

# A measured step forward

## Large-Scale Chlorinator and Accessories



Dosing | Liquids  
Conveying | Gases  
Control | Systems

## Water is precious.

The more consumption increases due to public, industrial and domestic use, the more crucial it becomes to treat the water for reuse. Disinfection as the final treatment stage plays a particularly important role in this process.

The responsible introduction of disinfectants into the water requires reliable dosing technology. As a result of profound research and development in this area, Lutz-Jesco has created system solutions which apply internationally.

### We give water the right quality for use.

Different methods are applied for disinfecting water. They differ in the configuration of the equipment and the type of chemicals used.

Due to their easy application and effectiveness, chlorine and its compounds have been used successfully for many decades in water treatment.

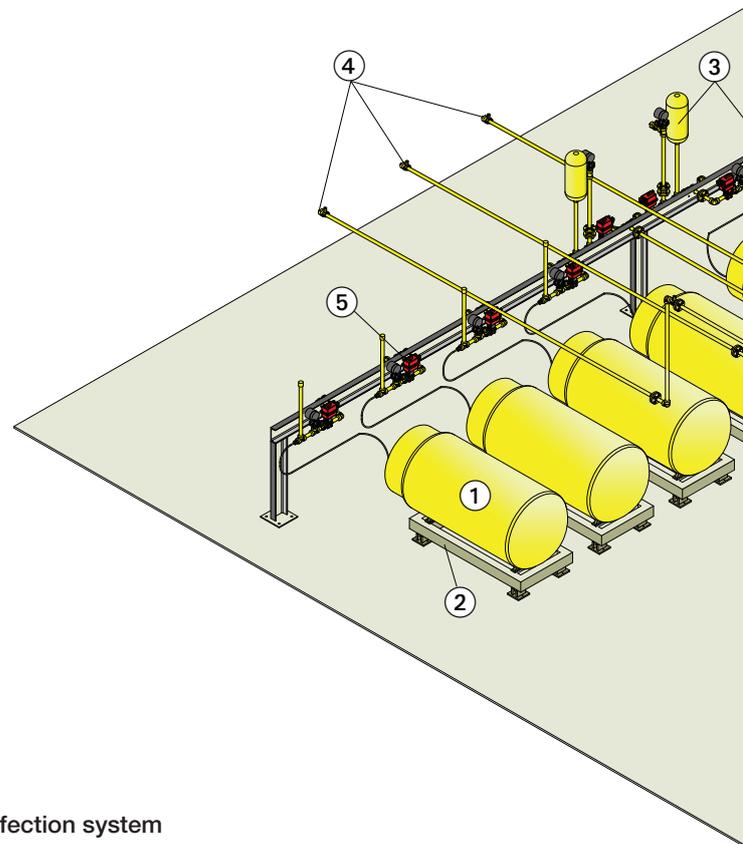
We have specialized in chlorine dosing technology. Our range of approved equipment for dosing chlorine gas under vacuum or liquid chlorine compounds is as comprehensive as the versatility of the individual tasks.

With their well-matched components, Lutz-Jesco chlorinators meet all requirements from chlorination to analyzing and detecting equipment, which can be expected from a state-of-the-art installation. They stand out for their reliability and repetitive dosing accuracy.

Our systems corresponding to DIN and international standards ensure an optimum water quality due to exactly rated disinfection. We contribute our know-how and experience to provide the best solution – technically and economically.

In addition to the quality of our precision equipment, our know-how is a key factor for the success of our customers.

Worldwide.



