



STARKEY WATER
102 COUNCIL AVENUE, COUNCIL ID 83612, USA

Detailed quotation of 18.06.2018
26777485 / Layout PL107754B0000002

Kosme Filler 8.000bph (0,5l), Carbonizing system, Empty bottle inspector

KRONES, INC
9600 South 58th
Street
Franklin, WI 53132-
6300

Sales representative/Subsidiary
Matthew Johnson
Franklin
Tel. 414 409 4792
Fax
Matthew.Johnson@kronesusa.com

Internal contact person
Katrina Walker
Franklin
Tel. 414 4128663
Fax
Katrina.Walker@kronesusa.com

 KOSME

Table of contents

- I. Your project - overview**
 - Sales and delivery conditions.....3
- II. Your project - detailed overview**
 - 1. Filling technology KOSME BARIFILL HRS FC7
 - 2. Empty bottle inspector LINATRONIC M 16
 - 3. Network / hardware technology 21
 - 4. CARBONATOR KARBONISIERER 24
 - 5. Material of electrical supply system..... 28
 - 6. Technical documentation..... 32
 - 7. Packing 34
 - 8. Freight 35
 - 9. OPTIONAL: Beverage treatment technology CARBOFLOW 15/1 40
- III. Attachments**
 - Performance data 45
 - Customer object list 47
 - Container/Decoration overview 49
 - Line characteristics 51
 - Electrical line components 53

Sales and delivery conditions

1. OFFER; GOVERNING PROVISIONS:

This quotation is an offer or counteroffer by Krones, Inc., a Wisconsin corporation ("Seller"), to sell to the buyer identified in this quotation ("Buyer") the goods and/or services described in this quotation (the "Goods") in accordance with these General Terms and Conditions (these "Terms and Conditions"), is not an acceptance or confirmation of any offer made by Buyer, and is expressly made conditional on assent to these Terms and Conditions. No additional or different terms or conditions will be binding upon Seller unless specifically agreed to in writing by Seller. Seller hereby objects to any such additional or different terms or conditions contained in any request for quotation, request for proposal, purchase order, notice of award or other form, document or communication heretofore or hereafter received from Buyer. This quotation, including these Terms and Conditions, constitutes the entire agreement between the parties regarding the subject matter hereof (this "Contract"). Except as expressly contemplated herein, this Contract may not be altered, modified or amended, except by a writing signed by both parties hereto. This Contract may not be suspended, terminated or cancelled by Buyer except upon terms and conditions accepted by Seller in writing.

2. LAYOUTS AND TECHNICAL DATA:

Buyer shall, at its sole expense, promptly furnish Seller with such layouts, technical specifications, sample materials, product specifications and any and all other data and materials as may be necessary for the engineering and manufacture of the Goods and for all efficiency testing, acceptance testing and the like (if any). Seller has provided or intends to provide a questionnaire in connection with Buyer's furnishing of such data and materials. Buyer shall submit all data and materials as contemplated by such questionnaire within ten (10) calendar days after Buyer accepts this quotation and submits its order for the Goods hereunder. Buyer shall not thereby be relieved of its obligations under the first sentence of this Section 2, however. Any and all costs that result from any changes in any such layouts, technical specifications, sample materials, product specifications and other data and materials so furnished shall be charged to Buyer, and any delay caused by such changes shall extend the delivery date. All such layouts, technical specifications, sample materials, product specifications and other data and materials shall be delivered at Buyer's sole expense to such Krones AG facility (or other Krones facility) as may be designated by Seller.

3. PRICE; DELIVERY TERMS:

(a) The purchase price payable to Seller for the Goods will be as set forth in the quotation, subject to adjustment as contemplated by these Terms and Conditions. Unless otherwise provided in this Contract, the Goods shall be delivered to Buyer EXW plant of manufacture (as that trade term is defined in Incoterms 2010). Buyer shall bear all expenses paid or incurred by Seller in delivering the Goods.

(b) In the absence of shipping instructions agreed upon by the parties, the Goods are to be shipped by whatever shipping method Seller deems appropriate, and, in any event, the Goods are at the risk of Buyer from and after delivery and Buyer assumes all responsibility for shortage, loss, delay or damage in transit. All scheduled delivery dates are approximate. Seller shall not be liable for any damage or liability as a result of any delay, failure to deliver or other failure to perform due to any cause beyond Seller's reasonable control, including but not limited to any embargo or other governmental act, regulation or request, civil insurrection, civil disturbance, war, act of terrorism, fire, flood, hurricane or other act of nature or act of God, accident, strike or other labor disturbance, slowdown, act of Buyer, shortage of materials or failure of suppliers or subcontractors to satisfactorily meet scheduled deliveries, or any other factor or event beyond Seller's reasonable control. In the event of any such delay, the date of delivery shall be extended for a period equal to the time lost because of the delay. Similarly, if Buyer fails to make the initial payment as required by this Contract or fails to furnish a completed questionnaire with all data or the required material within ten (10) calendar days after it orders the Goods, the delivery date shall be extended on the same basis. Use of the Goods by Buyer shall constitute a waiver of any claim for delay.

4. IMPAIRMENT OF CREDIT:

If Buyer (a) is or becomes insolvent or is unable to pay its debts as they mature, (b) files or has filed against it a bankruptcy, insolvency or any similar petition or is made the subject of an "order for relief" as that term is defined in the U.S. Bankruptcy Code, or (c) fails to make any payment hereunder as and when due, or if Seller has a reasonable belief that any of the foregoing is impending or otherwise in good faith doubts the ability of Buyer to pay the purchase price for the Goods, then Seller may at its option (i) suspend performance hereunder, (ii) terminate

this Contract, (iii) demand cash payment in advance before shipments are made, regardless of the payment terms otherwise agreed upon, or (iv) otherwise require additional security for any remaining balance of the purchase price.

5. LATE PAYMENT:

Buyer agrees to pay interest at the rate of eighteen percent (18%) per annum, or at the highest rate permitted under applicable law, whichever is less, on invoiced amounts not paid when due and further agrees to reimburse Seller, upon demand, for any costs (including without limitation attorneys' fees and legal costs) incurred by Seller in the collection of any amounts owed to Seller hereunder.

6. TAXES AND DUTIES:

The Aggregate Purchase Price does not include any applicable sales, use, value-added, excise or similar taxes, customs or other duties imposed on the sale of goods or services pursuant hereto (collectively, "Sales Taxes"). All such Sales Taxes are ultimately the responsibility of Purchaser and Purchaser hereby indemnifies Krones in respect of such Sales Taxes. For jurisdictions in which Krones is required to pay Sales Tax directly to the governmental entity, it will issue an invoice to Purchaser (either as a separate line item in an invoice or as a separate invoice) for the amount of the Sales Tax and Purchaser will promptly pay to Krones the amount of the Sales Tax reflected in such invoice. Krones uses the Vertex computer software to calculate Sales Taxes and is required to pay Sales Taxes in most cases on a monthly basis. Therefore, if Purchaser believes that calculation of Sales Tax on the Krones invoice is in error, it will (i) nevertheless promptly remit to Krones the amount of the Sales Tax reflected in such invoice, and (ii) give Krones written notice of its calculation of the Sales Tax specifying the basis for the difference in detail and detailing its calculation of the applicable Sales Tax. Provided that Krones finds that there is a reasonable basis for Purchaser's basis for disputing the amount of Sales Taxes, Krones will undertake commercially reasonable efforts to assist Purchaser in filing for a refund or credit on Purchaser's applicable tax return for such disputed amount of Sales Taxes. If Purchaser believes that some or all of the goods or services purchased under this Agreement are exempt from Sales Tax, it shall before Krones issues its first invoice under this Agreement provide Krones with the form of exemption certificate or other applicable instruments required by applicable law (if any) duly executed by Purchaser. If Krones, using its reasonable judgment, determines that it is permitted without liability to rely on such exemption certificate or other instrument, it will forego the collection of Sales Tax for those items that are covered by the exemption certificate.

7. INSPECTION AND ACCEPTANCE:

The Goods shall be deemed finally inspected and accepted within ten (10) calendar days after receipt thereof unless notice of a claim is given in writing to Seller within such time period.

8. INSTALLATION AND COMMISSIONING:

(a) Installation, commissioning and efficiency testing are not included in the purchase price for the Goods and must be specifically contracted for. The efficiency test(s) (if any) will be conducted in accordance with Seller's standard protocol in effect at the time such tests are contracted for and will be conducted pursuant to the DIN 8782 standard.

(b) A service engineer to aid in the installation and start-up of the Goods is available at an additional cost pursuant to Seller's "General Terms for Technical Service" in effect at the time of contracting therefore. The period of service is generally dependent upon the type of machinery being installed.

(c) It is understood that one (1) "day" of service time is defined as eight (8) hours per day so that one (1) "week" of service amounts to forty (40) hours of time and each "week" or "day" additional are multiples of those respective times. It is understood that a reasonable charge for travel expenses will be made if such service time, because of a delay in the installation or of other factors or events within Buyer's control, is not provided on consecutive workdays. Also, an additional charge and traveling expense shall be made in the event the time exceeds the allowed period.

(d) It is Buyer's responsibility (i) to make sure that Buyer's facility where the Goods are to be installed conforms to the specifications and drawings furnished to Seller or approved by Buyer, (ii) to procure any and all permits, licenses and similar authorizations necessary for Seller to perform its obligations at such facility, and

Sales and delivery conditions

(iii) in general, to make sure that such facility is adequately prepared for installation and operation of the Goods. Installation does not include start-up services unless such start-up services are specifically contracted for. Such start-up services are available for an additional charge on a time and materials basis.

(e) If installation and commissioning are specifically contracted to be performed by Seller, then, promptly upon completion of installation, Seller will begin the process of commissioning the Goods in accordance with such contract. Commissioning typically will need to be conducted using the same kinds of packaging and bottles throughout the process. Therefore, Buyer agrees that for the duration of any such commissioning, the Goods will be run using the same bottle and packaging type during production. If Buyer does not adhere to such commitment, then the ability of Seller successfully to conduct an efficiency test or tests will have been significantly compromised, and as a result, the requirement to conduct an efficiency test or tests will be deemed waived and any and all such tests will be deemed to have been successfully completed.

(f) Training is not included in this quotation unless expressly included and specifically itemized herein as a purchased item.

9. WARRANTY:

(a) Seller warrants that the Goods shall (i) be free from defects in materials and workmanship for a period (the "Warranty Period") ending on the earlier to occur of (x) 6,000 hours of operation on the Goods or (y) expiration of one (1) year after the first to occur of commencement of production by the Goods of saleable product or lapse of one hundred twenty (120) calendar days after the date of arrival of the Goods at Buyer's facility; and (ii) will be transferred free and clear of any third-party liens. The foregoing warranties are conditioned on Buyer paying the full purchase price for the Goods.

(b) This warranty is expressly limited to repair or replacement of the affected Goods (or component thereof). To the extent Seller elects to replace the defective part or component, its sole obligation shall be to provide the replacement without charge, and any associated freight or labor is not included in the warranty. This warranty shall not apply to any part of the Goods which becomes defective through misuse or abnormal use that is not contemplated as reflected in this Contract, nor shall it apply if the prerequisite conditions detailed in the warranty provision itself are not satisfied. This warranty shall not apply to any part of the Goods which becomes defective due to normal wear and tear or other causes that do not arise from any defect in the Goods. This warranty does not apply to any parts or components manufactured by third parties, including electrical components. Such parts and components are instead covered by the applicable manufacturer's warranty. Seller shall not be responsible for any defect or damages actually caused by failure to follow the operating instructions reflected in the Goods' various manuals, or failure to comply with the recommended maintenance program reflected in the Goods' various manuals.

(c) EXCEPT AS PROVIDED IN THESE TERMS AND CONDITIONS, THE GOODS ARE PROVIDED "AS IS" WITH ALL FAULTS AND WITHOUT WARRANTY OF ANY KIND. EXCEPT AS PROVIDED IN THESE TERMS AND CONDITIONS, SELLER EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, OF FITNESS FOR A PARTICULAR PURPOSE, AND THOSE ARISING FROM COURSE OF DEALING OR USAGE OF TRADE. SELLER DOES NOT WARRANT THAT THE GOODS WILL MEET BUYER'S REQUIREMENTS OR EXPECTATIONS, OR THAT THE OPERATION OF THE GOODS WILL BE UNINTERRUPTED OR ERROR-FREE. SELLER DOES NOT WARRANT OR MAKE ANY REPRESENTATION REGARDING THE USE OR THE RESULTS OF THE USE OF THE GOODS IN TERMS OF THEIR CORRECTNESS, ACCURACY, QUALITY, RELIABILITY, APPROPRIATENESS FOR A PARTICULAR TASK OR PURPOSE OR OTHERWISE. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY SELLER SHALL CREATE A WARRANTY OR IN ANY WAY EXPAND THE SCOPE OF THIS WARRANTY. THIS SECTION 9 CONSTITUTES THE ENTIRE WARRANTY PROVIDED UNDER THIS CONTRACT.

10. BUYER'S EXCLUSIVE REMEDIES AND PROCEDURES REGARDING CLAIMS UNDER THE WARRANTY:

(a) Buyer shall notify Seller of any claim of defective material or workmanship (collectively the "Warranty Defect") in writing promptly upon its discovery by Buyer.

(b) Promptly upon receipt of a written notice of a Warranty Defect, Seller shall attempt to validate the Warranty Defect. If the Warranty Defect is valid, Seller

shall, at its option, repair or replace the affected pieces of the Goods. Such repair or replacement shall be made as quickly as commercially reasonably possible. Any repaired or replaced Goods shall themselves be deemed to be covered by the warranty hereunder for the balance of the Warranty Period only. SELLER'S SOLE OBLIGATION IN RESPECT OF ITS WARRANTY OBLIGATIONS HEREUNDER SHALL BE REPAIR OR REPLACEMENT OF THE AFFECTED GOODS (AT SELLER'S OPTION).

