

# HYBRID

## Foam Application Equipment for Open Surface Cleaning in the Food & Beverage Industry

Every Food & Beverage manufacturing site has different requirements in terms of cleaning open surfaces. Meeting every individual cleaning demand while being fully committed to safety, ergonomics and flexibility is our aim.

Ecolab provides state-of-the-art foam cleaning equipment technology embracing highest operators' safety standards, hygienic design, robustness and durability. Our comprehensive set of foam equipment components can be varied and combined, most convenient to individual needs.

Ecolab's **HYBRID** foam application equipment lays the foundation for optimal cleaning in the food and beverage industry. Featuring the unique Corona Technology it provides best foam performance for convincing cleaning results.

- Hybrid foam stations combine all cleaning operations in one unit - Rinse, Foam, Spray
- Safe use is supported as application hoses are not to be changed between operations
- Easy handling and hygiene are enabled by robust, smart design
- Double injector block for Advantis foam applications suitable with every station



# DECENTRALIZED FOAM SYSTEM

## PRESSURIZED WATER | MANUAL APPLICATION

### HYBRID COMPACT

#### MAIN STATION:

- ABS cover
- Cost efficient
- changeable injector 150-300l foam/min



#### SATELLITE:

- ABS and stainless steel cover



#### BOOSTER:

- ABS cover
- Pressure from 10 to 25 bar
- water supply 135



Ecolab's **HYBRID COMPACT** series is the standard version with all Hybrid features, cost effective and ready for use.

Technical specification:	
Water inlet connection:	1.1/4"
Water outlet connection:	1.1/4"
Supply water:	2 - 8 bar 120 l/min
Pump volume:	Max. 25 bar120 l/min
Compressed air supply:	6 - 10 bar 200 NI/min
Electric supply:	3 x 400 VAC 50/60Hz 5,5 kW
Approvals:	CE
Dimensions H x W x D:	980 x 550 x 400 mm

Model:	EBS no.:	Cover	Weight
MD421	10033216	ABS	85 kg
MD422	10033218	ABS	85 kg

Technical specification:	
Water inlet connection:	1/2"
Min. - Max. supply water:	12 - 40 bar
Water consumption rinse-foam:	30 l/min - 1,2 l/min
Air connection:	ø 6mm
Compressed air supply:	6 - 10 bar 200 NI/min
Approvals:	CE
Dimensions H x W x D:	363 x 259 x 131 mm

Model:	EBS no.:	Cover	Weight
SD21ABS	10033219	ABS	4.3 kg
SD21SST	10033309	Stainless Steel	4.5 kg
SD22ABS	10033220	ABS	4.3 kg
SD22SST	10033214	Stainless Steel	4.5 kg

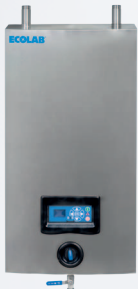
Technical specification:	
Water inlet connection:	1.1/4"
Water outlet connection:	1.1/4"
Water supply:	2-8 bar - min. 135 l/min
Supply water temperature:	Max. 70 °C
Electric supply:	3 x 400 VAC 50/60Hz
Power consumption:	5,5 kW
Maximum outlet pressure:	25 bar
Maximum outlet capacity:	120 l/min
Dimensions H x W x D:	880 x 550 x 379 mm
Approvals:	CE

Model:	EBS no.:	Cover	Weight
BW4P	10033214	ABS	85 kg

### HYBRID

#### MAIN STATION:

- Stand alone foam unit
- Integrated booster
- Attached to additional satellites for 4 simultaneous users



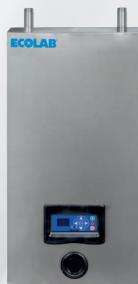
#### SATELLITES:

- Modular
- changeable injectors 150-450l/min foam



#### BOOSTER:

- supplies water to satellites for simultaneous operatio by several users
- pressure range from 10 to 25 bars
- water supply 135-265l/min



Ecolab's **HYBRID** series is the extendable version in an extra spacious design for additional modules to be added.