### Installation of a water disinfection system

#### Installation under pressure

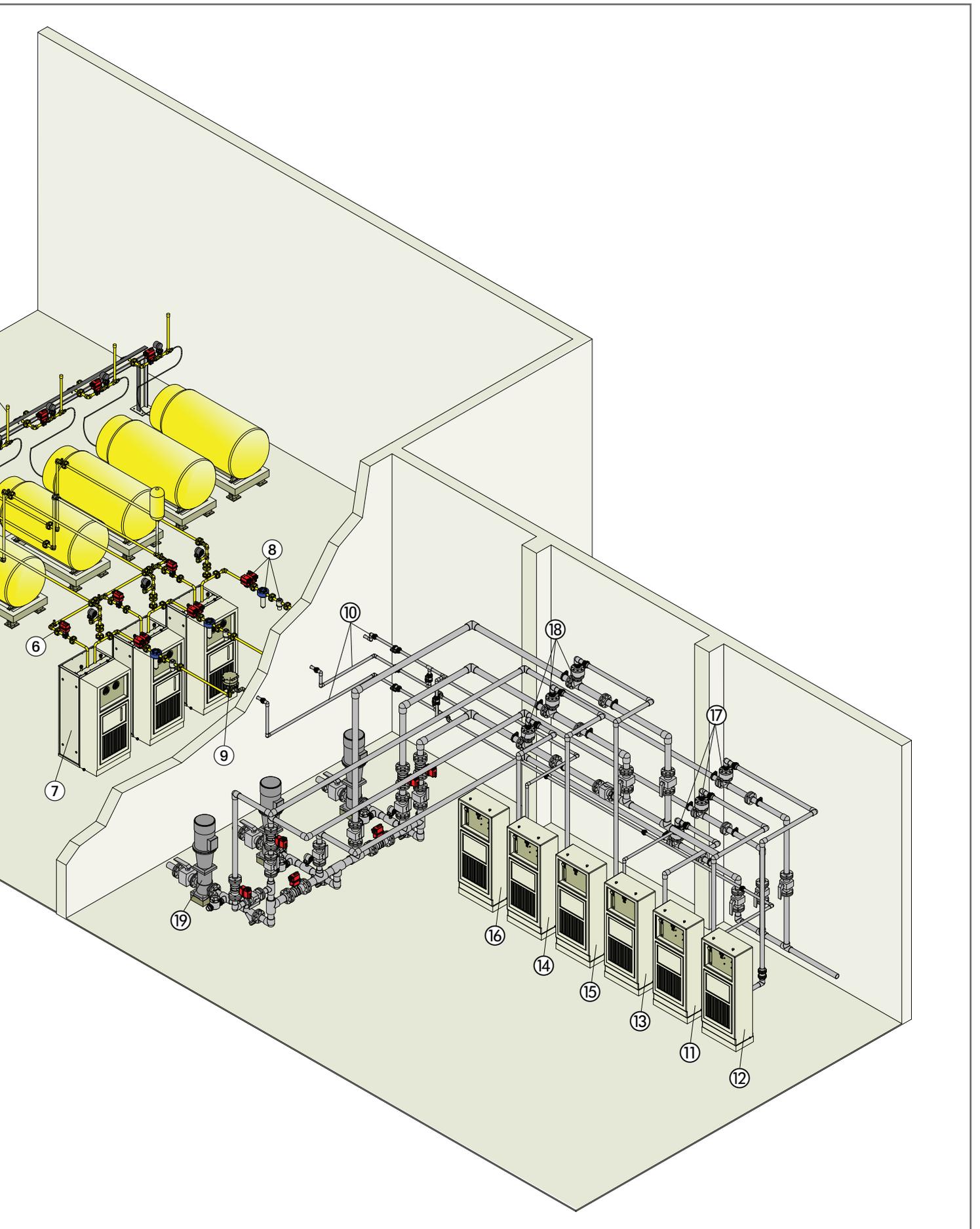
1. Chlorine barrel
2. Barrel balance
3. Expansion cylinder, expansion piping
4. Excess pressure blowoff line
5. Automatic single barrel changeover unit for liquid chlorine
6. Automatic evaporator changeover unit
7. Chlorine evaporator
8. Chlorine gas filter, pressure reducing valve, gauge with pressure switch, quick-action stop valve
9. Vacuum regulator

