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LAGAFORS® PRODUKTKATALOG - 2011

Dear customer,

Welcome to Lagafors' world!

Our new product catalog presents the latest technology in cleaning equipment for the food-processing industry. We hope that you will find it useful when choosing your next system solution.

You can also visit our website, www.lagafors.se, to find more information and our latest news.

Best regards, Lagafors



We are continuously developing our product range, which means that the information about and specifications for the products described in this catalog can change without prior notice, and we reserve the right to carry out design modifications without prior notice. In 2011, this catalog will be published in three languages: Swedish, English and German. We do not take responsibility for any clerical errors herein. Lagafors Fabriks AB, Laholm 2011.

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# **CENTRAL CLEANING SYSTEM - CCS**



Lagafors® Central Cleaning System, CCS, enables the food industry to obtain ultimate hygiene at reduced cost and environmental impact, in a good working setting. The CCS is made up of five main components that together meet high demands for capacity, performance and quality.

By combining the components in the CCS, which comprises our newly developed VCC (Variable Chemical Centre) chemical centre and various types of water pump centres, customers can reduce their costs by up to 35% compared to most existing cleaning systems and cleaning methods. These savings, and a decreased environmental impact, are achieved thanks to reduced use of warm water and chemicals and less wastewater generated.

The central components provide the correct pressure, flow and chemical concentration, where needed, for up to 20 simultaneous users. An enormous ergonomic advantage is provided when using them together with the Triggless® II spray gun.

The water pump centre and the VCC chemical centre are normally placed in a centrally located area. Pipes and hoses then run throughout the factory feeding all the satellite stations. Each satellite station consists of a hose reel with hose for water, chemicals and disinfectant. Attached are the Triggless® II spray guns and pre-cleaning nozzles. The central dosing and storage of chemicals enables safe handling with no concentrated chemicals in the production areas. Service, maintenance and settings for the VPP and VCC are made in one central place.

| Features                      | Benefits   | Facts   |  |
|-------------------------------|--|---|--|
| Water pump centre             | Flexible pressure and flow                                   | Desired pressure and flow for up to 20 simultaneous users |  |
| Variable Chemical Centre, VCC | High dosage accuracy of chemicals/disinfectant               | Optimized cost and environmental impact                   |  |
| Variable Media Satellite, VMS | User friendly and hygienically designed                      | Efficiency and hygiene in production area                 |  |
| Triggless® II                 | Spray gun that offers ergonomics, flexibility and efficiency | No trigger, 0-150 bar, reduced muscle strain              |  |
| Pre-Cleaning Nozzle, PCN      | User adjustable pressure and flow                            | Efficient cleaning 0.3-7 m at optimized water consumption |  |

#### THE FIVE MAIN COMPONENTS



#### **Water pump units**

The water pump centre is an essential component of the cleaning system. Lagafors offers a wide variety of pumps and customers can choose between different pressures (20-80 bar) as well as flow capacities for various numbers (1-20) of simultaneous users. Furthermore, many of our units are already prepared for expanding flow capacity.

Pages 4-11



#### **Variable Chemical Centre (VCC)**

The unique Variable Chemical Centre (VCC) is designed for central dosing of chemicals. Its key components are a water pump, 1-3 chemical dosing units and a control unit. The dosing accuracy of +/- 0.1% ensures optimal consumption of chemicals, with maximum results. Up to three different chemical solutions can be mixed and used at the same time in this unit.

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### **Variable Media Satellite (VMS)**

Our newly developed Variable Media Satellite (VMS) is a hygienically designed satellite station that you can connect to any water pump or VCC unit. Up to three different media (normally chemicals, disinfectant and water) can be distributed through the VMS. The VMS is user-friendly, easy to maintain and appreciated within demanding industry for its robustness.

Pages 16-21



### Spray Gun (Triggless® II)

The patented Triggless® II spray gun is ergonomically designed to reduce muscle strain on the operator. The gun uses the reaction-force of the water to keep the valve open instead of a traditional trigger. It is light weight, safe whilst used with one hand and suitable for all pressure levels up to 150 bars. During operation the Triggless® II can be held in different ways to improve flexibility and efficiency. It also features a "dead man's" grip, i.e. the water flow is shut off if the gun is accidentally dropped.

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### **Pre-Cleaning Nozzle (PCN)**

The patent pending Pre-Cleaning Nozzle (PCN) enables the user to control the water pressure for long or short distance cleaning, i.e. 0.3–7 metres. The purpose is to use the PCN instead of a high flow water-hose in the pre-cleaning stage. Correctly used, this method can significantly reduce the water consumption. The weight of the Pre-Cleaning Nozzle is only 125 grams.

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## **LOW WATER PRESSURE PUMP - LWP 20**



Lagafors® LWP 20 (Low Water Pressure, Stationary Booster), is designed for cleaning with pressurized water and it is to be connected to a number of Lagafors® Variable Media Satellites (VMS). The LWP is especially appropriate for cleaning applications in food processing, e.g. in dairies, breweries, fish industries, prepared food industries, industrial kitchens and other places where a high level of hygiene is required.

- · Working pressure 20-25 bar.
- · Floor-standing unit.
- · Unit is intended for central placement (non-production areas).

| Features  | Benefits                          | Facts                             |
|---|-----------------------------------|-----------------------------------|
| Increases the pressure on outgoing media Better cleaning energy on surfaces |                                   | From 3-8 bar up to 25 bar         |
| Flexibility in pressure and flow  | Multiple options                  | 20-25 bar and up to 600 lit/min   |
| Constant pressure on outgoing media   | Ergonomical and safe for the user | Insignificant pressure variations |
| Vertical multistage centrifugal pump  | Reliable and robust pump model    | Low maintenance costs             |
| Frequency-controlled pump   | Optimal energy consumption        | Low operating costs               |

| Technical inform        | Technical information Lagafors® Low Water Pressure Pump LWP 20 |  |  |  |  |  |  |
|-------------------------|--|--|--|--|--|--|--|
| Model                   | LWP 2030 SB  | LWP 2090 SB                                    | LWP 20150** SB                                 | LWP 20150 Multi**                              | LWP 20300 Multi**                              | LWP 20450 Multi**                              | LWP 20600 Multi**                              |
| Outgoing water pressure | 20-25 bar  | 20-25 bar                                      | 20-25 bar                                      | 20-25 bar                                      | 20-25 bar                                      | 20-25 bar                                      | 20-25 bar                                      |
| Water consumption       | 0-30 lit/min   | 0-90 lit/min                                   | 0-150 lit/min                                  | 0-150 lit/min                                  | 0-300 lit/min                                  | 0-450 lit/min                                  | 0-600 lit/min                                  |
| Flow capacity           | 50 lit/min   | 120 lit/min                                    | 165 lit/min                                    | 165 lit/min                                    | 330 lit/min                                    | 495 lit/min                                    | 660 lit/min                                    |
| Capacity (30lit/user)   | 1-2 users  | 3-4 users                                      | 5 users  | 5 users  | 10 users                                       | 15 users                                       | 20 users                                       |
| Surrounding temperature | 5-30 °C  | 5-30 °C  | 5-30 °C  | 5-30 °C  | 5-30 °C  | 5-30 °C  | 5-30 °C  |
| Connections             |  |  |  |  |  |  |  |
| Water incoming          | ISO-G 1 1/4" int. thread                                       | ISO-G 1 1/4" int. thread                       | ISO-G 1 1/4" int. thread                       | ISO-G 2 1/2" int. thread                       |
| Water supply, flow      | 70 lit/min   | 150 lit/min                                    | 180* lit/min                                   | 180* lit/min                                   | 360* lit/min                                   | 540* lit/min                                   | 720* lit/min                                   |
| Water supply, pressure  | 3-8 bar  | 3-8 bar  | 3-8 bar  | 3-8 bar  | 3-8 bar  | 3-8 bar  | 3-8 bar  |
| Water temperature, max  | 70 °C  | 70 °C  | 70 °C  | 70 °C  | 70 °C  | 70 °C  | 70 °C  |
| Water outgoing          | ISO-G 1" int. thread   | ISO-G 1" int. thread                           | ISO-G 1" int. thread                           | ISO-G 2 1/2" int. thread                       | ISO-G 2 1/2" int. thread                       | ISO-G 2 1/2" int. thread                       | ISO-G 2 1/2" int. thread                       |
| Electricity             |  |  |  |  |  |  |  |
| Voltage                 | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz                 | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz |
| Current                 | 4,5 A  | 9,0 A  | 14,6 A   | 14,6* A  | 30* A  | 45* A  | 60 A   |
| Power                   | 2,2 kW   | 4,0 kW   | 7,5 kW   | 7,5* kW  | 15* kW   | 22,5* kW                                       | 30 kW  |
| Dimensions              | Dimensions   |  |  |  |  |  |  |
| Measurements WxDxH      | 500 x 500 x 1400 mm  | 500 x 500 x 1510 mm                            | 500 x 500 x 1400 mm                            | 1140 x 760 x 1130 mm                           | 1140 x 760 x 1130 mm                           | 1140 x 760 x 1130 mm                           | 1140 x 760 x 1130 mm                           |
| Weight, approx.         | 100 kg   | 125 kg   | 125 kg   | 175 kg   | 250 kg   | 325 kg   | 400 kg   |



Lagafors® LWP 20150-F SB



<sup>-</sup> Alarm feature for low supply water pressure and exceeded max flow is standard on all units.

<sup>\*</sup> A fully built-out unit has the following capacity: 720 lit/min – 60 A – 30 kW.

<sup>\*\*</sup> Frequency-regulated pumps.

## **LOW WATER PRESSURE PUMP - LWP 40**



Lagafors® LWP 40 (Low Water Pressure, Stationary Booster), is designed for cleaning with pressurized water and it is to be connected to a number of Lagafors® Variable Media Satellites (VMS). Lagafors® LWP is especially suitable for cleaning applications in the food processing industry, for example slaughterhouses, meat processing, dairies, breweries, fishing industry, prepared food, large-scale kitchens and other places where a high level of hygiene is required.

- · Working pressure 35-40 bar.
- · Floor-standing unit.
- · Unit is intended for central placement (non-production areas).

| Features  | Benefits                          | Facts                             |  |
|---|-----------------------------------|-----------------------------------|--|
| Increases the pressure on outgoing media Better cleaning energy on surfaces |                                   | From 3-8 bar up to 40 bar         |  |
| Flexibility in pressure and flow  | Multiple options                  | 35-40 bar and up to 420 lit/min   |  |
| Constant pressure on outgoing media   | Ergonomical and safe for the user | Insignificant pressure variations |  |
| Vertical multistage centrifugal pump  | Reliable and robust pump model    | Low maintenance costs             |  |
| Frequency-controlled pump   | Optimal energy consumption        | Low operating costs               |  |



| Technical inform        | Technical information Lagafors® Low Water Pressure Pump LWP 40 |  |  |  |  |  |  |  |
|-------------------------|--|--|--|--|--|--|--|--|
| Model                   | LWP 4025 SB  | LWP 4070 SB                                    | LWP 4070 Multi                                 | LWP 40140 Multi                                | LWP 40210 Multi                                | LWP 40280 Multi                                | LWP 40350 Multi XL                             | LWP 40420 Multi XL                             |
| Outgoing water pressure | 35-40 bar  | 35-40 bar                                      | 35-40 bar                                      | 35-40 bar                                      | 35-40 bar                                      | 35-40 bar                                      | 35-40 bar                                      | 35-40 bar                                      |
| Water consumption       | 0-25 lit/min   | 0-70 lit/min                                   | 0-70 lit/min                                   | 0-140 lit/min                                  | 0-210 lit/min                                  | 0-280 lit/min                                  | 0-350 lit/min                                  | 0-420 lit/min                                  |
| Flow capacity           | 50 lit/min   | 90 lit/min                                     | 90 lit/min                                     | 180 lit/min                                    | 270 lit/min                                    | 360 lit/min                                    | 450 lit/min                                    | 540 lit/min                                    |
| Capacity (23 lit/user)  | 1-2 users  | 3-4 users                                      | 3-4 users                                      | 6-7 users                                      | 9-10 users                                     | 12-13 users                                    | 15-16 users                                    | 19-20 users                                    |
| Surrounding temperature | 5-30 °C  | 5-30 °C  | 5-30 °C  | 5-30 °C  | 5-30 °C  | 5-30 °C  | 5-30 °C  | 5-30 °C  |
| Connections             |  |  |  |  |  |  |  |  |
| Water incoming          | ISO-G 1 1/4" int. thread                                       | ISO-G 1 1/4" int. thread                       | ISO-G 2 1/2" int. thread                       |
| Water supply, flow      | 70 lit/min   | 120 lit/min                                    | 120* lit/min                                   | 240* lit/min                                   | 330* lit/min                                   | 440 lit/min                                    | 660 lit/min                                    | 660 lit/min                                    |
| Water supply, pressure  | 3-8 bar  | 3-8 bar  | 3-8 bar  | 3-8 bar  | 3-8 bar  | 3-8 bar  | 3-8 bar  | 3-8 bar  |
| Water temperature, max  | 70 °C  | 70 °C  | 70 °C  | 70 °C  | 70 °C  | 70 °C  | 70 °C  | 70 °C  |
| Water outgoing          | ISO-G 1 1/4" int. thread                                       | ISO-G 1 1/4" int. thread                       | ISO-G 2 1/2" int. thread                       |
| Electricity             |  |  |  |  |  |  |  |  |
| Voltage                 | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz                 | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz |
| Current                 | 9,4 A  | 14,6 A   | 14,6* A  | 30* A  | 45* A  | 60 A   | 90 A   | 90 A   |
| Power                   | 4,6 kW   | 7,5 kW   | 7,5* kW  | 15* kW   | 22,5* kW                                       | 30 kW  | 45 kW  | 45 kW  |
| Dimensions              |  |  |  |  |  |  |  |  |
| Measurements WxDxH      | 500 x 500 x 1400 mm  | 500 x 500 x 1400 mm                            | 1140 x 760 x 1200 mm                           | 1140 x 760 x 1200 mm                           | 1140 x 760 x 1200 mm                           | 1140 x 760 x 1200 mm                           | 1830 x 760 x 1200 mm                           | 1830 x 760 x 1200 mm                           |
| Weight, approx.         | 80 kg  | 90 kg  | 175 kg   | 250 kg   | 325 kg   | 400 kg   | 500 kg   | 575 kg   |

- All pumps are frequency-controlled.
- Alarm feature for low supply water pressure and exceeded max flow is standard on all units.
- \* A fully built-out unit has the following capacity: 440 lit/min 60 A 30 kW. (40350 must always be connected according to 40420 specifications)



Lagafors® LWP 4070 SB



## **MEDIUM PRERSSURE PUMP - MPP-F**



The Lagafors® Medium Pressure Pump - Frequency 8090, MPP-F, features reduced water consumption, improved ergonomics and proven reliability with low maintenance costs. The Lagafors® MPP-F uses a frequency-controlled pump to supply five simultaneous users with consistent water pressure. This feature eliminates the pressure surges that nomally arise when other satellite stations are activated. The pump pressure can be set in the range 60–80 bar, with a capacity of 90 lit/min. Up to four pumps can be interconnected to achieve a capacity of 360 lit/min.

- · Can be connected to Lagafors's VMS satellite stations with up to 5 simultaneous users/unit.
- · Operating pressure of 60-80 bars and maximum flow of 360 lit/min and 20 users simultaneously.
- · The unit can with advantage also be connected to automatic cleaning equipment and dishwashers.

