

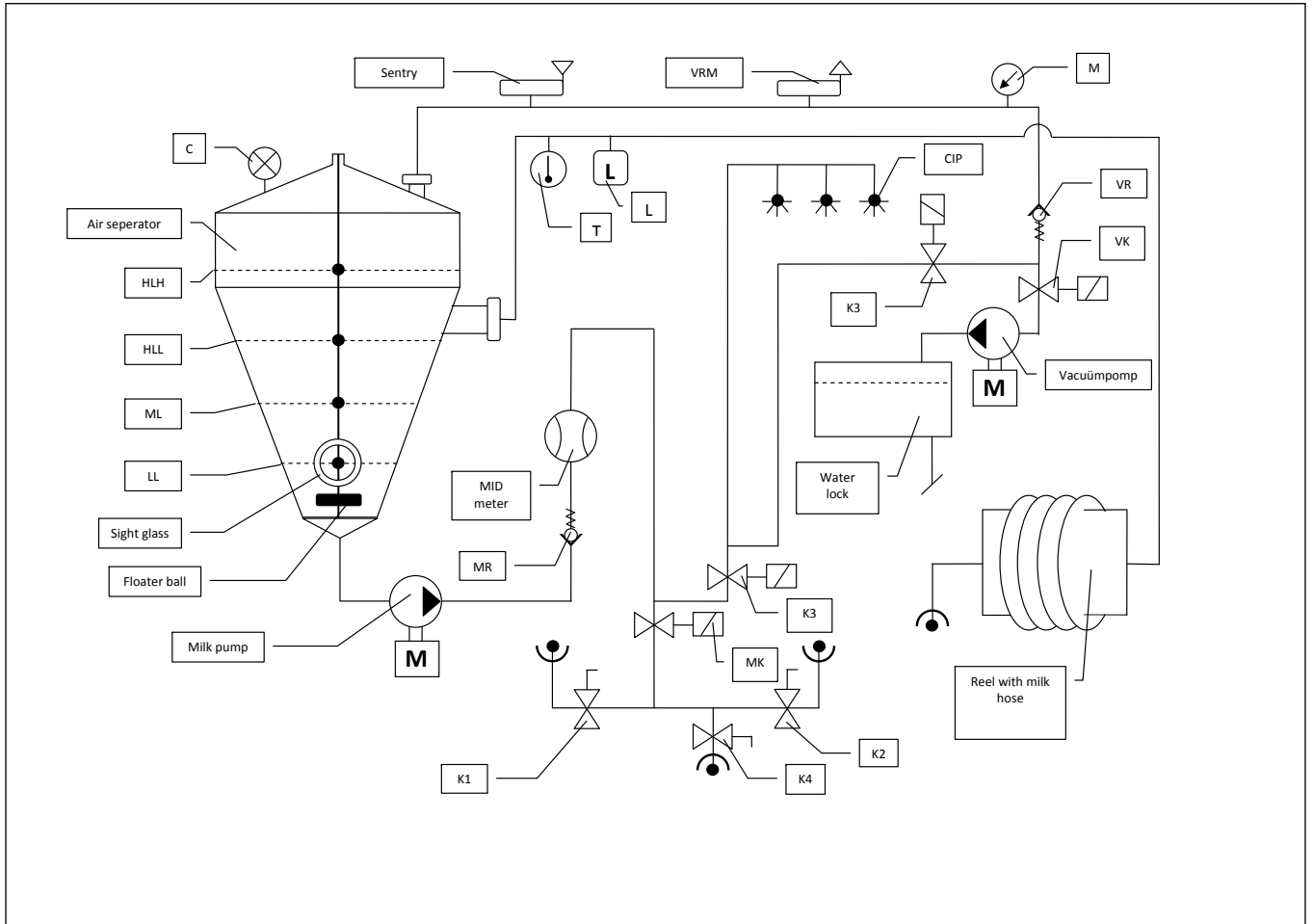




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Project number 2575000
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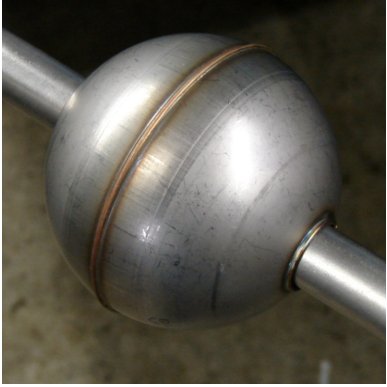