11. LIMITATION OF LIABILITY:

IN NO EVENT SHALL SELLER, ITS AFFILIATES OR CONTRACTORS BE LIABLE TO BUYER OR ANY THIRD PARTY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, INDIRECT, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES FOR LOSS OF BUSINESS, LOSS OF PROFITS, LOSS OF GOODWILL OR BUSINESS REPUTATION, BUSINESS INTERRUPTION, LOSS OF DATA, OR LOSS OF BUSINESS INFORMATION) ARISING OUT OF OR CONNECTED IN ANY WAY WITH THIS CONTRACT, OR FOR ANY CLAIM BY ANY THIRD PARTY, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE, ERRORS AND OMISSIONS AND STRICT LIABILITY) OR OTHER THEORIES OF LAW, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION OF LIABILITY SHALL APPLY EVEN IF THE EXPRESS WARRANTY SET FORTH ABOVE SHALL FAIL OF ITS ESSENTIAL PURPOSE. THE MAXIMUM AGGREGATE LIABILITY OF SELLER ARISING OUT OF OR RELATED TO BREACH OF CONTRACT, BREACH OF WARRANTY (INCLUDING THE COST OF REPAIRING OR REPLACING THE GOODS), TORT (INCLUDING NEGLIGENCE, STRICT LIABILITY AND ERRORS AND OMISSIONS) OR ANY OTHER CAUSE OR FORM OF ACTION SHALL NOT EXCEED THE AMOUNT OF THE PURCHASE PRICE ACTUALLY RECEIVED BY SELLER HEREUNDER. THE FOREGOING IS NOT INTENDED TO LIMIT SELLER'S LIABILITY IN TORT FOR PERSONAL INJURY (INCLUDING DEATH) OR PHYSICAL DAMAGE TO PROPERTY CAUSED BY SELLER.

12. SECURITY INTEREST; INSURANCE:

Buyer grants to Seller a security interest in the Goods to secure payment of the purchase price therefore and all other fees or amounts, which are or become due and payable to Seller. In the event of nonpayment in breach of this Contract, or disposition or transfer of any of the Goods to a third party, Seller shall be entitled to foreclose on its security interest in the Goods. Seller is hereby authorized to file any financing statements or other documents to perfect the security interest granted in this Contract, including a UCC-1 statement in a form that is satisfactory to Seller. Buyer shall upon request provide Seller with a legal description of the location of Buyer's facility where the Goods are installed to aid Seller in making a "fixture filing". Seller's security interest in the Goods shall terminate upon Buyer's full and final payment of all sums due and owing. In addition, for so long as any amount of the purchase price for the Goods remains unpaid, Buyer shall keep the Goods insured against all casualty or loss for not less than the full amount of such purchase price with an insurer reasonably acceptable to Seller, and Seller shall be named an additional insured and loss payee under such insurance policy. Such policy shall provide that Seller will be notified not less than thirty (30) calendar days prior to cancellation or amendment of the policy. However, the foregoing shall not change the time at which the risk of loss passes to Buyer, which shall remain in all events as set forth in Section 3 hereof.

13. SPECIFICATIONS:

Seller reserves the right to alter the design or specifications of the Goods at any time prior to delivery so long as such alteration does not materially change the basic function of the Goods or increase the purchase price therefore.

14. PATENTS:

Seller shall not sell to Buyer any Goods the sale of which infringes on any intellectual property right of any third party. Seller shall indemnify and hold Buyer harmless from any third-party claim against Buyer arising from breach of the foregoing sentence if, and only if, Buyer notifies Seller thereof within a reasonable period of time after Buyer is or becomes aware of such claim and gives authority, information and assistance (at Seller's expense) for the defense of such claim. If at any time Seller determines that there is a substantial question of infringement

Sales and delivery conditions

or in case the sale of the Goods or any part thereof is judicially held to constitute infringement and the use of the Goods or part thereof is enjoined by reason of such infringement, then in addition to the foregoing indemnification obligation, Seller shall have the right (but not the obligation) to, at its own expense, either (a) procure for Buyer the right to continue using and selling the Goods or part thereof; or (b) replace the Goods or part thereof with non-infringing goods; or (c) modify the Goods or part thereof so that they become non-infringing; or (d) remove the Goods and refund the purchase price and the transportation and installation costs thereof. The foregoing states the entire liability of Seller for patent infringement or other intellectual property infringement relating to the Goods.

The preceding paragraph does not apply to modifications made by Buyer to any goods (including the Goods), nor does it apply to any goods (including the Goods) or parts thereof manufactured to Buyer's design or specifications, and Seller shall have no liability or obligation whatsoever under the preceding paragraph in respect of any such goods. As to any and all such goods, Buyer shall indemnify and hold Seller harmless from and against any and all claims that such goods infringe the rights of any third party.

15. SAFETY:

Buyer assumes responsibility for the operation of the Goods in accordance with sound safety practices. Buyer shall use and shall require its employees to use any and all safety devices, guards, signs, instructions and safe operating procedures required by law, regulation, code or applicable safety standard or by Seller, and Buyer agrees not to remove or modify any such safety device, guard, sign, instruction or procedure for use provided with the Goods. Buyer shall indemnify Seller from and against any and all losses, liabilities, damages and expenses (including, without limitation, attorneys' fees and other costs of defense) that Seller may incur as a result of any breach by Buyer of this Section 15.

16. CONTRACT TERMS:

The terms and conditions of this Contract shall be considered to be the terms and conditions governing any purchase order issued by Buyer to Seller and any sales contract entered into by Buyer and Seller, and this Contract shall constitute the complete and exclusive statement of the terms and conditions hereof and thereof and shall supersede all prior oral and written statements of any kind whatsoever made by either party or their respective representatives. No statement or writing subsequent to this quotation purporting to modify or add to the terms and conditions hereof shall be binding unless consented to in writing by duly authorized representatives of Seller. Specifically, whenever a separate statement or document is issued by Buyer to Seller that is intended to add, delete or change purchase contract terms as stated herein, that document shall be binding only when signed by two (2) officers of Seller. Such a separate document, signed by such officers, shall override only those terms and conditions hereof as are specifically referenced in such separate document. All other terms and conditions of sale hereof not referenced or overridden in any separate document will remain binding.

THIS CONTRACT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE INTERNAL LAWS OF THE STATE OF WISCONSIN WITHOUT REFERENCE TO PRINCIPLES PERTAINING TO CONFLICTS OF LAWS. THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER SHALL NOT BE GOVERNED BY THE 1980 U.N. CONVENTION ON CONTRACTS FOR THE INTERNATIONAL SALE OF GOODS. This Contract shall be deemed to have been executed and performed in the State of Wisconsin.

MISCELLANEOUS TERMS, CONDITIONS AND POLICIES GOVERNING SALES AND QUOTATIONS

A. All prices are quoted and payable without set-off or deduction in U.S. Dollars unless otherwise specified in writing by Seller. Quoted dollar amounts are subject to examination by Seller of final sample containers, product specifications and labels, which may increase or reduce final purchase price based upon the specific geometry and resulting complexity. In these cases, Seller will make Buyer aware of such changes by sending a "confirming" quotation.

B. Quoted delivery dates are based upon timely receipt of final bottle and label and other required samples, completed and signed SAP document and line layout. All delivery dates are approximate.

C. All prices are subject to change by Seller during the time prior to acceptance of Buyer's purchase order by Seller. Such changes will be communicated to Buyer in writing.

D. Any requested termination of an order, or any part thereof, must be submitted to Seller in writing by Buyer and, if accepted by Seller in its sole discretion, is subject to termination charges.

E. Payment Terms. The Aggregate Purchase Price shall be payable as follows:

(i) Forty percent (40%) of the Aggregate Purchase Price shall be payable immediately upon execution of this Agreement;

(ii) Fifty percent (50%) of the Aggregate Purchase Price shall be payable immediately prior to shipment of the Equipment;

(iii) Five percent (5%) of the Aggregate Purchase Price shall be payable within fourteen (14) days after the earlier of (A) the first date of production by the Equipment of salable product, and (B) the date that is 120 days after the date of the Bill of Lading for the Equipment;

(iv) The balance of the Aggregate Purchase Price for Equipment shall be payable immediately upon the earlier of (A) successful completion of the Kronos Efficiency Test applicable to such Equipment, and (B) the date that is 180 days after the date of the Bill of Lading for the Equipment.

F. This Contract shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. This Contract shall not be assigned by Buyer without the prior written consent of Seller. Any such attempted assignment by Buyer without such prior written consent shall be null and void and without legal effect.

G. If, for any reason whatsoever, one or more of the provisions of this Contract shall be held or deemed to be illegal, invalid or unenforceable, the remaining provisions of this Contract shall not be affected thereby and shall remain in full force and effect.

H. All disputes arising out of or related to this Contract shall be submitted to binding arbitration under the Commercial Rules of Arbitration of the American Arbitration Association. All such proceedings shall be held in Milwaukee, Wisconsin.

These Terms and Conditions are subject to change upon notice by Seller.

Sales and delivery conditions

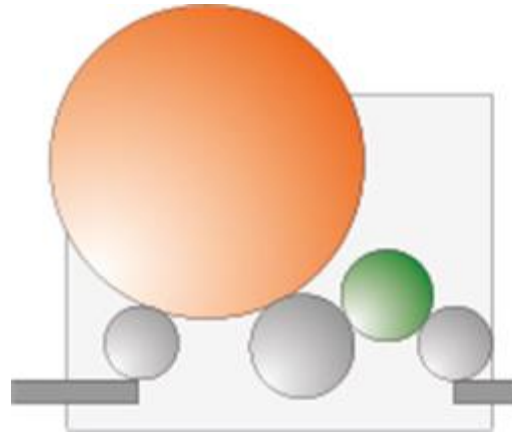
Matt Johnson
Regional Sales Manager

Katrina Walker
Regional Sales Assistant

1. Filling technology KOSME BARIFILL HRS FC

Model description

The filling and capping system (F, C) operates according to the rotary principle and is designed for glass and plastic bottles. The system consists of an isobar filler for carbonated and non-carbonated beverages as well as a capper tower. The filler carousel has a diameter of 56,69 inch (1.440) mm and 32 filling valves, as the capper tower has a diameter of 14,17 inch (360) mm and 8 capping heads. Both units are placed on a common base. The containers are conveyed by base handling and transferred via a transfer starwheel from one unit to the other.



System advantages

- Isobar filler with electropneumatic controlled filling valve functions
- Optional: modular base to facilitate dispatch, installation, maintenance and cleaning
- Advanced technology with limited place requirement
- Diverse combination possibilities with rinser and several capping systems
- Inclined table plate to improve the hygiene and for easier cleaning
- No dirty corners, in which the product can be deposited
- Ring bowl with centralised distribution and product feed from bottom
- Simple and quick format change
- Product-contacting parts made of rust-proof stainless steel AISI 304
- Fully-automatic valve manifold for product, CO₂, sterile air and for CIP return. Can entirely be controlled on the control panel.



Illustrations are only for non-binding information, the text description has precedence.

1. Filling technology KOSME BARIFILL HRS FC

Prices

Rinser

- Electrical documentation in DXF format

Filler

- Model BARIFILLHRS-1.440-32-141
- Pitch circle diameter 56,69 inch (1.440 mm)
- Number of filling valves 32 PCE
- Pitch 5,55 inch (141 mm)
- Filling valve with lift cylinder and electrical components
- Tabletec
- Design of guard doors, hinged flaps glass
- Control cabinet CSA
- Touch panel 10 inch
- Cooling unit control cabinet
- Remote maintenance via Ethernet
- Non-loadable neutral conductor

Capper 1

- Model CAPPER1-AR-360-8-141
- Pitch circle diameter, capper 1 14,17 inch (360 mm)
- Pitch, capper 1 5,55 inch (141 mm)
- Number of heads, capper 1 8 PCE
- Design, capper 1 roll-on capper
- Capping station aluminium roll-on capper
- Additional capper head screw capper
- Additional cap retainer for additional heads screw capper
- Centrifugal sorter on the roof
- Additional cap chute
- Cover of capper top part made of stainless steel INOX against aggressive products
- UV radiation
- Mechanic cap elevator 0.4 cubic metres
- Horizontal cap conveyor, l = 3000 mm, for mechanic cap elevator
- Intake for dust extraction for mechanic cap elevator
- Pneumatic system capper SMC

Handling parts

- Equipment 01.00, 0,5l glass bottle
 - Bottle stop starwheel
 - Infeed worm filler
 - Infeed starwheel base handling filler
 - Transfer starwheel base handling filler

1. Filling technology KOSME BARIFILL HRS FC

- Curved infeed and discharge guide base handling filler
- Set of centring bells filler
- Set of vent tubes filler
- Cap chute for aluminium caps, capper 1
- Discharge starwheel base handling, capper 1
- Curved infeed and discharge guide base handling, capper 1
- Guide starwheel body and neck, capper 1
- Guide base handling, capper 1

■ Equipment 02.00, 1l glass bottle

- Bottle stop starwheel
- Infeed worm filler
- Infeed starwheel base handling filler
- Transfer starwheel base handling filler
- Curved infeed and discharge guide base handling filler
- Set of vent tubes filler
- Discharge starwheel base handling, capper 1
- Curved infeed and discharge guide base handling, capper 1
- Guide starwheel body and neck, capper 1
- Guide base handling, capper 1

Customer-related expansions

Filler

- Media pipe DN 50 in stainless steel rust-proof and acid-proof/chrome molybdenum steel (similar to AISI 316)
- CIP return pump
- Signal transmission product pump
- Neck grippers
- Manual CIP cups
- Laminar Flow
- Nitrogen injection system vacuum pump

- Central lubrication terminal
- Pneumatic system filler SMC

Customer requirement

- Cost alignment for special capper for two different cap sizes (aluminium screw cap and plastic flat cap).
- VKP-DL valve to fill still water in PET bottles

Options (not included in total value of item)

- Climbing aid to reach the electrical processing and operating mate-

1. Filling technology KOSME BARIFILL HRS FC

rial mounted above 2.2 meters..... USD 210,-

Optional customer request (not included in total value of item)

- Upcharge walkable roof

Notes

Output values to be entered in SD-CC based on product carbonated water @15°C temperature and 8 g/lit CO2:

500 ml: 8.000 bph
1000 ml: 5.500 bph
740 ml: 6.600 bph
1500 ml: 2800 bph

Note:

The quoted machine is not prepared for earthquake zones!

