

03

Open plant cleaning solutions

1. Central cleaning satellites in the food industry

Central cleaning solutions with pre-mixed chemical supply

The Rhino CCU hydraulic range is designed for supplying chemicals and water from a central location to the local satellites designed for pre-diluted mixture. The Rhino CCU hydraulic can make a pre-diluted mixture by injecting the chemicals directly into the water stream with the dosing pumps.

The dosing system supplies the pre-diluted mixture to the satellites at a pressure of 8 bar. This unit is equipped with a frequency controlled pump which generates a constant pressure independent from the number of users. Concentration between 0.5 to 5%. Maximum capacity of 7(MAG7) or 20 (MAG20) simultaneous users. The system is made for one, two or three chemicals.

The units mix the concentrated chemicals with water in a chemical storage room to lower HSE risks and ergonomic issues. Standard the housing of the hydraulic pumps are made of PTFE for high chemical resistance. Dry running protection to protect the water booster and signal for low chemical stock is possible.

**Correct dosing
all the time**

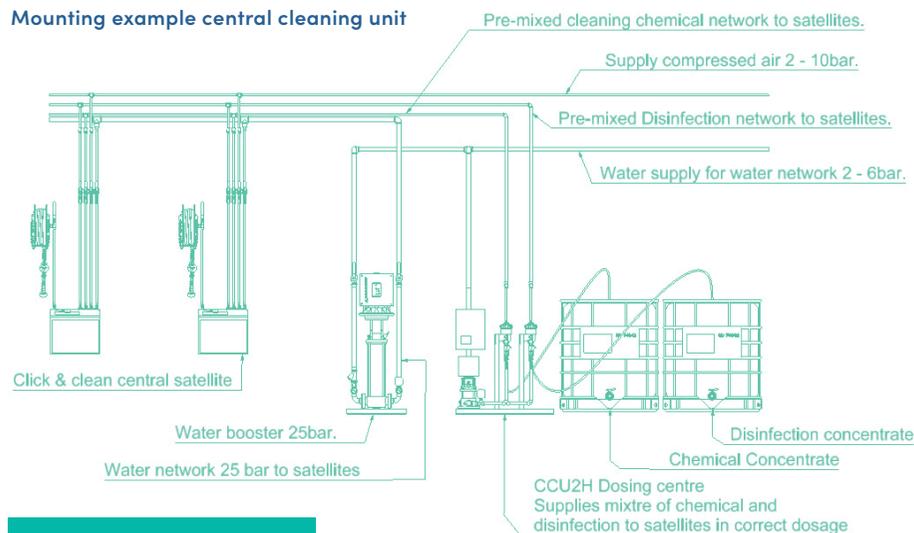


Custom made automated cleaning equipment.

Besides for pre-diluted cleaning systems, the Rhino CCU is often used for automated cleaning of machinery and production equipment in the food-processing industry. E.g. conveyor belts, tanks and vessel washing, ...

For these applications the CCU is equipped with time controlled solenoid valves.

- Features RHINO CCU Hydraulic:**
- Economic solution.
 - Low maintenance.
 - Precision dosing.
 - Big volume.
 - Easy to adjust.
 - Ensuring no concentrated products in the production area and ensuring a uniform concentration all over.
 - Standard Dosing pumps with PFE housing for optimal chemical resistance.
 - Standard dry running protection on water supply.
 - Optional: signal for dry running chemical.



Hydraulic dosing series

Reference	100CCU1H7	100CCU1H20	100CCU2H7	100CCU2H20	100CCU3H7	100CCU3H20
Nr. of chemicals	1	1	2	2	3	3
Simultaneous users	7	20	7	20	7	20
Water inlet	G1 1/4"	G1 1/2"	G1 1/4"	G1 1/2"	G1 1/4"	G1 1/2"
Outlet premix	1 x G3/4"	1 x G1 1/4"	2 x G3/4"	2 x G1 1/4"	3 x G3/4"	3 x G1 1/4"
Max. pressure	8 bar					
Max. water temp.	40°C/60°C	40°C/60°C	40°C/60°C	40°C/60°C	40°C/60°C	40°C/60°C
Supply voltage	3x400V	3x400V	3x400V	3x400V	3x400V	3x400V
Pump/skid and pipework	Stainless steel					
Dosing pump	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
Accessories type:	•	•	•	•	•	•



2. With pre-mixed chemical supply

Click & clean Central satellite

The most versatile, hygienic, robust and reliable central cleaning satellite on the market.

