from the bottom of the tank by a specific pump and drainage takes place after washing and before the start of the rinse cycle. This makes for a 100% efficient water changeover and maximum cleanliness of the water in the tank. It is used on the models 38-01 -03 -11 -13 -21 -23. In both systems surface filters are used (either in steel or composite material depending on the model) that extend the full width of tank and are therefore virtually unblockable. We can therefore do without the filter presence sensors or clogging sensors used on many of our competitors' models as they serve no purpose.



Certain models can be equipped with the built-in **CareFree** continuous water softener. The continuous water softener automatically performs regeneration during every wash cycle; the only action required of the operator is to top up the salt when requested by a message displayed on the screen of the user interface.

In addition to built-in systems, Colged also offers large-capacity external water softeners, in both manual and automatic versions, decarbonation systems and reverse osmosis filtration system to obtain water that is perfectly purified; osmosis water is especially recommended for washing crystal glasses and cutlery, but has no advantages for washing dishes.

















### **NRG** heat recovery system

At the end of the wash cycle, the steam in the wash chamber is aspirated through two vents in the back panel and directed to a heat exchanger made from copper and aluminium (or optional stainless steel for machines supplied with osmosis water) where the steam gives up its latent heat of evaporation to the cold water coming from the mains, which is then sent to the boiler. The steam condenses and is expelled, while the temperature of the cold water rises by approximately 20°C. The entire process takes only 30", which must therefore be added to the standard duration of the wash cycle.

The clear benefit of the **NRG** system is that water vapor is not emitted into the environment, in other words, the recovery system performs a function that otherwise would have to entrusted to an extractor hood.

The economic impact, however, is significant: if 100 cycles per day are performed with the **ProFessional** programme, the daily saving would be 4.2 kwh; this means that it is possible to save 260 € on your electricity bill in just one year.

















PROGRAMME SELECTION	39-20 D	39-21 D	39-22 D	39-22 DT	39-22 D NRG	39-23 D	39-23 DT	39-23 D NRG
ProSpeed programme	•	•	•	•	•	•	•	•
ProFessional programme	•	•	•	•	•	•	•	•
ProTemp programme	•	•	•	•	•	•	•	•
<b>ProGlass</b> programme	•	•	•	•	•	•	•	•
<b>ProWater</b> programme	•	•	•	•	•	•	•	•
ProLong programme	•	•	•	•	•	•	•	•
ProEco programme	•	•	•	•	•	•	•	•
ProActive programme		•				•	•	•
<b>ProNew</b> programme		•				•	•	•
ProSteel programme						•	•	•
ProSan programme						•	•	•
ProSelf self-clean programme	•		•	•	•			
ProClean self-clean programme and automatic drain		•				•	•	•
ProDrain automatic drain		•				•	•	•

### The TopTech serie 39

The flagship of the Colged range. Characterised by their **rack size of 60 \times 50 \text{ cm}**, these models are extremely technically advanced, with an excellent build quality and feature innovative technologies that offer the very best in terms of productivity, low consumption and easy operation. Operational flexibility is also of the highest level, thanks to a wide range of programmes, with, depending on the version, up to three standard programmes and eight specialised programmes, all of which can be easily selected from the direct access menu.

### Why to choose a TopTech series 39

This product represents the combination between a plate washer and a utensil washer, but thanks to Colged technology, the result is not just a compromise hybrid, but actually two machines in one. As a plate washer, real-life productivity is up to 924 plates per hour, thanks to the larger capacity of the 50 x 60 rack which can take 20% more plates; as a glass washer, the specialised programmes ensure delicate handling of crystal ware; as a utensil washer, the special grilled worktop allows all the available height to be used to the full, accommodating containers and racks up to 135 litres in volume, the maximum performance for this function being obtained with the **ProActive** programme with automatic prewash. The large load capacity helps keep operating costs even lower than the already very economical 38 series.