Technical specification:	
Water inlet connection:	1.1/4"
Water outlet connection:	1.1/4"
Supply water:	2-8 bar 120 l/min
Pump volume:	Max. 25 bar 120 l/min
Compressed air supply:	6 - 10 bar 200 NI/min
Electric supply:	3 x 400 VAC 50/60Hz 5,5 kW
Approvals:	CE
Dimension H x W x D:	1500 x 300 x 386 mm

Model:	EBS no.:	Functions	Weight
?	10022355	2 products spray/rinse/foam	104 kg
?	10022356	2 products foam/rinse/foam	104 kg

Technical specification:	
Water connection:	1/2" threaded connection
Water pressure:	min. 12 bar/max. 40 bar
Air connection:	ø 6 mm
Basic functions:	Foam cleaning, disinfecting and rinsing
Dimension H x W x D:	510 x 402 x 152 mm

Model:	EBS no.:	Cover	Weight
Hybrid Satellite	?	Stainless steel Rear wall: ABS	6,5 kg

Technical specification Wall Cabinet:		BWH4	BWH7
Number of users:	30 l/min	4	7
Supply water:	2-8 bar	135 l/min	230 l/min
Supply voltage:	3 x 400 V/50 Hz	5,5 kW	11 kW
Outlet water:	20 bar plus inlet pressure	max. 25 bar/max. 120 l/min	max. 25 bar/max. 210 l/min
Housing:		stainless steel	
Dimension H x W x D:		1074 x 560 x 385 mm	1074 x 560 x 385 mm
EBS no.		10022458	10022459
Technical specification Floor frame:		BF4	BF8
Number of users:	30 l/min	4	8
Supply water:	2-8 bar	135 l/min	265 l/min
Supply voltage:	3 x 400 V/50 Hz	5,5 kW	11 kW
Outlet water:	20 bar plus inlet pressure	max. 25 bar/max. 120 l/min	max. 25 bar/max. 240 l/min
Frame:		stainless steel	
Dimension H x W x D:		850 x 550 x 350 mm	1000 x 550 x 400 mm
EBS no.		10201206	10201207

## PRESSURIZED WATER | AUTOMATIC

### HYBRID FOAMATIC

Ecolab's **HYBRID FOAMATIC** series is a unit for automated foam cleaning to be connected to pressurized water. The unit is available with and without integrated PLC and can be connected to external PLC. Depending on the model, the PLC can control 9 or 10 external valves.

Model:	MA2	MA2M	MA2C	MA2CM	MA3	MA3M	MA3C	MA3CM
EBS no.:	10039513	10039519	10038993	10039518	10039516	10039523	10039515	10039521
Controller:	-	-	●	●	-	-	●	●
Manual Hybrid block:	-	●	-	●	-	●	-	●
Number of detergents:	2	2	2	2	3	3	3	3

Technical specification:	
Water inlet/outlet connection:	flange, pipe diameter 38mm
Water supply:	min. 240 l/minute, min./max. 2-8 bar., max. 70°C
Pump pressure:	max. 15 bar. (12 bar. + inlet pressure)
Water consumption:	rinsing 0-240 l/minute, foaming and disinfection 10-32 l/minute
Compressed air Min./max. inlet pressure:	5 - 10 bar. / 200 - 450 NI/minute
Compressed air connection:	1/4"
Electric supply/Power consumption:	3x400V 50-60Hz / 5,5 kW 20A
Dimensions /weight:	(HxWxD) 1310x560x400mm / 120 - 127Kg

#### MAIN STATION:

- PLC with HMI touch panel for flexible and intuitive programming
- Integrated 300L injector
- Interchangeable injectors 150-300-45l foam/min



#### SATELLITE:

- PLC with HMI touch panel for flexible and intuitive programming
- Interchangeable injectors 150-300-45l foam/min



Model:	SA2	SA2M	SA2C	SA2CM	SA3	SA3M	SA3C	SA3CM
EBS no.:	10039528	10039537	10039525	10039534	10039533	10039541	10039531	10039540
Controller:	-	-	●	●	-	-	●	●
Manual Hybrid block:	-	●	-	●	-	●	-	●
Number of detergents:	2	2	2	2	3	3	3	3

Technical specification:	
Water inlet/outlet connection:	flange, pipe diameter 38mm
Water supply:	min. 300 l/minute, min./max. 2-25 bar., max. 70°C
Water consumption:	rinsing 0-300 l/minute, foaming/desinfection 10-32 l/minute
Compressed air Min./max. inlet pressure:	5 - 10 bar. / 200 - 450 NI/minute
Compressed air connection:	1/4"
Electric supply/fuse:	3x400V 50-60Hz / 10A
Dimensions /weight:	(HxWxD) 550x560x313mm / 33 - 40 Kg

## PRESSURIZED WATER | MOBILE

### HYBRID TYPHOON

Ecolab's **HYBRID TYPHOON** is a complete mobile hygiene station provides all features of a fix station in a very flexible design. The easy to manouver station allows cleaning also small production areas difficult to reach.