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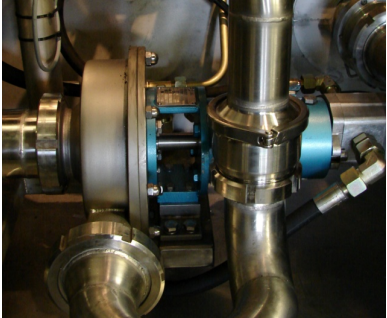


Symbol	Description	Photo / picture	Principles
Hose reel with milk hose	COSMO TECHNIEK - MAGYAR Hose reel with milk hose. Type: HR 2008-01		The hydraulic powered hose reel is used to connect the measuring system to the tank of the farmer. It can be automatically enrolled with a remote control.
Air separator	MAGYAR Dégazeur type Hollande 024-2006 séparateur		Air separator for the purpose of milk products. Separates the air from the milk. The air separator is placed upstream the measuring system, before the pump and the MID meter.

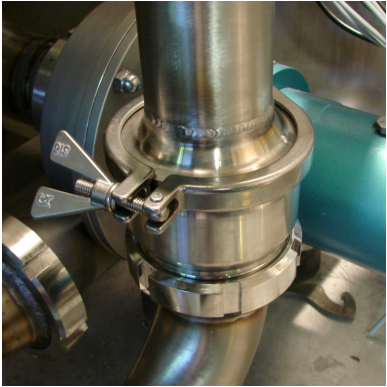



Floater ball	COSMO TECHNIEK - Lochem Stainless steel floater ball Type: FB 2008-01		<p>The floater ball is part of the air separator. The floater ball is mounted on a vertical bar so that the floater can only move vertically inside the air separator. The Floater floats on top of the milk. When the liquid level rises or lowers inside the air separator the floater ball rises or lowers with it. Inside the Floater ball are two magnets. By this the liquid level in the air separator can be determined. Because of the shape and the weight of the floater it does not float on the foam of the milk.</p>
HLH	High level high		<p>The floater is mounted on a vertical guiding bar placed inside the center of the air separator. Inside this bar are 4 electronic contacts points. (HLH, HLL, ML, LL) These contacts are triggered when the floater (magnets inside the floater ball) moves past them. These signals are used to operate the COSMO VMI and the MAGYAR air separator. For a detailed explanation of the working and operating principle of these contacts see "working principle COSMO VMI".</p>
HLL	High level low		
ML	Mean level		
LL	Low level		





Sight glass	Sight glass for MAGYAR 024-2006 séparateur Gazeuse Hollande. BORIL, LA. DIN 7080		The sight glass indicates the level of milk that is present in the air separator. The sight glass is placed at the "Low level" so that the level of milk inside the air separator can be verified.
Milk pump	Milk pump POMAC Stainless steel hydraulic / electronically centrifugal pump Vmax: 90 / 120 m3/h Pmax: 3 bar		The milk pump, pumps the milk from the outlet of the air separator to the MID meter and the outlet(s) of the installation. This pump can be powered hydraulically or electronically. The pump is placed directly after the air separator.

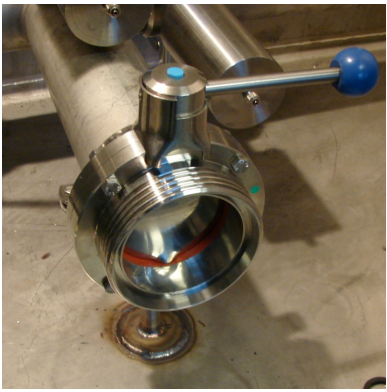



MR	Milk non-return valve MW 70 / 3 inch		<p>The Milk non-return valve ensures that no milk can flow back in the system. It is placed between the milk pump and the MID meter.</p>
MID meter	Proces – Data PD 340 TC 7204		<p>The COSMO VMI is fitted with an electric magnetic induction meter (MID). The central measuring element of the MID is a stainless steel measuring tube positioned in a magnetic field of coils. When milk or any other conductive fluid flows through the tube it generates a voltage proportional to its velocity or flow. This results are transmitted as a digital output signal for a further processing system.</p> <p>The MID meter is placed after the milk pump and the milk non-return valve.</p>