Click & clean central units are standard equipped with:

- Stainless steel Maintenance free selector valve for water, chemicals and air. Complete made of AISI316 Stainless steel.
- Valve with PTFE seals for excellent chemical resistance.
- Air regulator.
- Air manometer.
- Lockable stainless steel cabinet, with sloped top cover for optimal hygiene. AISI316
- Internal PTFE hoses with stainless steel AISI316 wire for premixed chemicals.
- 2 x stainless steel check valve for air supply protection.
- 1 x check valve with detector when first check valve is failing.
- All adapters ½" BSP 60° hydraulic for seal or glue free connection.

FFDR version.

- Stainless steel chemical injector for sporadic use of acid for descaling.



This switchbox is very versatile, so there are plenty of options to meet your specific needs.

Click & clean central switchbox

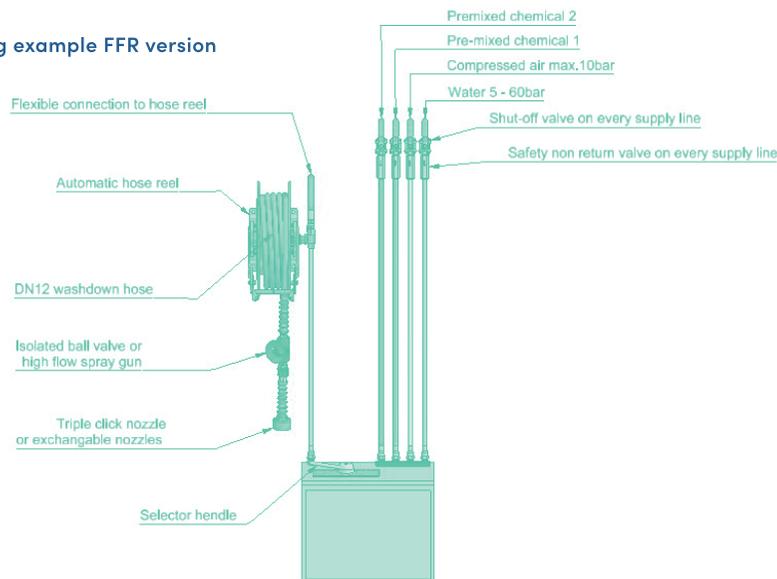
The click & clean Central FFR, FSR, FFRR, FFDR and FFFR series are equipped with the famous Dosanova "switchbox". This massive AISI316 switchbox is equipped with PTFE seals for excellent chemical resistance.

With a single lever the operator can change between the different medias. Only compressed air, water and pré-mixed chemicals are to be connected to the unit. In contrast to other similar systems in the market, it switches 100% mechanically. So no other parts are needed that often require maintenance and are expensive to replace.

Most common functions Click & clean central Versions

Type	FFR	FSR	FFRR	FFDR	FFFR
Reference:	100.200	100.200	100.200	100.200	100.200
Clear water rinse full flow.	✓	✓	✓	✓	✓
Second clear water rinse (hot, RO, demi water)	x	x	✓	x	x
Foaming premixed chemical 1	✓	✓	✓	✓	✓
Foaming premixed chemical 2	✓	x	✓	✓	✓
Spray cleaning chemical 2	x	✓	x	x	x
Foaming premixed chemical 3	x	x	x	x	✓
Spray or foam decentral chemical (hybrid)	x	x	x	✓	x
Complete stop position.	✓	✓	x	x	x
Accessories type:	●	●	●	●	●

Mounting example FFR version



Click & clean central units can be custom build with many other possibilities.