#### Construction

Full double-skin construction with thermally-acoustically insulated hood. The hood lifts smoothly and easily with no tight spots, thereby reducing operator fatigue. The hood opening of 46.5 cm is among the highest of products in this market segment. The tank is entirely press-moulded and equipped with a full-width integral surface filter, which, thanks to its large intake size, is virtually unblockable. The wash chamber is free of internal pipes and sharp corners.

#### User interface

Easy to use, reliable and complete, with four soft touch keys and a large backlit polychromatic LCD display. Unlike other dishwashers on the market, it is not just a button; the entire screen changes colour according to the operating status of the machine and the current stage of the wash cycle; this feature, combined with its position above the hood, makes the screen easy to read and interpret even from a distance. In addition to the operating parameters, such as the temperature of the tank and boiler or the number of cycles completed, the indications provided by the automatic diagnosis system are also displayed. Information is provided in the form of clear text and icons. The user can adjust the tank and boiler temperatures, the dosing of detergent and rinse aid, while our specialised technicians can modify all the operating parameters of the machine.

#### The versions

Four versions offering different equipment packages are available: with or without water softener and heat recovery system. The table on the next page shows the entire range with all the various options.

### Standard equipment

The dishwashers are equipped a plate rack and a flat rack, **both 60 x 50 cm**, a cutlery container, approved filler hose and drain hose.

TECHNOLOGIES		39-20 D	39-21 D	39-22 D	39-22 DT	39-22 D NRG	39-23 D	39-23 DT	39-23 D NRG
DuoFlow pump		03 Z0 D	00 21 0	• •	00 22 01	OS ZZ D NIIU	00 Z0 D	• •	00 20 D Mild
UltraRinse <sub>3</sub> rinse arm		•	•	•	•	•	•	•	
HiTech wash arms		•	•	•	•	•	•	•	
EnergySaving system		•	•	•	•	•	•	•	•
ProGlide hood raising system		•	•	•	•	•	•	•	
SmartClean construction		•	•	•	•	•	•	•	•
QuickReady rapid tank heating system		•	•	•	•	•	•	•	
HotWash heating system		•	•	•	•	•	•	•	•
ThermoStop rinse control		•	•	•	•	•	•	•	
		•	•	•	•	•	•	•	•
ProRinse system SmartScreen user interface		•	•	•	•	•	•	•	•
ArchiMedes drain system		•	•	•	•	•	•	•	•
Evolution <sub>3</sub> drain system		•	•	•	•	•	•	•	•
CareFree automatic water softener			•		•		•	•	•
ProDose detergent control system		•	•	•	•	•	•	•	•
ProGressive triple-stage filtration system		•	•	•	•	•	•	•	•
NRG steam condensing/heat recovery system			•			•	•	•	
CHARACTERISTICS Double-skin hood		•	•	•	•	•		•	•
		•	•	•	•	•	•	•	•
Full double-skin construction		-	-		•	-	•		•
Entirely press-moulded tank without welds	tianal nanta	•	•	•	•	•	•	•	•
Can be installed as a corner unit with requiring addit	lionai parts	•	•	•	•	•	•	•	•
Timed rinse		•							
Volumetric rinse			•	_	_	_	_	_	
Atmospheric boiler with break tank and rinse pun	np			•	•	•	•	•	•
Electronically-controlled drain pump			•				•	•	•
Stainless steel integral tank filter		•	•	•	•	•	•	•	•
Pump safety filter		•	•	•	•	•	•	•	•
Electronically controlled rinse-aid dosing unit		•	•	•	•	•	•	•	•
Electronically controlled detergent dosing unit		•	•	•	•	•	•	•	•
TECHNICAL DATA									
Maximum real productivity*	racks/hour	42	42	42	42	42	45	45	45
Maximum theoretical productivity	racks/hour	65	65	65	65	65	65	65	65
Dimensions W x D x H	cm	70x75.5 x156.5	70x75.5 x156.5	70x75.5 x156.5	70x75.5 226.4	70x75.5 x156.5	70x75.5 x156.5	70x75.5 x156.5	70x75.5 226.4
Door/hood opening	cm	46,5	46,5	46,5	46,5	46,5	46,5	46,5	46,5
Tank capacity	litres	30	30	30	30	30	30	30	30
Boiler capacity	litres	6	6	12	12	12	12	12	12
Tank heating element	W	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500
Boiler heating element	W	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000
Wash pump - power	W	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
Total power consumption	W	11.000	11.000	11.000	11.000	11.000	11.000	11.000	11.000
Power supply voltage - Phases	V	400/50/3N	400/50/3N	400/50/3N	400/50/3N	400/50/3N	400/50/3N	400/50/3N	400/50/3N
Max. current	amp	20	20	20	20	20	20	20	20
Min-max water supply pressure	bar	2-4	2-4	1-4	1-4	1-4	1-4	1-4	1-4
Min-max water supply temperature	°C	15-60	15-60	15-60	15-60	15-25	15-60	15-60	15-25