	<p>GEA Diessel IZM TC 7520</p>		
<p>MK</p>	<p>Milk valve with pneumatic actuator. MW-70 / 3 inch</p>		<p>Milk valve opens when milk is being collected and measured. This milk valve is opened pneumatically. The milk valve closes when the tank is unloaded at the milk factory. It is placed after the meter in the down-tube. By closing this valve the milk cannot return into the measuring system when the milk is unloaded.</p>





K4	Unloading valve (manually operated) 4 inch		<p>This valve is opened when the tank is being unloaded at the milk factory or when the system is being cleaned. Normally when the measuring system is active it is closed. This valve is operated manually.</p>
K1	Loading valve to main tank (manually operated) 4 inch		<p>Valve that leads the milk from the measuring system to main tank of the vehicle. This valve is operated manually.</p>





K2	Loading valve to front tank cabinet (Optional and manually operated) 4 inch		Valve that leads the milk from the measuring system to the front tank chamber of the vehicle. (Optional for tank semi-trailers only to give the truck more traction on the wheels of the truck.) This valve is operated manually.
K3	Cleaning valve with pneumatic actuator. (CIP cleaning) 2 inch		This valve is used to clean the measuring system and the milk tank of the vehicle by CIP standards.

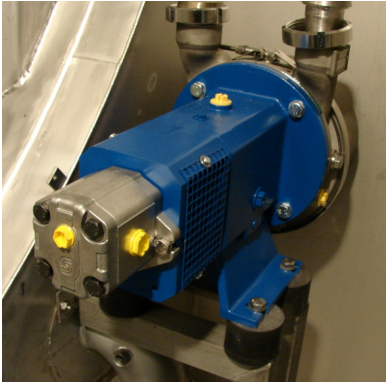



T	<p>Temperature sensor GEA Diessel PT 100</p> <p>or:</p> <p>RS Rooden 305111-9 PT 100</p>		<p>Measures the temperature of the milk when it enters the Air separator. Signal is send directly to the Zevodat Flash.</p>
L	<p>Air bubble sensor E.L.B. Type : EE-1-FACH</p>		<p>The air bubble sensor detects when air is entering the air separator and regulates the milk pump speed.</p>

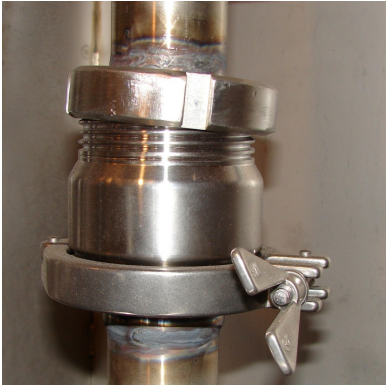


M	<p>Manometer -1 / 3 bar</p>		<p>Indicates the pressure in the tubes from the air separator towards the vacuum pump.</p>
C	<p>CERABAR M Endress+Hauser PMC 45 P -1..1 bar m.w.p. 6,7 bar 4-20 mA 11,5...45 V DC</p>		<p>Indicates the pressure in the air separator and the regulates the speed of the milk pump.</p>



<p>Vacuum pump</p>	<p>Vacuum pump SPECK waterring pump VG</p>		<p>The vacuum pump is used for different purposes which are also explained in the "COSMO VMI working principle".</p> <p>The vacuum uses a bath of water which mixes the air from the air separator with water. This water and air mixture is pumped to the water lock.</p> <p>First the vacuum pump is used to fill the air separator to the HLH level. After this the vacuum pump stops and the milk pump starts.</p> <p>After the main part of the measurement the vacuum pump is used to (suck) empty the milk hose that is connected to the milk tank (of the farmer).</p>
<p>VK</p>	<p>Vacuum valve with pneumatic actuator. 2 inch</p>		<p>The vacuum valve is closed to maintain a vacuum after the vacuum pump has stopped.</p>




VR	Vacuum non-return valve 2 inch		Ensures that no air can return into the air separator.
Water lock	Cosmo Techniek – Lochem Water lock with air / water separator and inlet/outlet. Type: WL 2008-01		<p>The water lock has two functions. Mainly it separates the air/water mixtures that is pumped into the water lock from the vacuum pump.</p> <p>The water than is used/recycled as a reservoir for the vacuum pump. The air is blown out at the bottom of the water lock.</p>



