

# MALTA

The compact aqueous cleaning system with three wet stages and innovative drying technology.



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CREATIVE CLEANING

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# Setting the standard for superior cleaning of industrial parts: MALTA-three-bath technology, with versatile cleaning combinations.

In response to increasingly complex demands on the cleaning of industrial parts, MAFAC has developed the new MALTA Part Cleaning System.

MALTA captivates as an extremely compact system with a three-bath design and innovative drying technology. Three tanks with a total capacity of 1000 liters are housed on a area of approximately 4,4 square meters, making MALTA a real gem for any business wanting to achieve superior cleaning results in a minimal space.

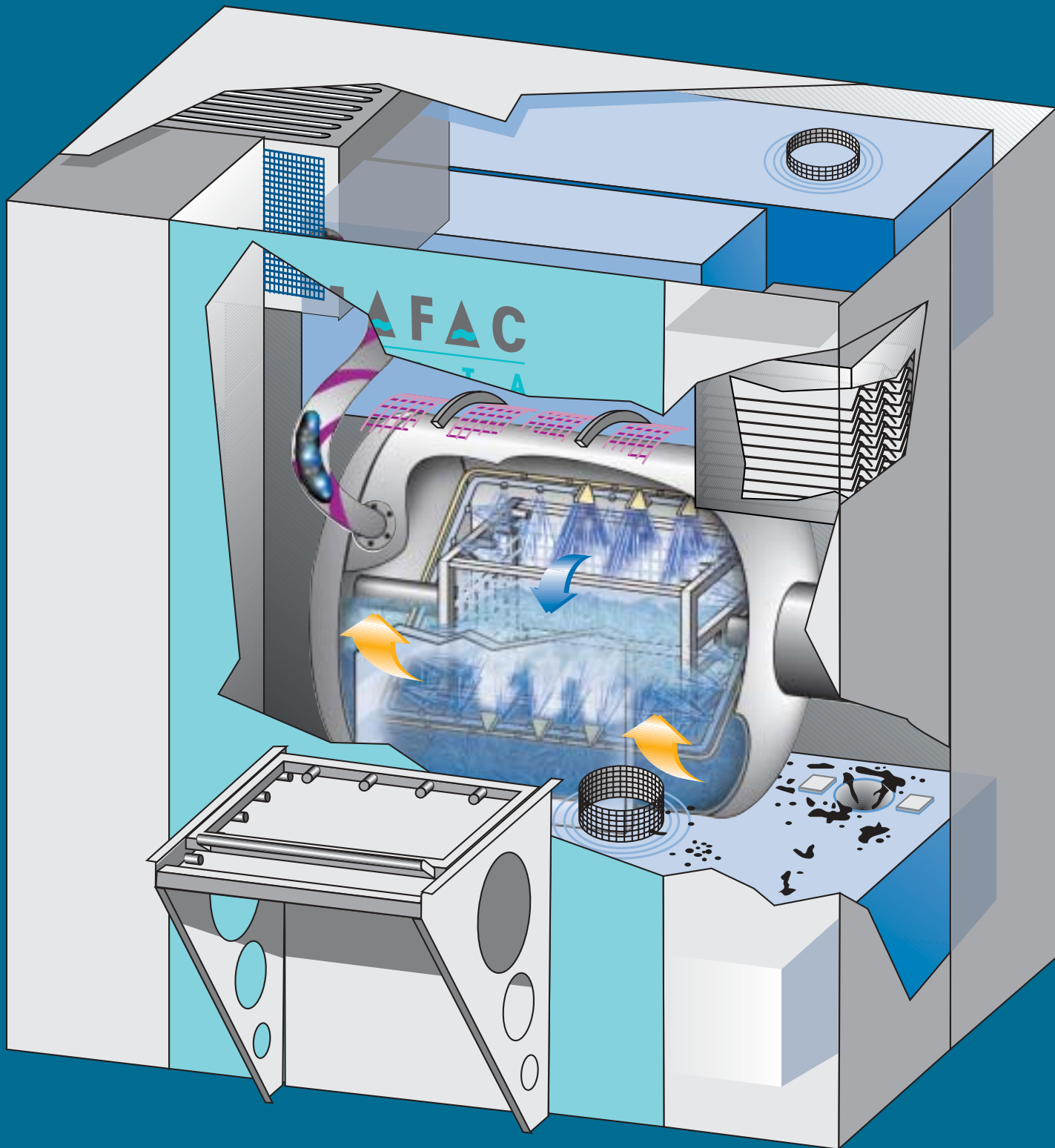
The combination possibilities of the new three-bath technology are very versatile: pre-cleaning, cleaning, post-cleaning, rinsing and preserving can be tuned to individual needs, problem-free, with simple programming technology.