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<sup>\*</sup> Water supply temperature

\* Water supply temp. 15°C, Rack loading and unloading time 10"











PROGRAMME SELECTION	38-20 D	38-21 D	38-22 D	38-22 DT	38-22 D NRG	38-23 D	38-23 DT	38-23 D NRG
<b>ProSpeed</b> programme	•	•	•	•	•	•	•	•
<b>ProFessional</b> programme	•	•	•	•	•	•	•	•
ProTemp programme	•	•	•	•	•	•	•	•
<b>ProGlass</b> programme	•	•	•	•	•	•	•	•
<b>ProWater</b> programme	•	•	•	•	•	•	•	•
<b>ProLong</b> programme	•	•	•	•	•	•	•	•
ProEco programme	•	•	•	•	•	•	•	•
<b>ProActive</b> programme		•				•	•	•
<b>ProNew</b> programme		•				•	•	•
ProSteel programme						•	•	•
<b>ProSan</b> programme						•	•	•
<b>ProSelf</b> self-clean programme	•		•	•	•			
ProClean self-clean programme and automatic drain		•				•	•	•
ProDrain automatic drain		•				•	•	•

### The TopTech serie 38

The top models in the Colged range are extremely technically advanced, with an excellent build quality and feature innovative technologies to offer the very best in terms of productivity, low consumption figures and easy operation. Operational flexibility is also of the highest level, thanks to a wide range of programmes, with, depending on the version, up to three standard programmes and eight specialised programmes, all of which can be easily selected from the direct access menu.

### Construction

Full double-skin construction with thermally-acoustically insulated hood. The hood lifts smoothly and easily with no tight spots, thereby reducing operator fatigue. The hood opening of 46.5 cm is among the highest of products in this market segment. The tank is entirely press-moulded and equipped with a full-width integral surface filter, which, thanks to its large intake size, is virtually unblockable. The wash chamber is free of internal pipes and sharp corners. The rack support is hinged to the back panel to facilitate cleaning.

### **User interface**

Easy to use, reliable and complete, with four soft touch keys and a large backlit polychromatic LCD display. Unlike other dishwashers on the market, it is not just a button; the entire screen changes colour according to the operating status of the machine and the current stage of the wash cycle; this feature, combined with its position above the hood, makes the screen easy to read and interpret even from a distance. In addition to the operating parameters, such as the temperature of the tank and boiler or the number of cycles completed, the indications provided by the automatic diagnosis system are also displayed. Information is provided in the form of clear text and icons. The user can adjust the tank and boiler temperatures, the dosing of detergent and rinse aid, while our specialised technicians can modify all the operating parameters of the machine.

#### The versions

Versions with four different equipment levels are available, with and without water softener and heat recovery system. The entire range and the various options can be seen in the table on the next page.

### Standard equipment

The dishwashers are equipped plate rack and a flat rack, a cutlery container, approved filler hose and drain hose.





