



KIT ETC 1388M1 (CB36) – 1501G2-A

Section 2 - Process functions

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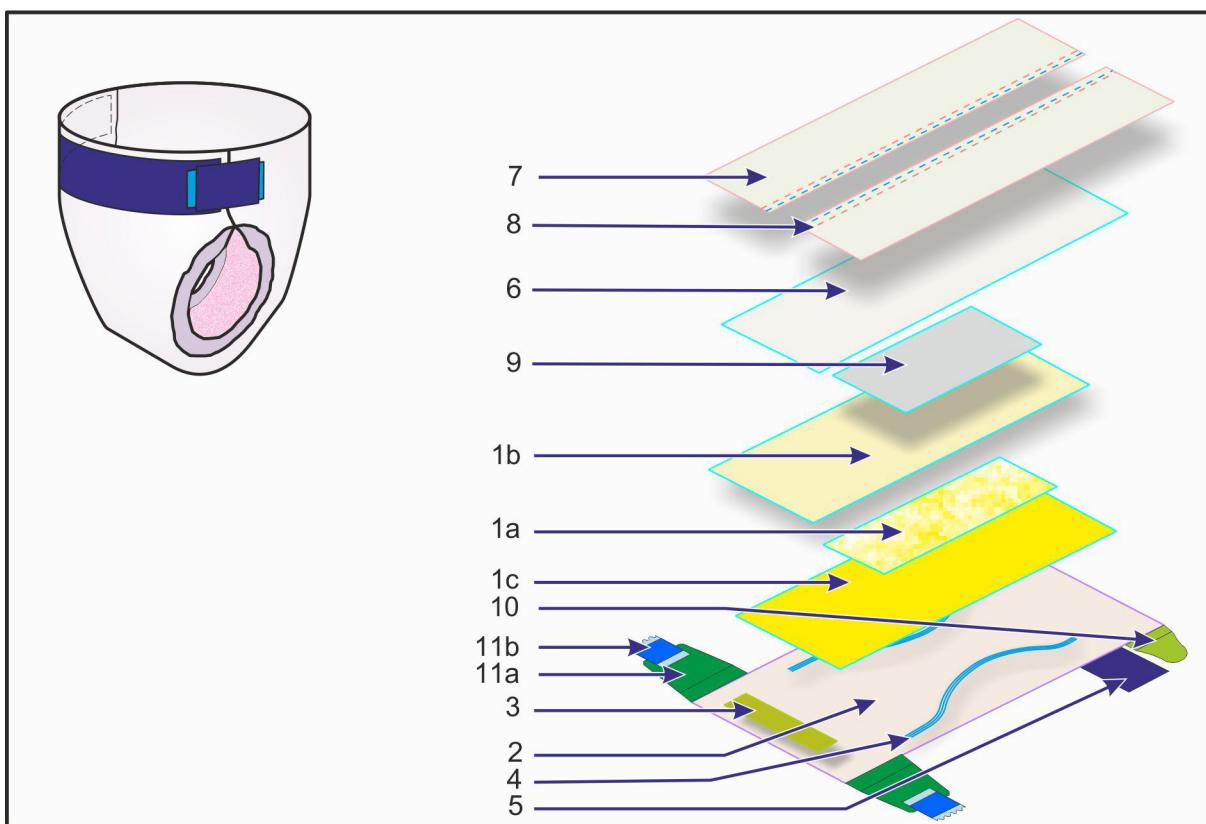
2 Product technical feature

The upgrade kit ETC is installed in order to modify some modules and units on machine type 1388M1(CB36).

The upgrade kit shall be able to produce diapers with characteristics set out in the purchase contract.

The product is mainly composed of the following materials:

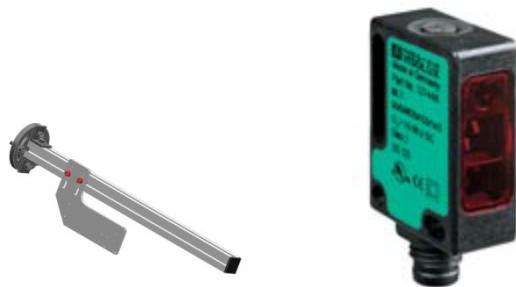
1. Absorbing core:
 - 1a Fluff + SAP
 - 1b Tissue Upper
 - 1c Tissue Lower
2. Backsheet
3. Waist Elastic
4. Leg Elastics
5. Tape Landing
6. Topsheet
7. Acquisition Layer
8. Standing Gathers
9. Topsheet Elastics
10. Front Wing
11. Rear Wing
 - 11a Side Panel
 - 11b Tape



3 General processes unit technical description

3.1 Web detections

3.1.1 Technical description and features



ML7(1) series miniature photoelectric sensors - Diffused mode - 20 - 200mm sensing range - PNP output light on - vertical mounting - V31 nano quick disconnect