If the installation has to be in earthquake zones, the customer has to give the information and the quotation has to be revised accordingly.

This quotation is suitable for budgetary purposes only!

All customer objects are being assumed. Machine has to be rechecked and confirmed when original customer samples or drawings are available.

In case of an order, complete sample material needs to be checked in detail.

This machine was quoted with estimated filling times. In case of an order the machine will confirmed after a filling test with original product and original samples.

Nitrodoser added.

PET bottles will have flat water inside. Should there be sparkling the design will have to be changed

We have now considered one size only of flat cap and one size only of aluminium cap

Option upcharge for walkable clean room roof

1. Filling technology KOSME BARIFILL HRS FC

Machine data

Machine design

■ Components

- filler
- capper
- nitrogen injection
- clean room roof
- cap feed unit

■ Design of explosion protection

is not included in KRONES scope of supply. Machine operation in potentially explosive areas or with potentially explosive material only allowed after KRONES approval

Filler

■ Filling system VKP

The short-tube filling system VKP combines the advantages of sturdy mechanical components with the flexibility of an electro-pneumatic controller. All filling process steps can be individually programmed, and thus be specifically adapted to the product to be filled. This variant of the well-proven single-chamber counter-pressure system offers an ideal basis especially for filling carbonated or non-carbonated in glass or plastic containers. First, the bottle is pressurised with gas from the ring bowl and afterwards filled gently. The required fill level is determined by the length of the vent tube. If products sensitive to oxygen are filled, the bottle can be flushed with gas from the ring bowl prior to pressurisation. Thanks to the flexible electro-pneumatic control system, the system can be quickly and easily converted to other products. A closed CIP circuit is possible for interior cleaning. Thank to its uncomplicated structure the filling system VKP has proven itself as very reliable, also in continuous operation.

■ Direction of operation *

according to layout

■ Pitch circle diameter

56,69 inch (1.440 mm)

■ Number of filling valves

32 PCE

■ Pitch

5,55 inch (141 mm)

■ Product filling

cold filling

■ Design of front table

Tabletec

■ Material of front table

rust-proof stainless steel/chrome nickel steel (similar to AISI 304)

■ Design carousel top part

ring bowl

■ Material carousel bottom part

Material: painted iron, plate of rust-proof stainless steel / chrome nickel steel (similar to AISI 304)

■ Design of lifting unit

pneumatic lift cylinder

■ Container guidance

basehandling

■ Product-contacting parts

stainless steel rust-proof and acid-proof/chrome molybdenum steel (similar to AISI 316)

■ Sealings

food grade

■ Material of valve manifold

stainless steel rust-proof and acid-proof/chrome molybdenum steel (similar to AISI 316)

■ Design valve manifold

manual

■ Slanted seat valves

make: Gemü

■ Flap valves

make: KRONES Evoguard

■ CIP return pump

in rust-proof stainless steel / chrome nickel steel (similar to AISI 304)

■ CIP circuit

closed with manual CIP cups

■ Supplier of product pump

customer

■ Control product pump

signal transmission: set-point value processing

■ Type product pump

centrifugal pump in rust-proof stainless steel / chrome nickel steel (similar to AISI 304)

■ Position product pump

is not at the filler

■ Container stop

bottle stop starwheel

1. Filling technology KOSME BARIFILL HRS FC

<ul style="list-style-type: none"> ■ Worm arrangement container stop ■ Design of guard doors ■ Guard doors / panels ■ Clean room roof ■ Design of clean room roof ■ Conveyor height * ■ Adjusting range conveyor * ■ Type of conveyor chain * ■ Height conveyor chain * ■ Width of conveyor chain * ■ Conveyor chain * ■ Supplier control discharge conveyor ■ Type of control discharge conveyor ■ Accessories for cleaning, operation, maintenance 	<p>single worm swing doors material: single-pane safety glass is included roof with laminar flow (ISO6) 43,31 inch (1.100 mm) 1.050 mm - 1.150 mm flat-top chain stainless steel 0,12 inch (3,00 mm) 3,25 inch (82,50 mm) is straight KOSME frequency inverter - mechanical changing gripper for vent tubes - Neck clamps - Remote maintenance via Ethernet nitrogene injection Vacuum Barrier mounted on front table 59,00 deg F (15 °C) KOSME standard lubrication (manual - Cluster lubrication nipple) Central lubrication system with Cluster lubrication nipples positioned on a board on the side of the machine supporting frame. 216,54 inch (5.500 mm) 13,78 inch (350 mm) 5,91 inch (150 mm) 4,72 inch (120 mm) 1,77 inch (45 mm) is included pneumatic</p>
<ul style="list-style-type: none"> ■ Design of remote maintenance ■ Additional assemblies ■ Manufacturer nitrogen injection ■ Design of injection ■ Maximum filling temperature product ■ Lubrication 	<p>Required minimum room height 216,54 inch (5.500 mm) Maximum possible container height * 13,78 inch (350 mm) Minimum possible container height * 5,91 inch (150 mm) Maximum possible container diameter * 4,72 inch (120 mm) Minimum possible container diameter * 1,77 inch (45 mm) Centring bell lowering device is included Design of filling valve control pneumatic</p>
<p>Capper</p> <ul style="list-style-type: none"> ■ Number of capper 	<p>1 PCE</p>
<p>Capper 1</p> <ul style="list-style-type: none"> ■ Installation of capper 1 ■ Pitch circle diameter, capper 1 ■ Pitch, capper 1 ■ Number of heads, capper 1 ■ Design, capper 1 ■ Additional set of capper heads, capper 1 ■ Cap holder for additional screw capper, capper 1 ■ Number of cap holder sets for additional heads for screw capper, capper 1 ■ Manufacturer top part, capper 1 ■ Clutch, capper 1 ■ Design of feed, capper 1 ■ Funnel size feed, capper 1 ■ Height of feed conveyor, capper 1 * ■ Accessories infeed, capper 1 	<p>on table plate of filler 14,17 inch (360 mm) 5,55 inch (141 mm) 8 PCE roll-on capper for screw capper cone 1 PCE make: KOSME is not disengageable mechanic 0,4 m³ 137,80 inch (3.500 mm) - Horizontal cap conveyor, L = 3000 mm - Extraction system</p>

1. Filling technology KOSME BARIFILL HRS FC

■ Number of sorting units, capper 1	1 PCE
■ Manufacturer, sorting unit 1, capper 1	make: third-party manufacturer
■ Sorter 1, capper 1	centrifugal
■ Number of cap chutes, sorter 1, capper 1	2 chutes
■ Position cap sorting unit 1, capper 1	mounted on clean room roof
■ Additional component(s), capper 1	- UV radiation at the cap feed unit - Cover of capper top part made of stainless steel Inox against aggressive products e.g. for protecting the mechanic components against corrosion

Finish - pneumatic components - lubrication system

- Colour of painted parts:
This equipment is described in detail in the chapter "customer requests" and is subject to an additional charge.

Electrical line components

- The electrical equipment of KRONES machines and line parts is designed, manufactured and finally inspected according to NFPA 79 and UL508A. KRONES has the certification according to UL 508A for the manufacturing of control cabinets and has the UL identification number (file umber) E226540. The inspection results are documented and supplied with the electrical equipment. For all control cabinets manufactured at KRONES for supply to the United States and Canada KRONES confirms by the cULus-LISTED Label (Enclosed Industrial Control Panel) that all relevant requirements of UL508A and NFPA79 are observed.

Operation of the electrical equipment:

KRONES indicates and supposes that the supplied electrical equipment has to be operated within the limits of the maximum allowed net parameters of NFPA79, item 4.3. Additionally the requirements in IEC 61000-2-4 (environment class 2) must be obtained.

Material :

For the KRONES NAD standard equipment variant well-proved and high-quality branded products with the necessary UL approvals and applications (CCN code) are applied for the electrical equipment.

■ Network in customer's network	Solidly Grounded Wye Network (L1, L2, L3, GND). Network type similar to TN three-phase network according to IEC 364-3. The neutral point of the secondary winding transformer is grounded and designed as protective earth conductor (Ground GND). There is no neutral conductor in this network.
■ Rated operating voltage in customers network	460 V
■ Rated frequency in the network	60 Hz
■ Voltage fluctuations in customers network	+/-10%
■ Rated operating voltage for line components of KRONES scope of supply.	460 V
■ Full-load current Ib max.	23 A
■ Short-circuit strength	10 kA
■ Back-up fuse	30 A
■ Rated connected active power	12,45 kW
■ Rated connected apparent power	14,9 kVA
■ Power factor cosinus phi	0,80
■ Manufacturer main drive	make: Rossi
■ Cooling of the housing at the machines in the wet sector	with cooling unit
■ UPS system	without UPS
■ Housing protection type	IP 54 (By new or additional installation of components in the housing wall, the protection type may be modified.)

Notes

1. Filling technology KOSME BARIFILL HRS FC

- The machine is neither an aseptic nor an ultraclean type. Products will not be aseptic once filled. Kosme does not guarantee for the shelf life of the sensitive products.
Machine cleaning and maintenance are possible within the limits indicated in the operation and maintenance documentation.
More aggressive cleaning may damage the machine components.
- The quoted machine is not prepared for earthquake zones! In case of machine installation in an earthquake zone, the customer is obliged to provide this information. The quotation has to be revised accordingly.
- KOSME points out that the electrical devices used in this machine (e.g. overcurrent protective device) are installed higher than 2.2. meters. These electrical devices are installed inside of housings (e.g. control cabinets). The operation is reserved only for qualified professional for maintenance works. For the access to the devices, the operating company must provide suitable and approved climbing aids.
- For the KOSME standard equipment variant well-proved and high-quality branded products with the necessary approvals and characteristics are applied for the electrical equipment.
The standard equipment variant is shown in the chapter "Technical details" as attachment for electrical components. Deviations are described in detail in the chapter "Customer requests".

* Features which do not affect pricing of this quotation item within KRONES standard

1. Filling technology KOSME BARIFILL HRS FC

Equipment

Handling parts	01.00 0,5l glass bottle	02.00 1l glass bottle
Bottle stop starwheel	1	1
Infeed worm filler	1	1
Infeed starwheel base handling filler	1	1
Transfer starwheel base handling filler	1	1
Curved infeed and discharge guide base handling filler	1	1
Set of centring bells filler	32	(01.00)
Set of vent tubes filler	32	32
Cap chute for aluminium caps, capper 1	1	(01.00)
Discharge starwheel base handling, capper 1	1	1
Curved infeed and discharge guide base handling, capper 1	1	1
Guide starwheel body and neck, capper 1	1	1
Guide base handling, capper 1	1	1

2. Empty bottle inspector LINATRONIC M

Model description

The empty bottle inspector is a linear machine with own drive, which meets the highest requirements and offers a very good accessibility. The inspection units work with the well-proved DART technology (Distributed Architecture for Real Time). Faulty containers are rejected by systems optimised for the respective container type. The operation and visualisation is performed by a pivotable control panel with touch-screen. For the fully-automatic type change-over no handling parts are necessary. Thanks to the modular machine concept a simple retrofitting with further inspection units is possible - this contributes to the maintaining of the machine value.



System advantages

- Integrated lift guard for easier access
- Task-oriented and user-oriented visualisation with possibility of networked visualisation to KRONES machines
- Fully-automatic, type-dependent adjustment of through passage station and camera systems
- Type-dependent activation of installed P.E. sensor assemblies
- User administration via integrated transponder log-in
- Continuous LED illumination

Illustrations are only for non-binding information, the text description has precedence.

2. Empty bottle inspector LINATRONIC M

Prices

Basic machine

- Basic machine 735
- Through passage station with 2 pairs of belt, electrically adjustable in height to each other
- Control cabinet assembly according to UL508a/CSA
- Electrical documentation in DXF format

Further system components

Inspection system

- Base inspection in transmitted light method with camera in the modular housing and passive-cooled LED base lighting
- Film detection at the container base
- Glass fragment inspection at container base for clear glass
- Neck finish inspection with double imaging in the modular housing
- Side-wall inspection module in the infeed and discharge with LED lighting
- Film detection side-wall
- High-frequency caustic and residual liquid detection
- Infrared residual liquid detection in modular housing

Monitoring system

- Container height inspection by P.E. sensor assemblies (too high / too low) at the machine infeed

Rejection Systems

- Ecopush for foreign containers rejection at the machine infeed
- Ecopush for dirty container rejection at the machine discharge

Customer-related expansions

System expansion

- Blowing with compressed air at the conveyor

Additional electrical equipment

- Cable design according to UL/CSA standards.
- Main and auxiliary contactors, make: Allen Bradley
- Motor protector, make: Allen Bradley
- Control and indicating devices, make: Allen Bradley 800E
- Manufacturer signal beam, Allen Bradley
- Conductor cross-section of control voltage inside of housings minimum 18 ampere-turns
- Conductor cross-section 2-wire min. 14 ampere-turns inside and

2. Empty bottle inspector LINATRONIC M

outside of housings

- Conductor cross-section 3-wire min. 14 ampere-turns inside and outside of housings
- Core marking according to contact/terminal numbers with BRADY marker
- Wire colours, special design
- Controller(s) for frequency converter motor for conveyor drive
- Control cabinet with electrical door lock
- Voltage-free contacts

Customer requirement

- VPN-Router integrated in the control cabinet of the Linatronic.

Internet connection to the machine has to be supported by the customer.

Notes

Inspection of bottom, neck finish, sidewall, rest liquid.

Be aware: In the Linatronic non-resuable PET container could not be inspected / worked with. In this case a bypass at the Linatronic is necessary.