TECHNOLOGIES		38-20 D	38-21 D	38-22 D	38-22 DT	38-22 D NRG	38-23 D	38-23 DT	38-23 D NRG
DuoFlow pump		•	•	•	•	•	•	•	•
UltraRinse₃ rinse arm		•	•	•	•	•	•	•	•
HiTech wash arms		•	•	•	•	•	•	•	•
EnergySaving system		•	•	•	•	•	•	•	•
ProGlide hood raising system		•	•	•	•	•	•	•	•
SmartClean construction		•	•	•	•	•	•	•	•
QuickReady rapid tank heating system				•	•	•	•	•	•
HotWash heating system		•	•	•	•	•	•	•	•
ThermoStop rinse control		•	•	•	•	•	•	•	•
ProRinse system				•	•	•	•	•	•
SmartScreen user interface		•	•	•	•	•	•	•	•
ArchiMedes drain system		•		•	•	•			
Evolution <sub>3</sub> drain system			•				•	•	•
CareFree automatic water softener					•			•	
ProDose detergent control system		•	•	•	•	•	•	•	•
ProGressive triple-stage filtration system			•				•	•	•
NRG steam condensing/heat recovery system						•			•
CHARACTERISTICS									
Double-skin hood		•	•	•	•	•	•	•	•
Full double-skin construction		•	•	•	•	•	•	•	•
Entirely press-moulded tank without welds		•	•	•	•	•	•	•	•
Can be installed as a corner unit with requiring addit	tional parts	•	•	•	•	•	•	•	•
Timed rinse		•							
Volumetric rinse			•						
Atmospheric boiler with break tank and rinse pur	пр			•	•	•	•	•	•
Electronically-controlled drain pump			•				•	•	•
Stainless steel integral tank filter		•	•	•	•	•	•	•	•
Pump safety filter		•	•	•	•	•	•	•	•
Electronically controlled rinse-aid dosing unit		•	•	•	•	•	•	•	•
Electronically controlled detergent dosing unit		•	•	•	•	•	•	•	•
TECHNICAL DATA									
Maximum real productivity*	racks/hour	45	45	45	45	38	51	51	38
Maximum theoretical productivity	racks/hour	65	65	65	65	65	65	65	65
Dimensions W x D x H	cm	63.3x75.5 x156.5	63.3x75.5 x156.5	63.3x75.5 x156.5	63.3x75.5 x156.5	63.3x75.5 x226.4	63.3x75.5 x156.5	63.3x75.5 x156.5	63.3x75.5 x226.4
Door/hood opening	cm	46,5	46,5	46,5	46,5	46,5	46,5	46,5	46,5
Tank capacity	litres	22	22	22	22	22	22	22	22
Boiler capacity	litres	6	6	12	12	12	12	12	12
Tank heating element	W	2.500	2.500	2.500	2.500	2.500	2.500	2.500	2.500
Boiler heating element	W	7.000	7.000	7.000	7.000	7.000	7.000	7.000	7.000
Wash pump - power	W	700	700	700	700	700	700	700	700
Total power consumption	W	10.200	10.200	10.200	10.200	10.200	10.200	10.200	10.200
Power supply voltage - Phases	V	400/50/3N							
Max. current	amp	16	16	16	16	16	16	16	16
Min-max water supply pressure	bar	2-4	2-4	1-4	1-4	1-4	1-4	1-4	1-4
Min-max water supply temperature	°C	15-60	15-60	15-60	15-60	15-25	15-60	15-60	15-25









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<sup>\*</sup> Water supply temp. 15°C, Rack loading and unloading time 10"







PROGRAMME SELECTION	38-10 D	38-11 D	38-12 D	38-13 D
ProSpeed programme	•	•	•	•
ProFessional programme	•	•	•	•
ProTemp programme	•	•	•	•
ProGlass programme	•	•	•	•
ProWater programme	•	•	•	•
ProLong programme	•	•	•	•
ProEco programme	•	•	•	•
ProSelf self-clean programme	•		•	
ProClean self-clean programme and automatic drain		•		•
ProDrain automatic drain		•		•

### The IsyTech range

This product family is characterised by its double-skin construction, technical solutions and advanced functions, with operational flexibility ensured by three standard programmes and four special programmes organised into two direct access menus.