Technical specification:	
Water inlet connection:	3/4"
Min./max. supply pressure:	2-4 bar
Max. temperature:	70° C
Water outlet connection:	pressure locked quick coupler
Compressor:	6-10 bar 120 NI/min
Max. operation time:	1h (foaming)
Control voltage:	24VDC
Approvals:	CE
Dimensions H x W x D:	690 x 1445 x 1030 mm

Model:	EBS no.:	Max. outlet pressure Max. pump capacity:	Weight
Electric supply*: 3x400V 50/60Hz 2,2 kW			
HT	10036330	25 bar/50 l/min	120 kg
HTU	10036332		
Electric supply*: 3x400V 50Hz 7,5kW			
HT40	10036342	40 bar/60 l/min	140 kg
HT40U	10036344		

\*other voltages available

- Mobile robust industrial design
- Integrated booster and water pump supplying max 25 bar
- Interchangeable injectors 150-300l foam/min





# CENTRAL FOAM SYSTEM

## HYBRID PENTA

Ecolab's **Hybrid Penta** is designed for the local application of centrally supplied pre-diluted cleaning products in order to eliminate concentrated agents in the production area. This supports food safety and environmental hygiene in food and beverage processing facilities.

### SATELLITE:

- Designed for local applications of centrally supplied pre-diluted application solutions
- Safe - no chemical handling by operators
- full flexibility
- can be extended by foam injector blocks if local pick up is required



Technical specification:	
Water inlet/outlet connection:	1/2"/quick coupling (pressure locked)
Rinse water supply:	8-30 l/minute, 12-40 bar., max. 70°C
Prediluted product supply:	5-8 l/minute, 7-13 bar., max. 40°C
Compressed air connection:	push in fitting Ø6mm
Compressed air min./max. inlet pressure:	6-10 bar. / 200-450 NI/minute
Dimensions/Weight:	(HxWxD) 530x400x140mm / 7 Kg

Model:	SU11PD22	SU21PD22	SUPD21	SUPD22	SUPD32	SUPD22DW
EBS order no.:	10051869	10051870*	10052652	10051868	10051867	10051866
Prediluted products:	2	2	2	2	3	2
Local pick-up products:	1	2	-	-	-	-
Functions:	Rinse water Foam prediluted 1 Foam prediluted 2 Foam local	Rinse water Foam prediluted 1 Foam prediluted 2 Foam local Spray local	Rinse water Foam prediluted Spray prediluted	Rinse water Foam prediluted 1 Foam prediluted 2	Rinse water Foam prediluted 1 Foam prediluted 2 Spray prediluted	Rinse water Foam prediluted 1 Foam prediluted 2 Rinse water 2

\* this unit has two outlets

## MIXSTATIONS

Ecolab's **MIX STATIONS** are designed for the centralized supply of pre-diluted application solutions.

To make the grade of Food Safety, hygiene and environmental requirements in the Food and Beverage industry cleaning and disinfection solutions can be prepared in and distributed by Mix stations that are located outside the production areas.

A Mix station incorporates a hydraulic dosing pump, a buffer tank and a booster pump. The application solution is pre-diluted in the buffer tank and is distributed on demand to the foam generating consumption point e.g. Hybrid Penta Satellites.

- Up to 25 simultaneous user on one Mix Station
- 200 l buffer tank; 50-120l foam/min
- Dosing pumps incorporated
- Accurate dosing between 0,2-2% or 1-5%



Model	MIX10 AF*		MIX10 VF*		MIX25 AF*		MIX25 VF*	
Concentration solution <sup>(1)</sup>	0.2-2%	1-5%	0.2-2%	1-5%	0.2-2%	1-5%	0.2-2%	1-5%
EBS no.:	10051923	10051921	10051922	10051920	10051927	10051925	10051926	10051924
Number of users simultaneously <sup>(2)</sup> :	10				20			
Number of products:	1							
Content Mix tank:	200 l							
Dosing pump:	Hydraulic driven Dosatron pump							
Sealings:	ETPS		Viton		ETPS		Viton	
Water inlet - outlet connections:	1.1/2" INT - 1.1/4" EXT							
Water supply:	min. 60 l/min - max. 40°C				min. 150 l/min - max. 40°C			
Prediluted product output <sup>(3)</sup> :	50 l/min - 8 bar				140 l/min - 8 bar			
Concentration solution:	0.2-2% or 1-5% <sup>(1)</sup>							
Electric supply voltage:	3/PE 380-500V - 50/60Hz							
Electric control voltage:	24V DC							
Electric power/nominal current:	4.0 kW / 11A							
Dimensions (HxWxD) / Weight:	1500x1300x600mm /97 kg				1500x1300x600mm /100 kg			

\* AF - VF = alkaline - acid compatible sealings / <sup>(1)</sup> 0.03-0.3% on request / <sup>(2)</sup> icw Hybrid Penta satellite / <sup>(3)</sup> standard 8 bar., max. 13 bar through Grundfos dongle

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