#### Installation under vacuum

10. Chlorine gas supply line
11. Automatic chlorinator for prechlorination
12. Standby for item 11, automatic
13. Standby for item 11, manual
14. Automatic chlorinator for postchlorination
15. Standby for item 14, automatic
16. Standby for item 14, manual
17. Ejector for prechlorination, automatic chlorinator, automatic standby and manual standby
18. Ejector for postchlorination, automatic chlorinator, automatic standby and manual standby
19. Booster pump, automatic chlorinator, automatic standby and manual standby

# Lutz-Jesco Chlorination

## Systematized Chlorine Applications



# Chlorinators



## Fully developed, safe, reliable

Chlorine and chlorine compounds have been used successfully in water treatment for many decades. Lutz-Jesco offers you an extensive range of well-established equipment as well as of state-of-the-art chlorination systems for dosing chlorine gas and chlorine compounds reliably and precisely.

Chlorinator, analyzing and detecting devices match perfectly. Lutz-Jesco chlorination units meet the safety requirements according to German standard DIN 19606 by full vacuum technology.

### In short

- User-friendly
- Easy handling
- Increased dosing accuracy
- High working reliability
- For an optimum automation level

## Modular disinfection

Chlorinators C 2525 and C 2700 follow a clear modular structure. Whether we are talking of a compact unit with all functions integrated in a free-standing cabinet or of functional modules for your individual installation setup – a reliable vacuum system will always be at your disposal.

### In short

- Suitable for up to 5 and 200 kg Cl<sub>2</sub>/h, respectively
- With separate vacuum regulator

## Sturdy and precise

The C 7700 is the final control element in automatically operated chlorination installations working according to the vacuum method. It impresses by its reliability and linear characteristic curves. The valve is suitable for proportional dosing as well as for automatic control systems.

### In short

- Control range from 0 – 80 g Cl<sub>2</sub>/h to 0 – 200 kg Cl<sub>2</sub>/h

## Dosing without any break

You like it perfectly automatic, don't you? In this case C 7520 and C 7522 are just the right devices for you: automatic changeover valves for uninterrupted chlorine gas supply. Microprocessor-controlled and motor-driven. Equipped with relay contacts for remote monitoring.

### In short

- C 7522: vacuum version up to 100 kg Cl<sub>2</sub>/h
- C 7520: pressure version up to 200 kg Cl<sub>2</sub>/h

# Vacuum Chlorinators

## C 2525 vacuum chlorinators

### C 2525 chlorinators

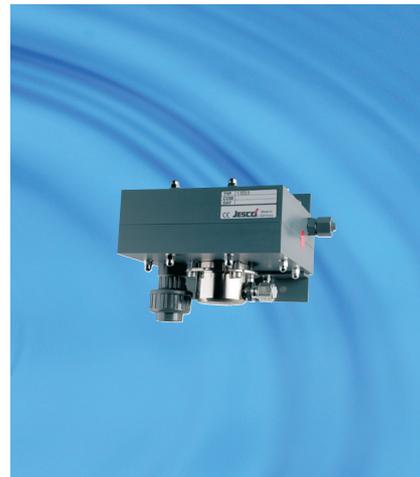
These chlorinators have been designed as vacuum units according to German standard DIN 19606. Versions for other gases (CO<sub>2</sub>, NH<sub>3</sub>, SO<sub>2</sub>) available on request.

### C 2525 V

Vacuum regulator up to 25 kg Cl<sub>2</sub>/h

Supplied as a separate unit with an optional pressure gauge.

A safety blowoff valve is integrated in the device.



### C 2525 WL

For wall mounting up to 25 kg Cl<sub>2</sub>/h

The equipment is fixed to a plate for wall mounting.

Consisting of:

- Flow meter
- Adjusting valve
- Backpressure regulator
- Vacuum gauge
- Automatic control valve as an option

Type C 2525	Capacity kg Cl <sub>2</sub> /h	Vacuum connection mm
WL5	0.25 – 5	8/12 tubing
WL10	0.50 – 10	12/16 tubing
WL15	0.75 – 15	12/16 tubing
WL25	1.25 – 25	screwed PVC-connection d 20

Dimensions:

Plate for wall mounting H x W 900 x 490 mm

Weight: approx. 16 kg



### C 2525 SL

Installed in a free-standing cabinet for up to 25 kg Cl<sub>2</sub>/h

The equipment is built in a cabinet.