#### Construction

Full double-skin construction with thermally-acoustically insulated hood. The hood lifts smoothly and easily with no tight spots, thereby reducing operator fatigue. The hood opening of 45 cm is among the highest of products in this market segment. The tank is entirely press-moulded and free of welds and sharp edges; it is equipped with a full-width integral surface filter, which, thanks to its large intake size, is virtually unblockable. The wash chamber is free of internal pipes and sharp corners.

#### User interface

Easy to use, reliable and complete, with four soft touch keys and a 4-character LED display with two lateral indicator bars, located on the lower body. Carefully chosen combinations of colours and graphic symbols provide a clear indication of the dishwasher status and wash cycle progress at a glance. In addition to the operating parameters, such as the temperature of the tank and boiler or the number of cycles completed, the indications provided by the automatic diagnosis system are also displayed. The information is provided in the form of codes, text, or graphic indicators and colours. The user can adjust the tank and boiler temperatures, the dosing of detergent and rinse aid, while our specialised technicians can modify all the operating parameters of the machine.

#### The versions

Four different versions are available offering a range of equipment levels and functions. The entire range and the various options can be seen in the table on the next page. All models are equipped as standard with electronically-controlled peristaltic dosing units for both detergent and rinse aid.

### Standard equipment

The dishwashers are equipped plate rack and a flat rack, a cutlery container, approved filler hose and drain hose.





TECHNOLOGIES	38-10	38-11 D	38-12 D	38-13 D
<b>DuoFlow</b> pump	•	•	•	•
UltraRinse₃ rinse arm	•	•	•	•
HiTech wash arms	•	•	•	•
EnergySaving system	•	•	•	•
ProGlide hood raising system	•	•	•	•
SmartClean construction	•	•	•	•
QuickReady rapid tank heating system			•	•
HotWash heating system	•	•	•	•
ThermoStop rinse control	•	•	•	•
ProRinse system			•	•
ProScreen user interface	•	•	•	•
ArchiMedes drain system	•		•	
EvoLution₃ drain system		•		•
ProDose detergent control system		•	•	•
ProGressive triple-stage filtration system		•		•

CHARACTERISTICS							
Double-skin hood	•	•	•	•			
Double-skin lower body	•	•	•	•			
Entirely press-moulded tank without welds	•	•	•	•			
Can be installed as a corner unit with requiring additional parts	•	•	•	•			
Timed rinse	•						
Volumetric rinse		•					
Atmospheric boiler with break tank and rinse pump			•	•			
Electronically-controlled drain pump		•					
Integral tank filter in composite material	•	•	•	•			
Pump safety filter	•	•	•	•			
Electronically controlled rinse-aid dosing unit	•	•	•	•			
Electronically controlled detergent dosing unit	•	•	•	•			

TECHNICAL DATA					
Maximum real productivity*	racks/hour	45	45	45	45
Maximum theoretical productivity	racks/hour	60	60	60	60
Dimensions W x D x H	cm	63.4x74.4 x152.9	63.4x74.4 x152.9	63.4x74.4 x152.9	63.4x74.4 x152.9
Door/hood opening	cm	45	45	45	45
Tank capacity	litres	15	15	15	15
Boiler capacity	litres	6	6	12	12
Tank heating element	W	2.100	2.100	2.100	2.100
Boiler heating element	W	7.000	7.000	7.000	7.000
Wash pump - power	W	470	470	470	470
Total power consumption	W	9.600	9.600	9.600	9.600
Power supply voltage - Phases	V	400/50/3N	400/50/3N	400/50/3N	400/50/3N
Max. current	amp	16	16	16	16
Min-max water supply pressure	bar	2-4	2-4	1-4	1-4
Min-max water supply temperature	°C	15-60	15-60	15-60	15-60











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<sup>\*</sup> Water supply temp. 15°C, Rack loading and unloading time 10"







### The SteelTech range

This product family is characterised by its extreme simplicity of use, while still offering a wide choice of wash programmes and additional functions.