3.1.2 Data sheet

LOAD CURRENT	100 mA max.
HORT CIRCUIT AND OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTION	Yes
VOLTAGE RIPPLE	10%
LED(s)	Yes
STANDARDS	EN 60947-5-2
PROTECTION (IEC)	IP67, IP69K
TEMPERATURE RANGE:WORKING	-4 °F to +140 °F
TEMPERATURE RANGE:STORAGE	-4 °F to +140 °F
HOUSING MATERIAL	PC (fibre-reinforced Makrolon)

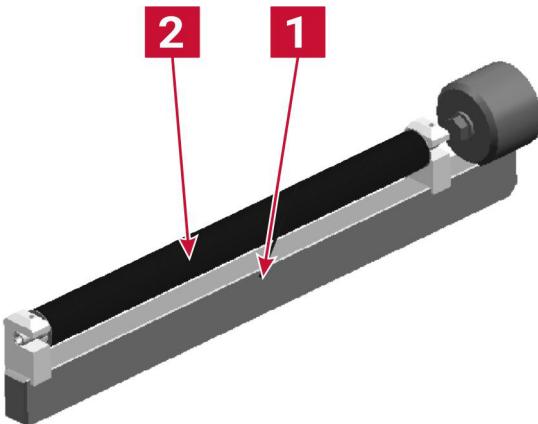
3.2 Idle roller

3.2.1 Technical description

The unit conveys the material without tensioning it excessively. This is a low-inertia and low-friction idle roller.

The unit is composed of the following components:

1. arm
2. roller with grease-free bearings

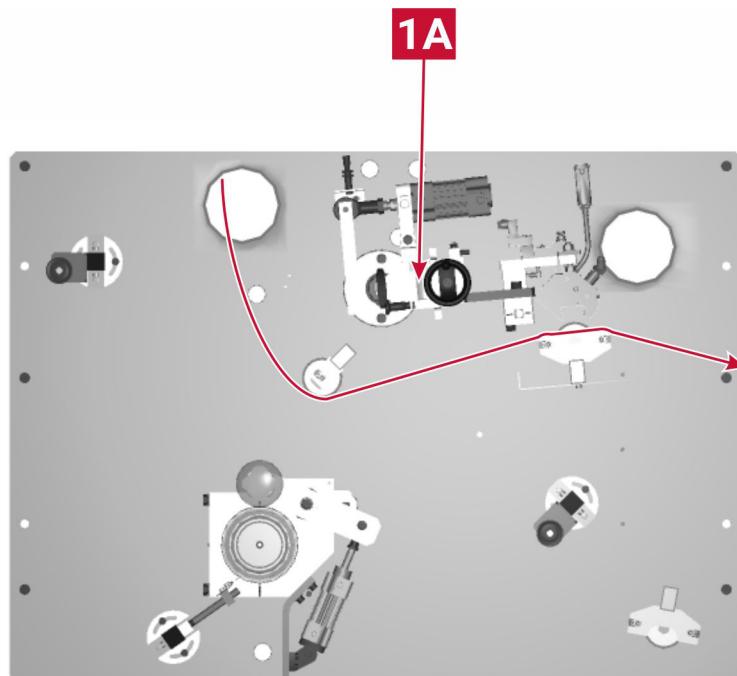


4 Processes unit technical description

4.1 LOWER TISSUE (TILO)

POS.	UNIT CODE	FUNCTION DESCRIPTION
	A5B00010	ASSY ROLL D32 L400 300 SIN
1A	A5B02928F091	GLUE HEAD BRACKET SIZE PART
	A8B15100046	GLUE HEAD SUPPORT PLATE
	A8B25010960	GLUE GUN SUPPORT BAR
	A8B28021346	GLUE GUN SUPPORT

Note: units not supplied with the upgrade kit and that are reused from existing machine are highlighted in red