Consisting of:

- Flow meter
- Adjusting valve
- Backpressure regulator
- Vacuum gauge
- Automatic control valve as an option

Type C 2525	Capacity kg Cl <sub>2</sub> /h	Vacuum connection mm
SL5	0.25 – 5	8/12 tubing
SL10	0.50 – 10	12/16 tubing
SL15	0.75 – 15	12/16 tubing
SL25	1.25 – 25	screwed PVC-connection d 20

Dimensions:

Cabinet H x W x D 1,600 x 700 x 360 mm

Weight: approx. 35 kg



# Vacuum Chlorinators

## C 2700 vacuum chlorinators



### C 2700 chlorinators

These chlorinators have been designed as vacuum units according to German standard DIN 19606. Versions for other gases ( $\text{CO}_2$ ,  $\text{NH}_3$ ,  $\text{SO}_2$ ) available on request.

### C 2700 V

Vacuum regulator up to 200 kg  $\text{Cl}_2/\text{h}$

Supplied as a separate unit with an optional pressure gauge.

A safety blowoff valve is integrated in the device.



### C 2700 WL

For wall mounting up to 200 kg  $\text{Cl}_2/\text{h}$

The equipment is fixed to a plate for wall mounting.

Consisting of:

- Flow meter
- Adjusting valve
- Backpressure regulator
- Vacuum gauge
- Automatic control valve as an option

Type C 2700	Capacity kg $\text{Cl}_2/\text{h}$	Vacuum connection screwed PVC conn.
WL40	2 – 40	d 50 mm
WL60	3 – 60	d 50 mm
WL120	6 – 120	d 50 mm
WL200	10 – 200	d 50 mm

Dimensions:

Plate for wall mounting H x W 810 x 645 mm  
Weight: approx. 24 kg



### C 2700 SL

Installed in a free-standing cabinet for up to 200 kg  $\text{Cl}_2/\text{h}$

The equipment is built in a cabinet.

Consisting of:

- Flow meter
- Adjusting valve
- Backpressure regulator
- Vacuum gauge
- Automatic control valve as an option

Type C 2700	Capacity kg $\text{Cl}_2/\text{h}$	Vacuum connection screwed PVC conn.
SL40	2 – 40	d 50 mm
SL60	3 – 60	d 50 mm
SL120	6 – 120	d 50 mm
SL200	10 – 200	d 50 mm

Dimensions:

Cabinet H x W x D 1,600 x 700 x 360 mm  
Weight: approx. 49 kg

### Flow meter

For precise reading of the current chlorination performance. With adjusting valve for manual setting of the dosing rate.

Length of measuring glass 300 mm.

Measuring ranges:

- 0.25 – 5 kg Cl<sub>2</sub>/h
- 0.50 – 10 kg Cl<sub>2</sub>/h
- 1.75 – 15 kg Cl<sub>2</sub>/h
- 1.25 – 25 kg Cl<sub>2</sub>/h
- 2 – 40 kg Cl<sub>2</sub>/h
- 3 – 60 kg Cl<sub>2</sub>/h
- 6 – 120 kg Cl<sub>2</sub>/h
- 10 – 200 kg Cl<sub>2</sub>/h



### C 7700

Chlorine control valve (ATE) control ranges up to 200 kg Cl<sub>2</sub>/h

C 7700 chlorine control valves are electrically adjustable plastic control valves for chlorination under vacuum. They allow a continuous proportional chlorination and are used as a final control element in automatic control systems. A servomotor is used as drive. The unit is controlled either by a three-point step controller or a 4 ... 20 mA output. The chlorine gas flow rate is proportional to the control variable. The valve can be set to position "Open" to enable manual dosing.