3. Central pre-mixed chemical supply



Click & clean central air switch

The Click & clean Air switch central satellites are connected by a piping network to the central hydraulic dosing units and fitted as standard with one rinse position and one stop position. Depending on the chosen central hydraulic dosing unit selected it can also be provided with one or two or three foaming functions, one rinsing function, one complete blow out function (system and hoses are free from water, chemical and compressed air) and stop function.

Pneumatically controlled stainless steel valves activate the rinsing water and the chemicals in the piping. Stainless steel non-return valves are fitted to prevent rebound and different products being mixed in the piping. The satellite is operated by a pneumatically operated stainless steel selector switch (max. 6 positions including stop). This is built into a fully stainless steel hygienic housing for perfect hygiene in the production environment. These satellites with housing are connected to an automatic hose reel with cleaning hose and accessories.

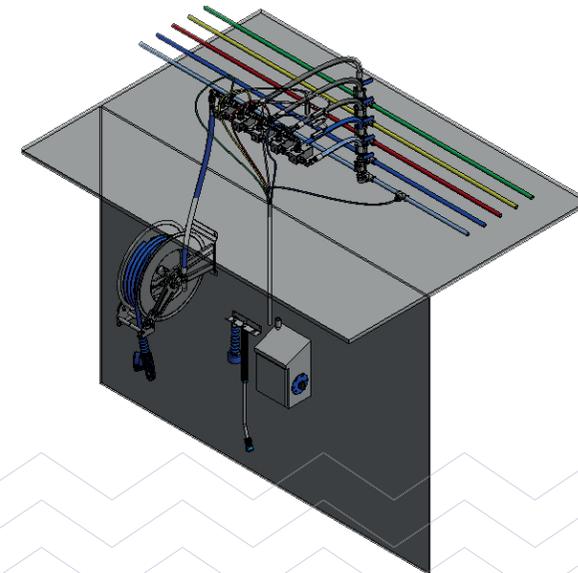
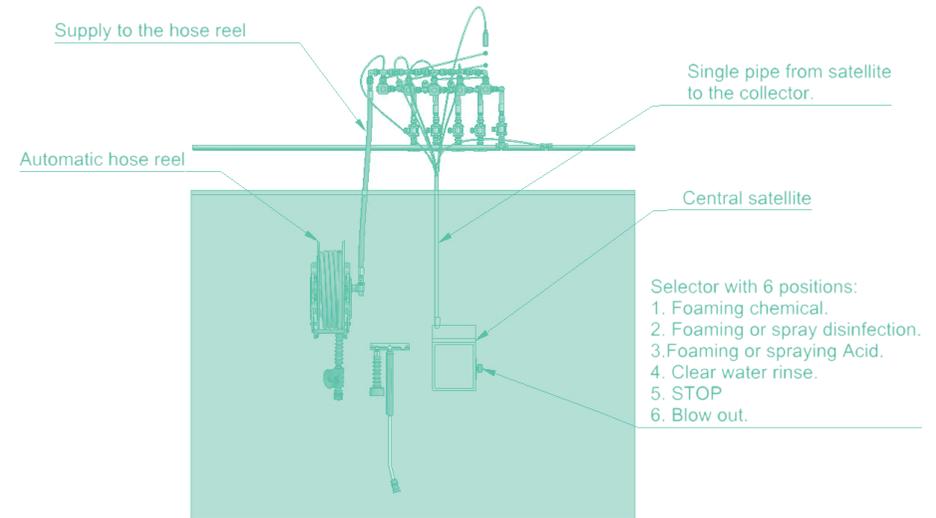
Technical data	
Inlet water pressure:	10 – 250 bar.
Water consumption in rinse position:	Adjustable from 15 up to 100 liter / minute.
Max. Water temperature:	90°C.
Inlet premixed chemical pressure:	8 bar (from central hydraulic dosing unit)
Chemical consumption in foam position:	9 liter / minute standard.
Air supply to satellite:	Maximal 10 bar
Air Flow rate:	200 Lpm.
Functions:	Complete stop function Blow out function (zero pressure in satellite, hose and gun) Clear water rinse function Foam chemical Foam or spray disinfection Foam or spray Acid
Dimensions:	300H x 200W x 155Dmm.
Materials cabinet:	Stainless steel AISI316.
Maximal distance to valve block:	Unlimited.
Connection adapter for air hose passage:	G ½”M BSPT adapter.
Accessories types:	
Usage up lower than 25bar	•
Usage up higher than 25bar.	•

Pneumatically controlled stainless steel valves

Collector, valves, actuator are made in stainless steel. This unit is normally installed on the rooftop.