Sentry	Sentry unit DeLaval 15-70 kPa		<p>The Sentry unit is an adjustable pressure valve. This valve regulates the pressure of the vacuum to a certain level (0,5-0,6 bar).</p> <p>When the pressure drops below this value it opens a valve and it opens a small air hose towards the VRM module.</p>
VRM	VRM module Manus 50-1500 l/min		<p>The VRM module is a valve. The module works together with the Sentry unit. When the pressure is too low in the vacuum system. This VRM (valve) is opened and air can flow in into the vacuum system till it reaches its desired value. Together with the Sentry unit it ensures that the vacuum level is stable and not too low.</p>



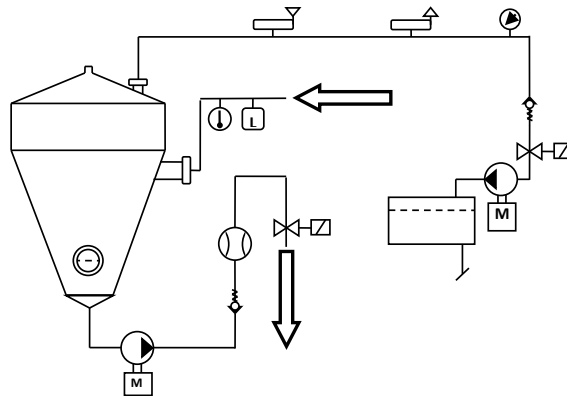
CIP	CIP cleaning	N.A.	CIP (cleaning standard) for tanks of food products. Uses different sparkling balls inside the tank and water.
Data system	GEA Diessel Zevodat Flash TC 7251		The data system gathers all metrological and non-metrological data.



TRUCK & TRAILERGROEP LOCHEM B.V.
 KWINKWEERD 15
 7241 CW LOCHEM
 NEDERLAND



FABRIKANT:	MAGYAR	OMGEVINGSTEMPERATUUR:	-25 +55 °C
TYPE:	MAGYAR VMI	TEMPERATUUR BEREIK VLOEISTOF:	-5 +35 °C
JAAR:	2016	ELEKTROMAGNETISCHE OMG. KLASSE:	E3
SERIENUMMER:		MECH. OMGEVINGSKLASSE:	M3
VLOEISTOF:	MELK	NAUWKEURIGHEIDSKLASSE:	0.5
Q. MAX:	1700 L / MIN	MIN. AFL. HOEVEELHEID:	500 L
Q. MIN:	150 L / MIN	P. MAX:	2 Bar
BASISHOEVEELHEID:	L	MID METERNUMMER:	



MID TOELATINGSNUMMER : T10958



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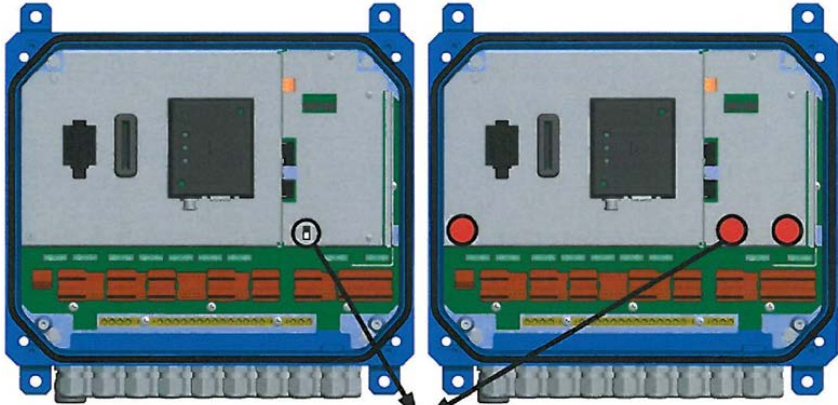
FABRIKANT:	MAGYAR
TYPE:	MAGYAR AEV
JAAR:	
SERIENUMMER:	
VLOEISTOF:	MELK
Q. MAX:	1700 L / MIN
V / CM:	1,8 L


EVALUATIE CERTIFICAATNUMMER : TC10959



8.4 Securing positions

8.4.1 Compact-Controller type 6942-10



Compact controller seal positions		
Calibration switch		
open Access possible to metrological relevant parameters		closed Access not possible to metrological relevant parameters
		Sealed with marks - Calibrations-switch - Covering

8.4.2 Magneto-inductive flowmeter Type 6823-x (PD340)