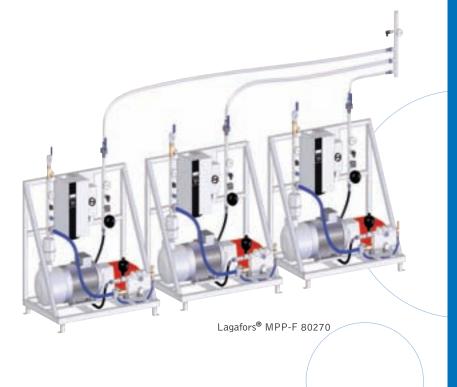
| Features                                  | Benefits                                      | Facts                           |  |
|---|---|---------------------------------|--|
| Pressure-raising water pump               | Enhanced surface-cleaning energy              | From 3-6 bar up to 80 bar       |  |
| Flexible in terms of pressure and flow    | Choose between several different alternatives | 60-80 bar and up to 360 lit/min |  |
| Consistent pressure for pressurized water | Ergonomic and user-safe                       | No pressure fluctuation         |  |
| Low revolutions (rpm)                     | Long service intervals                        | Low maintenance costs           |  |
|   |   |                                 |  |



| Technical information Lagafors® Medium Pressure Pump MPP-F |  |  |  |  |  |
|--|--|--|--|--|--|
| Model  | 8090   | 80180  | 80270  | 80360  |  |
| Exit water pressure  | 60-80 bar                                      | 60-80 bar                                      | 60-80 bar                                      | 60-80 bar                                      |  |
| Water consumption  | 0-90 lit/min                                   | 0-180 lit/min                                  | 0-270 lit/min                                  | 0-360 lit/min                                  |  |
| Capacity (18 l/user)                                       | 1-5 users                                      | 1-10 users                                     | 1-15 users                                     | 1-20 users                                     |  |
| Surrounding temperature                                    | 10-30 °C                                       | 10-30 °C                                       | 10-30 °C                                       | 10-30 °C                                       |  |
| Water connections  |  |  |  |  |  |
| Water connection, supply                                   | ISO-G 1", internal thread                      | 2 x ISO-G 1", internal thread                  | 3 x ISO-G 1", internal thread                  | 4 x ISO-G 1", internal thread                  |  |
| Supply water flow  | 120 lit/min                                    | 240 lit/min                                    | 360 lit/min                                    | 450 lit/min                                    |  |
| Supply water pressure                                      | 3-6 bar  | 3-6 bar  | 3-6 bar  | 3-6 bar  |  |
| Water temperature, max                                     | 60 °C  | 60 °C  | 60 °C  | 60 °C  |  |
| Outgoing water connection                                  | ISO-G 3/4", internal thread                    | ISO-G 1 1/4", internal thread                  | ISO-G 1 1/4", internal thread                  | ISO-G 1 1/4", internal thread                  |  |
| Electric supply  |  | <u> </u>                                       | <u> </u>                                       |  |  |
| Voltage  | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 4 x 380-420 V / 50 Hz<br>4 x 440-480 V / 60 Hz |  |
| Electric current   | 50 A   | 2 x 50 A                                       | 3 x 50 A                                       | 4 x 50 A                                       |  |
| Power consumption  | 15 kW  | 2 x 15 kW                                      | 3 x 15 kW                                      | 4 x 15 kW                                      |  |
| Dimensions   |  |  |  |  |  |
| Measurements WxDxH (without hood)                          | 1190 x 740 x 1360 mm                           | 2 x (1190 x 740 x 1360) mm                     | 3 x (1190 x 740 x 1360) mm                     | 4 x (1190 x 740 x 1360) mm                     |  |
| Weight, approx.  | 310 kg   | 2 x 310 kg                                     | 3 x 310 kg                                     | 4 x 310 kg                                     |  |

- Alarm feature for low supply water pressure and exceeded max flow is standard. Recommendations:
- Avoid placing near noise-sensitive areas.
- Unit must be bolted to the floor (concrete floor recommended).





## **MEDIUM WATER PRESSURE - MWP**



Lagafors® pump MWP, (Medium Water Pressure) is designed for cleaning with pressurized water. It is to be connected to a number of Lagafors® Variable Media Satellites, VMS. The MWP is especially appropriate for cleaning applications in food processing, e.g. in slaughter houses, dairies, breweries, fish industries, prepared food industries, industrial kitchens and other places where a high level of hygiene is required.

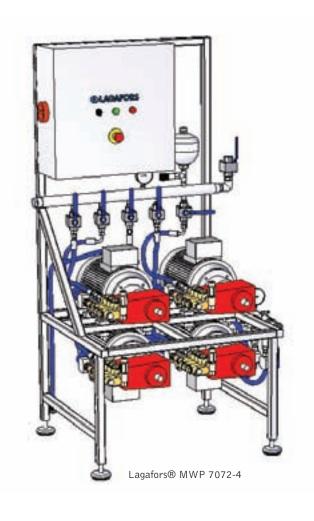
- · Working pressure 70 bar, can also be run on 90 bar.
- · Turnkey unit, placed on floor.
- · The pumps are mounted on a frame in stainless steel.
- · The unit can with advantage also be connected to automatic cleaning equipment and dishwashers.

| Features                                 | Benefits                           | Facts                          |
|--|------------------------------------|--------------------------------|
| Increases the pressure on outgoing media | Better cleaning energy on surfaces | From 3-8 bar up to 90 bar      |
| Flexibility in flow                      | Multiple options                   | 70-90 bar and up to 72 lit/min |
| Well-known pump model                    | Reliable and robust                | Low maintenance costs          |
| Extendable to max 4 pumps                | Flexible                           | Low investment costs           |



| Technical information Lagafors® Medium Water Pressure MWP |                        |                        |                        |  |  |  |
|---|------------------------|------------------------|------------------------|--|--|--|
| Model   | MWP 7036-2             | MWP 7054-3             | MWP 7072-4             |  |  |  |
| Outgoing water pressure                                   | 70 bar                 | 70 bar                 | 70 bar                 |  |  |  |
| Water consumption   | 0-36 lit/min           | 0-54 lit/min           | 0-72 lit/min           |  |  |  |
| Capacity (18 lit/user)                                    | 2 users                | 3 users                | 4 users                |  |  |  |
| Surrounding temperature                                   | 5-30 °C                | 5-30 °C                | 5-30 °C                |  |  |  |
| Water connections   | ·                      |                        |                        |  |  |  |
| Water incoming  | ISO-G 1" int. thread   | ISO-G 1" int. thread   | ISO-G 1" int. thread   |  |  |  |
| Water supply, flow  | 50 lit/min             | 70 lit/min             | 90 lit/min             |  |  |  |
| Water supply, pressure                                    | 3-8 bar                | 3-8 bar                | 3-8 bar                |  |  |  |
| Water temperature, max                                    | 70 °C                  | 70 °C                  | 70 °C                  |  |  |  |
| Water outgoing  | ISO-G 1/2" int. thread | ISO-G 1/2" int. thread | ISO-G 1/2" int. thread |  |  |  |
| Electric supply   | ·                      |                        |                        |  |  |  |
| Voltage   | 3 x 380-420 V / 50 Hz  | 3 x 380-420 V / 50 Hz  | 3 x 380-420 V / 50 Hz  |  |  |  |
| Current   | 2 x 9 A                | 3 x 9 A                | 4 x 9 A                |  |  |  |
| Power   | 2 x 4.0 kW             | 3 x 4.0 kW             | 4 x 4.0 kW             |  |  |  |
| Dimensions  | Dimensions             |                        |                        |  |  |  |
| Measurements WxDxH  | 780 x 690 x 1600 mm    | 780 x 690 x 1600 mm    | 780 x 690 x 1600 mm    |  |  |  |
| Weight. approx.   | 100 kg                 | 140 kg                 | 180 kg                 |  |  |  |

- Alarm feature for low supply water pressure is standard.
- \* Our recommendation is to connect the unit according to MWP 7072-4 for further expansions.
- \*\* Cabinet is optinal.







## **VARIABLE CHEMICAL CENTRE - VCC**



Lagafors® unique Variable Chemical Centre, VCC, is designed for central dosing of chemicals. It consists of a pressure booster pump, 1-3 chemical dosing units and a control unit. The dosing accuracy of +/- 0.1% enables optimal chemical concentration, with maximum results. Up to three different chemical solutions can be mixed and used at the same time in this unit. The VCC is especially appropriate for cleaning applications in food processing, e.g. in slaughterhouses, dairies, breweries, fish industries, meat processing industries, industrial kitchens and other places where a high level of hygiene is required.

- · Main components: pressure booster pump, 1-3 chemical dosing units and a control unit.
- · High dosing accuracy (+/- 0,1%), guarantees low chemical consumption.
- · Capacity extended dosing unit.
- · Flexible, handles any combination of up to three chemicals.

| Features                        | Benefits   | Facts  |  |
|---------------------------------|--|--|--|
| High dosage accuracy (+/- 0,1%) | Reduced chemical consumption   | Lower chemical cost  |  |
| Constant chemical concentration | No concentration fluctuation   | Reduced chemical consumption   |  |
| Central storage of chemicals    | No concentrated chemicals in production area, less handling of chemicals | Reduced risk of accidents with chemicals   |  |
| Central dosage                  | Purchase of chemicals in containers                                      | Reduced cost per litre/chemical  |  |
| Separate water systems          | Possibility to set desired temperature of diluted chemical solution      | Optimal chemical efficiency, improved working environment, reduced amount of aerosol |  |

| Technical information Lagafors® Variable Chemical Centre VCC |  |  |  |  |  |
|--|--|--|--|--|--|
| Model  | vcc-s  | VCC-D  | VCC-T  |  |  |
| Dosing pumps   | 1  | 2  | 3  |  |  |
| Outgoing water pressure                                      | 8 bar  | 8 bar  | 8 bar  |  |  |
| Water consumption  | 0-30 lit/min                                   | 0-60 lit/min                                   | 0-90 lit/min                                   |  |  |
| Capacity (6 lit/user)  | 1-5 users                                      | 1-10 users                                     | 1-15 users                                     |  |  |
| Surrounding temperature                                      | 5-30 °C  | 5-30 °C  | 5-30 °C  |  |  |
| Connections incoming media                                   |  |  |  |  |  |
| Water incoming   | ISO-G 1" int. thread                           | ISO-G 1" int. thread                           | ISO-G 1" int. thread                           |  |  |
| Water supply, flow   | 50 lit/min                                     | 80 lit/min                                     | 120 lit/min                                    |  |  |
| Water supply, pressure                                       | 3-6 bar  | 3-6 bar  | 3-6 bar  |  |  |
| Water temperature, max                                       | 30 °C  | 30 °C  | 30 °C  |  |  |
| Air (6-8 bar)  | ISO-G 3/8"                                     | ISO-G 3/8"                                     | ISO-G 3/8"                                     |  |  |
| Connections outgoing media                                   |  |  |  |  |  |
| Chemical solution to satellite                               | ISO-G 1/2" int. thread                         | 2 x ISO-G 1/2" int. thread                     | 3 x ISO-G 1/2" int. thread                     |  |  |
| Air to satellite   | ISO-G 3/8" int. thread                         | ISO-G 3/8" int. thread                         | ISO-G 3/8" int. thread                         |  |  |
| Electricity  |  |  |  |  |  |
| Voltage  | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz |  |  |
| Current  | 3,3-2,7 A                                      | 3,3-2,7 A                                      | 3,3-2,7 A                                      |  |  |
| Power  | 1,5 kW   | 1,5 kW   | 1,5 kW   |  |  |
| Dimensions   |  |  |  |  |  |
| Measurements WxDxH (excl. cabinet)                           | 1200 x 480 x 1920 mm                           | 1200 x 480 x 1920 mm                           | 1200 x 480 x 1920 mm                           |  |  |
| Weight, approx.  | 100 kg   | 110 kg   | 120 kg   |  |  |

- The unit can be extended with Multiflow, which doubles each line's chemical solution capacity.
- \* Protective cover, level sensor with digital display and alarm for 1-3 chemical solutions are optional.



Lagators® VCC-D, cabinet and level indicator are optional\*



# **CENTRAL COMBI UNIT - CCU**



The Lagafors® CCU is a centralized cleaning system for washing with water, foam application and disinfection for use in applications with lower capacity requirements. Chemical and disinfectant solutions can be dosed in concentrations between 1% and 5%. The Lagafors® CCU is especially suitable for cleaning applications in small-scale food processing industries, for example slaughterhouses, meat processing, dairies, breweries, fishing industry, prepared food, large-scale kitchens and other places where a high level of hygiene is required.

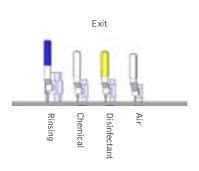
- · Turnkey unit.
- · Automatic start/stop feature for water as well as chemical and disinfectant solutions.
- · Built-in pressure indicator that warns when the supply water pressure is too low.
- · Two different pressure alternatives, 20 or 40 bar.

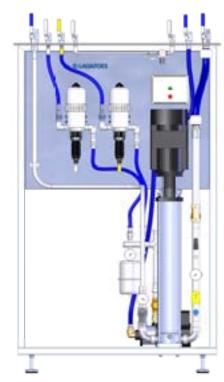
| Features                                 | Benefits                                   | Facts                     |
|--|--|---------------------------|
| Increases the pressure on outgoing water | Better cleaning energy on surfaces         | Good hygienic result      |
| Flexible in flow                         | Easy to work with                          | Reduced water consumption |
| High dosing accuracy                     | Optimized chemical consumption             | Low chemical costs        |
| Dependable in service                    | Few break-downs                            | Low maintenance costs     |
| All-in-One system                        | Centralized water, chemicals, disinfectant | Low investment            |

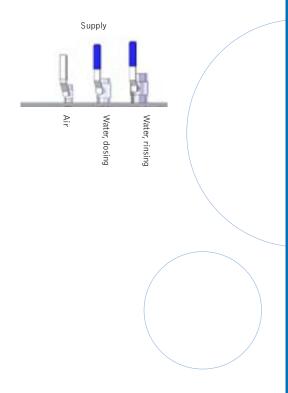


| Model                                | 2090 S                 | 2090 D                     | 20150 S                | 20150 D                    | 4070 S                 | 4070 D                    |
|--------------------------------------|------------------------|----------------------------|------------------------|----------------------------|------------------------|---------------------------|
|                                      |                        | 1                          | 1                      | 1                          | 10100                  | 10102                     |
| Exit pressure, water                 | 20-25 bar              | 20-25 bar                  | 20-25 bar              | 20-25 bar                  | 35-40 bar              | 35-40 bar                 |
| Water consumption                    | 0-90 lit/min           | 0-90 lit/min               | 0-150 lit/min          | 0-150 lit/min              | 0-70 lit/min           | 0-70 lit/min              |
| Flow capacity, 30/lit/anv (8 US gal) | 120 lit/min            | 120 lit/min                | 165 lit/min            | 165 lit/min                | 90 lit/min             | 90 lit/min                |
| Capacity, rinsing (30 lit/user)      | 1-3 users              | 1-3 users                  | 1-5 users              | 1-5 users                  | -                      | -                         |
| Capacity, rinsing (23 lit/user)      | -                      | -                          | -                      | -                          | 1-3 users              | 1-3 users                 |
| Exit pressure, chemical solution     | 6 bar                  | 6 bar                      | 6 bar                  | 6 bar                      | 6 bar                  | 6 bar                     |
| Capacity, chemical solution          | 1-3 users              | 1-3 users                  | 1-3 users              | 1-3 users                  | 1-3 users              | 1-3 users                 |
| Capacity, disinfectant solution      | -                      | 1-3 users                  | -                      | 1-3 users                  | -                      | 1-3 users                 |
| Supply connections                   |                        |                            |                        |                            |                        |                           |
| Supply water, rinsing                | ISO-G 1" int. thread   | ISO-G 1" int. thread       | ISO-G 1" int. thread   | ISO-G 1" int. thread       | ISO-G 1" int. thread   | ISO-G 1" int. thread      |
| Supply water flow                    | 150 lit/min            | 150 lit/min                | 180 lit/min            | 180 lit/min                | 120 lit/min            | 120 lit/min               |
| Supply water pressure                | 3-8 bar                | 3-8 bar                    | 3-8 bar                | 3-8 bar                    | 3-8 bar                | 3-8 bar                   |
| Water temperature, max               | 70 °C                  | 70 °C                      | 70 °C                  | 70 °C                      | 70 °C                  | 70 °C                     |
| Supply water, dosing                 | ISO-G 3/4" int. thread | ISO-G 3/4" int. thread     | ISO-G 3/4" int. thread | ISO-G 3/4" int. thread     | ISO-G 3/4" int. thread | ISO-G 3/4" int. threa     |
| Supply water flow                    | 50 lit/min             | 50 lit/min                 | 50 lit/min             | 50 lit/min                 | 50 lit/min             | 50 lit/min                |
| Supply water pressure                | 3-5 bar                | 3-5 bar                    | 3-5 bar                | 3-5 bar                    | 3-5 bar                | 3-5 bar                   |
| Water temperature, max               | 30 °C                  | 30 °C                      | 30 °C                  | 30 °C                      | 30 °C                  | 30 °C                     |
| Air pressure (6-8 bar / 87-116 psi)  | ISO-G 3/8" int. thread | ISO-G 3/8" int. thread     | ISO-G 3/8" int. thread | ISO-G 3/8" int. thread     | ISO-G 3/8" int. thread | ISO-G 3/8" int. threa     |
| Exit connections                     |                        |                            |                        |                            |                        |                           |
| Water to satellite                   | ISO-G 1" int. thread   | ISO-G 1" int. thread       | ISO-G 1" int. thread   | ISO-G 1" int. thread       | ISO-G 1" int. thread   | ISO-G 1" int. thread      |
| Chemical solution to satellite       | ISO-G 1/2" int. thread | 2 x ISO-G 1/2" int. thread | ISO-G 1/2" int. thread | 2 x ISO-G 1/2" int. thread | ISO-G 1/2" int. thread | 2 x ISO-G 1/2" int. threa |
| Air to satellite                     | ISO-G 3/8" int. thread | ISO-G 3/8" int. thread     | ISO-G 3/8" int. thread | ISO-G 3/8" int. thread     | ISO-G 3/8" int. thread | ISO-G 3/8" int. thread    |
| Electric supply                      |                        |                            |                        |                            |                        |                           |
| Voltage                              | 3 x 380-420 V / 50 Hz  | 3 x 380-420 V / 50 Hz      | 3 x 380-420 V / 50 Hz  | 3 x 380-420 V / 50 Hz      | 3 x 380-420 V / 50 Hz  | 3 x 380-420 V / 50 Hz     |
| Current                              | 12,7 Amp               | 12,7 Amp                   | 18,3 Amp               | 18,3 Amp                   | 18,3 Amp               | 18,3 Amp                  |
| Power                                | 4,55 kW                | 4,55 kW                    | 8,05 kW                | 8,05 kW                    | 8,05 kW                | 8,05 kW                   |
| Dimensions                           | ,                      |                            | ,                      | •                          | ,                      | ,                         |
| Dimensions WxDxH                     | 1200 x 480 x 1920 mm   | 1200 x 480 x 1920 mm       | 1200 x 480 x 1920 mm   | 1200 x 480 x 1920 mm       | 1200 x 480 x 1920 mm   | 1200 x 480 x 1920 mr      |
| Weight, appr.                        | 130 kg                 | 140 kg                     | 150 kg                 | 160 kg                     | 150 kg                 | 160 kg                    |

<sup>\*</sup> Protective cover is optional.