### Construction

Full double-skin construction for the lower body and single-skin for the hood. The hood lifts smoothly and easily with no tight spots, thereby reducing operator fatigue. The hood opening of 45 cm is among the highest of products in this market segment. The tank is entirely press-moulded and free of welds and sharp edges; it is equipped with a full-width integral surface filter, which, thanks to its large intake size, is virtually unblockable. The wash chamber is free of internal pipes and sharp corners.

### User interface

Comprised of four sturdy function keys and a LED display, located on the lower body, which shows the wash and rinse temperatures. There are four wash programmes to choose from, including one specifically for glasses. The tank and boiler temperatures can be adjusted, as can the peristaltic dosing units for rinse aid and detergent (if present).

### The versions

Four different versions are available offering a range of equipment levels and functions. The entire range and the various options can be seen in the table on the next page.

### Standard equipment

The dishwashers are equipped plate rack and a flat rack, a cutlery container, approved filler hose and drain hose.

PROGRAMME SELECTION	38-00	38-01 D	38-02	38-03 D
ProSpeed programme	•	•	•	•
ProFessional programme	•	•	•	•
ProTemp programme	•	•	•	•
ProGlass programme	•	•	•	•
ProSelf self-clean programme	•		•	
ProSelf self-clean programme and automatic drainage		•		•





TECHNOLOGIES	38-00	38-01 D	38-02	38-03 D
DuoFlow pump	•	•	•	•
UltraRinse₃ rinse arm	•	•	•	•
HiTech wash arms	•	•	•	•
EnergySaving system	•	•	•	•
ProGlide hood raising system	•	•	•	•
SmartClean construction	•	•	•	•
QuickReady rapid tank heating system			•	•
HotWash heating system	•	•	•	•
ThermoStop rinse control	•	•	•	•
ProRinse system			•	•
ArchiMedes drain system	•		•	
EvoLution₃ drain system		•		•
ProDose detergent control system		•		•
ProGressive triple-stage filtration system		•		•

CHARACTERISTICS					
Single-skin hood	•	•	•	•	
Double-skin lower body	•	•	•	•	
Entirely press-moulded tank without welds	•	•	•	•	
Can be installed as a corner unit with requiring additional parts	•	•	•	•	
Tank thermometer and boiler with digital display	•	•	•	•	
Timed rinse	•				
Volumetric rinse		•			
Atmospheric boiler with break tank and rinse pump			•	•	
Electronically-controlled drain pump		•		•	
Integral tank filter in composite material	•	•	•	•	
Pump safety filter	•	•	•	•	
Electronically controlled rinse-aid dosing unit	•	•	•	•	
Electronically controlled detergent dosing unit		•		•	

TECHNICAL DATA					
Maximum real productivity*	racks/hour	45	45	45	45
Maximum theoretical productivity	racks/hour	60	60	60	60
Dimensions W x D x H	cm	63.4x74.4 x152.9	63.4x74.4 x152.9	63.4x74.4 x152.9	63.4x74.4 x152.9
Door/hood opening	cm	45	45	45	45
Tank capacity	litres	15	15	15	15
Boiler capacity	litres	6	6	12	12
Tank heating element	W	2.100	2.100	2.100	2.100
Boiler heating element	W	7.000	7.000	7.000	7.000
Wash pump - power	W	470	470	470	470
Total power consumption	W	9.600	9.600	9.600	9.600
Power supply voltage - Phases	V	400/50/3N	400/50/3N	400/50/3N	400/50/3N
Max. current	amp	16	16	16	16
Min-max water supply pressure	bar	2-4	2-4	1-4	1-4
Min-max water supply temperature	°C	15-60	15-60	15-60	15-60











\* Water supply temp. 15°C, Rack loading and unloading time 10"

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