2. Empty bottle inspector LINATRONIC M

Machine data

Set-up

- Inspection modules
 - Base inspection camera
 - Sealing surface inspection camera (including neck ring detection for returnable PET bottles)
 - Sidewall inspection camera
 - with high-frequency
 - with infrared
- Residual liquid and caustic detection
- Design of neck finish lighting
 - DualFlash for exact sealing surface inspection by two different, minimally offset lighting angles inspecting the outer and inner sealing surface separately. Small chip-pings on the sealing surface as well as lateral chippings are detected thus even more reliable.
 - 2 inspection modules, 2 x 3 views, 30° mirror assembly
 - Detection of transparent films at the container base
- Sidewall inspection module design
- Additional equipment for expanding the inspection systems
 - Optimised detection of glass fragments at the container base via special filter. The result highly depends on the quality of the waste edge.
 - Detection of transparent film at the container sidewall by light sensor
- Overheight/underheight detection
- Installation of foreign bottle detection
- Safety devices in front of the machine
- Emergency mode
 - integrated at machine infeed
 - Detection of containers which have fallen over using P.E. sensors - if a fallen container is detected, it is rejected by an infeed pusher into a collecting bin.
 - With network fluctuations it is possible that the machine computer crashes or does not boot. The machine may be operated by passage (without inspections).

Machine infeed

- Container infeed design
- Container blower
- Design of blower
 - conveyor dead plate (2-fold)
 - selected in infeed
 - Compressed air blowing at the conveyor

Rejection

- Foreign container rejection at machine infeed
- Dirty container rejection at machine discharge
 - Ecopush into collecting bin (collecting bin not included)
 - Ecopush onto a rejection conveyor segment (rejection conveyor segment not included)

Finish - pneumatic components - lubrication system

- Pneumatic system *
- Pneumatic system maintenance unit *
- Lubricant design *
- Finish colour for visible three-phase motors and their mounted gears or pumps in the wet line section
 - Make: Festo
 - Make: Festo
 - application of food-grade lubricants
 - RAL 9018 (papyrus white)

Machine design

- Additional technical information *
 - All support feet belonging to the machine's scope of supply, must be screwed to the floor (exception: basic machine).
 - lined up pressureless at the machine infeed
- Container pitch *
- Base frame design
 - machine base and housing of rust-proof stainless steel/chromium nickel steel (similar to AISI 304), in Clean design

2. Empty bottle inspector LINATRONIC M

<ul style="list-style-type: none">■ Base blow-off unit (removal of foam and lubricant residues from the container base)■ Protective material *■ Min. required room height *■ Design of explosion protection	with clocked air nozzle material: (PMMA) plexiglass 108,66 inch (2.760 mm) is not included in KRONES scope of supply. Machine operation in potentially explosive areas or with potentially explosive material only allowed after KRONES approval
<p>Conveyors</p> <ul style="list-style-type: none">■ Conveyor height *■ Adjustment range of the container conveyors *	45,28 inch (1.150 mm) 1055 - 1215 mm
<p>Drive technology in general</p> <ul style="list-style-type: none">■ Additional drive	<ul style="list-style-type: none">- Drive for collection module for rejected containers at the discharge (The motor of the collection module is controlled by separate servo controller. The servo controller is integrated into the control cabinet of the inspector. Motor and servo controller are included in KRONES scope of supply.)- Drive for intermediate conveyor at the infeed (The motor is controlled by separate servo controller. The servo controller is integrated into the control cabinet of the inspector. Motor and servo controller are included in KRONES scope of supply.)
<ul style="list-style-type: none">■ Speed control■ Back-up detection at infeed *■ Back-up detection at discharge *■ Voltage-free contacts from customer to KRONES (conveyors)■ Voltage-free contacts from KRONES to customer (conveyors)	yes 2 proximity switches 3 proximity switches - group discharge is on - Emergency stop - Rejection control - Machine is rotating - Emergency stop - Set-point value infeed

* Features which do not affect pricing of this quotation item within KRONES standard

3. Network / hardware technology

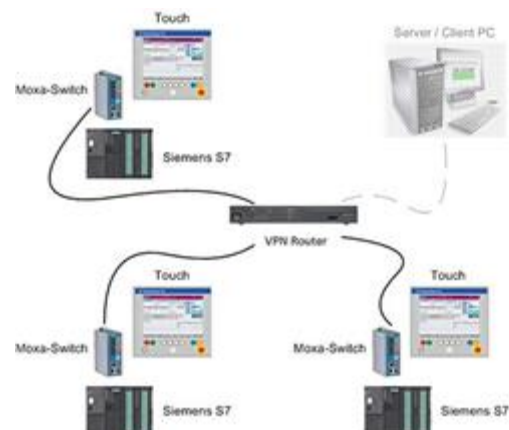
Model description

A central component for the Remote Service is the VPN connection between KRONES and the customer. Based on a site-to-site tunnel which is based on the internationally recognised IPsec standard, the customer can have safe access on the KRONES machines. Due to this, if necessary, not only a troubleshooting can be made quickly but one can also work directly on a solution or trouble shooting. Of course, the KRONES employees are trained intensively for the remote service and adhere strictly to the Remote Service Guidelines.

At a site-to-site connection the VPN tunnel is established between the customer router at the line site and the KRONES router.



System advantages



Illustrations are only for non-binding information, the text description has precedence.

3. Network / hardware technology

Prices

- Engineering

Notes

Krones assumes that the complete Ethernet network is in customer scope of supply.

Krones quotes:

- VPN connection via KRONES Standard (EzVPN Router)
- the effort for IP address clarification and documentation

Please note for VPN connection via EzVPN:

- The VPN router will be mounted into the cabinet of the Linatronic.
- Maximum 3 primary machines can be connected. If more than 3 machines have to be connected, an additional network cabinet and switch are required.
- Internet connection to the endpoint of the VPN router needs to be provided by the customer.
- Cable material and cabling are not contained in the scope of supply of Krones IT-S.
- LCS support contract is not contained in the scope of supply of Krones IT-S. This has to be inquired separately by LCS.

Please note for the Signal exchange via Ethernet:

- The OEM machine suppliers have to supply an Ethernet Communication Processor. The preparation of the OEM machines are not scope of supply of KRONES.

Machine data

Connected machines network technology

- 1. Filling technology KOSME BARIFILL HRS FC
- 2. Empty bottle inspector LINATRONIC M
- 9. Beverage treatment technology CARBOFLOW 15/1

Machine design

- Scope of supply network package:

Establishment of a VPN connection for the teleservice between KRONES and the customer. For the VPN connection a site-to-site IPsec VPN tunnel is installed.

Exclusions:

Following requirements to remote maintenance connections cannot be supported according to the Security Policies of KRONES:

- intermediate Login Web pages to enable the VPN tunnel or to connect to KRONES machines
- a VPN connection via VPN client software or plug-in
- use of remote maintenance tools such as the teamviewer
- further intermediate customer systems which do not allow direct access on KRONES machines

Each traffic during access or access attempt on KRONES machines must be made via an encrypted IPsec VPN tunnel.

3. Network / hardware technology

Hardware

- Signal exchange via Ethernet included
- For following networks IP addresses are assigned Dataline network
- Dataline network includes the components of the the customer
machine level, e.g. HMI, PLC, subsystems as well as an
interface to the connection of line networks. The IP
address for this area is assigned by
- Connection of original equipment manufacturer ma- not included
chinery

4. CARBONATOR KARBONISIERER

Prices

Basic machine

Deaerating and Carbonating unit for water mod. Carbosmart 6

Description:

The new series of carbonators Carbosmart has been studied and built by SAP Italia for optimizing the production process of carbonated and still water.

Carbosmart uses of a reliable technology that added to some technical innovations get it flexible, efficient and easy to use.

The water is deaerated by injection trough special nozzles into an under vacuum tank.
The shape of the tank and the high vacuum level grant an ongoing deaeration during the whole production.

The product opportunely deaerated, is taken from the tank and pumped into a CO₂ injection system by means of an high prevalence centrifugal pump ; the water flow is controlled by a magnetic flow meter, while, the quantity of CO₂, is automatically dosed following the recipe chosen by the operator.

The control of the CO₂ quantity dosed into the water is checked by a pressure transmitter or alternatively by a flow meter fitted for this application.

The water, after going through an holding pipe, for optimizing the gas absorption inside itself, is sored in a tank and then sent to the bottling machine.

The Carbosmart software developed by SAP Italia grants to the operator a easy-to-use and flexible usage of the plant

Technical data:

- Ø Capacity : From 3.000 to 6.000 l/h
- Ø Water inlet temperature: + 18°C
- Ø CO₂ max quantity: 10 g/l
- Ø Water in let capacity: 7.000 l/h at 3 Bar
- Ø CO₂ in let capacity: 60 Kg/h a 10 Bar
- Ø Compressed air: 0,7 NI/h a 6 Bar
- Ø Power: 13 Kw 400 V-3-50Hz

Supply description:

- Ø Stainless steel AISI 304 divert panel for CIP/production management complete of:
 - N.6 Manual butterfly valves
 - N.5 Proximity switches for bends position

- Ø N. 1 Stainless steel AISI 304 horizontal deaeration tank
 - Mirror finishing inside
 - Min and max level probes
 - No 1 Water inlet valve
 - Vacuum pump complete with vacuum regulation accessories.
 - Safety valve and instruments

- Ø N. 1 Sanitary pump for water
- Ø N. 1 Sanitary flow meter for water

4. CARBONATOR KARBONISIERER

Ø N. 1 CO2 in line injection system, complete of:

- Sanitary modulating valve
- N°1 Mass flow meter for accurate dosage of CO2
- CO2 injector
- Static mixer
- Holding pipe

Ø N. 1 Stainless steel AISI304 vertical tank for finished product

- Mirror finishing inside
- Min and max level probes
- Valve for CO2 pressure regulation
- Safety valve and instruments
- N. 1 continuous level
- ASME certificate for pressure vessels

Ø N. 1 Sanitary pneumatic valves set, complete of proximity switch

Ø N. 1 Stainless steel piping and fittings set

Ø N. 1 Sanitary pump for filler feeding

Ø N.1 Stainless steel AISI 304 electrical panel , protection IP54, including:

- Frequency converter for water pump
- Command and control for vacuum pump
- PLC Siemens S7-300
- Touch screen panel Siemens TP 900
- N.1 Set of solenoid valves
- N.1 Set of low voltage devices
- Software for control and management of the plant
- N.1 Control panel air conditioner
- Ethernet communication card
- N.1 EWON module for teleservice

Ø N.1 Stainless steel AISI 304 skid, with adjustable feet on which are erected all the devices above mentioned

Ø Tests with water in our workshop.

Ø N.1 CO2 on-line analyzer to be installed on product outlet pipe before filling.

Ø No 1 Water cooling plate heat exchanger with the following characteristics:

- Flow rate: 5.000 l/h
 - 1st section water cooling thermal cycle : + 50°C > +35°C With tower water +29°C
 - 2nd section water cooling thermal cycle: + 35°C > +10°C With chilled water +1°C
 - 1st Cooling section : with tower water +29°C, total consumption :75.000 Kcal/h
 - 2nd Cooling section : with chilled water +1°C, total consumption :125.000 Kcal/h
- (Chiller and tower not included in our scope of supply)

Ø N.2 Automatic temperature control system for single section heat exchanger complete of:

- N. 1 Tower water on/off valve
- N. 1 Chilled water 3-ways modulating valve
- N. 2 Sanitary temperature probe
- Temperature management software

N°1 Automatic flavors dosage system complete of:

Ø N°1 Mass flow meter Endress+Hauser with following characteristics:

4. CARBONATOR KARBONISIERER

- Process connection DN08
- Profibus DP interface
- Display

Ø N°1 Pheristaltc dosage pump with following characteristics:

- Max flow rate 600 ml/min at 291 rpm
- Process connection 3/4" clamp
- Leakage detector

Exclusions :

- Civil works and brik works
- Packaging and transport
- Insurance and fees
- Unloading and positioning
- Erection on Client site
- Commissioning and start up on Client site
- Travel, board and lodging our technicians.
- Stainless steel connections for product and CIP outside the plant.
- Utilities connections (steam, condensate, water, iced water, compressed air etc.) outside the plant.
- Electrical connections outside the plant.
- Raw materials and detergents for tests on Client site
- Anything not specifically mentioned in the offer.

Notes

Stand alone carbonator CARBOSMART 6

flavour dosing unit included.

Max 6.000 lt/hr

Machine data

Machine design

- Design of explosion protection

is not included in KRONES scope of supply. Machine operation in potentially explosive areas or with potentially explosive material only allowed after KRONES approval

Electrical line components

- Electrical design

according to supplier's standard

- The electrical equipment of KRONES machines and line parts is designed, manufactured and finally inspected according to NFPA 79 and UL508A. KRONES has the certification according to UL 508A for the manufacturing of control cabinets and has the UL identification number (file umber) E226540. The inspection results are documented and supplied with the electrical equipment. For all control cabinets manufactured at KRONES for supply to the United States and Canada KRONES confirms by the cULus-LISTED Label (Enclosed Industrial Control Panel) that all relevant requirements of UL508A and NFPA79 are observed.

Operation of the electrical equipment:

KRONES indicates and supposes that the supplied electrical equipment has to be operated within the limits of the maximum allowed net parameters of NFPA79, item 4.3. Additionally the requirements in IEC 61000-2-4 (environment class 2) must be obtained.

Material :

4. CARBONATOR KARBONISIERER

For the KRONES NAD standard equipment variant well-proved and high-quality branded products with the necessary UL approvals and applications (CCN code) are applied for the electrical equipment.

- Rated operating voltage in customers network 460 V
- Rated frequency in the network 60 Hz
- Rated operating voltage for line components of KRO- 460 V
NES scope of supply.

5. Material of electrical supply system

Model description

The used machines require an optimum energy supply in the complex production process of line and process technology. A well planned and performed electrical installation ensures an optimal line operation. It can fulfil the line requirements which are growing and changing continuously and provides safety and efficiency. A well thought-out concept for the electrical installation, especially designed by a specialist to match the respective requirements, is a good condition for a well-working line and process technology.



Illustrations are only for non-binding information, the text description has precedence.