## **SATELLITE STATION - VMS**



Lagafors's Variable Media Satellite, VMS, is a hygienically designed satellite station. It can be used together with any of Lagafors's water pump centres and VCC chemical systems for chemical dosage. The VMS is made entirely of stainless steel. It is easy to operate with an integrated colour coding for ball valves and nozzles. All media settings are fixed, no operator adjustments are needed. Up to three different media, normally chemicals, disinfectant and water, can be distributed through the VMS. The VMS is user-friendly, easy to maintain and to clean both externally and internally, thanks to the open underside.

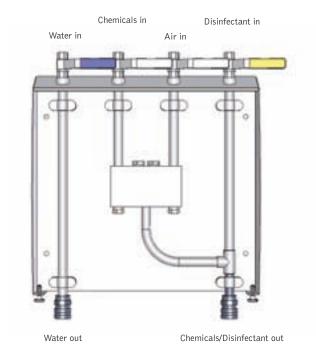
#### The VMS consists of:

- · Colour coded ball valves for each media.
- · Cabinet in stainless steel with slanting top for improved hygiene.
- $\cdot$  Unique mixer unit for foam and disinfectant.
- · Quick couplings for change of media.

| Features  | Benefits                               | Facts                                   |
|---|--|---|
| Easy to fix and connect                         | Time effective                         | Lower installation costs                |
| Well thought-out design                         | Easy to clean                          | Good from a hygienic perspective        |
| "All-in-one"-principle                          | Only one hose to operate               | Saves time during cleaning              |
| Distributes chemical solutions, no concentrates | No handling of concentrate by the user | Reduced risk in the working environment |



| Technical information Lagafors® Media Satellite VMS |  |  |
|---|--|--|
| Connections incoming media                          |  |  |
| Water 5-160 bar                                     | ISO-G 3/8" int. thread                               |  |
| Waterflow, Max                                      | 35lit/min  |  |
| Alkaline chemicals 6-8 bar (from VCC/CCU)           | ISO-G 3/8" int. thread                               |  |
| Disinfectant 6-8 bar (from VCC/CCU)                 | ISO-G 3/8" int. thread                               |  |
| Air 4 bar (from VCC/CCU)                            | ISO-G 3/8" int. thread                               |  |
| Connections outgoing media                          |  |  |
| Quick couplings                                     | Easy change between water and chemicals/disinfectant |  |
| Dimensions  |  |  |
| Measurements WxDxH                                  | 440 x 112 x 435 mm                                   |  |





The hose reel (optional) increases the life cycle of the hose and provides good hygiene.



### **SATELLITE STATION - VMS-T**



Lagafors® Variable Media Satellite, VMS-T, is a hygienically designed satellite station which is to be connected to to any Lagafors® water pump centre and the Lagafors® VCC for dosing of chemicals. Developed mainly to satisfy the needs of the meat industry, the great advantage with the VMS-T is that it is a all-in-one unit, which gives the possibility of using up to three different chemical solutions at the same time. E.g. the satellite station manages contemporaneously both alkaline chemicals and acid chemicals in parallel outlets without having to clean the unit when changing from one kind of solution to the other. This option represents a truly revolutionary feature both from a convenience and an operator safety point of view.

The VMS-T is completely made of stainless steel. It is easy to operate with an integrated colour coding for ball valves and nozzles. All media settings are fixed so no operator adjustments are needed. The VMS-T is user-friendly, easy to maintain and to clean both externally and internally, thanks to the open underside.

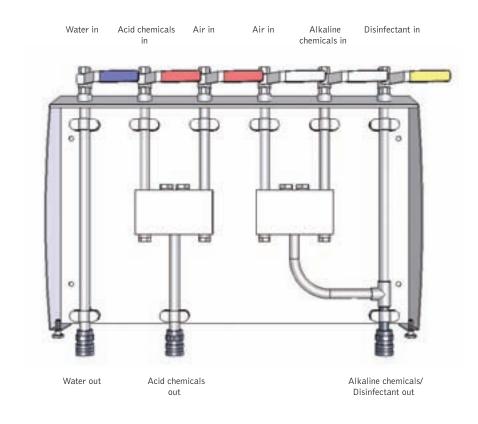
#### The VMS-T consists of:

- · Colour coded ball valves for each media.
- · Cabinet in stainless steel with slanting top for improved hygiene.
- · Unique mixer unit for foam and disinfectant.
- · Quick couplings for change of media.

| Features  | Benefits                               | Facts                                   |
|---|--|---|
| Easy to fix and connect                         | Time effective                         | Lower installation costs                |
| Well thought out design                         | Easy to clean                          | Good from a hygienic perspective        |
| "All-in-one"-principle                          | Only one hose to operate               | Saves time during cleaning              |
| Distributes chemical solutions, no concentrates | No handling of concentrate by the user | Reduced risk in the working environment |



| Technical information Lagafors® Media Satellite VMS-T |  |  |
|---|--|--|
| Connections incoming media                            |  |  |
| Water 5-160 bar                                       | ISO-G 3/8" int. thread                                     |  |
| Alkaline chemicals 6-8 bar (from VCC/CCU)             | ISO-G 3/8" int. thread                                     |  |
| Acidic chemicals 6-8 bar (from VCC/CCU)               | ISO-G 3/8" int. thread                                     |  |
| Disinfectant 6-8 bar (from VCC/CCU)                   | ISO-G 3/8" int. thread                                     |  |
| Air 4 bar (from VCC/CCU)                              | ISO-G 3/8" int. thread                                     |  |
| Waterflow, Max  | 35 lit/min   |  |
| Connections outgoing media                            |  |  |
| Quick couplings                                       | Easy change between water, acid and chemicals/disinfectant |  |
| Dimensions  |  |  |
| Measurements WxDxH                                    | 680 x 112 x 435 mm   |  |





### **SATELLITE STATION - VMS-COMBI**



The Lagafors® Variable Media Satellite, VMS, is a hygienically designed satellite station, which can be used together with any of Lagafors's water pump centres and VCC chemical systems for chemical dosage. This unit is wall-mounted in the production area and is suitable for water pressures between 5 and 160 bar. The VMS-Combi variant, manages both centrally dosed chemical and disinfectant solutions, and thanks to an integrated injector, an optional chemical solution. This unit is essentially an alternative for customers who want centralized dosage, but also work in an environment where an optional chemical solution (e.g. car shampoo) is needed from time to time. This provides a large degree of freedom, while at the same time maintaining operator safety and centralized dosage.

The VMS-Combi is completely made of stainless steel. It is easy to operate with an integrated colour coding for ball valves and nozzles. All media settings are fixed so no operator adjustments are needed. The VMS-Combi is user-friendly, easy to maintain and to clean both externally and internally, thanks to the open underside.

#### The VMS-Combi consists of:

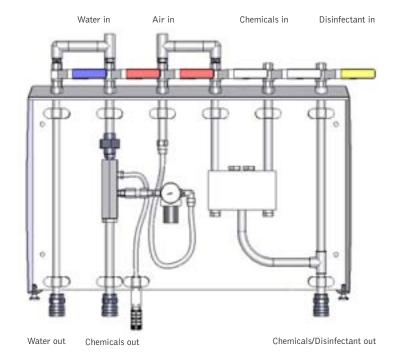
- · Colour coded ball valves for each media.
- $\cdot$  Cabinet in stainless steel with slanting top for improved hygiene.
- · A unique concept consisting of a mixer unit for central dosing of chemical and disinfectant solutions, as well as an injector for an optional chemical solution.
- · Quick couplings for change of media.

| Features                                | Benefits                 | Facts                            |
|---|--------------------------|----------------------------------|
| Easy to fix and connect                 | Time effective           | Lower installation costs         |
| Well thought out design                 | Easy to clean            | Good from a hygienic perspective |
| "All-in-one"-principle                  | Only one hose to operate | Saves time during cleaning       |
| Injector for optional chemical solution | Flexible                 | Meets all requirements           |



| Technical information Lagafors® Media Satellite VMS-Combi |  |  |
|---|--|--|
| Connections incoming media                                |  |  |
| Water 5-160 bar   | ISO-G 3/8" int. thread                                     |  |
| Alkaline chemicals 6-8 bar (from VCC/CCU)                 | ISO-G 3/8" int. thread                                     |  |
| Disinfectant 6-8 bar (from VCC/CCU)                       | ISO-G 3/8" int. thread                                     |  |
| Air 4 bar (from VCC/CCU)                                  | ISO-G 3/8" int. thread                                     |  |
| Waterflow, Max  | 35 lit/min   |  |
| Connections outgoing media                                |  |  |
| Quick couplings   | Easy change between water, acid and chemicals/disinfectant |  |
| Dimensions  |  |  |
| Measurements WxDxH  | 680 x 112 x 435 mm   |  |

- Factory set values (approx. 4%) may need adjustments to local conditions e.g. water pressure, chemical viscosity etc. Colour-coded dosage nozzles are included with the unit.
- Incoming water pressure and dosing affects the foam quality, use a hose min. 1/2" with a maximum length of 20 metres.





## **ACCESSORIES - CCS**

### Triggless® II Hose-Kit

Complete hose-kit containing the Triggless® II spray gun, 15-30 metre 1/2" hose, stainless steel quick couplings and hose nipples for connection to Lagafors satellite station VMS.

The hose-kit includes a 1/2" flexible kevlar hose for pressures below 50 bar and a 1/2" two-steel reinforced hose for pressures over 50 bar.

| Technical specification |                    |  |
|-------------------------|--------------------|--|
| < 50 bar                |                    |  |
| Working pressure        | 50 bar             |  |
| Temperature             | -10°C to +70°C     |  |
| Appearance              | Smooth, light blue |  |
| > 50 bar                |                    |  |
| Working pressure        | 330 bar            |  |
| Temperature             | -40°C to +155°C    |  |
| Appearance              | Smooth, blue       |  |

| Art. No. | Description                  |
|----------|------------------------------|
| < 50 bar |                              |
| 17915    | Triggless® II Hose-Kit, 15 m |
| 17920    | Triggless® II Hose-Kit, 20 m |
| 17925    | Triggless® II Hose-Kit, 25 m |
| 17930    | Triggless® II Hose-Kit, 30 m |
| > 50 bar |                              |
| 17815    | Triggless® II Hose-Kit, 15 m |
| 17820    | Triggless® II Hose-Kit, 20 m |
| 17825    | Triggless® II Hose-Kit, 25 m |
| 17830    | Triggless® II Hose-Kit, 30 m |



#### **Lagafors® Hose Reel**

Professional spring-loaded hose reel in stainless steel for 15, 20, 25 or 30 metre hose. Equipped with a mobile arm which enables installation of the reel in narrow spaces or in the ceiling. Equipped with a connection hose. Length 2 metres.

| Technical specification |  |  |
|-------------------------|--|--|
| Max. working pressure   | 150 bar                                  |  |
| Connection              | 1/2" int. thread                         |  |
| Material                | Stainless steel                          |  |
| Measurements WxDxH      | 560 x 203 x 550 mm<br>575 x 488 x 550 mm |  |

| Art. No. | Description                |
|----------|----------------------------|
| 17870    | Hose Reel for VMS, 15/20 m |
| 17875    | Hose Reel for VMS, 25/30 m |



### **Lagafors® Hygiene Hood**

Hygienic and protective hood in stainless steel developed for Lagafors hose reels. The bottom is open to allow easy access for cleaning with the same hygiene media as the one used in the VMS satellite. The hood ensures cleaning of all parts in the encased area and for service/maintenance it is simply lifted off its hook.

| Technical specification |                  |
|-------------------------|------------------|
| Material                | Stainless steel  |
| Measurements WxDxH      | Suited for model |

| Art. No. | Description                        |  |
|----------|------------------------------------|--|
| 34349    | Hygiene Hood for hose reel 15/20 m |  |
| 34350    | Hygiene Hood for hose reel 25/30 m |  |



#### **Lagafors® Nozzles & Lances**

Nozzles and lances for different pressures and applications. Each nozzle is equiped with a hose nipple for connection to the spray gun. The Lagafors® Colour Coding System\* is an integrated part of all nozzles and lances.

| Art. No. | Description                        |  |
|----------|------------------------------------|--|
| 17910    | Black Pre-Cleaning Nozzle          |  |
| 17891    | Blue Rinse Nozzle, 20 bar          |  |
| 17892    | Blue Rinse nozzle, 40 bar          |  |
| 17890    | Blue Rinse nozzle, 60 bar          |  |
| 17893    | Blue Rinse nozzle, 80 bar          |  |
| 17882    | Yellow Disinfection nozzle, VMS    |  |
| 17883    | Yellow Disinfection nozzle, VMS DC |  |

| Art. No. | Description                     |  |
|----------|---------------------------------|--|
| 17881    | White Foam lance                |  |
| 17898    | Blue Rinse lance 800 mm, 20 bar |  |
| 17900    | Blue Rinse lance 800 mm, 40 bar |  |
| 17894    | Blue Rinse lance 800 mm, 60 bar |  |
| 17896    | Blue Rinse lance 800 mm, 80 bar |  |



### \*Lagafors® Colour Coding System

Lagafors® colour coding system makes the cleaning process simple and easy to understand. It consists of an operators guide that explains the correct cleaning process and usage thanks to matching colours for ball valve handles and nozzles. In the system blue stands for water, white for foam and yellow for disinfectant.

### **Lagafors® VMS Accessories**

| Art. No. | Description              |
|----------|--------------------------|
| 4702     | Nozzle protector Blue    |
| 4701     | Nozzle protector White   |
| 4700     | Nozzle protector Yellow  |
| 5264     | Ball valve handle Blue   |
| 33000    | Ball valve handle White  |
| 5265     | Ball valve handle Yellow |
| 36782    | Nozzle rack              |



### **Lagafors® Nozzle Pouch**

A practical and hygienic pouch for nozzles facilitating accessibility and increasing control of the items for the operator. With an easy clip-on function the pouch can be carried on the belt. After the cleaning session it can be rinsed together with its contents in a dishwasher.

| Art. No. | Description                     |  |
|----------|---------------------------------|--|
| 30980    | Nozzle Pouch complete with belt |  |



# **DECENTRALIZED CLEANING SYSTEM - DCS**



The new Lagafors® Decentralized Cleaning System, DCS, helps companies in the food industry achieve first-class hygiene while at the same time delivering flexibility in the cleaning process. The DCS cleaning system is comprised of four main components that together comply with the highest capacity, performance and quality standards.