MALTA offers the additional feature that the treatment chamber can be flooded during spray cleaning. Intensive cleaning of very difficult, complex part geometries is thus guaranteed. With combined, constantly changing

spray cleaning or flood cleaning processes, MALTA provides a modern procedural variant with extensive possibilities for the achievement of optimal cleaning results. An integrated drying process with a rotating jet tube system rounds out MALTA's intensive cleaning process. In addition to the tube system for the wet treatment, a further set of tubes is installed for the heated drying air. The parts in the cage can thus be blown dry directly.

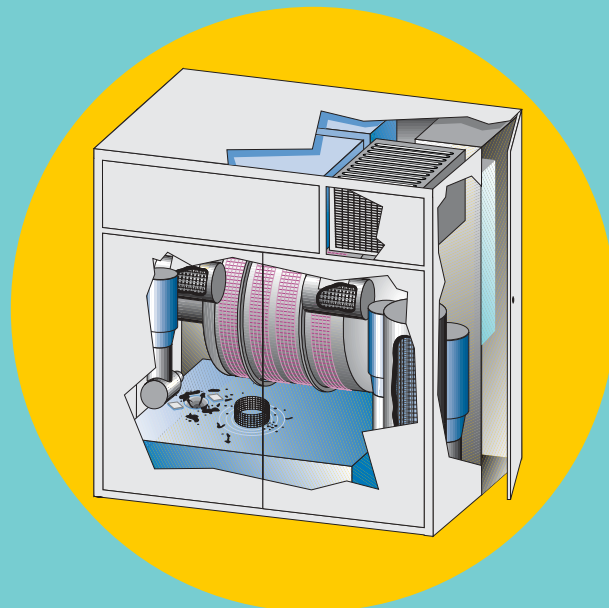
The multistage drying process can be activated with up to three process variants, which can also be combined. A further MALTA advantage dependent of application – vacuum technology (optionally with radiated heat drying). For this purpose, the treatment chamber has been designed as a pressure vessel. The electronic controls, with text and graphic display, are very user-friendly and provide for easy handling in all cleaning applications.





# Obvious MALTA advantages: targeted solutions to specific cleaning tasks.

- Very compact space saving design.
- Three wet stages in any combination or cascaded.
- Integrated 360° rotating solution spray and compressed air drying system.
- High intensity spray arrangement combining fan jet and needle jet system. Total immersion cycle with spray or ultrasonics for delicate components.
- Floodable treatment chamber for careful parts handling in a combined spray and flood process.
- 360° rotation of component load with or counter to spray arm rotation.
- Innovative drying system utilizing combination of:
  - 360° heated compressed air
  - vacuum drying technology
  - Infra red radiant heat.
- Superior wash solution maintenance programme ensures prolonged chemistry life:
  - multistage full flow particulate filtration of the main solution tank
  - overflow into coalescing zone for efficient Tramp oil removal from first wash stage
  - membrane filtration of dissolved and emulsified soils in the two rinse stages.
- Wide vertical load door with viewing panel for optimum process monitoring.
- User friendly electronic control with text and graphic display.
- Environmentally friendly recyclable construction materials.
- Can be fully automated via transfer systems.
- Optional ultrasonic equipment.





# Optimal cleaning results on complex part geometries.

As with all MAFAC cleaning systems, MALTA utilizes aqueous solutions. Superior procedural mechanics restrict chemical consumption to two to three percent of solution. High quality cleaning results are achieved by a combination of spray pressure and flood cleaning techniques often combined with ultrasonic power. Malta achieves superior results even when cleaning extremely soiled components with complex geometry.