5. Material of electrical supply system

Prices

General

- Planning and project planning

Cable trays

- Cable trays material
- Cable trays fastening - material

Vertical cable trays

- Vertical cable trays material

Connection lines

- Connection lines material

5. Material of electrical supply system

General - Assembly

- The electrical installation material is supplied by KRONES
- Project planning is made by KRONES
- Electrical installation plan included
- The electrical installation plan includes:
 - the way of cable trays
 - the vertical cable trays
 - the cable duct at the conveyor
 - the control cabinets, area planned
 - the power demand data list for electrical installation necessary
- Material allowance, electrical installation necessary
- Installation documents, electrical installation necessary

Main feeder

- The main power lines are supplied by the customer

Design of feed pipes

- Design of electrical feeders Power cables according to UL/CSA and NEC (NFPA 70), conductor material copper

Power lines subdistribution to control cabinet

- The feeders from the energy distributor to the feeding points of the machines are supplied by the customer

Cable trays

- The cable trays are supplied by KRONES
- Cable tray type wide-span cable tray without cover
- The design of the cable trays is performed with partition
- The material of the cable trays is sendzimir galvanised EN 10142
- Cable tray height is 18,04 feet (5,50 m)

Cable tray fastening

- The fastenings for the cable trays are supplied by KRONES
- The fastening type of base supports for cable trays is made of rustproof stainless steel / chrome nickel steel (similar to AISI 304)

Vertical cable trays

- The vertical cable trays are supplied by KRONES
- The type of vertical cable tray is Basket cable tray without cover
- The design of the vertical cable trays is with partition
- The vertical cable tray material is rust-proof stainless steel / chromium nickel steel (similar to AISI 304)

Cable ducts

- The supply of the cable ducts is performed by KRONES
- The cable duct is made of rustproof stainless steel / chrome nickel steel (similar to AISI 304)
- The cable duct at the container conveyor is necessary no
- The cable duct at the pack conveyor is necessary no
- The cable duct at the pallet conveyor is necessary no
- The cable duct at the air conveyor is necessary no

Control cabinets

- The energy distributor is supplied by the customer

5. Material of electrical supply system

Connection lines

- Design of electrical connection lines which are guided outside the machines via cable trays Sheathed cable according to UL / CSA requirements, suitable for laying in cable trays (TC-ER), construction type MTW.
- The connection lines between the separate control cabinets and the electrical equipment of the machines are supplied by KRONES
- The supply of components for identification of conductors is performed by KRONES
- The supply of the network cable between the machines of the KRONES scope of supply is performed by the customer

False floor

- False floor necessary not necessary

Notes

See SAP Attachment for Electrical SOS

6. Technical documentation

User documentation set 1

■ Delivery date:	with machine delivery
■ Output medium:	paper KRONES file
■ Quantity	1
■ Shipment:	to consignee
■ Supply	separately per machine
■ Operation documentation	-----
■ Language	English
■ Edition:	final documentation
■ Format:	A4 KRONES file

User documentation Set 2

■ Delivery date:	for line commissioning
■ Output medium:	CD in eCat format
■ Quantity	1
■ Shipment:	to consignee
■ Supply	per order
■ Operation documentation	-----
■ Language	- German
	- English
■ Edition:	final documentation
■ Format:	KRONES eCat
■ Spare parts documentation	-----
■ Language	English
■ Edition:	as-delivered documentation
■ Format	KRONES eCat

User documentation Set 3

■ Delivery date:	12 weeks after final line acceptance
■ Output medium:	CD in eCat format
■ Quantity	1
■ Shipment:	to consignee
■ Supply	per order
■ Operation documentation	-----
■ Language	- German
	- English
■ Edition:	final documentation
■ Format:	KRONES eCat
■ Spare parts documentation	-----
■ Language	English
■ Edition:	final documentation
■ Format	KRONES eCat
■ Electrical documentation	-----
■ Language	English
■ Edition:	final documentation
■ Format:	KRONES eCat

User documentation Set 4

■ Delivery date:	12 weeks after final line acceptance
■ Output medium:	CD in another format
■ Quantity	1
■ Shipment:	to consignee
■ Supply	per order

6. Technical documentation

- Electrical documentation
- Language
- Edition:
- Format:

English
final documentation
DXF

7. Packing

Prices

- Optional machines

Packaging costs for optional machines are not included in the price.

Packing

- Type of packing
- Packaging class

All machines and/or equipment are packed seaworthy (cases and/or containers).
Sea-worthy packaging with corrosion protection for 6 months; accessories packed in standard boxes for accessories

8. Freight

Prices

- Incoterms Delivered at Place, delivered defined location
- Optional machines Freight costs and costs for transport insurance for optional machines are not included in the price.

8. Freight

Freight and insurance

■ Incoterms	Delivered at Place, delivered defined location
■ Named place	COUNCIL, ID
■ Pre-carriage	by rail
■ Type of main carriage	by sea freight
■ Onward carriage	by truck
■ Transport insurance	The usual transport insurance (according to Incoterm) exists until the place of delivery determined by the orderer.

Basic logistic agreement

■ Delay of shipment: Where shipment is delayed due to reasons beyond KRONES` control, the CUSTOMER shall be liable for any additional costs that arise during transport or storage, including but not limited to the costs of container detention, truck waiting time, demurrage, dead freight and storage charges.	Customer
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Packing and Transport preparation

■ Application for overseas transport: Containers are deemed to be shipping line containers (COC = carriers own container), if not otherwise agreed in writing. Containers shall be returned in empty condition within the agreed maximum time of 7 calendar days after arrival of the ocean vessel in the port of destination. In the event that the agreed maximum time of 7 calendar days is exceeded any additional costs for demurrage (storage) and / or container detention (container overtime) are to be borne and paid by the CUSTOMER.	Customer
■ Applicable for land transport: The agreed maximum free time for truck detention during customs clearance and unloading on CUSTOMER` s site: In the EU: until 3 hours after arrival Outside of the EU: until 12 hours after arrival In the event that the agreed maximum time of 24 hours is exceeded due to reasons beyond KRONES` control, the CUSTOMER shall be liable for any additional costs that arise during transport and/or storage, including but not limited to truck waiting time (detention), and storage charges.	Customer
■ Special requirements with regard to export marking of packages and transport packages: These need to be advised 8 weeks prior to EXW (ex works) date of the first delivery at the latest.	Customer
■ Export formalities: Special requirements such as pre-inspection need to be named. The corresponding date has to be 8 weeks prior to EXW (ex works) date of the first delivery at the latest.	Customer
■ Shipping instructions: Shipping instructions, such as but not limited to: supplementary instructions with regard to Incoterm, CMR / Bill of Lading / AWB instructions, jobsite access, safety and delivery regulations, shall be notified to KRONES 6 weeks prior to EXW	Customer

8. Freight

(ex works) date of the first delivery at the latest.

- Definition of laydown area and storage place at the final place of delivery - storage place for containers and break bulk in flood protected and secure area at site on solid ground, easy accessible during installation.: The definition need to be defined and communicated 4 weeks before EXW (ex works) date. KRONES

Transport

- Applicable for land transport: Deviations to the agreed Incoterm have to be named and the additional costs shall be deemed by customer, such as, but not limited to: convoy routing, importation requirements, multistopp delivery. KRONES
- Applicable for airfreight transport: Deviations to the agreed Incoterm to be named KRONES
- Applicable for overseas transport: Krones shall be authorized to designate the port of departure and port of destination. KRONES
- Import customs clearance, including import licenses: Special requirements which are important for the CUSTOMER for importation, shall be notified to Krones 6 weeks prior to EXW (ex works) date of the first delivery at the latest. Customer
- Import execution according to Incoterm: CUSTOMER has to do the customs clearance according to the incoterms. In the event that the specified time of customs clearance is exceeded (as agreed with project schedule), the CUSTOMER shall be liable for any additional demurrage costs. Customer
- Execution of the temporary import of equipment, tools and other items required on site: CUSTOMER has to do the customs clearance for temporary import. After close-up at jobsite, CUSTOMER has to reexport the equipment to KRONES Germany according to the "Guidelines for creating pro forma invoices". The originally delivery no. by KRONES has to be mentioned as reference number on the proforma invoice. Customer
- Import customs clearance of the material shipped to Customer's site in fulfillment of KRONES obligations within the Defects Liability Period: In cases, the CUSTOMER cannot do the Customs clearance, the obligation to issue a power of attorney has to be given from the CUSTOMER to the forwarding company or the customs broker - in order to authorize them to execute the customs clearance on behalf of the CUSTOMER. If the CUSTOMER is entitled for pre-tax-deduction, the VAT has to be billed to the customer. Fees and duties can be covered by KRONES Germany. This will only be happen in exceptional cases which has to be discussed with KRONES AG before delivery. In the event that the power of attorney authorizing to execute the customs clearance on behalf of the CUSTOMER is not issued by the CUSTOMER, it is the responsibility of the CUSTOMER to execute the

8. Freight

customs clearance. KRONES Germany is not available to do the customs clearance in the country of destination!

On-site activities

- Access to the final installation position and/or unloading/storage area on site: Obligation to grant free and unrestricted access to the final installation position and/or laydown area on site in accordance with the valid shipping schedule and from the first delivery for all applied means of transportation (including but not limited to low-bed-truck, truck, container) and logistics personnel. Gates wide enough to pass with delivered goods, prepared surface of the jobsite roads, prepared and accessible roads from the laydown areas to the final installation position. Customer
- As required, access to the laydown area off-site including but not limited to defined temporary buffer areas or warehouses: Obligation to grant free and unrestricted access to the laydown area off-site in accordance with the valid shipping schedule and from the first delivery for all applied means of transportation (including but not limited to low-bed-truck, truck, container) and logistics personnel. Free and unrestricted access and fully prepared roads to the laydown / off-loading areas off-site for all applied means of transportation (including but not limited to low-bed-truck, truck, container). Gates wide enough to pass with delivered goods, prepared surface of the roads at the laydown area. Customer
- Provision of laydown area at the final place of destination in accordance with Krones requirements: Sufficient equipped as per KRONES request, as per item 2.7. (in square meters as per request, laydown area at the final place of destination on site suitable for low-bed-truck, truck, crane and forklift traffic). In particular: storage place for containers, break bulk or any packages in flood protected and secure area at site on solid ground, easy accessible during installation, incl. insurance, securing and guarding of the goods after arrival. Customer
- As required, provision of laydown area off-site including but not limited to defined temporary buffer areas or warehouses in accordance with Krones requirements. Sufficient equipped as per KRONES request, as per item 2.7. (in square meters as per request, laydown area off-site suitable for low-bed-truck, truck, crane and forklift traffic). In particular: storage place for containers, break bulk or any packages in flood protected and secure area off-site on solid ground, easy accessible during installation, incl. insurance, securing and guarding of the goods after arrival. Customer
- Applicable for break bulk and truck cargo and / or shippers owned containers (SOC): Off-loading of arriving goods from means of transportation (e.g. truck) Customer

8. Freight

- at the laydown area and as required off-site of the jobsite. Provision of crane equipment, fork lift trucks, labor force for unloading, safety process
- Applicable for shipping line containers (COC): Unstuffing and handling of containers: Provision of crane equipment, fork lift trucks, labor force for unloading, safety process Customer
 - Examination of the delivered goods upon its arrival for visible faults and deviations: Visible damage of the delivered goods shall be notified to KRONES immediately upon delivery. Hidden damage of the delivered goods shall be notified to KRONES upon their discovery, however not later than within 7 calendar days after delivery. Customer
 - Return of recyclable packaging, according to packaging category KRONES
 - Return (re-transport) of temporarily imported equipment, tools and other items required on site. KRONES
 - Re-exportation of temporarily imported equipment, tools and other items required on site Customer
 - Return (re-transport) of surplus material after installation. KRONES
 - Re-exportation of surplus material after installation Customer

9. OPTIONAL: Beverage treatment technology CARBOFLOW 15/1

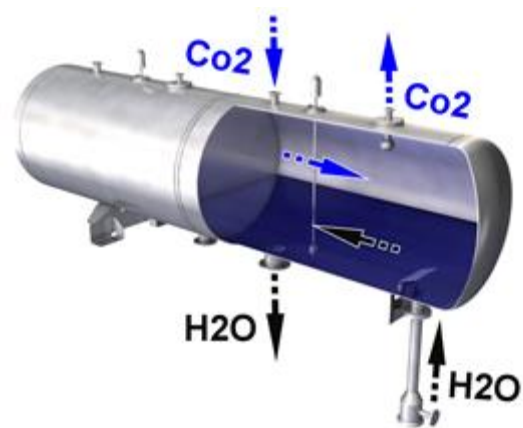
Model description

The carbonator CARBOFLOW is designed for deaeration and carbonation of water. The machine is available in sizes with outputs of 15, 30, 45, and 60 m³/h. The CARBOFLOW works continuously in the range of 80 to 110 % of the nominal output. The flavour is added according to the principle of register control for highest dosing accuracy. CO₂ is added according to the principle of saturation carbonation. The integrated control calculates the required pressure independently and adjusts it continuously to the current beverage temperature. Due to two similar reaction vessels the deaeration as well as the CO₂ bonding is performed in two steps. The machine covers a range of 3 to 10 g/l CO₂ (up to 20°) and works with minimised gas loss. The carbonator CARBOFLOW is a low-cost and convenient solution for the production of carbonated and non-carbonated water products.



System advantages

- Minimum media and product loss by programme-supported start and stop routines, determined guaranteed values
- Intensive product homogenisation by dynamic axial mixing sections
- Recipe memory for perfectly reproducible product quality
- Machine control programmed for many different existing automation standards
- Line design optimised in operation and maintenance
- Also suitable for carbonation with nitrogen (for PET stabilisation)
- With Krones EvoGuard a high performance valve series of our own production is available. This offers evident advantages in the daily operation and during maintenance processes



Illustrations are only for non-binding information, the text description has precedence.