### C 7520

Automatic changeover valve for chlorine gas and liquid chlorine under pressure up to 200 kg Cl<sub>2</sub>/h

As a standard two chlorine gas supply units (cylinder or barrel batteries) are provided for chlorination installations. This is the only way to operate the plant automatically 24 hours per day. A changeover valve is required to switch over automatically to the standby battery.

Available on a plate for wall mounting or as a kit including the individual components. The changeover unit consists of a microprocessor-driven changeover control allowing also manual operation and display of all conditions by

means of bright LEDs, a contact vacuum gauge as well as two separate motor ball valves allowing manual emergency operation.

The C 7520 changeover valve is fitted with relay contacts for remote signaling in the case of an empty tank.

In the case of chlorine gas leakage, both valves can be shut off by means of a gas detector or manually at the changeover control.



# Chlorinators

## C 7522 changeover valves, ejectors, C 6100 chlorine evaporator

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### C 7522

Automatic changeover valve for chlorine gas under vacuum up to 100 kg Cl<sub>2</sub>/h

As a standard two chlorine gas supply units (cylinder or barrel batteries) are provided for chlorination installations. This is the only way to operate the plant automatically 24 hours per day. A changeover valve is required to switch over automatically to the standby battery.

Available on a plate for wall mounting or as a kit including the individual components. The changeover unit consists of a microprocessor-driven changeover control allowing also manual operation and display of all conditions by means of bright LEDs, a contact vacuum

gauge as well as two separate motor ball valves allowing manual emergency operation. The C 7522 changeover valve is fitted with relay contacts for remote signaling in the case of an empty tank.

The „residual emptying“ facility ensures that the chlorine tanks are fully emptied by switching back to them periodically. If higher chlorine consumption is required temporarily, both chlorine gas tanks can be used at the same time (shock chlorination).

Vacuum connection as d 32 mm cemented connection, adapter with tubing connections available.

Changeover time: max. 25 seconds.

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### Ejectors with non-return valves

Ejectors generate the vacuum required for vacuum systems and cause a homogenous mixing of the chlorine solution. This is the only way to ensure reliable disinfection. Lutz-Jesco ejectors are produced precisely and offer optimum performance at minimum energy consumption. Ejectors can be supplied for all dosing rates up to 200 kg Cl<sub>2</sub>/h in PVC or rubber-coated cast iron, depending on the application.

Ejector non-return valves reliably prevent water from entering the dosing unit.

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### C 6100

Evaporator for liquid chlorine applications  
Evaporative power up to 220 kg Cl<sub>2</sub>/h

With the C 6100 chlorine evaporator, permanently much more than 1% of the chlorine contents can be taken per hour from the tank and converted into gas.

The evaporation process takes place in the heated chlorine evaporator. The chlorine supply just has to be rated as to allow to exchange the tanks at appropriate intervals.

#### Advantages:

- Reduction of danger potentials due to a minimum number of open chlorine barrels
- Maximum temperature of 100 °C, as water is the heat carrier
- Cathodic protection against corrosion
- Pipe coil construction with large heat transfer surface
- No circulating pump required
- Highest possible safety standard

### Matching combination

Even the best chlorination system can still be improved – namely by the right technical periphery, which, in fact, is the reason for the particularly comprehensive accessories program of Lutz-Jesco. It converts your chlorinators into an efficient dosing system.

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### Auxiliary valves

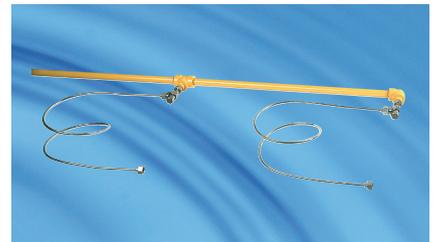
Auxiliary valves are required to change the chlorine tanks safely. Lutz-Jesco supplies these units for all standard tank valves.



### Manifolds

To allow increased chlorine supply volumes or longer rate times, several chlorine tanks are combined in a battery. For chlorine under pressure, manifolds for up to eight tanks are available. The manifolds for gas supply have an integrated mist collector which can be fitted with an electrical heating. All manifolds are supplied

with flexible connection lines and shutoff valves. They are corrosion-proof and coated with epoxy resin. Solid fastening material is also included in the scope of delivery.