This includes every sort of metal as well as plastic. Components are analyzed in our sample process laboratory, and test cleaned according to application. Customer quality requirements and down stream operations are considered first priority when determining cleaning processes. MAFAC's cleaning specialists are always available for consultation on any cleaning application.

## **Some successful applications for MAFAC cleaning systems:**

precision turned and milled components, drawn pressed and spun components, hardware e.g. polished door furniture and water fittings, automotive e.g. engine blocks, cranks-hafts, connecting rods, cylinder heads, pistons, piston rings, precision bearings, surgical implants, aerospace e.g. turbine discs and blades.



# Around the MALTA.

## Technical Data

System components for wet stages:		
<b>Pump system:</b>	Vol. flow	Pressure
Solution tank 1:	350 l/min.	5,5 bar
Solution tank 2:	230 l/min.	2,5 bar
Solution tank 3:	200 l/min.	2,0 bar
	Motor performance	
Solution tank 1:	5,5 kW	
Solution tank 2:	1,85 kW	
Solution tank 3:	2,2 kW	
<b>Tank Capacities:</b>	Volume	Heating
Solution tank 1:	800 Liter	26 kW
Solution tank 2:	250 Liter	13 kW
Solution tank 3:	240 Liter	13 kW
	max. operating temp.	
Solution tank 1:	80°C	
Solution tank 2:	80°C	
Solution tank 3:	80°C	
Heating time:	20°- 80°C	approx. 2,5 h
Loading capacity:	continuous operation	kg 100
Rotation speeds:	Process Station	1/min. 1,2 - 3
	Sray/air jet arm	1/min. 4
Extraction /condensation of steam (mean exhaust air)		
Volume flow:	m³/h	600
<b>Filtration:</b>		
Solution tank 1 (coarse/fine):	µm	300/100
Solution tank 2 (coarse/fine):	µm	200/50
Solution tank 3 (option fine):	µm	25

<b>Drying System:</b>		
Impulse jet system	Pressure	Volume flow
	6 bar	approx. 2700 l/min.
Mean noise level		ca. 78 dB(A)
<b>Vacuum drying (option)</b>		
Vacuum system:	Volume flow	Pressure
	700 l/min.	0,1 bar
		Motor performance
		2,35 kW
<b>Radiated heat drying (option)</b>		
	Chamber heating	max. operating temp.
	2 x 3,6 kW	80°C
<b>Connections:</b>		
Electrical	V, Ph/Hz/kVA	400,3/50/72
Pneumatic	in./bar	Rp 3/4, 5 - 8
Fresh water	in./bar	Rp 3/4, 1-4
Drainage (Medium tanks 1,2 & 3)	in./bar	Rp 1 1/2
Exhaust	mm	DN 120
<b>Dimensions:</b>		
Working volume/mm	X/Y/Z	600/400/285 or 300
Total volume/mm	A/B/C/D/E	2100/2100/2050/480/855
<b>Weight:</b>		net 1550 kg, total 1650 kg
<b>Color:</b>		RAL 7035 (light gray) and MALTA green

## Series characteristics:

- Front loading with vertical sliding door and loading station
- Spray/flood/ drying systems and charging basket system with parallel and counter-rotation
- Stageless speed control of basket rotation as well as basket rocking with programmable angle of inclination
- Three-bath combination in one system
- Cascaded baths
- EURO standard baskets can be used (600 L x 400 W x 285 H mm)
- Chip filtration and full flow fine filtration for baths 1 and 2
- Bath heating with separate temperature controls
- Heat insulation
- Extraction with steam condensation and mist extractor
- Oil extraction in bath 1 through coalescence separator with max. monitoring of the oil collecting tank
- Timer for day and week programs, including nightly maintenance program of the cleaning bath (oil extraction)
- Rotating impulse jet system with heat exchanger for part drying
- Stainless steel and plastic construction of fluid-carrying components
- Programmable, user-friendly controls with graphic and text display