9. OPTIONAL: Beverage treatment technology CARBOFLOW 15/1

Prices

Basic machine

- Control cabinet assembly according to UL508a/CSA
- Beverage mixing system, Carboflow
- Electrical documentation in DXF format

Customer-related expansions

Detailed

- Controlled flavour dosing
- Sampling valves
- Pressure tank acceptance ASME
- Safety valve CO2 gas connection
- Signal transmission for water supply
- Signal transmission for coolant supply

- Pressure reducer CO2
- Plate heat exchanger, base frame, sheet steel KRONES design
- Coolant monitoring

Additional electrical equipment

- Cable design according to UL/CSA standards.
- Main and auxiliary contactors, make: Allen Bradley
- Motor protector, make: Allen Bradley
- Control and indicating devices, make: Allen Bradley 800E
- Manufacturer signal beam, Allen Bradley
- Conductor cross-section of control voltage inside of housings minimum 18 ampere-turns
- Conductor cross-section 2-wire min. 14 ampere-turns inside and outside of housings
- Conductor cross-section 3-wire min. 14 ampere-turns inside and outside of housings
- Core marking according to contact/terminal numbers with BRADY marker
- Wire colours, special design

Customer requirement

- Different pressure tank norm

Options (not included in total value of item)

- | | | |
|--|-----|---------|
| ■ Automatic valve control of CIP unit via bus system | USD | 8.860,- |
| ■ Production logging, data recording by separate writer..... | USD | 8.030,- |

9. OPTIONAL: Beverage treatment technology CARBOFLOW 15/1

■ CO2 measurement Anton Paar: Carbo IT compact sensor	USD	27.520,-
■ Conductimetry water connection	USD	2.000,-
■ Conductimetry product discharge	USD	3.440,-
■ Base frame, stainless steel design KRONES, rust-proof/chrome nickel steel (similar to AISI 304).....	USD	6.640,-
■ Gas filter without steam connection	USD	1.770,-
■ Product-contacting parts in stainless steel rust-proof and acid-proof/ chromium molybdenum steel (similar to AISI 316).....	USD	11.470,-
■ Stationary disinfection and brim-full.....	USD	2.050,-

Optional customer request (not included in total value of item)

- Option for additional plate heat exchanger for incoming product water (thermal well water, >50 °C).
Opportunity to cool down by use of cooling tower water instead of glycol/chilled water.

Notes

KRONES points out that the electrical devices used in this machine (e.g. overcurrent protective device) are installed higher than 2.2. meters. These electrical devices are installed inside of housings (e.g. control cabinets). The operation is reserved only for qualified professional for maintenance works. For the access to the devices, the operating company must provide suitable and approved climbing aids.

Cooling of the thermal water to 24 °C by customer.
Machine with performance adjustment to 5 cbm/h by modified injectors.

9. OPTIONAL: Beverage treatment technology CARBOFLOW 15/1

Machine data

Machine design

<ul style="list-style-type: none"> ■ Beverage mixing unit, type ■ Surge speed 	<p>Carboflow 15/1 This equipment is described in detail in the chapter "special customer requirements" and is subject to an additional charge.</p>
<ul style="list-style-type: none"> ■ Products with and without CO2 ■ Product-contacting parts 	<p>3 - 10 g/l rust-proof stainless steel/chromium nickel steel (similar to AISI 304)</p>
<ul style="list-style-type: none"> ■ CO2 display in touch-screen * ■ Valve manufacturer ■ CIP valve control 	<p>g/l KRONES Basic programme step control: manual selection of the individual programme steps Details: For cleaning, the machine is equipped with automatic shut-off valves. Supply channels are switched automatically. The individual programme steps are selected at the control panel of the machine. The valve positions as well as the selected programme are monitored via visual display.</p>
<ul style="list-style-type: none"> ■ Sealing material ■ Design of explosion protection 	<p>material: EPDM is not included in KRONES scope of supply. Machine operation in potentially explosive areas or with potentially explosive material only allowed after KRONES approval not included in the scope of supply of the process unit. The partner ordered for the pipe system by the customer is responsible for the provision and proper installation of the disconnecting devices.</p>
<ul style="list-style-type: none"> ■ LOTO (Lockout/Tagout)locking devices 	<p>Lockout/Tagout is a system which ensures that a machine can be disconnected and prevented from any hazardous energy source before any work is done. This system is used to ensure the safety and occupational health of employees when intervening in the danger zone. For that, disconnecting devices must be installed ahead of the machine to be able to isolate the machine from hazardous energy sources.</p>
<h4>Set-up</h4>	
<ul style="list-style-type: none"> ■ Stationary disinfection and brimful ■ Signal exchange for water supply ■ Signal exchange for coolant supply ■ Signal exchange to ozone system ■ Production data recording and monitoring system ■ Centrifugal pump ■ Quick product change-over ■ Sampling valves ■ Deaeration type * 	<p>not included included included not included none KRONES standard not included included</p>
<ul style="list-style-type: none"> ■ CIP media infeed ■ Flavouring dosing 	<p>The product water is deaerated by pressure before the mixing with components. This reduces the residual oxygen content in the product water to 1.0 mg/l (based on max. 10 mg/l initial content at 15°C).</p>
<ul style="list-style-type: none"> ■ Safety valve for CO2 feed line (for pressure level up to maximum PN25) 	<p>product water included in the scope of supply The medium conductivity must be higher than 20 µS/cm. included</p>

9. OPTIONAL: Beverage treatment technology CARBOFLOW 15/1

Finish - pneumatic components - lubrication system

■ Design Style Guide	yes
■ Finish colour for machine column	RAL 5013 (Cobalt blue)
■ Machine finish colour in wet line section	RAL 9018 (papyrus white)
■ Finish colour for visible three-phase motors and their mounted gears or pumps in the wet line section	RAL 9018 (papyrus white)
■ Finish colour of machine housings in wet line section	RAL 9018 (papyrus white)
■ Manufacturer pneumatic system components	make: Festo
■ Manufacturer pneumatic maintenance unit	Make: Festo

Customer compressed air quality according to ISO 8573-1 class 6.3.1.
Oil-free compressed air supply with a particle size of max. 40µm

Accessories

■ Product water supply pressure (bar)	3.0 - 7.0 with pressure deaeration
■ Water feed pump	request signal KRONES
■ Product cooling	KRONES scope of supply
■ Design of product cooling	plate heat exchanger
■ Frame plate heat exchanger	painted steel
■ Coolant	glycol solution
■ Coolant control	yes
■ Coolant monitoring	included

Notes

- During operation of the machine/system, operating materials, additives and cleaning agents can escape, which are drained off via the floor.

* Features which do not affect pricing of this quotation item within KRONES standard

Performance data

Machine	Equipment	R/O	Line output	Factor	Machine output	Unit	Customer objects
1. Filling technology KOSME BARIFILL HRS FC	01.01	R	8.000	1,00	8.000	cont/h	1) 0,5l glass bottle 1) Water 15 °C 8,0 g/l 1) screw cap, aluminium (roll-on) 1) Glass bottles
	01.02		8.000	1,00	8.000	cont/h	1) screw cap, aluminium (roll-on) 1) 0,5l glass bottle 2) Water 15 °C 5,5 g/l 1) Glass bottles
	02.01		5.500	1,00	5.500	cont/h	1) Water 15 °C 8,0 g/l 1) screw cap, aluminium (roll-on) 2) 1l glass bottle 1) Glass bottles
	02.02		5.500	1,00	5.500	cont/h	1) screw cap, aluminium (roll-on) 2) Water 15 °C 5,5 g/l 2) 1l glass bottle 1) Glass bottles
	03.01	O	8.000	1,00	8.000	cont/h	3) 0,5 PET bottle 1) Water 15 °C 8,0 g/l 2) 0,5l PET bottle 3) 0,5l PET bottle
	03.02	O	8.000	1,00	8.000	cont/h	3) 0,5 PET bottle 2) Water 15 °C 5,5 g/l 2) 0,5l PET bottle 3) 0,5l PET bottle
	04.01	O	8.000	1,00	8.000	cont/h	1) Water 15 °C 8,0 g/l 2) screw cap, plastic (flat cap) 4) 0,74l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
	04.02	O	8.000	1,00	8.000	cont/h	2) screw cap, plastic (flat cap) 2) Water 15 °C 5,5 g/l 4) 0,74l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
	05.01	O	6.600	1,00	6.600	cont/h	1) Water 15 °C 8,0 g/l 2) screw cap, plastic (flat cap) 5) 0,7l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
	05.02	O	6.600	1,00	6.600	cont/h	2) screw cap, plastic (flat cap) 2) Water 15 °C 5,5 g/l 5) 0,7l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
	06.01	O	8.000	1,00	8.000	cont/h	1) Water 15 °C 8,0 g/l 2) screw cap, plastic (flat cap) 6) 1l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
	06.02	O	8.000	1,00	8.000	cont/h	2) screw cap, plastic (flat cap) 2) Water 15 °C 5,5 g/l 6) 1l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
	07.01	O	2.800	1,00	2.800	cont/h	1) Water 15 °C 8,0 g/l 2) screw cap, plastic (flat cap) 7) 1,5l PET bottle

Performance data

Machine	Equipment	R/O	Line output	Factor	Machine output	Unit	Customer objects
							3) 0,74l+0,7l+1l +1,5l PET bottle
	07.02	O	2.800	1,00	2.800	cont/h	2) screw cap, plastic (flat cap) 2) Water 15 °C 5,5 g/l 7) 1,5l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
2. Empty bottle inspector LINATRONIC M	01.01	R	8.000	1,10	8.800	cont/h	1) 0,5l glass bottle 1) Glass bottles
	02.02		5.500	1,10	6.050	cont/h	2) 1l glass bottle 1) Glass bottles
	03.01	O	8.000	1,10	8.800	cont/h	3) 0,5 PET bottle 2) 0,5l PET bottle
	04.01	O	8.000	1,10	8.800	cont/h	4) 0,74l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
	05.01	O	6.600	1,10	7.260	cont/h	5) 0,7l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
	06.01	O	8.000	1,10	8.800	cont/h	6) 1l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
	07.02	O	2.800	1,10	3.080	cont/h	7) 1,5l PET bottle 3) 0,74l+0,7l+1l +1,5l PET bottle
9. Beverage treatment technology CARBOFLOW 15/1	03.01		8.000	1,00	8.000	liter/h	3) Water 15 °C

R/O = Reference and/or optional equipment, A/M = Line output and/or required output

Customer object list

Container	1 reference	2	3 option	4 option
Container type	Bottle	Bottle	Bottle	Bottle
Container description	0,5l glass bottle	1l glass bottle	0,5 PET bottle	0,74l PET bottle
Material number	0905120102	0905120101	0904125462	0904125463
Material	Glass	Glass	Plastic PET	Plastic PET
Use	Non-returnable	Non-returnable	Non-returnable	Non-returnable
Nominal volume	0,500 l	1,000 l	0,500 l	0,740 l
Outer diameter	2,70 inch (68,60 mm)	3,36 inch (85,40 mm)	2,48 inch (62,90 mm)	2,82 inch (71,70 mm)
Total container height (mm)	9,48 inch (240,70 mm)	11,89 inch (302,00 mm)	8,06 inch (204,70 mm)	9,44 inch (239,70 mm)
Colour/finish	colourless	colourless	colourless	colourless
Type of colour	clear / transparent	clear / transparent	clear / transparent	clear / transparent
Body shape	parallel	parallel	parallel	parallel
Body cross section	circular	circular	circular	circular
Base shape	Normal shape	Normal shape		
Container orientation	none	none		
Applied ceramic label	yes	yes	no	no
Volume/weight unit	Liter (l)	Liter (l)	Liter (l)	Liter (l)

Container	5 option	6 option	7 option
Container type	Bottle	Bottle	Bottle
Container description	0,7l PET bottle	1l PET bottle	1,5l PET bottle
Material number	0904125464	0904125465	0904125466
Material	Plastic PET	Plastic PET	Plastic PET
Use	Non-returnable	Non-returnable	Non-returnable
Nominal volume	0,700 l	1,000 l	1,500 l
Outer diameter	2,82 inch (71,70 mm)	3,26 inch (82,70 mm)	3,58 inch (91,00 mm)
Total container height (mm)	9,06 inch (230,00 mm)	9,98 inch (253,40 mm)	11,94 inch (303,40 mm)
Colour/finish	colourless	colourless	colourless
Type of colour	clear / transparent	clear / transparent	clear / transparent
Body shape	parallel	parallel	parallel
Body cross section	circular	circular	circular
Applied ceramic label	no	no	no
Volume/weight unit	Liter (l)	Liter (l)	Liter (l)

The information with a frame are supposed data.

Customer object list

Product	1 reference	2	3
Product group	Water	Water	Water
Filling technology	standard	standard	standard
Filling temperature (°C)	59,00 deg F (15 °C)	59,00 deg F (15 °C)	59,00 deg F (15 °C)
CO2 (g/l)	8,0 g/l	5,5 g/l	0,0 g/l
Conductivity [$\mu\text{S}/\text{cm}$]	$40 < s < 20.000 \mu\text{S}/\text{cm}$	$40 < s < 20.000 \mu\text{S}/\text{cm}$	$40 < s < 20.000 \mu\text{S}/\text{cm}$
Viscosity with filling temperature	$0 < s < 1; [\text{mPas}]$	$0 < s < 1; [\text{mPas}]$	$0 < s < 1; [\text{mPas}]$

Cap	1 reference	2 option	3 option
Closure type	screw cap, aluminium (roll-on)	screw cap, plastic (flat cap)	screw cap, plastic (flat cap)
Cap designation	28 X 15	Euro Lok	0,5l PET bottle
Material number	0905114104	0904125461	0904125470

The information with a frame are supposed data.