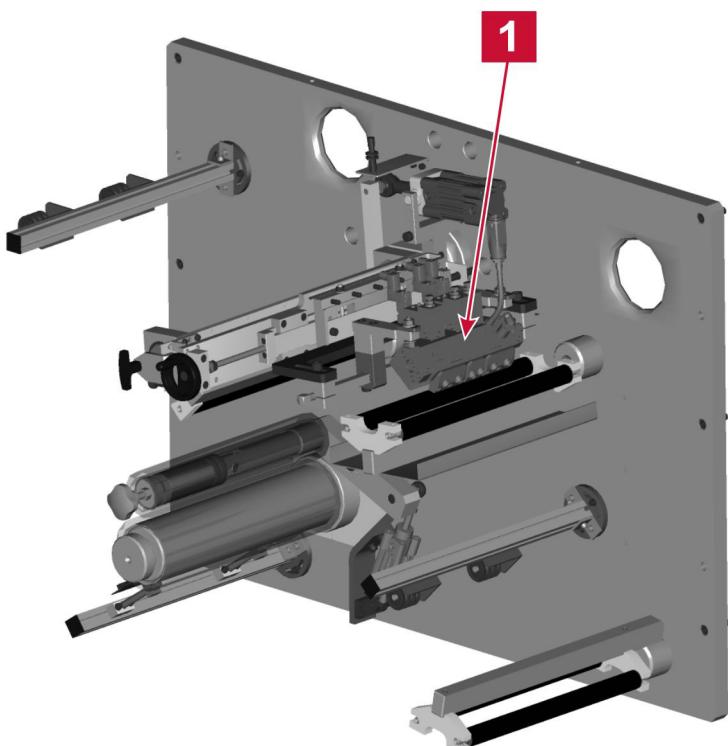
4.1.1 Glue applicator TILO-GA

Technical description and features



WARNING

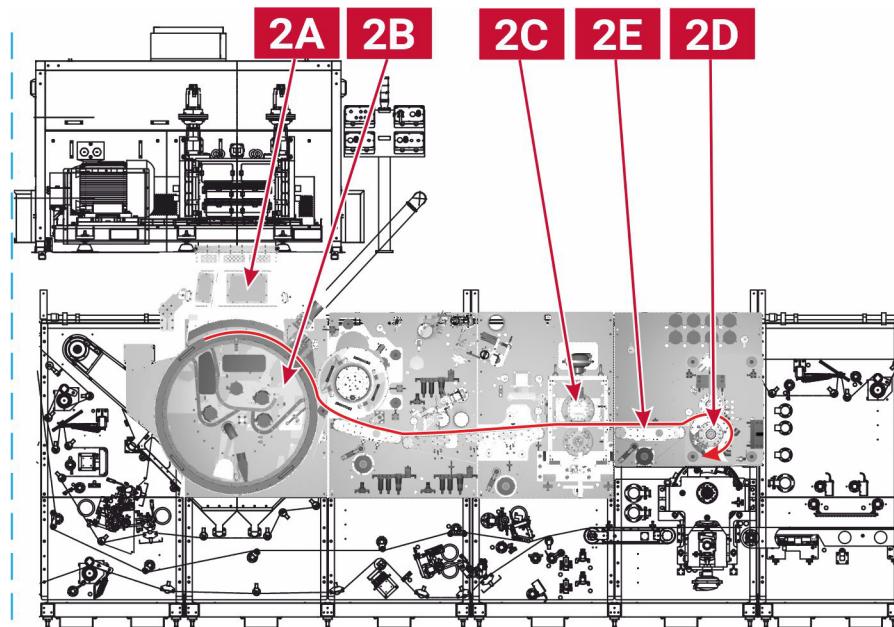
For technical description about Glue applicator (1), refer to the manufacturer's operating manuals.



4.2 CORE FORMING (CF)

POS.	UNIT CODE	FUNCTION DESCRIPTION
2A	CF-FL	FLUFF TRANSPORT
2B	C1B04802	MOD INT CHAM A5B36092-A5B38072
	A8B38016339	DRUM VACUUM REDUCER
2C	A5B38078	TRANSM. THB/PRESSING UNIT
	A5B38086	SUPPORT THB/PRESSING UNIT RH
	A5B39412	CHANNELS THB/PRESSING UNIT RH
2D	A5B29760	TRASM. INFEED CONVEYOR
	A5B38087	CORE INFEED CONVEYOR RH
2E	C1B04803	MOD EMBOSST A5B35915-A5B38073
	A5B38128	EMBOSSING FRAME
	C1B04804	MOD TRAN EMB A5B35916-A5B38074
	A8B11014319	TRANSMISSION PLATE

Note: units not supplied with the upgrade kit and that are reused from existing machine are highlighted in red



4.2.1 Fluff transport CF-FL

Technical description and features

The function of this unit is to suck the fluff coming from the cellulose defibrating mill of bottom core and to supply it to the core former drum.

The fluff is transferred to the moulds to allow core formation.