## Ordering information:

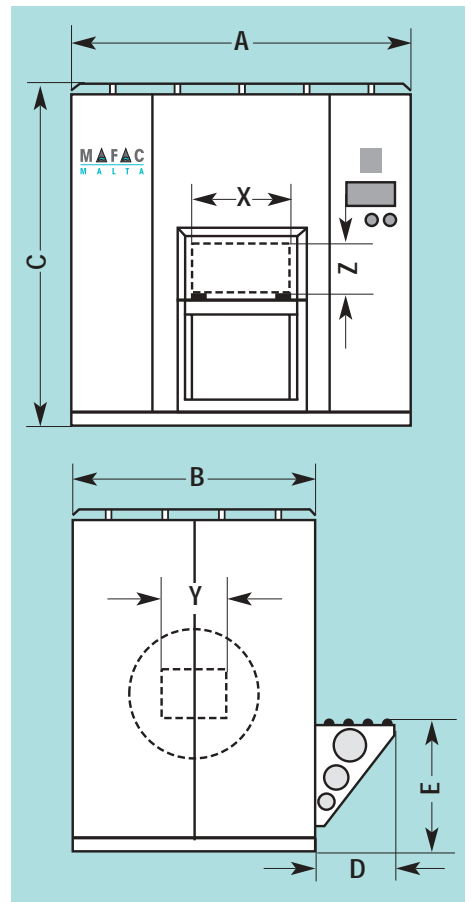
**MALTA cleaning system for EURO standard baskets with the dimensions:**  
 (L) 600 x (W) 400 x (H) 285 mm \_\_\_\_\_ 6770 0000  
 BW 60.40 Loading carriage with collecting basin \_\_\_\_\_ 6770 0013

**Accessories and special equipment:**  
 Full flow fine filtration for solution rinse stages \_\_\_\_\_ 6770 0002  
 Transparent vertical sliding door \_\_\_\_\_ 6770 0003  
 Integrated démineralization unit for fresh water \_\_\_\_\_ 6770 0004  
 Hot-air drying system \_\_\_\_\_ 6770 0014  
 Vacuum drying \_\_\_\_\_ 6770 0005  
 Radiated heat drying \_\_\_\_\_ 6770 0006  
 Membrane filtration \_\_\_\_\_ 6770 0007  
 Ultrasonic equipment \_\_\_\_\_ 6770 0022  
 Process-log with printout \_\_\_\_\_ 6770 0009  
 Tank drain pump \_\_\_\_\_ 6010 0006  
 Stainless steel collecting basin \_\_\_\_\_ 6770 0011  
 Automatic transfer system, with buffer for baskets in loading & unloading area \_\_\_\_\_ 6770 0012

**MAFAC standard basket system in stainless steel (dimensions 600 L x 400 W mm):**  
 Standard basket 20/4, electrolytically polished, mesh width 20mm, height 285mm \_\_\_\_\_ 6420 0078  
 Standard basket 10/4, electrolytically polished, mesh width 10mm, height 285mm \_\_\_\_\_ 6420 0076  
 Standard basket 5/1, electrolytically polished, mesh width 5mm, height 285mm \_\_\_\_\_ 6420 0060  
 Standard basket 1.5/2, electrolytically polished, mesh width 1.5mm, height 285mm, complete with cover unit \_\_\_\_\_ 3000 1534  
 Standard basket 20/3, synthetic coating, mesh width 20mm, height 285mm \_\_\_\_\_ 6420 0093  
 Standard basket 10/3, synthetic coating, mesh width 10mm, height 285mm \_\_\_\_\_ 6420 0092  
 Custom baskets design \_\_\_\_\_ upon request

Basket lid 20/4, electrolytically polished, mesh width 20mm, adjustable height \_\_\_\_\_ 6420 0081  
 Basket lid 10/4, electrolytically polished, mesh width 10mm, adjustable height \_\_\_\_\_ 6420 0061  
 Basket lid 20/3, synthetic coating, mesh width 20mm, adjustable height \_\_\_\_\_ 6420 0086  
 Basket lid 10/3, synthetic coating, mesh width 10mm, adjustable height \_\_\_\_\_ 6420 0094

## Dimensions:



## Your representative:

We would be happy to inform you about further MAFAC cleaning programs.



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