Container/Decoration overview

Product decoration	01.01 reference	01.02	02.01	02.02
Container	1	1	2	2
Container description	0,5l glass bottle	0,5l glass bottle	1l glass bottle	1l glass bottle
Material	Glass	Glass	Glass	Glass
Nominal volume	0,500 l	0,500 l	1,000 l	1,000 l
Outer diameter	2,70 inch (68,60 mm)	2,70 inch (68,60 mm)	3,36 inch (85,40 mm)	3,36 inch (85,40 mm)
Total container height (mm)	9,48 inch (240,70 mm)	9,48 inch (240,70 mm)	11,89 inch (302,00 mm)	11,89 inch (302,00 mm)
Product	1	2	1	2
Product group	Water	Water	Water	Water
Cap	1	1	1	1
Closure type	screw cap, aluminium (roll-on)	screw cap, aluminium (roll-on)	screw cap, aluminium (roll-on)	screw cap, aluminium (roll-on)
Cap designation	28 X 15	28 X 15	28 X 15	28 X 15

Product decoration	03.01 option	03.02 option	04.01 option	04.02 option
Container	3	3	4	4
Container description	0,5 PET bottle	0,5 PET bottle	0,74l PET bottle	0,74l PET bottle
Material	Plastic PET	Plastic PET	Plastic PET	Plastic PET
Nominal volume	0,500 l	0,500 l	0,740 l	0,740 l
Outer diameter	2,48 inch (62,90 mm)	2,48 inch (62,90 mm)	2,82 inch (71,70 mm)	2,82 inch (71,70 mm)
Total container height (mm)	8,06 inch (204,70 mm)	8,06 inch (204,70 mm)	9,44 inch (239,70 mm)	9,44 inch (239,70 mm)
Product	1	2	1	2
Product group	Water	Water	Water	Water
Cap	3	3	2	2
Closure type	screw cap, plastic (flat cap)	screw cap, plastic (flat cap)	screw cap, plastic (flat cap)	screw cap, plastic (flat cap)
Cap designation	0,5l PET bottle	0,5l PET bottle	Euro Lok	Euro Lok

Product decoration	05.01 option	05.02 option	06.01 option	06.02 option
Container	5	5	6	6
Container description	0,7l PET bottle	0,7l PET bottle	1l PET bottle	1l PET bottle
Material	Plastic PET	Plastic PET	Plastic PET	Plastic PET
Nominal volume	0,700 l	0,700 l	1,000 l	1,000 l
Outer diameter	2,82 inch (71,70 mm)	2,82 inch (71,70 mm)	3,26 inch (82,70 mm)	3,26 inch (82,70 mm)
Total container height (mm)	9,06 inch (230,00 mm)	9,06 inch (230,00 mm)	9,98 inch (253,40 mm)	9,98 inch (253,40 mm)
Product	1	2	1	2
Product group	Water	Water	Water	Water
Cap	2	2	2	2
Closure type	screw cap, plastic (flat cap)	screw cap, plastic (flat cap)	screw cap, plastic (flat cap)	screw cap, plastic (flat cap)
Cap designation	Euro Lok	Euro Lok	Euro Lok	Euro Lok

Product decoration	07.01 option	07.02 option
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Container/Decoration overview

Container	7	7
Container description	1,5l PET bottle	1,5l PET bottle
Material	Plastic PET	Plastic PET
Nominal volume	1,500 l	1,500 l
Outer diameter	3,58 inch (91,00 mm)	3,58 inch (91,00 mm)
Total container height (mm)	11,94 inch (303,40 mm)	11,94 inch (303,40 mm)
Product	1	2
Product group	Water	Water
Cap	2	2
Closure type	screw cap, plastic (flat cap)	screw cap, plastic (flat cap)
Cap designation	Euro Lok	Euro Lok

Container	01.01 reference	02.02	03.01 option	04.01 option
Container	1	2	3	4
Container description	0,5l glass bottle	1l glass bottle	0,5 PET bottle	0,74l PET bottle
Material	Glass	Glass	Plastic PET	Plastic PET
Nominal volume	0,500 l	1,000 l	0,500 l	0,740 l
Outer diameter	2,70 inch (68,60 mm)	3,36 inch (85,40 mm)	2,48 inch (62,90 mm)	2,82 inch (71,70 mm)
Total container height (mm)	9,48 inch (240,70 mm)	11,89 inch (302,00 mm)	8,06 inch (204,70 mm)	9,44 inch (239,70 mm)

Container	05.01 option	06.01 option	07.02 option
Container	5	6	7
Container description	0,7l PET bottle	1l PET bottle	1,5l PET bottle
Material	Plastic PET	Plastic PET	Plastic PET
Nominal volume	0,700 l	1,000 l	1,500 l
Outer diameter	2,82 inch (71,70 mm)	3,26 inch (82,70 mm)	3,58 inch (91,00 mm)
Total container height (mm)	9,06 inch (230,00 mm)	9,98 inch (253,40 mm)	11,94 inch (303,40 mm)

Product	03.01
Product	3
Product group	Water

Line characteristics

General conditions

- Geographic installation height above M.S.L. 2.952,76 feet (900 m)
- Minimum ambient temperature at machine installation area - wet part 46,40 deg F (8 °C)
- Maximum ambient temperature at machine installation area - wet part 96,80 deg F (36 °C)
- Minimum ambient temperature at machine installation area - dry part 46,40 deg F (8 °C)
- Maximum ambient temperature at machine installation area - dry part 96,80 deg F (36 °C)
- Minimum relative humidity - wet part 40 %
- Maximum relative humidity - wet part 75 %
- Minimum relative humidity - dry part 40 %
- Maximum relative humidity - dry part 75 %
- Air quality operating air Customer compressed-air quality of the operating air for pneumatic control of the machine is required according to ISO 8573-1, class 6.3.1.
Air pressure of 6 - 7 bar (87 - 100 PSI).
Oil-free compressed air supply (max. 0.01 mg/m³)
Particle density of max. 5 mg/m³ (3.12e-007 lbs/ft³)
Dew point temperature - 20°C (- 4°F)
Alternatively, dew point temperature of 3°C (37°F) according to class 6.4.1 ISO 8573-1 if operation of all pressurised components at a min. temperature of 8° C (46° F) is guaranteed.
- Lubricants Food-grade design, as far as technically possible
- Drive selection Standard drives are applied.
- Pressure equipment specification according to ASME code pressure equipment directive
- Noise emission value at workplace according to DIN ISO 11204
- Note concerning the noise emission value warranty:
Noise which is harmful to operators (immission value) is not attributable solely to the noise emitted by individual machines (emission value), but also - and to a significant extent - to the size and nature of the building, the production line layout and peripheral equipment (conveyors). Furthermore, the handling of packaging materials (bottles, cans, crates, etc.) also contributes to the generated noise level. This contribution is taken into account in the quoted machine noise emission value.

If the conditions for noise reduction technology are not sufficiently fulfilled by the customer or plant proprietors, or if third-party sound sources become influential, an increased immission level can result. In such cases, additional secondary noise reduction measures may become necessary - and such measures can be offered by us.

In view of the above, it is clear that the machine manufacturer, KRONES, and the proprietor must work together in order to minimise noise levels generated and address any noise level problems:

- KRONES regarding their technical products, and
- the proprietor with respect to the size and nature of the building
(The suitable machine layout is significantly influenced by the size of the room in which it is positioned)

The sound absorption coefficient, sound propagation per doubled distance and reverberation time are all crucial factors in designing low-noise rooms.

Experience has shown that a minimum sound absorption coefficient must be 0.35. The noise level propagation per doubled distance should be approx. 5 dB (A). Depending on the hall area, the reverberation time should be ideally between 0.6 and 0.8 sec. However, for hall sizes smaller than 300m², reduced reverberation times (less than 0.6 sec.) are necessary. In most cases, this can only be achieved when additional noise abatement measures are introduced.

Line characteristics

These features are also an important prerequisite for the efficiency of the additional noise reducing measures such as screens, noise protection panels, etc.. It should be noted that the acoustic ceiling should be positioned with a headway of 4m and the sound absorption coefficient should amount to a frequency of 500 - 4000 Hz >0.8.

KRONES shall not be held liable for the emission values of third-party machines and third-party auxiliary devices!

Configuration factor

- Planned number of operators
- Line control

see layout

Conventional:

The conveyor speed is set according to the speed of the machines picking up the containers. The machines are controlled via limit switches at infeed and discharge (isolated control).

according to hall layout

XXX

YYY

- Line installation site
- Hall plan number
- Gradient diagram

Marking and dialog displays:

- Language of PLC software
- Language of machine inscription
- Design of machine label
- Language touch-screen / monitor

English

English

with pictograms according to KRONES company standard

English

Additional influencing variables

- Design of explosion protection

is not included in KRONES scope of supply. Machine operation in potentially explosive areas or with potentially explosive material only allowed after KRONES approval

Electrical line components

Electrical line components

- The electrical equipment of KRONES machines and line parts is designed, manufactured and finally inspected according to NFPA 79 and UL508A. KRONES has the certification according to UL 508A for the manufacturing of control cabinets and has the UL identification number (file number) E226540. The inspection results are documented and supplied with the electrical equipment. For all control cabinets manufactured at KRONES for supply to the United States and Canada KRONES confirms by the cULus-LISTED Label (Enclosed Industrial Control Panel) that all relevant requirements of UL508A and NFPA79 are observed.

Operation of the electrical equipment:

KRONES indicates and supposes that the supplied electrical equipment is operated within the limits of the maximum allowed net parameters of NFPA79, item 4.3. Additionally the requirements in IEC 61000-2-4 (environment class 2) must be obtained.

Material :

For the KRONES NAD standard equipment variant well-proved and high-quality branded products with the necessary UL approvals and applications (CCN code) are applied for the electrical equipment.

- Note on safety technology:

Safety parts of controls are designed especially according to the standard specifications EN ISO 13849 and EN 62061. For risk analysis the contents of standard EN ISO 14121 are applied,

The technology of KRONES machines and lines is designed up to a maximum performance level "d" (according to EN ISO 13849) and up to SIL 2 (according to EN 62061).

The individual performance level and/or SIL for the respective safety function at the machine is determined individually by a risk analysis and accordingly planned.

Reservation

- All specifications for electronic components and equipment are valid for the entire quotation and/or the order. Deviations for technical reasons are possible. All deviations from the specifications are explicitly stated for each quoted item and are regarded as mandatory in their changed version. Items described "according to KRONES design" are electronic components or equipment which cannot be determined until the execution of the contract. In those cases, KRONES reserves the right to change the make / manufacturer or equipment types of the used electrical components without extraordinary information for the customer.

Electrical connection data

- | | |
|---|--|
| ■ Network in customer's network | Solidly Grounded Wye Network (L1, L2, L3, GND). Network type similar to TN three-phase network according to IEC 364-3. The neutral point of the secondary winding transformer is grounded and designed as protective earth conductor (Ground GND). There is no neutral conductor in this network. |
| ■ Rated operating voltage in customer's network | 460 V |
| ■ Supply voltage frequency | 60 Hz |
| ■ Voltage fluctuations in customer's network | +/-10% |
| ■ Neutral conductor in the connected customer's network | A neutral conductor is not provided. |
| ■ The adaptation of the electrical power supply | is not effected. The electrical components will be sized for each available non-standard main voltage, if possible. If, for technical reasons, electrical components with different voltage specifications are used, corresponding transformers are necessary in the machine electric. A network type allowed for the operation of Krones line components (TT network, TN-C network, TN-S network) must be provided. |
| ■ Connection of KRONES machines and line system parts | Power is supplied to KRONES machines and system parts with 4-conductors system, 3 phases and protective earth conductor (L1, L2, L3, GND). The incoming-feeder bays are also structured as 4-conductors system. The required operating voltages for electric components whose ope- |

Electrical line components

<ul style="list-style-type: none">■ Rated operating voltage for line components of KRONES scope of supply.■ Voltage fluctuations at the supply units of the line components and/or power subdistribution included in KRONES scope of supply.■ Neutral conductor at the connection of KRONES machines and line components■ Supply of uninterruptible power supply (UPS)	<p>rating voltage is not provided by the customer's power supply system are generated by additional transformers in the machines and line system parts.</p> <p>460 V</p> <p>+/-10%</p> <p>A neutral conductor is not provided.</p> <p>no additional UPS. Production counter and settings are kept during a power failure. From the time of failure, the sensor components and counter are no longer active. When the power is recovered, operating system and control systems are restarted.</p>
<h3>Electrical documentation</h3> <ul style="list-style-type: none">■ Electrical connection diagram structure	<p>according to JIC for North American Design with CAD system RACOS-EL</p>
<h3>Contactors and disconnectors</h3> <ul style="list-style-type: none">■ Main and auxiliary contactor■ Motor safety device■ Time relay■ Relay■ Main switch■ Main switch cut-off■ Hardware safety switching devices■ Manufacturer of mechanical position switch■ Safety switch design■ Safety switch without interlocking■ Safety switch with interlocking■ Circuit breaker DC	<p>make: Allen Bradley</p> <p>make: Allen Bradley</p> <p>make: Allen Bradley</p> <p>make: Allen Bradley, but not for special applications</p> <p>make: Allen Bradley</p> <p>3 pins</p> <p>make: Allen Bradley</p> <p>make: Schmersal</p> <p>without interlocking</p> <p>make: Schmersal</p> <p>make: Schmersal</p> <p>make: Heinemann</p>
<h3>Sensors</h3> <ul style="list-style-type: none">■ Light sensors■ Proximity detector	<p>KRONES applies standard and high-quality sensors which are adapted optimally to the respective use. Determined by function and requirements, make Pepperl & Fuchs, IFM and Turck are used.</p>
<h3>Power supply</h3> <ul style="list-style-type: none">■ power supply unit, controlled■ Control voltage, D.C.	<p>make: Siemens</p> <p>24 V</p>
<h3>Display and operation</h3> <ul style="list-style-type: none">■ Indicating and control devices with a diameter of 22.5 mm■ Operating system design■ Manufacturer of operating system touch-screen■ Minimum size and/or type of the touch-screen used for machine operation.■ Design of touch-screen operator surface	<p>make: Allen Bradley, AB 800</p> <p>The components used are explicitly indicated in the machines.</p> <p>make: B&R, visualisation software ZenOn</p> <p>The screen sizes used are explicitly indicated in the machines.</p> <p>Task-oriented visualisation with optimised operator guidance as well as solution-oriented message and diagnostics system according to style guide of KRONES AG</p>

Electrical line components

- 2011.
- Manufacturer of signal beam Make. Allen Bradley
- Following functions are defined for the standard KRONES signal beams:
 - Visual signal red : Continuous light for malfunction, flash lamp for emergency stop or protective device open, actuated.
 - Visual signal green: Continuous light for production moden, flash lamp for production process interrupted.
 - Visual signal blue: Continuous light for imperative handling necessary, flash lamp for raw, processing and operating materials approaching the end, operator intervention necessary.
 - Visual signal yellow: Flash lamp for attention restart of process unit.
 - Visual signal white: Muting signals the actual safe overriding of a contact-free safety device This lamp is usually integrated in the safety device.
 - Acoustic signal message: Automatic restart, general malfunction
- Further specific functions are indicated in the respective operating manual of the process unit.