Mounting Click & clean central air switch



4. Decentral cleaning solutions

Click & clean Decentral FFR hygienic

Available in Dynamic "air free foaming" and compressed air version. The most hygienic, robust and reliable Decentral cleaning satellite on the market. With a single lever the operator can change between the different medias. Safe chemical storage (2x25L) in closed cabinet.

Click & clean Decentral Hygienic units are standard equipped with:

- Stainless steel Maintenance free selector valve for water and chemicals.
- 2 separated chemical injectors with adjustable dosing ratio (0.15-15%) who makes it impossible to mix-up chemicals.
- Lockable stainless steel cabinet, with sloped top cover for optimal hygiene with storage for 2 x 25Liter chemicals.
- 2 x stainless steel check valves on chemical suction with Extreme Kalrez seals for excellent chemical resistance.
- Air regulator for wet/dry foam and blow out check valve for extra protection to customers air lines and compressors. (only on compressed air version)
- 1 x bleu suction kit with filter and PVC pipe for foam cleaning chemical.
- 1 x yellow suction kit with filter and PVC pipe for foam disinfectant chemical.
- Set Of 8 dosing tips.



Technical data		
Reference	100.203	100.203DYN
Type	Compressed air version	Dynamic "air free foaming" version
Water connection	1/2"M BSP 60°	1/2"M BSP 60°
Water pressure	6 -40 bar (centrifugal E-)	20 - 200 bar (Triplex pump)
Water temperature	0 -90°C.	0 -90°C.
Air connection	1/2"M BSP 60°	No air connection
Air pressure	Max. 10bar	No Air needed
Basic functions	<ul style="list-style-type: none"> • Foam cleaning • Foam Disinfection • Clean water rinse 	<ul style="list-style-type: none"> • Foam cleaning • Foam Disinfection • Clean water rinse
Chemical injectors	2 - 100% separated	2 - 100% separated
Dosing ratio	0.15 -15%	0.15 -15%
Materials	Stainless steel	Stainless steel
Dimensions (HxWxD):	1000 x 650 x 400 mm	1000 x 650 x 400 mm
Accessories types:	•	•



Dynamic "Air free foaming" satellites must be connected to Dosanova Triplex booster stations. The rinsing pressure can be regulated between 20 and 200bar.



Click & clean Decentral FFR

Available in Dynamic "air free foaming" and compressed air version. The most robust and reliable cleaning satellite on the market. With a single lever the operator can change between the different medias.

Click & clean Dé-central units are standard equipped with:

- Stainless steel Maintenance free selector valve for water and chemicals.
- 2 separated chemical injectors with adjustable dosing ratio (0.15-15%) who makes it impossible to mix-up chemicals.
- Lockable stainless steel cabinet, with sloped top cover for optimal hygiene
- 2 x stainless steel check valves on chemical suction with Extreme Kalrez seals for excellent chemical resistance.
- Air regulator for wet/dry foam and blow out check valve for extra protection to customers air lines and compressors. (only on compressed air version)
- 1 x bleu suction kit with filter and PVC pipe for foam cleaning chemical.
- 1 x yellow suction kit with filter and PVC pipe for foam disinfectant chemical.
- Set Of 8 dosing tips.