The main components supply the right pressure, flow and solution concentration to the places where they are needed. When used together with the Triggless® II spray gun, these components provide excellent ergonomic advantages.

The water pump unit is placed in the production area. Pipes are drawn from it to the satellite stations. Each satellite station is comprised of a hose reel with hoses for water, chemical solution and disinfectant solution. The Triggless® II spray gun and the PCN pre-cleaning nozzle are located by the hose.

The Lagafors DCS is suitable for installations of all sizes, but when using larger systems (>5 satellites), you should also consider installing a Lagafors CCS, Central Cleaning System.

| Features                  | Benefits                                    | Facts   |
|---------------------------|---|---|
| Water pump unit           | Flexible pressure and flow                  | Desired pressure and flow for up to five simultaneous users             |
| VMS-DC satellite station  | Hygienic design                             | User-friendly   |
| Injector dosaging         | Flexble                                     | Easy to switch chemical   |
| Triggless <sup>®</sup> II | Ergonomic, flexible and efficient spray gun | No trigger, 0-150 bar, reduced muscle strain                            |
| Pre-Cleaning Nozzle, PCN  | User-adjusted pressure and flow             | Efficient cleaning from 0.3 to 7 metres, with optimal water-consumption |

#### THE FOUR MAIN COMPONENTS



### Water pump units (LWP 20/40 CB)

The water pump centre is an essential component of the cleaning system. Lagafors offers a wide variety of pumps and customers can choose between different pressures (20-40 bar) as well as flow capacities for various numbers (1-5) of simultaneous users.

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### **Variable Media Satellite (VMS-DC)**

Lagafors® Variable Media Satellite, VMS-DC (decentralized), is a hygienically designed satellite station made in stainless steel for water rinsing, foam application and disinfection. The VMS-DC is wall mounted in production areas/kitchens and suitable for water pressures between 5-160 bar. The satellite station has suction hoses with distinctive markings for chemicals and disinfectant. With an easy grip the operator changes between the different medias. Portable containers with chemical concentrate are placed near the satellite station. Compressed air is connected to the VMS-DC unit. For capacity increase, the VMS-DCT offers distribution of up to three different chemicals (e.g. alkaline chemicals, acid chemicals and disinfectant).

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## Spray Gun (Triggless® II)

The patented Triggless® II spray gun is ergonomically designed to reduce muscle strain on the operator. The gun uses the reaction-force of the water to keep the valve open instead of a traditional trigger. It is light weight, safe whilst used with one hand and suitable for all pressure levels up to 150 bar. During operation the Triggless® II can be held in different ways to improve flexibility and efficiency. It also features a "dead man's" grip, i.e. the water flow is shut off if the gun is accidentally dropped.

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### **Pre-Cleaning Nozzle (PCN)**

The patent pending Pre-Cleaning Nozzle (PCN) enables the user to control the water pressure for long or short distance cleaning, i.e. 0.3–7 metres. The purpose is to use the PCN instead of a high flow water-hose in the pre-cleaning stage. Correctly used, this method can significantly reduce the water consumption. The weight of the Pre-Cleaning Nozzle is only 125 grams.

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# **LOW PRESSURE CENTRE - LWP 20 CB**



The Lagafors® LWP 20 CB low-pressure centre (Low Water Pressure, Combi Booster) is designed for cleaning with pressurized water as well as chemical and disinfectant solutions. This unit has a hygienic design, is intended for placement in a production area and can be connected to a number of Lagafors® satellite stations. The Lagafors® LWP is especially suitable for cleaning applications in the food processing industry, for example dairies, breweries, fishing industry, prepared food, large-scale kitchens and other places where a high level of hygiene is required.

- · Working pressure 20-25 bar.
- · Delivered with a hygienically designed cabinet.
- · Unit is wall-mounted.

| Features   | Benefits                             | Facts                           |
|--|--------------------------------------|---------------------------------|
| Increases the pressure on outgoing media                     | Better cleaning energy on surfaces   | From 3-8 bar up to 25 bar       |
| Flexibility in pressure and flow                             | Multiple options                     | 20-25 bar and up to 150 lit/min |
| Supplies water as well as chemical and disinfectant solution | All-in-One concept                   | Flexible                        |
| Hygienic design  | Enables placement in production area | Easy to clean                   |



| Technical information Lagafors® Low Pressure Centre LWP 20 CB |  |  |  |  |
|---|--|--|--|--|
| Model   | LWP 2030 CB                                    | LWP 2090 CB*                                   | LWP 20150 CB*                                  |  |
| Outgoing water pressure                                       | 20-25 bar                                      | 20-25 bar                                      | 20-25 bar                                      |  |
| Water consumption   | 0-30 lit/min                                   | 0-90 lit/min                                   | 0-150 lit/min                                  |  |
| Flow capacity   | 50 lit/min                                     | 120 lit/min                                    | 180 lit/min                                    |  |
| Capacity (30lit/user)   | 1-2 users                                      | 3 users  | 5 users  |  |
| Surrounding temperature                                       | 5-25 °C  | 5-25 °C  | 5-25 °C  |  |
| Relative air humidity   | 95%  | 95%  | 95%  |  |
| Connections   |  |  |  |  |
| Water incoming  | ISO-G 1 1/4" int. thread                       | ISO-G 1 1/4" int. thread                       | ISO-G 1 1/4" int. thread                       |  |
| Water supply, flow  | 70 lit/min                                     | 150 lit/min                                    | 210 lit/min                                    |  |
| Water supply, pressure  | 3-8 bar  | 3-8 bar  | 3-8 bar  |  |
| Water temperature, max  | 60 °C  | 60 °C  | 60 °C  |  |
| Water outgoing  | ISO-G 1" int. thread                           | ISO-G 1" int. thread                           | ISO-G 1" int. thread                           |  |
| Air, incoming   | ISO-G 1/4" int. thread                         | ISO-G 1/4" int. thread                         | ISO-G 1/4" int. thread                         |  |
| Air, pressure   | 6-8 bar  | 6-8 bar  | 6-8 bar  |  |
| Air, flow   | 150 lit/min                                    | 150 lit/min                                    | 150 lit/min                                    |  |
| Electricity   |  | ·  | ·  |  |
| Voltage   | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz |  |
| Current   | 4,5 A  | 9 A  | 14,6 A   |  |
| Power   | 2,2 kW   | 4 kW   | 7,5 kW   |  |
| Dimensions  |  |  |  |  |
| Measurements WxDxH  | 640 x 380 x 1290 mm                            | 640 x 380 x 1290 mm                            | 640 x 380 x 1290 mm                            |  |
| Weight, approx.   | 125 kg   | 145 kg   | 175 kg   |  |

 $The \ data \ is \ subject \ to \ variation \ and \ the \ producer \ reserves \ the \ right \ to \ change \ design \ specifications \ without \ notice.$ 

<sup>\*</sup>Frequency-regulated pumps.





<sup>-</sup> Alarm feature for low supply water pressure is standard.

# **LOW PRESSURE CENTRE - LWP 40 CB**



The Lagafors® LWP 40 CB low-pressure centre (Low Water Pressure, Combi Booster), is designed for cleaning with pressurized water and it is to be connected to a number of Lagafors® Variable Media Satellites (VMS). Lagafors® LWP is especially suitable for cleaning applications in the food processing industry, for example slaughterhouses, meat processing, dairies, breweries, fishing industry, prepared food, large-scale kitchens and other places where a high level of hygiene is required.

- · Working pressure 35-40 bar.
- · Delivered with or without cabinet.
- · Available for wall or floor installation.

| Features                                 | Benefits                           | Facts                             |
|--|------------------------------------|-----------------------------------|
| Increases the pressure on outgoing media | Better cleaning energy on surfaces | From 3-8 bar up to 40 bar         |
| Flexibility in pressure and flow         | Multiple options                   | 35-40 bar and up to 90 lit/min    |
| Constant pressure on outgoing media      | Ergonomical and safe for the user  | Insignificant pressure variations |
| Vertical multistage centrifugal pump     | Reliable and robust pump model     | Low maintenance costs             |
| Frequency-controlled pump                | Optimal energy consumption         | Low operating costs               |

| Technical information Lagafors® Low Pressure Centre LWP 40 CB |  |  |
|---|--|--|
| Model   | LWP 4025 CB                                    | LWP 4070 CB                                    |
| Outgoing water pressure                                       | 35-40 bar                                      | 35-40 bar                                      |
| Water consumption   | 0-25 lit/min                                   | 0-70 lit/min                                   |
| Flow capacity   | 50 lit/min                                     | 90 lit/min                                     |
| Capacity (30lit/user)   | 1-2 users                                      | 3-4 users                                      |
| Surrounding temperature                                       | 5-25 °C  | 5-25 °C  |
| Relative air humidity   | 95%  | 95%  |
| Connections   |  |  |
| Water incoming  | ISO-G 1 1/4" int. thread                       | ISO-G 1 1/4" int. thread                       |
| Water supply, flow  | 70 lit/min                                     | 120 lit/min                                    |
| Water supply, pressure  | 3-8 bar  | 3-8 bar  |
| Water temperature, max  | 60 °C  | 0° C   |
| Water outgoing  | ISO-G 1" int. thread                           | ISO-G 1" int. thread                           |
| Air, incoming   | ISO-G 1/4" int. thread                         | ISO-G 1/4" int. thread                         |
| Air, pressure   | 6-8 bar  | 6-8 bar  |
| Air, flow   | 150 lit/min                                    | 150 lit/min                                    |
| Electricity   |  |  |
| Voltage   | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz |
| Current   | 9,4 A  | 14,6 A   |
| Power   | 4,6 kW   | 7,5 kW   |
| Dimensions  |  |  |
| Measurements WxDxH  | 640 x 380 x 1290 mm                            | 640 x 380 x 1290 mm                            |
| Weight, approx.   | 100 kg   | 110 kg   |

 $The \ data \ is \ subject \ to \ variation \ and \ the \ producer \ reserves \ the \ right \ to \ change \ design \ specifications \ without \ notice.$ 

- Frequency-regulated pumps.
- Alarm feature for low supply water pressure is standard.







## **SATELLITE STATION - VMS-DC / VMS-DCT**



Lagafors® Variable Media Satellite, VMS-DC (decentralized), is a hygienically designed satellite station made in stainless steel for water rinsing, foam application and disinfection. The VMS-DC is wall mounted in production areas/kitchens and suitable for water pressures between 5-160 bar. The satellite station has suction hoses with distinctive markings for chemicals and disinfectant. With an easy grip the operator changes between the different medias. Portable containers with chemical concentrate are placed near the satellite station. Compressed air is connected to the VMS-DC unit. For capacity increase, the VMS-DCT offers distribution of up to three different chemicals (e.g. alkaline chemicals, acid chemicals and disinfectant).

#### The VMS-DC consists of:

- · Ball valves for water, chemicals and air.
- · Suction hoses for chemicals and disinfectant.
- · Chemical/disinfectant injector.
- · Removable stainless steel cabinet for easy maintenance.

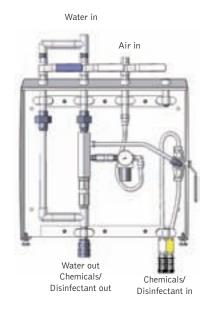
| Features                     | Benefits                                   | Facts   |
|------------------------------|--|---|
| Stainless steel construction | Hygienic and robust material               | Suitable for food processing facilities and restaurants |
| Suction hoses                | Easy to change between different chemicals | Time saving   |
| Easy to install and connect  | Time effective                             | Lower installation costs                                |
| Few parts                    | Time and cost efficient service            | Reduced maintenance costs                               |

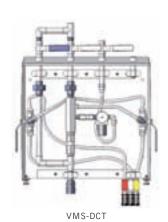


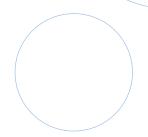
| Technical information Lagafors® Variable Media Satellite VMS-DC/VMS-DCT |                        |                        |                        |                        |                        |  |  |
|---|------------------------|------------------------|------------------------|------------------------|------------------------|--|--|
| Connections incoming water  |                        |                        |                        |                        |                        |  |  |
| Water pressure  | 5-10 bar**             | 15-25 bar              | 35-45 bar              | 60-100 bar             | 100-160 bar            |  |  |
| Dimension   | ISO-G 3/8" int. thread |  |  |
| Flow, Max   | 35 lit/min             |  |  |
| Connections incoming air  |                        |                        |                        |                        |                        |  |  |
| Air pressure  | 6-8 bar                |  |  |
| Flow, min   | 50 lit/min             |  |  |
| Dimension   | ISO-G 3/8" int. thread |  |  |
| Dosage  |                        |                        |                        |                        |                        |  |  |
| Chemicals*  | Ca. 5-7%               | Ca. 5%                 | Ca. 5%                 | Ca. 5%                 | ca 5%                  |  |  |
| Disinfectant*   | Ca. 1.5%               | Ca. 1.5%               | Ca. 1.5%               | Ca. 1.5%               | ca 1.5%                |  |  |
| Dimensions  |                        |                        |                        |                        |                        |  |  |
| Measurements WxDxH  | 440 x 112 x 435 mm     |  |  |



Hose reel and canister holder are optional. The hose reel increases the life cycle of the hose and provides good hygiene.







<sup>\*</sup> Factory set values may need adjustments to local conditions e.g. water pressure, chemical viscosity etc. Colour coded nozzles are supplied to facilitate this process.

<sup>\*\*</sup> Incoming water pressure and dosing affects the foam quality, use a hose min. 1/2" with a maximum length of 20 metres.

## **LOW PRESSURE INJECTOR - CDE**



The Lagafors® Low Pressure Injector, or CDE, is a functional, low-cost unit for flushing with water and application of foam/chemical solutions. The CDE unit is wall-mounted in the production area/kitchen and is suitable for water pressures from 3-8 bar. The operator can easily shift between different media with one easy maneuver. Concentrated chemicals are extracted from containers placed in the satellite station's immediate vicinity. The CDE unit is equipped with a pressurized air connection. This unit was designed for areas where good hygiene is required, but the use of pressurized water isn't.

The CDE unit is comprised of:

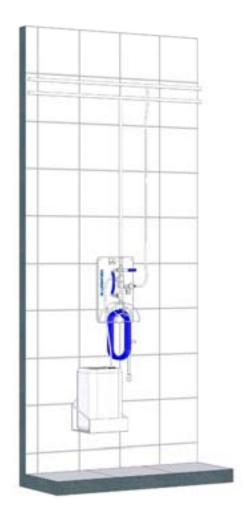
- · Complete chemical solution injector.
- · Three-way valve for choice of water or chemical solution.
- · Hose rack.
- · 15 m hose and foam lance.

| Features                  | Benefits                                | Facts                   |
|---------------------------|---|-------------------------|
| Simple functionality      | Low cost                                | Financial savings       |
| All-in-One                | Chemical solution and water in one unit | Time-saving             |
| Easy to mount and connect | Time-efficient                          | Low installation cost   |
| Small number of parts     | Time and cost-efficient service         | Lower maintenance costs |

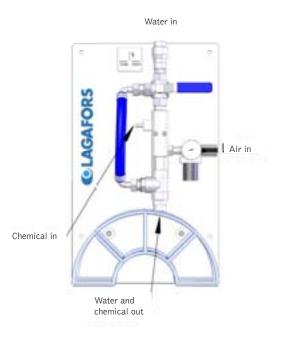


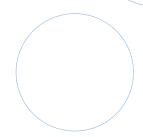
| Technical information Lagafors® Low Pressure Injector CDE |                       |                       |  |  |  |
|---|-----------------------|-----------------------|--|--|--|
| Model   | CDE                   | CDE-D                 |  |  |  |
| Connections incoming water                                |                       |                       |  |  |  |
| Water pressure  | 3-8 bar               | 3-8 bar               |  |  |  |
| Dimension   | ISO-G 1/2" inv. gänga | ISO-G 1/2" inv. gänga |  |  |  |
| Connections incoming air                                  |                       |                       |  |  |  |
| Air pressure  | 6-8 bar               | 6-8 bar               |  |  |  |
| Flow, min   | 50 lit/min            | 50 lit/min            |  |  |  |
| Dimension   | ISO-G 1/4" inv. gänga | ISO-G 1/4" inv. gänga |  |  |  |
| Dosage  |                       |                       |  |  |  |
| Chemicals*  | ca 4-6%               | ca 4-6%               |  |  |  |
| Disinfectant*   |                       | ca 1-2%               |  |  |  |
| Dimensions  |                       |                       |  |  |  |
| Measurements WxDxH  | 300 x 210 x 500 mm    | 300 x 210 x 500 mm    |  |  |  |

- \* Factory-set values may need to be adjusted to local conditions, for example water pressure, chemical solution viscosity, etc.
- Foam quality is affected by supply water pressure and dosing, Use a flush hose with a minimum diameter of 3/4" and max length of 20 metres (65 ft).
- This unit can be ordered with separate dosing for two chemical solutions. Choice of chemical solution is made using a valve lever.



