

MTX\_H 50 mounted with 2x bale breaker augers



MTX\_H18 mounted with 2x bale breaker augers

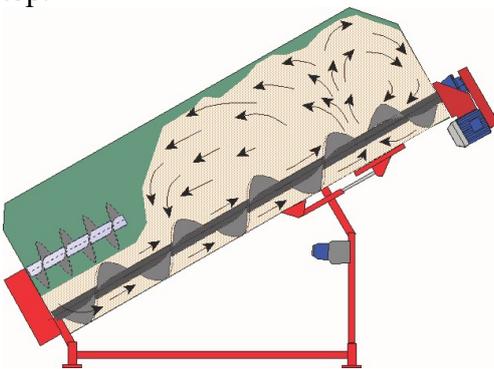


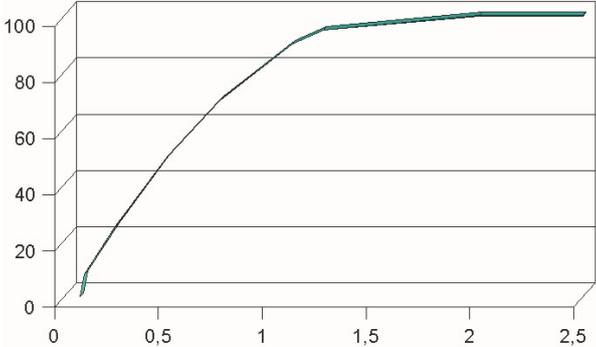
Holding bar inside MTX\_H



Flexible shear bar inside machine, not used with round bales, only for square bales



Machine number	1039-450, for MTX H 18-50
Custom tariff number	84369900
Machine paint	Standard ISO 12944-5 category C2. Machines, guards etc. comes in a color type RAL 3001 red suitable for indoor, non corrosive environment, aggregate that is used inside the machine is only with gray primer paint – paint is water and oil resistant -15 to + 60 degrees C, surface purified with alkaline degreaser, painted with a machine primer and here after coating paint.
Standard	DS/EN 60204-1:2006 Safety of Machinery - Electrical Equipment of Machines, DS/EN ISO 13850 of January 29th 2007 emergency stop, DS/EN ISO 13849-1 safety-related parts of control systems, DS/EN 60204-1: 2006, cable installation method E
Machine function	<p>The Cormall bale breaker augers are used to break up any bale before it is contained, mixed and feed out as a buffer, using straw bales as main material. They are made so they can be retrofit into any existing Cormall MTX mixer. The material is filled into the rear of the machine where the two bale breaker augers with flexible shear bars destroy bale stamps or round bale structure (round bales with shear bar) and fills the material into the two main augers that transport the material to the top.</p> 
Blockage and overload control:	<p>The two augers are breaking the material against the flexible shear bar. Material can be contaminated and block and the material itself can cause blocking of the augers. To overcome this are they both controlled with “augers reversed system”: The frequency inverter on each motor measures the amp usage and makes the automatic reverse when the augers are overloaded.</p> <p>Value settings: overload above 80% of <math>A_{max}</math> for more than 0,7 sec. = stop, and rev. 2 sec and start again with small ramp.</p> <p><b>WARNING! NEVER MORE THAN 2 SEC. REVERSE.</b></p>
Gear motor:	Nord Gear I: 22,4 Bonfiglioli I:23,8
kW	0,5-5 Ton : 2x 5 kW 5-10 Ton : 2x 7,5 kW 10-20 Ton : 2x 11 kW