The structure of the signal beam depends on the type and function of the process unit and is indicated explicitly in the unit.

Transformers

- Thermistor protection Make: Allen Bradley

Cables and connections

- Design of socket for programming units according to UL/CSA
- Terminals make: Phönix
- Design of the electrical lines, for the internal machine installation sheathed cable according to UL/CSA requirements
- Design of electrical connection cables which are guided outside the machine by trays. sheathed cable according to UL/CSA requirements, suitable for laying in cable trays (TC-ER), construction type MTW.
- Design of electrical lines Power cable according to UL/CSA and NEC (NFPA 70), conductor material copper
- Electric lines according to KRONES design. The manufacturer is determined by KRONES depending on the application.
- Line screw connections make: Lapp
- Line identification plates make: Murrplastik
- Cable protection design Protective hoses are installed at machines infeed and discharge, adjacent to aggregates and turning machine parts. This, however, is not the case with aseptic design parts of the line or with using lattice trays according to KRONES, based on country-specific standards
- Wire colours
 - Main circuit AC outer conductor L1 black
 - Main circuit AC outer conductor L2 black
 - Main circuit AC outer conductor L3 black
 - Excluded electric circuit AC ahead of main switch, outer conductor orange
 - Main circuit AC neutral conductor N white
 - Protective earth conductor, equipotential bonding conductor PE green
 - Main circuit AC outer conductor according to Transformer La brown
 - Main circuit AC return conductor according to Transformer Lb earthed brown/white
 - Excluded electric circuit AC ahead of main switch, outer conductor after transformer La orange
 - Excluded electric circuit AC ahead of main switch, orange/white

Electrical line components

outer conductor after transformer Lb earthed	
■ Control circuit DC outer conductor, positive + 24 V	blue
■ Control circuit DC, return conductor neutral 0V	blue/white
■ Control circuit AC/DC external voltage	orange
■ Control circuit AC/DC external voltage return conductor earthed	orange/white
■ Control circuit AC/DC measuring lines	violet
■ Minimum core cross section with three-phase current	AWG 14 Under certain circumstances the minimum cross section may fall below within housings, if the connection of AWG is technically not possible (UL508A).
■ Minimum core cross section with alternating current (1 and 2 phases)	AWG 14 Under certain circumstances the minimum cross section may fall below within housings, if the connection of AWG is technically not possible (UL508A).
■ Minimum wire cross section in control circuits inside housings	Wiring with single wires AWG 18, for power supply AWG 16. With ready-made or sheathed cables may differ the cross section.
■ Minimum core cross section in control circuits outside housings	AWG 18 for circuits with 2 cores and frequently moved lines AWG 16. With ready-made or permanently attached lines the cross section may differ and cannot be changed.
■ The identification of individual cores is ensured	by using the existing identification of the terminals or devices in compliance with the connection diagram. KRONES uses cables marked with colour-code or imprinted numbers which can be clearly identified by the corresponding terminal diagram. Additionally, an identification with self-adhesive labels, make: Brady, is applied whose numbering is identical to contact and terminal number.
■ Additional identification of the conductors	is only effected inside the housing, i.e. all cores in the control cabinet, control panel, terminal box, etc. include an additional identification feature. Feed lines, number wires and colour-coded cables as well as all cables at discharge for actuators, sensors and motors are not marked in this way.
Drive technology in general	
■ Machine drive motors	make: SEW
■ Synchronous motors for machine drive	make: CEDS DURADRIVE
■ Servo motors for machine drive	make: SEW
■ Gear motors for machine drive	according to KRONES design. The manufacturers are determined by KRONES in dependence upon the application.
■ Other drive units	according to KRONES design. The manufacturer is determined by KRONES depending on the application.
■ Protection type of drive motors	SEW drives in totally-enclosed, fan-cooled design, otherwise IP55
■ Protection type of the pump motors	in totally enclosed fan cooled design
■ Motor start conditions	Soft-start equipment for three-phase asynchronous motors from 5.5. kW upwards
■ Insulation class of drive motors	F
■ Protection against restart of the drives during maintenance is ensured	by switching off and locking the main switch or the maintenance switch on site. Additionally, a lockable isolator per drive is installed in the indicated areas.
■ Motor isolators used for	all three-phase motors of the conveyor drives, where the switch actuation can not cause a malfunction or damage

Electrical line components

<ul style="list-style-type: none">■ Motor isolator■ Housing of isolator■ Function of motor isolator	at the machines or the line parts. make: Siemens made of plastic Isolation of main and control circuit per drive, with visual display. Display and isolation of control circuit once per grouped unit.
<ul style="list-style-type: none">■ Frequency inverter■ Frequency inverter - manual input board	make: Allen Bradley Each make of frequency inverter gets one manual input board per machine. In the transport technology each control cabinet gets a manual input board.
<ul style="list-style-type: none">■ Frequency inverter for synchronous motors■ Manufacturer of decentralized frequency inverter motor - machine■ Frequency inverter for servo motor	make: Allen Bradley make: Danfoss Due to constructional limits the manufacturer of the frequency inverter for servo motors is determined by KRONES and is described with the respective machines. according to KRONES design. The manufacturer is determined by KRONES depending on the application.
<ul style="list-style-type: none">■ Soft start equipment	
Automation technology	
<ul style="list-style-type: none">■ Automation system■ Manufacturer of programmable logic control unit (PLC)■ Series of programmable logic control unit (PLC)■ Programming software of programmable logic control unit (PLC)■ Power supply of programmable logic control (PLC)■ Reserved space at the input and output ports■ Machine internal switches for Ethernet network of PLC with touch-screen (HMI) and subsystems■ Field bus design■ Switches field bus level■ Sensor / actuator design	designed according to KRONES. Make: Allen Bradley Allen Bradley ControlLogix or GuardLogix Version 28 provided by KRONES 10 % not programmable (unmanaged), make: Allen Bradley, Stratix 2000 Ethernet IP for Ethernet IP, make: Allen Bradley, Stratix 2000 conventional
Housing and cooling	
<ul style="list-style-type: none">■ Location of the electrical components■ Acceptance	is set by KRONES due to constructional reasons is performed internally according to UL508A and NFPA79 for the electrical equipment manufactured by KRONES.
<ul style="list-style-type: none">■ Housing protection type■ Material of the integrated control cabinet■ The cable infeeds of the integrated control cabinet■ Design■ Stand-alone control cabinets■ Material of stand-alone control cabinet(s)■ Width of stand-alone control cabinets■ Height of stand-alone control cabinets■ Depth of stand-alone control cabinets■ Stand-alone control cabinets	Type 12 Sheet steel (only for machines in the dry section) are performed according to KRONES. of the stand-alone control cabinets according to KRONES make: Rittal sheet steel 31,50 inch (800 mm) 70,87 inch (1.800 mm) 15,75 inch (400 mm) make Rittal, TS 8884.333 (WxHxD) 800 x 1800 x 400 sheet steel with base sheet steel
<ul style="list-style-type: none">■ Stand-alone control cabinets■ Material of bases of stand-alone control cabinets■ Base height of stand-alone control cabinets■ Base of stand-alone control cabinets■ Side part of stand-alone control cabinets	7,87 inch (200 mm) Complete housing with mounted base make Rittal, type TS 8184.235 (wxh) 400 x 1800 made of sheet steel

Electrical line components

■ Cable inlet into the stand-alone control cabinets	in the control cabinet base from the side
■ Max. transportation unit of the control cabinets	125,98 inch (3.200 mm)
■ Control cabinet foodpad levelling supports	for Rittal control cabinet
■ Reserve space for electrical components in stand-alone control cabinets or in the mounting plate	10 %
■ Manufacturer of lighting for integrated control panel and the stand-alone control cabinets	according to KRONES. Lamps with energy-saving LED technology are applied. The orientation of the light beam is limited possible by turning the support.
■ The stand-alone control cabinets	are delivered with door.
■ Door latch of integrated control panel and free-standing control cabinets	with double bit key
■ The doors of the mounted control cabinet and the stand-alone control cabinets	must be lockable electrically or mechanically so that an opening of the housing is only possible in OFF status of the disconnecting device.
■ Control cabinet door	for an aperture angle of 130 degrees
■ Turning on the lighting of the integrated control panel and the stand-alone control cabinets	By opening the door the lamp is turned on automatically.
■ Cooling of housing at the machines in the wet sector	with cooling unit
■ Cooling of the separate control cabinets in the wet sector	with cooling unit (under the condition that the control cabinets are supplied with doors).
■ Cooling of the housing at the machines in the dry sector	with cooling unit
■ Cooling of the separate control cabinets in the dry sector	with cooling unit (under the condition that the control cabinets are supplied with doors).
■ Control cabinet ventilation	according to KRONES design. The manufacturer is determined by KRONES depending on the application.
■ Control cabinet ventilation	continuous operation, without thermostat
■ Cooling unit design	according to KRONES. Manufacturer, type and installation are determined by KRONES depending on the application.
■ Cooling unit for stand-alone control cabinet	make: KRONES
■ Material of cooling unit for stand-alone control cabinets	sheet steel
■ Control panel material	according to KRONES design
■ Material of the sub-control panel	steel plate
■ Cooling unit for the control panel	Make: KRONES
■ Material of the housing of the indicating and control devices	plastic
■ Material of terminal boxes / receptacles	according to KRONES

Equipment

■ Marking of electrical components outside the housings is made	with yellow film sticker
■ Marking of electrical components in the housing	with yellow film stickers at the object
■ Analog signal exchange between the machines of this line	4 - 20 mA DC

Deviating for machines is applied: 2. Empty bottle inspector LINATRONIC M

Electrical connection data

■ Identifier of process unit for connection diagram	=IS1
■ Full-load current Ib max.	5 A
■ Rated connected apparent power	4,6 kVA
■ Rated connected active power	4,50 kW

Electrical line components

■ Power factor cosinus phi	0,98
Contactors and disconnectors	
■ Handle (pressing main switch)	rotating in red/yellow
■ Design of main switch	Motor protector PKW up to 63 A. In case of 80 A and more power circuit breakers with circumvention-proof door-lock.
■ Design of safety technology	with hardware switching devices The logics of the safety technology is only implemented in the connection of hardware devices.
■ Hardware safety switching devices	make: Pilz
Display and operation	
■ Design of operating system	Control of the machine / the conveyors is effected via a touch-screen. For safety functions as well as main activation functions additional indicating and control devices are used.
■ Manufacturer of operating system touch-screen	make: B&R
■ Type and/or size of the touch-screen used	15" Clean Design - colour display in stainless steel housing with ZenOn visualisation software
■ Structure of signal beam	Bottom-up: illuminating indicator blue, green, red, acoustic signal
Drive technology in general	
■ Protection against restart of the drives during maintenance is ensured	by switching off and locking the main switch or the maintenance switch on site.
Automation technology	
■ Automation technology	Programmable Logic Control (PLC)
■ Manufacturer of programmable logic control unit (PLC)	make: Siemens
■ Series of the programmable logic control (PLC)	Siemens S7 300
■ CPU - type of programmable logic control (PLC)	CPU 317-2PN/DP
■ Field bus design	Profibus-DP/Profinet
■ Sensor actuator design	ASI station
Housing and cooling	
■ Installation place of electrical components	in the control cabinet integrated in the machine
■ Material of the integrated control cabinet	rust-proof stainless steel/chrome nickel steel (similar to AISI 304)
■ Integrated control cabinet	make: Bader
3. Network / hardware technology	
Electrical connection data	
■ Identifier of process unit for connection diagram	=AVN1
Housing and cooling	
■ Installation place of electrical components	in stand-alone control cabinets
■ Cooling for separate control cabinet	with air conditioning (under the condition that the control cabinets are supplied with doors).

Electrical line components

9. Beverage treatment technology CARBOFLOW 15/1

Electrical connection data

■ Identifier of process unit for connection diagram	=M11
■ Full-load current Ib max.	38 A
■ Rated connected apparent power	30,0 kVA
■ Rated connected active power	27,00 kW
■ Power factor cosinus phi	0,91

Contactors and disconnectors

■ Handle (pressing main switch)	rotating in red/yellow
■ Design of safety technology	with hardware switching devices The logics of the safety technology is only implemented in the connection of hardware devices.
■ Hardware safety switching devices	make: Pilz

Display and operation

■ Design of operating system	Control of the machine / the conveyors is effected via a touch-screen. For safety functions as well as main activation functions additional indicating and control devices are used.
■ Type and/or size of the touch-screen used	15" colour display with ZenOn visualisation software
■ Structure of signal beam	Bottom-up: illuminating indicator blue, green, red, acoustic signal

Drive technology in general

■ Frequency inverter	make: Danfoss
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Automation technology

■ Automation technology	Programmable Logic Control (PLC)
■ Manufacturer of programmable logic control unit (PLC)	make: Siemens
■ Series of the programmable logic control (PLC)	Siemens S7 300
■ CPU - type of programmable logic control (PLC)	CPU 317-2PN/DP
■ Field bus design	Profibus-DP/Profinet

Housing and cooling

■ Installation place of electrical components	in the control cabinet integrated in the machine
■ Material of the integrated control cabinet	rust-proof stainless steel/chrome nickel steel (similar to AISI 304)
■ Cooling of control panel, control cabinet and control desk	with cooling unit
■ Cooling unit design	according to KRONES. The installation is determined by KRONES depending on the application.
■ Cooling unit for control panel	make: KRONES
■ Material of the control cabinet cooling unit	rust-proof stainless steel/chrome nickel steel (similar to AISI 304)
■ Control panel design	operation integrated in the control panel