Sample installation. Container holder is optional. We recommend using a springloaded hose reel, as it extends the life span of the hose and provides better hygiene.











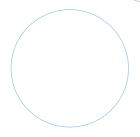
# **MOBILE CLEANING UNITS - MCU**



With the Lagafors® mobile cleaning unit, MCU, companies in the food-processing industry can achieve first-class hygiene at lower costs and reduced environmental impact in an improved working environment. Our range includes two units that both meet high standards regarding capacity, performance, quality and hygiene.

These units have been primarily designed for customers with slightly smaller production facilities and are intended as a cheaper alternative to fixed-installation cleaning systems. At sites with fixed-installation systems, these units can be used as a complement for specific cleaning needs, for example where a different water pressure or chemical solution is required.

Further functionality descriptions can be found under each product on the following pages.



## **LOW WATER PRESSURE MOBILE - LWP-M**



Lagafors® Low Water Pressure Mobile, LWP-M 2030/4025, is a complete mobile cleaning equipment for flushing with pressurised water and application of chemical foam and disinfectant. The LWP-M is built on a stainless steel frame with six wheels for easy transportation. The unit consists of a low pressure pump, a compressor for pressuried air and a satellite station with an injector and suction hoses for chemicals. Two 25 litres chemical containers can be placed on the trolley which also provides holders for hose and nozzles. LWP-M has a hygienically designed cabinet made in stainless steel that can easily be opened for service and maintenance.

The LWP-M is especially appropriate for cleaning applications in food processing, e.g. in slaughterhouses, meat processing, dairies, breweries, fish industries, prepared food industries, industrial kitchens and other places where a high level of hygiene is required.

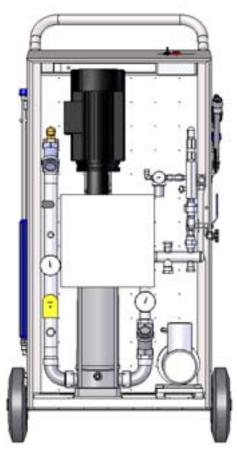
- · Working pressure 20 bar or 40 bar.
- · Mobile unit with a smooth trolley for easy transportation.
- · Easy to install; simply connect water and electricity.
- $\cdot$  20 metres hose, spray gun and nozzles for rinse, foam and disinfection are included.

| Features                  | Benefits   | Facts                                  |
|---------------------------|--|--|
| Pressure booster pump     | Better cleaning energy on surfaces                     | From 3-8 bar up to 20-40 bar           |
| Mobile unit               | Suitable for cleaning in smaller production facilities | Lower investment than a central system |
| Compact "all-in-one"-unit | Flexible   | Possible to use different chemicals    |



| Technical information Lagafors® Low Water Pressure Mobile LWP-M |  |  |
|---|--|--|
| Model   | LWP-M 2030                                     | LWP-M 4025                                     |
| Outgoing water pressure   | 20-25 bar                                      | 35-40 bar                                      |
| Water consumption   | 0-30 lit/min                                   | 0-25 lit/min                                   |
| Capacity  | 1 user   | 1 user   |
| Surrounding temperature   | 5-25 °C  | 5-25 °C  |
| Relative air humidity   | 95%  | 95%  |
| Water Connections   |  |  |
| Water incoming  | Quick coupling                                 | Quick coupling                                 |
| Water supply, flow  | > 50 lit/min                                   | > 50 lit/min                                   |
| Water supply, pressure  | 3-8 bar  | 3-8 bar  |
| Water temperature, max  | 60 °C  | 60 °C  |
| Water outgoing  | 1/2" Hose, 20 metres                           | 1/2" Hose, 20 metres                           |
| Electricity   |  |  |
| Voltage   | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz | 3 x 380-420 V / 50 Hz<br>3 x 440-480 V / 60 Hz |
| Current   | 4,5 A  | 9,4 A  |
| Power   | 2,2 kW   | 4,6 kW   |
| Dimensions  |  |  |
| Measurements  | 770 x 1200 x 1250 mm                           | 770 x 1200 x 1250 mm                           |
| Weight  | 140 kg   | 160 kg   |

The data is subject to variation and the producer reserves the right to change design specifications without notice.



Lagafors® LWP-M 2030

#### Accessories that are included



Spray gun ST2725



Nozzles for rinsing, foam application & disinfection



Hose 1/2", 20 metres



# **MOBILE FOAM UNIT - MFU 75**



The mobile foam unit MFU 75 from Lagafors® is used for the application of chemical and disinfectant solutions in powder or liquid format. The dosing is done manually directly into the tank, only pressurized air must then be added. The whole unit is made of stainless material and is easy to move thanks to the smooth trolley function. The unit is especially suitable for the cleaning of smaller areas, alternatively when extra cleaning force is needed on one particular spot.

The MFU 75 can be used for cleaning applications in e.g. slaughterhouses, meet processing industries, dairies, breweries, fish industries and other places where a high level of hygiene is required.

The delivery includes:

- · 20 metre hose (66 ft) with shut-off valve.
- · Lances for application of foam or liquid.

| Features   | Benefits           | Facts           |
|--|--------------------|-----------------|
| Applies a chemical solution in any format to the surface | Effective cleaning | Hygienic result |
| Construction made of stainless steel                     | Robust material    | Long life time  |
| Mobile unit mounted on a trolley                         | Easy to operate    | Flexible        |



| Technical information Lagafors® Mobile Foam Unit |                      |
|--|----------------------|
| Model  | MFU 75               |
| Pressure, max                                    | 9 bar                |
| Flow   | 6-8 lit/min          |
| Temperature, max                                 | 40°C                 |
| Tank volume                                      | 75 lit               |
| Connections                                      |                      |
| Air, incoming                                    | ISO 3/8" int. thread |
| Air, pressure                                    | 6-8 bar              |
| Air, flow  | min 100 lit/min      |
| Dimensions                                       |                      |
| Measurements WxDxH                               | 650 x 550 x 1100 mm  |
| Weight   | 50 kg                |

The data is subject to variation and the producer reserves the right to change design specifications without notice.











# **AUTOMATED CLEANING EQUIPMENT - ACE**



With the Lagafors® automated cleaning system, ACE, companies in the food-processing industry can achieve first-class hygiene in all kinds of freezers, smoking cabinets, refrigerators, transport and conveyor belts as well as elevator belts that are difficult, monotonous and time-consuming to clean. Plus at lower costs and reduced environmental impact in an improved working environment. Our automated system is comprised of different components that together meet high standards regarding capacity, performance, quality and hygiene.

The ACE automated system can easily be combined with and controlled by the central units in our CCS concept (LWP and MPP water units as well as our VCC dosing unit). When used properly, our system can deliver reduced costs through lower water, chemical and disinfectant consumption. However, the most significant benefits come from reduced labour needs and repeatable hygiene results.

You can choose between a fixed or a rotating water flush ramp. The rotating ramp delivers more advantages by further reducing water consumption as well as a greater mechanical processing of the cleaning surface.

The control cabinet is normally placed in the vicinity of the objects that need cleaning. The valve station(s) for the water and chemical solutions are placed adjacent to the cabinet, with pipes connecting to the central CCS units. Pipes to the various cleaning objects are then connected from these valve stations.

If there is no CCS cleaning system present, the Lagafors CBA (Combi Booster Automatic) can well be used to run the automated cleaning. The unit is designed to be controlled by and external PLC.



# **AUTOMATIC CLEANING SYSTEM - ACS**



The Lagafors® Automatic Cleaning System, ACS, consists of a controller unit and valve units for water, chemical and disinfectant solutions. The system is designed for automatic cleaning of all types of conveyor belts, elevator belts etc. The ACS unit is module-based and can control the cleaning of 5-30 different objects. The design is based on Lagafors's well-known VMS satellite station series, and from a hygienic point of view the unit has been adapted to the food-processing industry. The ACS system is ready to be connected to any Lagafors pressurized water unit as well as the VCC dosaging central for chemical and disinfectant solutions. The unit is user-friendly, as well as easy to use and maintain. The system gives the customer consistent cleaning results, which means better hygiene and time-savings, as well as reduced water, chemical and disinfectant consumption. The ACS system can also be connected to and control your Lagafors LFR flush ramp (see separate product description).

The ACS unit is comprised of the following:

- · Stainless steel controller cabinet with a PLC and controller display.
- · Stainless steel valve cabinet with solenoid valves to regulate the water flow.
- · Stainless steel valve cabinet with solenoid valves to regulate chemical and disinfectant solutions.

| Features                     | Benefits Facts                       |   |  |
|------------------------------|--------------------------------------|---|--|
| Easy to mount and connect    | Time-efficient Low installation cost |   |  |
| Intelligent, hygienic design | Easy to clean                        | Excellent hygienic aspects                |  |
| "All-in-One" principle       | Rinses, foam cleans, disinfects      | Excellent and consistent cleaning results |  |
| Time optimization per belt   | Saving of time                       | Lower material consumption                |  |
| "Start and go" principle     | Minimal need of handling             | Large work savings                        |  |



| Technical information Lagafors® Automatic Cleaning System ACS |                        |                          |                          |                           |
|---|------------------------|--------------------------|--------------------------|---------------------------|
| Model   | ACS Controller Cabinet | ACS LP Water             | ACS HP Water             | ACS Chemical/Disinfectant |
| Supply connections  |                        | <u> </u>                 |                          |                           |
| Electric rating   | 230 V                  |                          |                          |                           |
| Water, pressure   |                        | 20-50 bar                | 50-100 bar               |                           |
| Water, flow   |                        | 15-60 lit/min            | 10-50 lit/min            |                           |
| Water, dimensions   |                        | ISO-G ½" int. thread     | ISO-G ½" int. thread     |                           |
| Chemical solution, pressure                                   |                        |                          |                          | 6-8 bar                   |
| Chemical solution, flow                                       |                        |                          |                          | 6-12 lit/min              |
| Chemical solution, dimensions                                 |                        |                          |                          | ISO 3/8" int. thread      |
| Disinfectant solution, pressure                               |                        |                          |                          | 6-8 bar                   |
| Disinfectant solution, flow                                   |                        |                          |                          | 6-12 lit/min              |
| Disinfectant solution, dimensions                             |                        |                          |                          | ISO 3/8" int. thread      |
| Air, pressure   |                        |                          |                          | 5-8 bar                   |
| Air, flow   |                        |                          |                          | 100-200 lit/min           |
| Air, dimensions   |                        |                          |                          | ISO 3/8" int. thread      |
| Exit connections  |                        |                          |                          |                           |
| Dimensions  |                        | 5 x ISO 3/8" int. thread | 5 x ISO 3/8" int. thread | 5 x ISO 3/8" int. thread  |

The data is subject to variation and the producer reserves the right to change design specifications without notice. Recommendations:

- We recommend a maximum length of 30 metres between the valve station's chemical/disinfectant connections and the object to be cleaned.

Disinfectant/

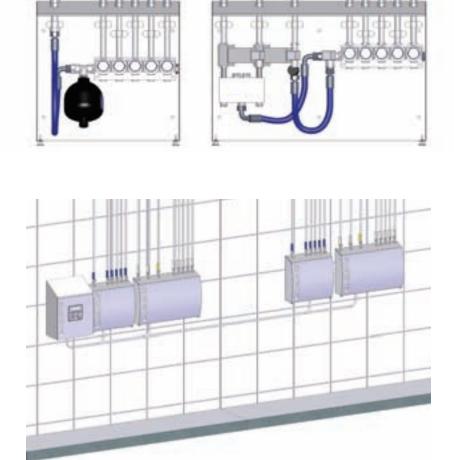
chemical out

- A rotating ramp will further increase the cleaning effect and water savings. Please see the separate product sheet.
- Electrical connections between the units are not included. A complete schematic connection diagram is included.

Disinfectant

- Pipe connections between the units are not included.

Water in

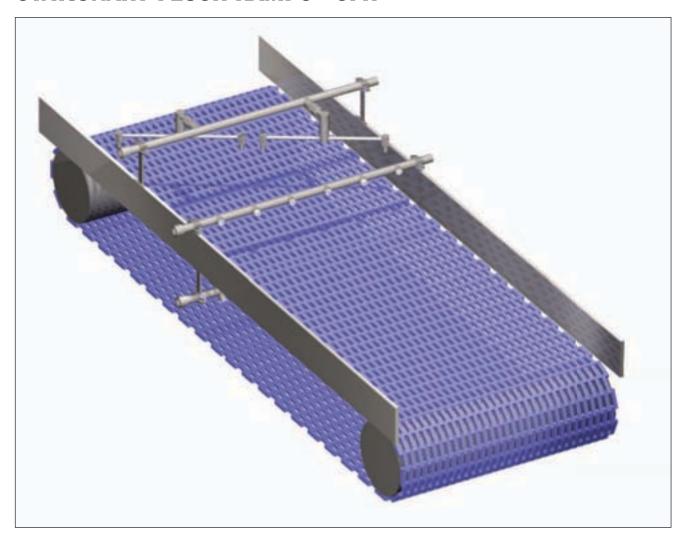


Chem.

Air



# **STATIONARY FLUSH RAMPS - SFR**



Lagafors® stationary flush ramps, SFR, were developed for effective cleaning of conveyor belts and other conveyor systems in the food processing industry. Can be supplied with media from a satellite station using a regular hose or, which we recommend, using a pipe from a Lagafors® Automatic Cleaning System, ACS. Please see separate product sheet. The product series is divided into two main groups: Fixed and rotating ramps.

Rotating ramps for flushing increase the cleaning effectiveness and reduce water consumption. Fixed ramps can be used anywhere, but are especially suitable for tight spots (e.g. the inside of a conveyor belt). Fixed ramps can also used to apply chemical and disinfectant foam solutions.

- · Fixed positions for water as well as chemical and disinfectant solutions.
- · Rotating ramps for increased cleaning effectiveness and reduced water consumption.
- · Available in all sizes between 200 mm and 800 mm (larger sizes can also be supplied).

| Features                                 | Benefits                         | Facts                     |
|--|----------------------------------|---------------------------|
| Conveyor flushing (stationary, rotating) | 100% coverage                    | Maximize hygienic results |
| Conveyor flushing (stationary, rotating) | Reduced work effort              | Lower costs               |
| Fixed flush ramp                         | Space-efficient                  | Suitable for tight spots  |
| Rotating flush ramp                      | Increased cleaning effectiveness | Lower water consumption   |

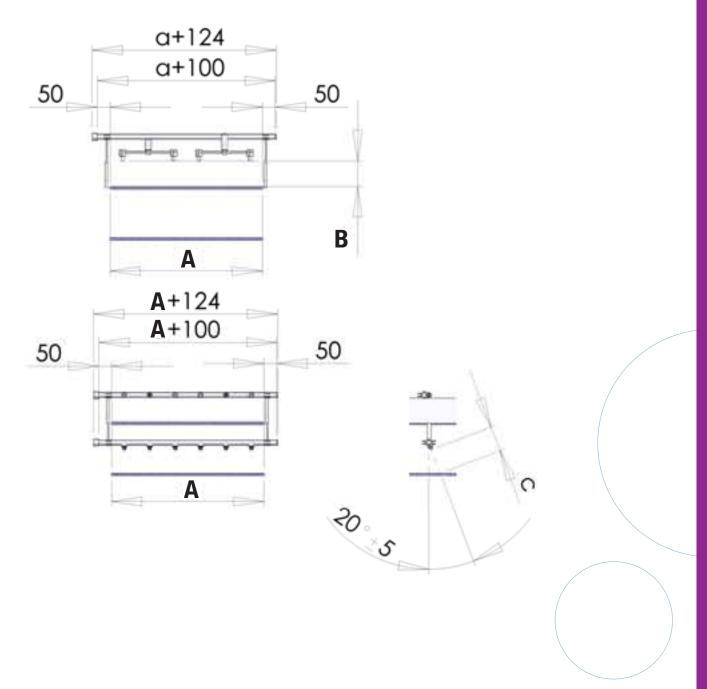


| Technical information Lagafors® Stationary Flush Ramps SFR |                                  |                            |                       |
|--|----------------------------------|----------------------------|-----------------------|
| Model  | Fixed flush ramp, water          | Rotating flush ramp, water | Fixed foam ramp       |
| Connections  |                                  |                            |                       |
| Supply media   | 1/2" internal thread.            | 1/2" internal thread.      | 1/2" internal thread. |
| Dimensions   |                                  |                            |                       |
| Pipes  | 21 mm                            | 21 mm                      | 21 mm                 |
| Angle of dispersal   |                                  |                            |                       |
| Nozzles/distance   | 65° / C = 80-95 mm (recommended) | 15° / B = 50-100 mm        | 40° * *               |
| Nozzles/distance   | 80° / C = 65-80 mm               |                            |                       |

The data is subject to variation and the producer reserves the right to change design specifications without notice.