RISK ASSESMENT Machine	The machine can be only be used with a MTX_H machine.																																				
RISK ASSESMENT – ATEX	<table border="1" data-bbox="592 474 1423 972"> <thead> <tr> <th data-bbox="592 474 963 555">  </th> <th colspan="2" data-bbox="963 474 1423 555">GESTIS-STAU-EX</th> </tr> <tr> <th data-bbox="592 555 963 591">Material</th> <th data-bbox="963 555 1192 591">Stroh (2213)</th> <th data-bbox="1192 555 1423 591">Miscanthus</th> </tr> </thead> <tbody> <tr> <td data-bbox="592 591 963 627">Feuchte</td> <td data-bbox="963 591 1192 627">-</td> <td data-bbox="1192 591 1423 627">10,2 %</td> </tr> <tr> <td data-bbox="592 627 963 663">Korngrösse &lt; 500 µm</td> <td data-bbox="963 627 1192 663">96%</td> <td data-bbox="1192 627 1423 663">56%</td> </tr> <tr> <td data-bbox="592 663 963 698">Korngrösse &lt; 125 µm</td> <td data-bbox="963 663 1192 698">26%</td> <td data-bbox="1192 663 1423 698">35%</td> </tr> <tr> <td data-bbox="592 698 963 734">Median-Wert µm</td> <td data-bbox="963 698 1192 734">200 µm</td> <td data-bbox="1192 698 1423 734">280 µm</td> </tr> <tr> <td data-bbox="592 734 963 770">UNtere Ex-Grenze</td> <td data-bbox="963 734 1192 770">125 g/m<sup>3</sup></td> <td data-bbox="1192 734 1423 770">60 g/m<sup>3</sup></td> </tr> <tr> <td data-bbox="592 770 963 806">Max Ex Überdruck</td> <td data-bbox="963 770 1192 806">8,0 bar</td> <td data-bbox="1192 770 1423 806">7,7 bar</td> </tr> <tr> <td data-bbox="592 806 963 842">K<sub>ST</sub>-Wert [bar m/s]</td> <td data-bbox="963 806 1192 842">47</td> <td data-bbox="1192 806 1423 842">115</td> </tr> <tr> <td data-bbox="592 842 963 878">Ex-Fähigkeit</td> <td data-bbox="963 842 1192 878">St1</td> <td data-bbox="1192 842 1423 878">St1</td> </tr> <tr> <td data-bbox="592 878 963 913">Zündtemp.</td> <td data-bbox="963 878 1192 913">470 C</td> <td data-bbox="1192 878 1423 913">-</td> </tr> <tr> <td data-bbox="592 913 963 972">Glimmtemperatur</td> <td data-bbox="963 913 1192 972">310 C</td> <td data-bbox="1192 913 1423 972">-</td> </tr> </tbody> </table> <p data-bbox="563 1012 735 1043">Wheat straw:</p> <p data-bbox="563 1050 1445 1227">We have primary evaluated the risk for dust explosion based on the conditions that have to be full filed with regard to dust explosion, and have used the official figures from the German institute BGIA: As translation to the above table sheet is the most important figures as follows:</p> <ul data-bbox="612 1234 1299 1303" style="list-style-type: none"> <li>- Fragmentation must contain 96 % below 0,5 mm.</li> <li>- The medium length must be 0,2 mm</li> </ul> <p data-bbox="563 1310 1453 1341">The fragmentation of any straw quoted from 5 mm screen and more:</p> <ul data-bbox="612 1348 1070 1379" style="list-style-type: none"> <li>- 96 % will be more than 1,3 mm</li> </ul> <p data-bbox="563 1417 1437 1487">We conclude that no person is in danger of explosive burning, only normal fire is possible.</p>		GESTIS-STAU-EX		Material	Stroh (2213)	Miscanthus	Feuchte	-	10,2 %	Korngrösse < 500 µm	96%	56%	Korngrösse < 125 µm	26%	35%	Median-Wert µm	200 µm	280 µm	UNtere Ex-Grenze	125 g/m <sup>3</sup>	60 g/m <sup>3</sup>	Max Ex Überdruck	8,0 bar	7,7 bar	K <sub>ST</sub> -Wert [bar m/s]	47	115	Ex-Fähigkeit	St1	St1	Zündtemp.	470 C	-	Glimmtemperatur	310 C	-
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<p data-bbox="185 1570 536 1711">Screening sample showing safety margin with regard to ATEX standard and BGIA (DONG/E2 2002)</p> <p data-bbox="185 1749 536 1899"><i>This sample was provoked with long time vibration, where many longer straws where going through the screen on the long side.</i></p>	 <p data-bbox="751 1906 1238 1928">■ Straw dust fragment in % (w. 6 mm milling screen)</p>																																				
EN/ISO 13849-1	<p data-bbox="563 1946 740 1977">Safety levels:</p> <p data-bbox="563 1984 1437 2054">PLr: c, as machine with automatic start if access is possible and not restricted.</p>																																				

Analyzed risk following EN-ISO 13849-1:	S	F	P	PLr
<p>1. Mounting: The machine is provided lifting positions that ensures balance when lifting and strong enough to hold machine load. The auger has to be lifted in the center, using rope for balance. Before stepping into the MTX_H machine, is placed a wood plate over the two main augers, this plate is used to stand on, during work, and to place the two breaker augers on for alignment. Work place assessment should be made, before start with mounting.</p>	S2	F1	P1	c
<p>2. Operating: The machine has to be mounted inside a Cormall MTX_H machine, with a closed filling device, Cormall BT 170 bale table or similar.</p>	S2	F1	P1	c
<p>3. Servicing: All lubrication positions are from safe position.</p>	S1	F1	P1	a
<p>4. Renovation: On the Auger is placed knives that has to be either turned or exchanged. 1-2 times per year. Before entering the machine must be turned off on the main switch and locked. Before stepping into the MTX_H machine, must be placed a wood plate over the two top augers, after this is placed another 2 wood plates over the lower augers, where one of them is pushed under the two upper augers. Work place assessment should be made, before start with mounting.</p>	S2	F1	P1	C
<p>5. Scrapping/recycling: same comment as under 1. Mounting</p>	S2	F1	P1	C

marts 31, 2020

nr. 1039-450

Item No	A
MTX_H 18-30	370
MTX_H 42-50	214

Technical drawing showing the SBB 2000 bale breaker auger assembly. The main drawing includes the auger (3) with dimensions 10.12, 27L, 1899.99, and 1959.99. It is labeled 'Right' and 'Left'. The gear is identified as 'Gear Klees-Beniglioli FS2451-23 a-14M4L44 7.5 kW El. Motor'. Detailed views show the 'MTX Endplate' (10), 'Support' (11), and 'Optional cover' (8) with various components numbered 1 through 13. Dimensions like 151, 161, 177, 181, 191, 201, 211, 221, 231, 241, 251, 261, 271, 281, 291, 301, 311, 321, 331, 341, 351, 361, 371, 381, 391, 401, 411, 421, 431, 441, 451, 461, 471, 481, 491, 501, 511, 521, 531, 541, 551, 561, 571, 581, 591, 601, 611, 621, 631, 641, 651, 661, 671, 681, 691, 701, 711, 721, 731, 741, 751, 761, 771, 781, 791, 801, 811, 821, 831, 841, 851, 861, 871, 881, 891, 901, 911, 921, 931, 941, 951, 961, 971, 981, 991, 1001 are also present.

Pos.	Item No	Quantity
1	4 039-781	8
2	4 039-776	16
3	3 039-450	2
4	4 039-778	6
5	4 039-779	6
6	4 039-790	2
7	4 039-782	2
8	4 039-783	2
9	4 039-785	2
10	3 039-454	2
11	3 039-245	2
12	3 039-784	1
13	4 039-455	4

Matr. —

Del for MTX\_H

Benavnelse: Bale breaker for MTX\_H 18-50

120524MN

Mal 1:30

Dato Retreise

Symb., Sign.