### Expansion cylinders

When withdrawing or using liquid chlorine, expansion cylinders must be installed into the lines to protect the system against extremely high pressures. An expansion cylinder must be provided wherever liquid chlorine may be entrapped between two shutoff elements. Depending on the line volume, the expansion

cylinders are supplied in different sizes with or without rupture disk and contact pressure gauge.



### Filters

Filters are installed into the pressure lines to protect the dosing units against dirt. The filters are fitted with a ceramic filter element with a pore size of 30 µm and retain dirt particles and liquid chlorine droplets. The filters are suitable for a chlorine gas flow rate of up to 200 kg/h.



# Accessories

## Valves, more accessories

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### Pressure reducing valves

Inlet pressure up to 15 bar  
Outlet pressure 0.5 – 2.5 bar  
Up to 200 kg Cl<sub>2</sub>/h

Pressure reducing valves are mainly used to prevent chlorine reliquefaction so that the destruction of PVC parts is avoided. The pressure is reduced to a level which ensures that chlorine reliquefaction would occur in the subsequent line at far less than 0 °C only. These temperatures are not permitted for chlorination rooms.

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### More accessories for your chlorination system

- Fastening material
- Pipe fittings
- Pressure gauges and vacuum gauges
- Special tools
- Process and commodity materials such as erection paste or ammonia solution

# Auxiliary and safety equipment

## Success with a pattern

### All equipment needed for a perfect chlorination room

#### Auxiliary equipment

- Fixing devices for cylinders and barrels
- Sling devices, e.g. crane trolleys, chain hangers
- Crane balances to determine the tank contents
- Room heatings
- Ammonia solution

#### Personal protective equipment

- (Compressed air) breathing apparatus independent of circulating air
- Full-view gas mask
- Protective clothes

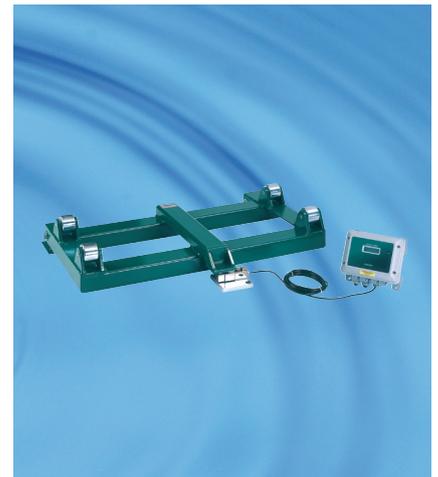
#### Safety equipment

- Gas detector to monitor the chlorine concentration in the room air
- Water sprinkling systems to condense chlorine in the room air
- Labeling (warn signs, short operating instructions)
- Showers for body and eyes
- Emergency kits for chlorine cylinders or barrels



### Barrel balances

The actual contents of a chlorine tank can only be determined by measuring the weight. The residual contents of a chlorine tank is of decisive importance for continuous, uninterrupted chlorination. The barrel balance is fitted with a safe barrel rest and allows to read the chlorine contents from a digital or analog display unit. Available as single or duplex barrel balance.



**Product range**

**Lutz Pumpen GmbH**  
P.O. Box 1462  
D-97864 Wertheim  
www.lutz-pumpen.de

**Product range**

**Lutz-Jesco GmbH**  
P.O. Box 100164  
D-30891 Wedemark  
www.lutz-jesco.com



Barrel and container pumps



Dosing pumps



Measuring and control equipment



Flow meters



Chlorinators



Disinfection



Double diaphragm pumps



Chemical centrifugal pumps



Standard plus



Centrifugal pumps



**TECHNOPOL**

Products for the disinfection of swimming pool water based on salt water electrolysis and domestic water technology



**The Lutz-Jesco App for iPad and iPhone is available from the iTunes App Store.**  
Further information can be found at [www.lutz-jesco.com](http://www.lutz-jesco.com)



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