#### Legend:

- $A = Belt \ width$
- $B = Recommended \ flush \ distance \ for \ rotating \ flush \ ramp$
- C = Recommended flush distance for fixed flush ramp
- \* Pipe holders and nozzles not included. Must be ordered separately.
- $\ensuremath{^{**}}$  For the optimization of the foam ramp contact Lagafors or Lagafors dealers.



# **LOW WATER PRESSURE PUMP - LWP CBA**



The Lagafors® low-pressure centre LWP CBA (Low Water Pressure, Combi Booster Automatic), is designed for cleaning of production equipment, such as conveyor belts, refrigerators, freezers, kitchen cabinets, smoking cabinets, roasters, etc in the food-processing industry. The unit has a hygienic design that is suitable for placement in production areas and can be complemented with a built-in satellite station equipped with outlets for water and chemical and disinfectant solutions. In the latter case, a hose, a hose reel, a spray gun and nozzles are included. This enables OPC (Open Plant Cleaning) within the unit's vicinity. The unit is constructed according to the customers specification regarding pressure/flow and is equipped with solenoid valves which is controlled directly from the customer's operating panel.

- · Up to 40 bar working pressure.
- · Up to 150 lit/min flow.
- · Delivered with a hygienically designed cabinet.
- · Unit is wall-mounted.

| Features   | Benefits                             | Facts                        |
|--|--------------------------------------|------------------------------|
| Increases the pressure on outgoing media                     | Better cleaning energy on surfaces   | From 3 bar up to 40 bar      |
| Flexibility in pressure and flow                             | Multiple options                     | 40 bar and up to 150 lit/min |
| Supplies water as well as chemical and disinfectant solution | All-in-One concept                   | Flexible                     |
| Hygienic design  | Enables placement in production area | Easy to clean                |

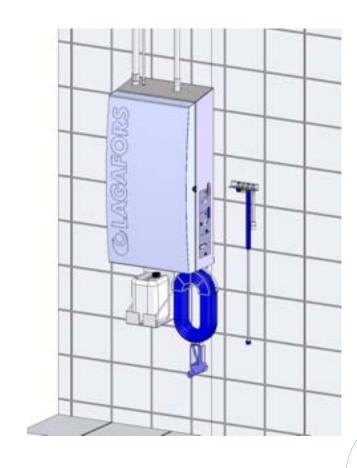


| Technical information I | Lagafors® Low Water Pressure Pump LWP CBA |
|-------------------------|---|
| Model                   | LWP CBA                                   |
| Outgoing water pressure | 3-40 bar                                  |
| Water consumption       | 0-150 lit/min                             |
| Flow capacity           | 0-170 lit/min                             |
| Surrounding temperature | 5-25 °C                                   |
| Relative air humidity   | 95%                                       |
| Connections             |   |
| Water incoming          | ISO-G 1 1/4" inv. g.                      |
| Water supply, flow      | 0-200 lit/min                             |
| Water supply, pressure  | 3-8 bar                                   |
| Water temperature, max  | 60 °C                                     |
| Water outgoing          | According to specifications               |
| Air, incoming           | ISO-G 1/4" inv. g.                        |
| Air, pressure           | 6-8 bar                                   |
| Air, flow               | 0-500 lit/min                             |
| Electricity             |   |
| Voltage                 | According to specifications               |
| Current                 | According to specifications               |
| Power                   | According to specifications               |
| Dimensions              |   |
| Measurements WxDxH      | 640 x 380 x 1290 mm                       |
| Weight, approx.         | Depending on specifications               |

The data is subject to variation and the producer reserves the right to change design specifications without notice.













# **ACCESSORIES - ACO**



Original Lagafors® accessories, ACO, guarantee that you as a customer get the highest quality and the best functionality from your various Lagafors® systems. These are just as suitable for use with centralized (CCS) as decentralized (DCS) systems. Lagafors® innovative prowess is evident in our products, for example Triggless® II and PCN, that provide our customers with ergonomical and safe products, as well as providing the flexibility during pre-wash, rinsing, etc.



# **HOSES**

#### 1/2-inch Low-pressure Hose

Very lightweight, flexible and durable hose for < 50 bar Lagafors systems. The hose has a blue design for sensitive environments. It is equipped with stainless steel joints, rupture protection and is available in a variety of lengths. See the

| Art. No. | Description  | Length     |
|----------|--------------|------------|
| 33282    | Low-pressure | 1/2", 10 m |
| 33283    | Low-pressure | 1/2", 15 m |
| 33284    | Low-pressure | 1/2", 20 m |
| 33285    | Low-pressure | 1/2", 25 m |
| 33286    | Low-pressure | 1/2", 30 m |
| 33287    | Low-pressure | 1/2", 35 m |

| Technical specification |  |  |
|-------------------------|--|--|
| Working pressure        | 50 bar   |  |
| Temperature             | 70°C   |  |
| Inner tube              | Grey PVC - Foodstuff quality                     |  |
| Outer tube              | Blue synthetic rubber - wear and ozone resistant |  |
| Reinforcement           | Doubble synthetic reinforcing fabric             |  |
| Design                  | Smooth, blue                                     |  |

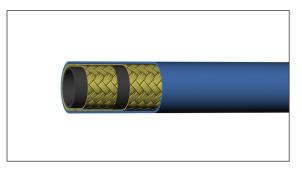


#### **High-pressure Hose 2-steel**

Very robust hose for Lagafors 'mobile high pressure units, > 100 bar. The hose has blue design for sensitive environments. The hose can be delivered with stainless steel couplings and different length, see the table.

| Art. No. | Description              | Length         |
|----------|--------------------------|----------------|
| 15050    | Water cleaning hose      | 1/2" per metre |
| 15027    | 1/2" hose w. SS coupling | 10 m           |
| 15028    | 1/2" hose w. SS coupling | 15 m           |
| 15024    | 1/2" hose w. SS coupling | 20 m           |
| 15025    | 1/2" hose w. SS coupling | 25 m           |
| 15026    | 1/2" hose w. SS coupling | 30 m           |
| 22009    | Water cleaning hose      | 3/8" per metre |
| 15011    | 3/8" hose w. SS coupling | 10 m           |
| 15015    | 3/8" hose w. SS coupling | 15 m           |
| 15014    | 3/8" hose w. SS coupling | 20 m           |
| 15012    | 3/8" hose w. SS coupling | 25 m           |
| 15035    | 3/8" hose w. SS coupling | 30 m           |

| Technical specification |                                  |  |
|-------------------------|----------------------------------|--|
| Working pressure        | 330 bar                          |  |
| Temperature             | -40°C to +155°C                  |  |
| Inner tube              | Synthetic oil resistant rubber   |  |
| Cover                   | Weather and oil resistant rubber |  |
| Reinforcement           | Two compact braids of steel wire |  |
| Design                  | Smooth, blue                     |  |



#### **HOSES**

#### **Food Hose**

Suitable for hot water cleaning in food industry. Smooth on the outside with a cover of rubber and a colour that does not rub off. Resistant to animal and vegetable fat. Food approved. Can be sterilised at a maximum temperture of +120°C during short periods. We can also deliver assembled hose with couplings.

| Art. No. | Description | Dimension |
|----------|-------------|-----------|
| 25032    | Food hose   | 1/2"      |
| 25033    | Food hose   | 3/4"      |
| 25034    | Food hose   | 1"        |

| Technical specification |  |  |
|-------------------------|--|--|
| Working pressure        | 10 bar   |  |
| Temperature             | -20°C to +95°C   |  |
| Inner tube              | White food resistant synthetic rubber (NBR/IR/CR)          |  |
| Cover                   | Absorbation & weather resistant synthetic rubber (NBR/PVC) |  |
| Reinforcement           | Synthetic textile fabric                                   |  |
| Design                  | Smooth, blue   |  |

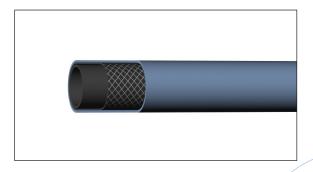


#### **Foam Hose**

Very lightweight, flexible and temperature-resistant hose for Lagafors systems. Can also be connected to standard water mains pressure. Available in custom lengths, with stamped joints at both ends.

| Art. No. | Description | Dimension |
|----------|-------------|-----------|
| 24000    | Foam hose   | 1/2"      |
| 24002    | Foam hose   | 3/4"      |

| Technical specification |                                    |
|-------------------------|------------------------------------|
| Working pressure        | 15 bar                             |
| Temperature             | -20°C to +60°C                     |
| Inner tube              | PVC                                |
| Cover                   | PVC                                |
| Reinforcement           | Polyester fiber                    |
| Design                  | Smooth, light blue with mat finish |

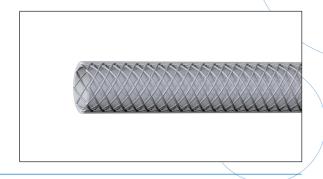


#### **Chemical Hose**

Food approved transparent hose for chemicals and water transport. Distributes chemical concentrate from the canister to Lagafors' Variable Chemical Centre.

| Art. No. | Description   | Dimension |
|----------|---------------|-----------|
| 23003    | Chemical hose | 1/2"      |
| 23004    | Chemical hose | 1/4"      |

| Technical specification |                            |  |
|-------------------------|----------------------------|--|
| Working pressure        | 10 bar                     |  |
| Temperature             | -20°C to +60°C             |  |
| Inner tube              | PVC                        |  |
| Cover                   | PVC                        |  |
| Reinforcement           | Reinforcement of polyester |  |
| Design                  | Smooth, transparent        |  |





#### **HOSES**

#### Wirsbo Pex

A chemical-resistant hose designed for transportation of chemical solutions between a Lagafors Chemical Centre and Satellite stations.

| Art. No. | Description | Dimension |
|----------|-------------|-----------|
| 24006    | Pexrör      | 18 mm     |
| 30034    | Pexrör      | 25 mm     |
|          |             |           |

| Technical specification |                              |  |
|-------------------------|------------------------------|--|
| Working pressure        | 10 bar                       |  |
| Temperature             | 70°C                         |  |
| Inner tube              | Polyethylene                 |  |
| Outer tube              | Polyethylene                 |  |
| Reinforcement           | Cross linking (Engel method) |  |
| Design                  | Chemical resistant           |  |



#### **Air Hose**

Robust hose used as pipeline to distribute compressed air between Lagafors' Variable Chemical Centre and Lagafors' Variable Media Satellite.

| Art. No. | Description | Dimension |
|----------|-------------|-----------|
| 23002    | Air hose    | 6 mm      |
| 23001    | Air hose    | 8 mm      |
| 23000    | Air hose    | 10 mm     |

| Technical specification |                  |  |
|-------------------------|------------------|--|
| Working pressure        | 14 bar           |  |
| Temperature             | -40°C till +93°C |  |
| Material                | Polyamid         |  |
| Design                  | Smooth, white    |  |
|                         |                  |  |
|                         |                  |  |



#### **HOSE REEL**

#### Hose reel

Professional springloaded hose reel for up to 20 metre long 1/2" hoses. Equipped with a movable arm to direct the hose, which enables location of the reel in tight spaces or roof-mounting. A optional pivoting wall-mounting is offered, which facilitates lateral work.

| Art. No. | Description      | Hose length |
|----------|------------------|-------------|
| 34241    | Hose reel SS     | 15-20 m     |
| 34242    | Angle bracket    |             |
| 34349    | Protective cover |             |

#### **Features - Benifits - Facts**

Robust - Can handle high-pressure

Springloaded - Quick roll-up

- Decreased hose wear, as the hose does

not drag on the floor

Stainless steel - Hygienic material

- Saves time, cost of spare parts and

increases hygiene

A hygienic protective cover made of stainless steel has been specially developed for the Lagafors hose reel.

| Technical specification |                    |  |
|-------------------------|--------------------|--|
| Working pressure        | 150 bar            |  |
| Material                | Stainless steel    |  |
| Connection              | 1/2" int. thread   |  |
| Measurements WxDxH      | 560 x 203 x 550 mm |  |



#### Hose reel

Professional springloaded hose reel for 25 or 30 metres long 1/2" hoses. Equipped with a movable arm to direct the hose, which enables location of the reel in tight spaces or roof-mounting. A optional pivoting wall-mounting is offered, which facilitates lateral work.

| Art. No. | Description      | Hose length |
|----------|------------------|-------------|
| 34218    | Hose reel SS     | 25-30 m     |
| 34243    | Angle bracket    |             |
| 34250    | Protective cover |             |

#### **Features - Benifits - Facts**

Robust - Can handle high-pressure

Springloaded - Quick roll-up

- Decreased hose wear, as the hose does

not drag on the floor

Stainless steel - Hygienic material

- Saves time, cost of spare parts and

increases hygiene

A hygienic protective cover made of stainless steel has been specially developed for the Lagafors hose reel.

| Technical specification |                    |  |
|-------------------------|--------------------|--|
| Working pressure        | 150 bar            |  |
| Material                | Stainless steel    |  |
| Connection              | 1/2" int. thread   |  |
| WxDxH                   | 575 x 488 x 550 mm |  |



#### **HOSE REEL**

#### Hose reel

Professional springloaded stainless steel hose reel for thicker hoses. Equipped with a movable arm to direct the hose, which enables location of the reel in tight spaces or roof-mounting.

| Art. No. | Description      | Hose length |
|----------|------------------|-------------|
| 20020    | Hose reel SS     | 20 m        |
| 20021    | Angel bracket SS |             |
|          |                  |             |

#### **Features - Benifits - Facts**

Robust - Can handle 3/4" hose up to 20 metres

in length

Springloaded - Quick roll-up

Decreased hose wear, as the hose does

not drag on the floor

Stainless steel - Hygienic material

- Saves time, cost of spare parts and

increases hygiene

| Technical specification |                    |  |
|-------------------------|--------------------|--|
| Working pressure        | 20 bar             |  |
| Material                | Stainless steel    |  |
| Connection              | 3/4" int thread    |  |
| WxDxH                   | 550 x 460 x 485 mm |  |



#### Hose reel Hygiene

This hose reel has been specially developed for industries with high hygienic requirements. All surfaces are made of stainless steel and it is designed to prevent build-up of filth and bacteria. The dual spring cassette ensures safe and efficient roll-up of the hose. Approved by the independent organization "Royal Institute of Public Health".

| Art. No. | Description       | Hose length |
|----------|-------------------|-------------|
| 20002    | Hose reel Hygiene | 25 m        |
|          |                   |             |
|          |                   |             |

#### **Features - Benifits - Facts**

Hygienic design - Minimized risk of bacterial growth

 Developed to meet high future requirements in the food industry

Springloaded - Quick roll-up

- Decreased hose wear, as the hose does

not drag on the floor

Stainless steel - Hygienic material

- Saves time, cost of spare parts and

increases hygiene

| Technical specification |                    |  |
|-------------------------|--------------------|--|
| Working pressure        | 180 bar            |  |
| Material                | Stainless steel    |  |
| Connection              | 3/8" int. thread   |  |
| WxDxH                   | 732 x 490 x 555 mm |  |



# **HOSE REEL / MANUAL HOSE REEL**

#### **Electric hose reel**

The electric hose reel is suited for highpressure hoses where there is a demand for longer hoses. Developed for hard usage in moist environment. The electric hose reel has a motorpowered roll-up of the hose, which relieves the user.