Technical data		
Reference	100.201	100.202
Type	Compressed air version	Dynamic "air free foaming" version
Waterconnection	1/2"M BSP 60°	1/2"M BSP 60°
Water pressure	6 -40 bar (centrifugal E-booster)	20 - 200 bar (Triplex pump)
Water temperature	0 -90°C.	0 -90°C.
Air connection	1/2"M BSP 60°	No air connection
Air pressure	Max. 10bar	No Air needed
Basifunctions	<ul style="list-style-type: none"> • Foam cleaning • Foam Disinfection • Clean water rinse 	<ul style="list-style-type: none"> • Foam cleaning • Foam Disinfection • Clean water rinse
Chemical injectors	2 - 100% separated	2 - 100% separated
Dosing ratio	0.15 -15%	0.15 -15%
Materials	Stainless steel	Stainless steel
Dimensions (HxWxD):	400x 400 x 210 mm	400x 400 x 210 mm
Accessories types:	•	•

air free foaming

Manual open plant cleaning solutions in the food industry.

EMICO Decentral FFR

Available in Dynamic "air free foaming" and compressed air version.
The most robust and reliable cleaning satellite on the market.
With a single lever the operator can change between the different medias.

EMICO Dé-central units are standard equipped with:

- Stainless steel Maintenance free selector valve for water and chemicals.
- 2 separated chemical injectors with adjustable dosing ratio (0.15-15%) who makes it impossible to mix-up chemicals.
- Lockable stainless steel cabinet, with sloped top cover for optimal hygiene
- 2 x stainless steel check valves on chemical suction with Extreme Kalrez seals for excellent chemical resistance.
- Extra protection to customers air lines and compressors. (only on compressed air version)
- 1 x bleu suction kit with filter and PVC pipe for foam cleaning chemical.
- 1 x yellow suction kit with filter and PVC pipe for foam disinfectant chemical.
- Set Of 8 dosing tips.



Technical data		
Reference	100.210AFS	100.210AFS DYN
Type	Compressed air version	Dynamic "air free foaming" version
Water connection	1/2" M BSP 60°	1/2" M BSP 60°
Water pressure	6 - 40 bar (centrifugal E-booster)	20 - 200 bar (Triplex pump)
Water temperature	0 - 90°C.	0 - 90°C.
Air connection	1/4" M BSP 60°	No air connection
Air pressure	Max. 10bar	No Air needed
Basic functions	<ul style="list-style-type: none"> • Foam cleaning • Foam Disinfection • Clean water rinse 	<ul style="list-style-type: none"> • Foam cleaning • Foam Disinfection • Clean water rinse
Chemical injectors	2 - 100% separated	2 - 100% separated
Dosing ratio	0.15 - 15%	0.15 - 15%
Materials	Stainless steel	Stainless steel
Dimensions (HxWxD):	300x 200 x 165mm	300x 200 x 165mm
Accessories types:	•	•



The EMICO which is available in the nozzle size of 1.2 - 2.8 mm meets the requirements in every field of application in the professional cleaning industry. The dosing is adjusted by one of the 10 nozzle inserts which are included in the consignment.

5. Inline Decentral injectors

Dosanova Block satellites

The stainless steel decentral block satellites are robust, user-friendly, compact and effective.



Reference	200164584	200164504	200162504	200167504
Type	Compressed air version	Dynamic "air free foaming" version	Compressed air version	Dynamic "air free foaming" version
Water connection	3/8" F BSP 60°	3/8" F BSP 60°	3/8" F BSP 60°	3/8" F BSP 60°
Water pressure	6 - 80 bar	80 - 200 bar	6 - 80 bar	80 - 200 bar
Water temperature	0 - 90°C.	0 - 90°C.	0 - 90°C.	0 - 90°C.
Air connection	1/4" M BSP 60°	No air connection	1/4" M BSP 60°	No air connection
Air pressure	Max. 10bar	No Air needed	Max. 10bar	No Air needed
Basic functions	<ul style="list-style-type: none"> • Foam cleaning • Foam Disinfection • Clean water rinse 	<ul style="list-style-type: none"> • Foam cleaning • Foam Disinfection • Clean water rinse 	<ul style="list-style-type: none"> • Foam cleaning • Clean water rinse 	<ul style="list-style-type: none"> • Foam cleaning • Clean water rinse
Chemical injectors	2 - 100% separated	2 - 100% separated	1	1
Dosing ratio	0.15 - 15%	0.15 - 15%	0.15 - 15%	0.15 - 15%
Materials	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Accessories types:	• •	•	• •	•

Wall support