#### **Features - Benifits - Facts**

Electric motor-driven - Automatic roll-up

- Reduced hose wear, as the hose is

lifted from the floor

- Remote control

Stainless steel - Hygienic material

- Saves time, cost of spare parts and

increases hygiene

| Technical specification |                    |  |
|-------------------------|--------------------|--|
| Working pressure        | 220 bar            |  |
| Material                | Stainless steel    |  |
| Connection              | 3/4" int. thread   |  |
| WxDxH                   | 628 x 455 x 550 mm |  |

| Art. No. | Description    | Hose length |
|----------|----------------|-------------|
| 20100    | Hose reel ERGO | 30 m        |
|          |                |             |



#### Manual hose reel

Light-weight and easy-to-use, manual stainless steel hose reel for both high and low pressure. A flexible wall bracket is included.

#### **Features - Benifits - Facts**

Stainless steel

- Hygienic material
- Saves time, cost of spare parts and increases hygiene

| Technical specification |                      |  |
|-------------------------|----------------------|--|
| Working pressure        | 200 bar              |  |
| Material                | Stainless Steel      |  |
| Connection              | 1/2" external thread |  |
| WxDxH                   | 330 x 570 x 330 mm   |  |
|                         | 460 x 600 x 460 mm   |  |

| Art. No. | Description       | Hose length |
|----------|-------------------|-------------|
| 34263    | Hose reel, manual | 20 m        |
| 34264    | Hose reel, manual | 35 m        |
|          |                   |             |



#### **Hose rack**

Stainless steel hose rack for hanging hoses by satellite stations or on a carriage. Robust and hygienic.

#### **Features - Benifits - Facts**

Stainless steel

- Hygienic material
- Saves time, cost of spare parts and increases hygiene

| Art. No. | Description                           | Hose length     |
|----------|---------------------------------------|-----------------|
| 14000    | Small, stainless steel wire hose rack | 30 m, 1/2" hose |
|          |                                       | 25 m, 3/4" hose |





## **CONTAINER HOLDER / NOZZLE RACK / NOZZLE BAG**

#### **Container holder**

Stainless steel container holder to hold chemical solution containers. Robust and hygienic. Available in various sizes and materials.

| Art. No. | Description      | Size         |
|----------|------------------|--------------|
| 30065    | Container holder | 1 x 5 liter  |
| 30062    | Container holder | 1 x 25 liter |
| 30099    | Container holder | 2 x 25 liter |

#### **Features - Benifits - Facts**

Stainless steel

- Hygienic material
- Robust construction
- Reduced wear on the walls and floors at the satellite station



#### **Nozzle rack**

Stainless steel rack for nozzles. Fits up to 5 nozzles.

| Art. No. | Description     |
|----------|-----------------|
| 36782    | Stainless steel |



#### **Nozzle bag**

A practical and hygienic nozzle bag that offers cleaning staff accessibility and better control of their tools. Using a simple fastener, the bag can be attached to the belt. When work has been completed, the bag and its contents can be cleaned in a dishwasher.

| Art. No. | Description          |
|----------|----------------------|
| 30980    | Nozzle bag with belt |







# **SPRAY GUN - TRIGGLESS® II**



Lagafors® patented spray gun Triggless® II is ideal for use where ultimate ergonomics, work efficiency, flexibility, durability and safety is important. The spray gun is ergonomically designed to reduce muscle stress on the user. Since it offers flexible grip positions, the operator can increase efficiency at the same time as the risk for work related injuries is reduced. It also features a "dead man's" grip where the water flow is shut off if the gun is accidentally dropped. The spray gun is made with food grade stainless steel parts and a unique plastic-glass compound to ensure ultimate quality and durability.

- · No trigger, the gun uses the reaction-force of the water to keep the valve open.
- · Can be held in many different ways during operation.
- · "Dead man's" grip, i.e. the water flow is shut off if the gun is accidentally dropped.
- · Light weight, secure while used with one hand.
- · Suitable for pressures from 20 bar up to 150 bar.

| Features  | Benefits                                       | Facts  |
|---|--|--|
| Trigger function when low pressure and flow, "Triggless" function when higher pressure and flow | Ergonomical for the user                       | Less muscle stress in arm and wrist              |
| Uses reaction force, "Triggless" function, to keep valve open                                   | Improved ergonomics for the user               | Can be held in different ways                    |
| "Dead man's" grip   | Shuts off the water flow if the gun is dropped | Safe for the user and the surroundings           |
| Light weight  | Secure while used with one hand                | Weight 700 g                                     |
| Barrel rests on the arm   | Reduced pull-down force                        | Less muscle strain, improved operator efficiency |



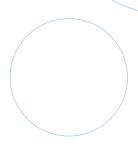
| Technical information Lagafors® Spray Gun Triggless® II |   |
|---|---|
| Model   | Flexible                                  |
| Working pressure, max                                   | 150 bar                                   |
| Flow, max   | 45 lit/min                                |
| Temperature, max  | 70 °C                                     |
| Connection, incoming                                    | ISO-G 1/2" int. thread                    |
| Connection, outgoing                                    | ISO-G 3/8" int. thread                    |
| Dimensions  |   |
| Measurements LxH  | 220 mm x 135 mm                           |
| Weight  | 700 g                                     |
| Materials   | Stainless steel, impact resistant plastic |

<sup>\*</sup>Quick coupling is optional
The data is subject to variation and the producer reserves the right to change design specifications without notice.









#### **SPRAY GUNS**

#### Spray Gun HP1500

Robust and impact resistant spray gun with a spring loaded trigger. Suitable for many different applications within professional high pressure cleaning. Available with or without swivel

| Technical specification |  |  |
|-------------------------|--|--|
| Working pressure        | 275 bar                                    |  |
| Flow                    | 45 lit/min                                 |  |
| Temperature             | 150 °C                                     |  |
| Weight                  | 550 g                                      |  |
| Material                | Brass, plastic                             |  |
| Connection              | in 3/8"int. thread<br>out 1/4" int. thread |  |

| Art. No. | Description                |
|----------|----------------------------|
| 4133     | Spray gun HP1500           |
| 4134     | Spray gun HP1500 w. swivel |



#### **Spray Gun HP2600/2700**

Robust spray gun with a spring loaded trigger and an easy sqeeze function, which reduces the risk of muscle stress on the operator. Suitable for many different applications within professional high pressure cleaning. Delivered with or without swivel. Also available with stainless steel components.

| Technical specification * ST 272 |   |
|----------------------------------|---|
| Working pressure                 | 310 bar / 125 bar *                         |
| Flow                             | 45 lit/min / 80 lit/min *                   |
| Temperature                      | 150°C                                       |
| Weight                           | 600 g                                       |
| Material                         | Brass, plastic or Stainless steel, plastic  |
| Connection                       | in 3/8" int. thread<br>out 1/4" int. thread |

| Art. No. | Description                |
|----------|----------------------------|
| 5239     | Spray gun HP2600           |
| 5240     | Spray gun HP2600 w. swivel |
| 5241     | Spray gun HP2700 SS        |
| 33018    | Spray gun HP2720 RF        |



#### **Spray Gun HP2725**

Robust spray gun with a spring loaded trigger and an easy sqeeze function, which reduces the risk of muscle stress on the operator. Suitable for a wide variety of industrial cleaning applications. Equipped with a quick-coupling, swivel and dampened shut-off feature in order to minimize pressure surges.

| Technical specification |   |
|-------------------------|---|
| Working pressure        | 80 bar                                      |
| Flow                    | 80 lit/min                                  |
| Temperature             | 150°C                                       |
| Weight                  | 940 g                                       |
| Material                | Stainless steel, plastic                    |
| Connection              | in 1/2" int. thread<br>out 1/2" int. thread |

| Art. No. | Description      |
|----------|------------------|
| 34250    | Spray gun HP2725 |



#### **SPRAY GUNS**

## **Spray Gun HP601**

lde ab gu spring loaded trigger and suits many cleaning application.

| deal array dur far yestical alcoring and alcoring of confesse   | 4132 | Spray gun HP601 |
|---|------|-----------------|
| deal spray gun for vertical cleaning and cleaning of surfaces   |      |                 |
| bove the head. The design offers a straight flow through the    |      |                 |
| un and several different grip possibilites. The spray gun has a |      |                 |
|   |      |                 |

Art. No.

| Technical specification |   |
|-------------------------|---|
| Working pressure        | 275 bar                                     |
| Flow                    | 45 lit/min                                  |
| Temperature             | 150°C                                       |
| Weight                  | 550 g                                       |
| Material                | Brass, plastic                              |
| Connection              | in 3/8" int. thread<br>out 1/4" int. thread |



**Description** 

#### Spray Gun LP 10 bar

Easy to handle low pressure spray gun usable for a variety of wash and cleaning dutys. The trigger is activated with the palm of the hand. Adjustable spray pattern and replacable rubber grip.

| Technical specifica | tion          |  |
|---------------------|---------------|--|
| Working pressure    | 10 bar        |  |
| Flow                | 38-61 lit/min |  |
| Temperature         | 93 °C         |  |
| Weight              | 700 g         |  |

| Art. No. | Description               |
|----------|---------------------------|
| 5046     | Spray gun LP 10 bar black |
| 4899     | Spray gun LP 10 bar white |
| 5049     | Swivel 1/2"               |
| 5050     | Swivel 3/4"               |



## Spray Gun LP 25 bar

Material

Connection

Low pressure spray gun with a robust spray nozzle and good grip that suits most cleaning applications. Adjustable spray pattern from tight beam to 60° wide. Suitable for most cleaning dutys.

Brass, rubber 1/2" int. thread

| Technical specification |                  |
|-------------------------|------------------|
| Working pressure        | 25 bar           |
| Flow                    | 25-42 lit/min    |
| Temperature             | 80°C             |
| Weight                  | 900 g            |
| Material                | Brass, rubber    |
| Connection              | 1/2" int. thread |

| Art. No. | Description         |
|----------|---------------------|
| 5045     | Spray gun LP 25 bar |
| 5049     | Swivel 1/2"         |
| 5050     | Swivel 3/4"         |



# **SPRAY GUNS**

#### **Spray Pipe**

Easy contruction without trigger, by turning the pipe flow and scattering angle is adjusted. Can be adjusted from concentrated spray to water mist.

| Art. No. | Description         |
|----------|---------------------|
| 12010    | Spray pipe white    |
| 12073    | Hose connector 1/2" |
| 12074    | Hose connector 3/4" |

| Technical specification |                  |  |
|-------------------------|------------------|--|
| Working pressure        | 10 bar           |  |
| Flow                    | 40-60 lit/min    |  |
| Temperature             | 80°C             |  |
| Weight                  | 300 g            |  |
| Material                | Brass, plastic   |  |
| Connection              | 3/4" ext. thread |  |



#### Low pressure ball valve

Easy too use low pressure ball valve with trigger guard. Very robust in its construction.

The low pressure ball valve is not equiped with "dead man's" grip.

| Technical specification |                  |
|-------------------------|------------------|
| Working pressure        | 50 bar           |
| Flow                    | 90 lit/min       |
| Temperature             | 70°C             |
| Weight                  | 0,56 kg          |
| Material                | Stainless steel  |
| Connection              | 1/2" int. thread |





# **QUICK COUPLINGS & HOSE NIPPLES**

#### **Quick Coupling RF standard**

Robust and dependable quick-coupling that is resistant to most chemical solutions as well as high pressure.

| Art. No. | Description        |
|----------|--------------------|
| 3530     | 3/8" int. threaded |
| 3531     | 3/8" ext. threaded |
| 3532     | 1/2" int. threaded |
| 3533     | 1/2" ext. threaded |





#### **Nipple RF standard**

Robust and dependable hose nipple that is resistant to most chemical solutions as well as high pressure.

| Art. No. | Description        |
|----------|--------------------|
| 3540     | 1/4" int. threaded |
| 3541     | 1/4" ext. threaded |
| 3542     | 3/8" int. threaded |
| 3543     | 3/8" ext. threaded |
| 3544     | 1/2" int. threaded |
| 3545     | 1/2" ext. threaded |





#### **Quick Coupling 1600**

Quick coupling for pressurised air with a valve that prevents flow when no nipple is connected. Can be reconditioned.

| Art. No. | Description          |
|----------|----------------------|
| 4092     | Quick coupling 1600B |
|          |                      |

| Technical specification |                     |
|-------------------------|---------------------|
| Working pressure        | 30 bar              |
| Connection              | 3/8" int. threaded  |
| Material                | Nickel-plated brass |



#### **Nippel 1600**

Hose nipple for pressurised air.

| Art. No. | Description       |
|----------|-------------------|
| 4094     | Hose nipple 16210 |

| Technical specification |                    |
|-------------------------|--------------------|
| Connection              | 1/4" ext. threaded |
| Material                | Zinc-plated steel  |





# **QUICK COUPLINGS & HOSE NIPPLES**

#### **Quick Coupling 1800**

Quick coupling for fluids, air or chemicals (stainless steel). Can be reconditioned.

| Technical specification |  |
|-------------------------|--|
| Working pressure        | 100 bar                                |
| Connection              | 3/8" int. threaded                     |
| Material                | Nickel-plated brass or Stainless steel |

| Art. No. | Description             |
|----------|-------------------------|
| 4057     | Quick coupling 1800H    |
| 4075     | Quick coupling 1800RVUV |



#### **Nippel 1800**

Hose nipple for water couplings, high pressure proof. Available with different connections.

| Art. No. | Description        | Connection |
|----------|--------------------|------------|
| 4065     | Hose nipple 18012  | 1/2" hose  |
| 4066     | Hose nipple 18019  | 3/4" hose  |
| 4060     | Hose nipple 18110  | 1/4" utv   |
| 4061     | Hose nipple 18210  | 3/8" utv   |
| 4077     | Hose nipple 18210R | 3/8" utv   |
| 4062     | Hose nipple 18220  | 1/2" utv   |
| 4063     | Hose nipple 18405  | 1/4" inv   |
| 4064     | Hose nipple 18410  | 3/8" inv   |
| 4076     | Hose nipple 18410R | 3/8" inv   |
| 4067     | Hose nipple 18420  | 1/2" inv   |





#### **Quick Coupling 2500**

Quick coupling for fluids with a locking ring. High pressure proof. Can be reconditioned.

| Technical specification |  |
|-------------------------|--|
| Working pressure        | 250 bar                                |
| Connection              | 1/4" int. threaded                     |
| Material                | Nickel-plated brass or Stainless steel |

| Art. No. | Description             |
|----------|-------------------------|
| 4068     | Quick coupling 2510UV   |
| 4078     | Quick coupling 2510RVUV |



#### Nipple 2500

Hose nipple without valve, high pressure proof.

| Technical specification |  |
|-------------------------|--|
| Connection              | 1/4" int. threaded   |
| Material                | Zinc-plated steel or Hardened acid-resistant stainless steel |

| Art. No. | Description          |
|----------|----------------------|
| 4069     | Hose nipple 2520UV   |
| 4079     | Hose nipple 2520RHUV |



# **QUICK COUPLINGS & HOSE NIPPLES**

#### **Quick Coupling 3800**

Quick coupling for fluids, available with or without locking ring. High pressure proof. Can be reconditioned.

| Art. No. | Description             |
|----------|-------------------------|
| 4070     | Quick coupling 3810H    |
| 4080     | Quick coupling 3810RVUV |

| Technical specification |  |
|-------------------------|--|
| Working pressure        | 300 bar                                |
| Connection              | 3/8" int. threaded                     |
| Material                | Nickel-plated brass or Stainless steel |



#### **Nipple 3800**

Hose nippel without valve, high pressure proof.

| Art. No. | Description          |
|----------|----------------------|
| 4071     | Hose nipple 3820UV   |
| 4081     | Hose nipple 3820RFUV |

| Technical specification                              |                    |  |
|--|--------------------|--|
| Connection   | 3/8" int. threaded |  |
| Material Zinc-plated steel or Acid-resistant stainle |                    |  |



#### **Quick Coupling 5000**

Quick coupling for fluids with a locking ring. High pressure proof. Can be reconditioned.

| Art. No. | Description           |
|----------|-----------------------|
| 4072     | Quick coupling 5010UV |

| Technical specification |                     |  |
|-------------------------|---------------------|--|
| Working pressure        | 300 bar             |  |
| Connection              | 1/2" int. threaded  |  |
| Material                | Nickel-plated brass |  |



#### Nipple 5000

Hose nipple without valve, high pressure proof.

| Art. No. | Description         |
|----------|---------------------|
| 4073     | Hose nipple 5020RUV |

| Technical specification |                                |  |
|-------------------------|--------------------------------|--|
| Connection              | 1/2" int. threaded             |  |
| Material                | Acid-resistant stainless steel |  |





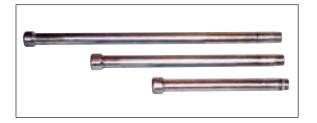
#### **WATER-JET PIPES**

#### **Light-weight water-jet pipes**

Light-weight, stainless steel water-jet pipes with thin pi pe walls. Available in various lengths and with 1/4" thread. Custom lengths and bends available on special-order.

| Art. No. | Description                  | Length  |
|----------|------------------------------|---------|
| 25023    | Light-weight water-jet pipes | 100 mm  |
| 25021    | Light-weight water-jet pipes | 200 mm  |
| 25020    | Light-weight water-jet pipes | 300 mm  |
| 25018    | Light-weight water-jet pipes | 400 mm  |
| 25017    | Light-weight water-jet pipes | 500 mm  |
| 25026    | Light-weight water-jet pipes | 600 mm  |
| 25029    | Light-weight water-jet pipes | 800 mm  |
| 25030    | Light-weight water-jet pipes | 1000 mm |

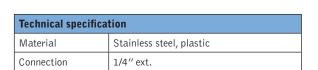
| Technical specification |                       |  |
|-------------------------|-----------------------|--|
| Material                | Stainless steel       |  |
| Connection              | 1/4" int. x 1/4" ext. |  |

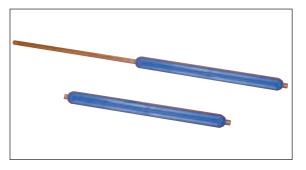


#### **Insulated water-jet pipes**

Insulated, stainless steel water-jet pipes with insulating, grip-friendly, plastic handle. Available in various lengths and with 1/4" thread. These water-jet pipes are suitable for use with hot water.

| Art. No. | Description               | Length  |
|----------|---------------------------|---------|
| 11003    | Insulated water-jet pipes | 300 mm  |
| 11004    | Insulated water-jet pipes | 400 mm  |
| 11005    | Insulated water-jet pipes | 600 mm  |
| 11006    | Insulated water-jet pipes | 800 mm  |
| 11007    | Insulated water-jet pipes | 1000 mm |





#### **Dual water-jet pipes**

Dual, stainless steel water-jet pipes that are especially suitable for use with Lagafors's mobile high-pressure cleaning systems. The pressure can be variably regulated by adjusting the valve opening. Ideal for use in combination with an injector.

| Art. No. | Description          | Length |
|----------|----------------------|--------|
| 11000    | Dual water-jet pipes | 600 mm |

| Technical specification |                                 |
|-------------------------|---------------------------------|
| Material                | Brass, stainless steel, plastic |
| Connection              | 1/4" int.                       |









# **PRE-CLEANING NOZZLE - PCN**



The patent pending Pre-Cleaning Nozzle (PCN) enables the user to control the water pressure for long or short distance cleaning, i.e. 0.3-7 metres. The PCN should be used instead of a high flow water-hose in the pre-cleaning stage. Correctly used, this method can significantly reduce water consumption. The PCN combines high pressure with low volume to ensure water savings. The weight of the Pre-Cleaning Nozzle is only 125 grams.

- · Can be used for all pressures from 20 bar to 100 bar.
- · Efficient working range, 0.3-7 metres.
- · Correctly used the PCN can significantly reduce water consumption.
- · Light weight, only 125 grams.
- · The PCN is delivered with four different restriction nipples to adapt the PCN to the water pressure used by the operator.

| Features   | Benefits                      | Facts  |
|--|-------------------------------|--|
| Power adjusted stream  | Replaces high flow water hose | One hose less for the user                         |
| Connect to water booster systems rather than normal water pipe | Uses low volumes of water     | Enables reduced water consumption                  |
| Adjustable stream length and hardness                          | Flexible between 0.3-7 m      | Desired pre-cleaning flow and pressure combination |
| Stainless steel parts and impact resistant plastic             | Robust materials              | Long life time                                     |



| Technical information Lagafors® Pre-Cleaning Nozzle PCN |   |  |
|---|---|--|
| Cleaning distance                                       | 0.3-7 metres                              |  |
| Flow, min   | 25 lit/min                                |  |
| Flow, max   | 35 lit/min                                |  |
| Connection, incoming                                    | ISO-G 1/4" ext. thread                    |  |
| Capacity demands  | Capacity demands                          |  |
| Pressure  | 20-100 bar                                |  |
| Flow  | 25-35 lit/min                             |  |
| Dimensions  | Dimensions                                |  |
| Measurements L/D  | Measurements L/D 119 mm /44 mm            |  |
| Weight  | 125 g                                     |  |
| Materials   | Stainless steel, impact resistant plastic |  |

The data is subject to variation and the producer reserves the right to change design specifications without notice.





<sup>\*</sup> Connector nipple is optional.

#### **NOZZLES**

#### **Flat Spray Nozzle**

Nozzles for water rinse of the whole pressure range and application of chemicals and foam. Because of the large amount of different sizes and scattering angles we recommend you to contact our order department for the right article number.

| Technical specification |                                |  |
|-------------------------|--------------------------------|--|
| Flow                    | 0,3-200 lit/min (20 bar)       |  |
| Temperature             | 120°C                          |  |
| Connection              | 1/4", 3/8", 1/2" ext. threaded |  |
| Material                | Stainless steel or Brass       |  |
| Scattering angle        | 0° - 110°                      |  |



#### **Adjustable Nozzle**

Spray nozzle with adjustable spray angle that can be varied from a single jet to a flat, 80° spray. The adjustable spray angle gives the user great flexibility in the operations.

| Art. No. | Description       | Size |
|----------|-------------------|------|
| 4136     | Adjustable nozzle | 08   |
| 4137     | Adjustable nozzle | 09   |
| 4158     | Adjustable nozzle | 10   |
| 4206     | Adjustable nozzle | 11   |
| 4211     | Adjustable nozzle | 20   |

| Technical specification |                                       |
|-------------------------|---------------------------------------|
| Flow                    | 175 bar                               |
| Temperature             | 50°C                                  |
| Connection              | 1/4" int. threaded                    |
| Material                | Stainless steel, polypropylene, Brass |
| Scattering angle        | 0- 80°                                |



#### **Turbo Nozzle**

Robust and impact resistant turbo nozzle for professional cleaning where an increased effect is needed. The effect is about 30% higher than a normal nozzle. The turbo nozzle produces a round rotating water spray. Can be reconditioned.

| Art. No. | Description  | Dimension |
|----------|--------------|-----------|
| 4118     | Turbo nozzle | 055       |
| 4119     | Turbo nozzle | 07        |
| 4120     | Turbo nozzle | 08        |
| 4121     | Turbo nozzle | 09        |
| 4122     | Turbo nozzle | 10        |
| 4220     | Turbo nozzle | 20        |

| Technical specification |                        |
|-------------------------|------------------------|
| Working pressure        | 320 bar                |
| Temperature             | 80°C                   |
| Connection              | 1/4" int. threaded     |
| Material                | Brass, plastic, rubber |
| Weight                  | 700 g                  |
| Measurements            | L=100 mm, Ø=65 mm      |



#### **NOZZLES**

#### **Cleaning Spray Nozzle**

Nozzle for the cleaning of pipes, for instance when the pipe is filled up. The nozzle has one hole in the front and three holes angled backwards. By flushing backwards the hose and nozzle will move forward into the pipe. See the product sheet "Hoses" for a suitable hose for this nozzle.

| *A special hose for this | nozzle is available | in lengths of 5, 1 | 0, |
|--------------------------|---------------------|--------------------|----|
| 15 and 20 metres.        |                     |                    |    |

| Art. No. | Description              | Size |
|----------|--------------------------|------|
| 4230     | Pipe cleaning nozzle 3+1 | 045  |
| 4124     | Pipe cleaning nozzle 3+1 | 06   |
| 4164     | Pipe cleaning nozzle 3+1 | 07   |
| 4209     | Pipe cleaning nozzle 3+1 | 08   |
| 4212     | Pipe cleaning nozzle 3+1 | 09   |

| Technical specification |                    |
|-------------------------|--------------------|
| Flow                    | 250 bar            |
| Size                    | 150°C              |
| Connection              | 1/8" int. threaded |
| Material                | Stainless steel    |
| Diametre                | 15 mm              |



#### **Rotating Tank Nozzle**

Nozzle usable for foam application and water rinse. Revolves with constant speed independent of pressure and flow. Made of chemical resistant material. Is also available with a scattering angle of  $180^{\circ}$ .

| Art. No. | Description          | Flow (16 bar) |
|----------|----------------------|---------------|
| 12094    | Rotating tank nozzle | 19 lit/min    |
| 33008    | Rotating tank nozzle | 30 lit/min    |
| 12012    | Rotating tank nozzle | 93 lit/min    |
| 12810    | Rotating tank nozzle | 128 lit/min   |

| Technical specification |                    |
|-------------------------|--------------------|
| Working pressure        | 16 bar             |
| Temperature             | 150°C              |
| Connection              | 1/2" int. threaded |
| Material                | PVDF               |
| Weight                  | 150 g              |
| Measurements            | L=135 mm, Ø=49 mm  |
| Scattering angle        | 360°               |



#### **Rotating Flush Arm**

Rotating flush arm with one nozzle in each end. By angling the nozzles the arm will be self rotating when water is connected, the speed is set by the nozzles. Suitable for cleaning of e.g. conveyor belts. The nozzles are dimensioned depending on pump preformance.

| Technical specification |   |
|-------------------------|---|
| Working pressure        | 250 bar                                   |
| Temperature             | 5°C to 120°C                              |
| Connection              | in 3/8" int. thread, out 1/4" ext. thread |
| Materials               | Brass, nickel, stainless steel            |
| Weight                  | 250-410 g                                 |

| Art. No. | Description  | Length |
|----------|--------------|--------|
| 24013    | Rotating arm | 200 mm |
| 24014    | Rotating arm | 300 mm |
| 24021    | Rotating arm | 350 mm |
| 24008    | Rotating arm | 400 mm |
| 24018    | Rotating arm | 450 mm |
| 24019    | Rotating arm | 500 mm |
| 24015    | Rotating arm | 600 mm |
| 24009    | Swivel 3/8"  |        |



# FLOOR CLEANING EQUIPMENT

#### **Rotating Floor Cleaning**

Floor cleaning equipment for fast and easy cleaning of flat surfaces with high water pressure. Is used preferably in facilities with open and large spaces. The equipment has a rotating flush arm under a stainless steel hood and four wheels for smooth transportation. The spray gun is not included.

| Art. No. | Description              |
|----------|--------------------------|
| 30017    | Floor Cleaning, Rotating |

| Technical specification |                            |  |  |
|-------------------------|----------------------------|--|--|
| Woring pressure         | 250 bar                    |  |  |
| Flow                    | Depending on pump capacity |  |  |
| Temperature             | 5 °C - 120 °C              |  |  |
| Nozzle                  | 1/4" ext. threaded         |  |  |
| Material                | Stainless steel            |  |  |
| Diameter                | 520 mm                     |  |  |



#### **Fixed Floor Cleaning**

Floor cleaning equipment for fast and easy cleaning of flat surfaces with high water pressure. Is used preferably in facilities with open and large spaces. The equipment has a fixed flush arm under a stainless steel hood. The spray gun is not included.

| Art. No. | Description                  |  |
|----------|------------------------------|--|
| 30018    | Floor Cleaning, Fixed 400 mm |  |
| 30068    | Floor Cleaning, Fixed 600 mm |  |

| Technical specification |                            |  |
|-------------------------|----------------------------|--|
| Woring pressure         | 250 bar                    |  |
| Flow                    | Depending on pump capacity |  |
| Temperature             | 5 °C - 160 °C              |  |
| Nozzle                  | 1/4" ext. threaded         |  |
| Material                | Stainless steel            |  |
| Diameter                | 400, 600 mm                |  |



# **HYGIENIC EQUIPMENT - HGE**



Lagafors® provides a complete range of products in:

- ·Sinks
- · Shoe and boot washers
- · Hygiene ports
- · Washing stations
- · Etc...

Contact Lagafors for more information.



# **DISHWASHERS - DSW**



Lagafors® dishwashers, DSW, meet the food-processing industry's high demands for hygiene, with lower costs and reduced environmental impact in an improved working environment. All this while at the same time meeting our customers' high standards regarding capacity, performance, quality.

All of our dishwashers have been developed with a normal cleaning cycle in mind, i.e. pre-wash, circulated dishwashing, rinsing and, when needed, disinfection or hot water. Most of our dishwashers recirculate the heated chemical solution, while refilling as needed. They also recycle the water, whenever possible, by reusing the rinse water in the pre-wash phase.

Contact Lagafors for more information.

# **LAGAFORS® SERVICE AGREEMENTS**



Lagafors® service teams check and maintain existing Lagafors® cleaning system installations. A service agreement with Lagafors® ensures a visit from our service team one or more times per year, at a fixed rate. The frequency of our visits depends on how much the installation is used.

Advantages of a Lagafors® service agreement:

- · Scheduled service visits. We keep an eye on the service intervals and contact you before each visit.
- · Minimized maintenance costs. We provide preventive maintenance for your installations.
- · Increased safety in production. Routine service reduces downtime.
- · Reduced workload for your own service and technical staff.









# **CLAGAFORS**®

# Lagafors® – delivering cleaning solutions that make a difference to the food industry

Do you want to obtain optimal hygiene at reduced cost, with minimized environmental impact in an improved working environment? Then you should contact us at Lagafors. We provide complete, tailor-made system solutions and a broad range of equipment for industrial cleaning.

#### What we offer

Our competence spans from manufacturing and installation of mobile units, to concepts, customized solutions and design of large, centralized cleaning systems. The systems are developed to dose foam detergents and disinfectants as well as deliver pressurized water ranging from low pressure to high pressure. We have been the market leader in Scandinavia for 40 years and are represented in a number of countries world-wide.

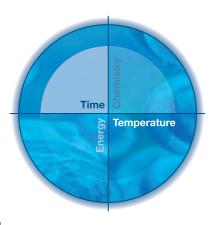
#### How we operate

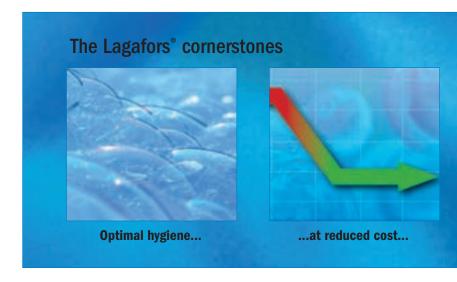
All of our work is guided by the principles of the Zinner Circle, which consists of 4 variables:

Energy Time Chemistry Temperature

When these variables are in equilibrium, you will obtain your desired hygiene level with minimal

consumption of water, energy, chemicals and effort. At Lagafors we never compromise on our cornerstones which are optimal hygiene, at reduced cost, with reduced environmental impact, in an improved working environment.





#### Why choose Lagafors®?

Thanks to our flexible and service-minded organization, we can quickly present you with a direct and tangible solution and can easily transform your production process' hygienic needs into a practical, working solution. Technical service is one of our strengths and we take pride in offering our customers timely and efficient service. We offer both a complete service program as well as idea generation and trouble shooting. On site training and production adjustments are part of every system sale but we can also provide customized training should there be a need.

# Sao

#### **Partnership**

Some of our reference installations world-wide:

Abdon Mills
Arla Foods AB
Atria
Danish Crown
Gilde
JBT FoodTech (Frigoscandia Equipment)
Kraft Foods

Orcla
Scan (Swedish Meats)
Swedish Match

Abelmann AstraZeneca Baltika Breweries Findus Nestlé Vittal Fleisch Marine Harvest

Vimex Migros Unilever



To supply innovation based, complete hygiene systems to the food industry, offering our customers improved competitiveness in:

Cost
Food safety
Microbial load
Environmental impact
Ergonomics and working environment