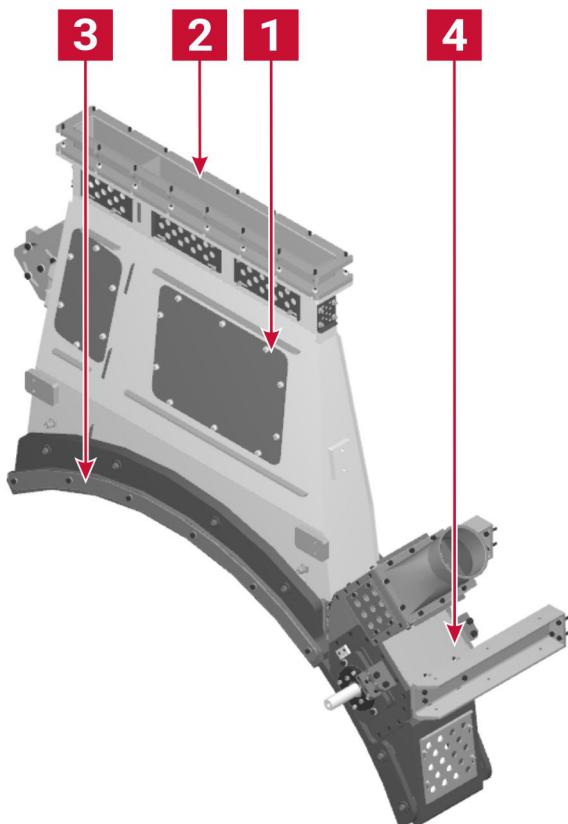
The SAP is inserted into the external chamber through a special injection device so as to bind the fluff particles to the super-absorbing material.

In this way the surface layer of the core being formed inside the mould will have greater absorbing capacity

The injection device is connected to a SAP dosing system. This system is a commercial unit purchased externally.

The process unit consists of the following components:

1. Core forming hood
2. Air shutter
3. Polyzene sealing
4. Cleaning brush



4.2.2 Drum former CF-DF

Technical description and features

This process unit forms the core to be applied to the diaper.

The forming process is carried out thanks to the molds arranged on the core former that interact with the internal forming chambers

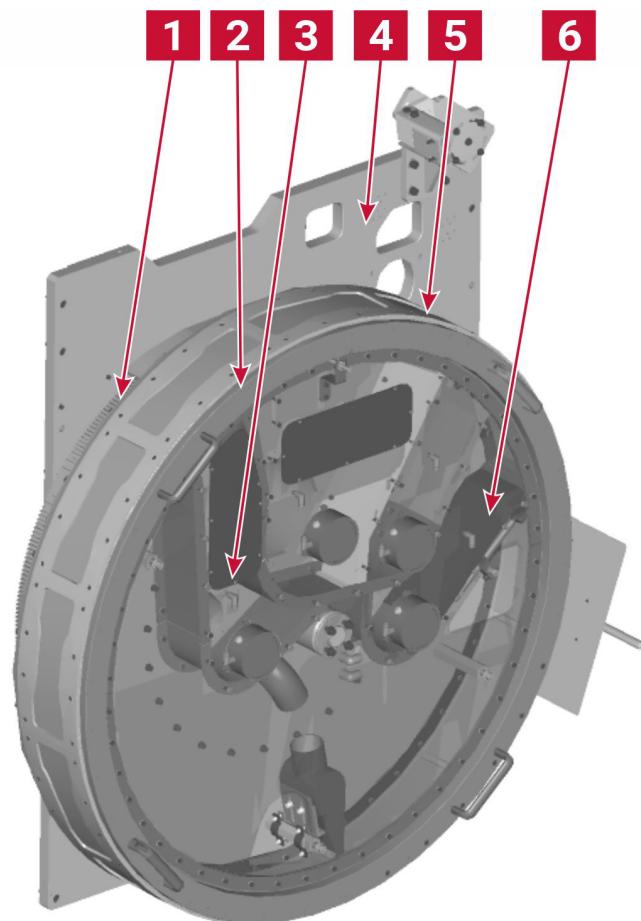
The fluff is drawn on the molds by the suction applied to the internal chambers thanks to the connection to the main fan so as to form a core with the desired dimensions in relation to the size selected.

It is then released thanks to the action of the core-compressor which picks it up from the mold in an area where the partitions exclude the suction and is inserted in the production process.

The drum is put in motion by means of a driving belt powered by a motor-reduction gear system located on a plate adjacent to the drum plate.

The process unit consists of the following components:

- | | |
|------------------------------|--|
| 1. Driving geared wheel | 4. Supporting plate for drum structure |
| 2. Drum wheel | 5. Molds |
| 3. Suction internal chambers | 6. Partitions |



Technical specification	
Maximum speed of material:	Refer to purchasing contract
Technical data	
Servomotor	Refer to 1388M1 instructions manual
Reduction gear:	Refer to 1388M1 instructions manual
Pulley	Refer to 1388M1 instructions manual
Driving belt:	Refer to 1388M1 instructions manual

Transmission

The CF-DF transmission has the transmission configuration MGPT and is based upon the following units:

- Servo Motor (M)
- Reduction gear (G)
- Pulley (P)
- Timing belt drives (T)

This unit transmission Assembly drawing is A5B16297.

This unit transmission layout is illustrated by the sketch below:

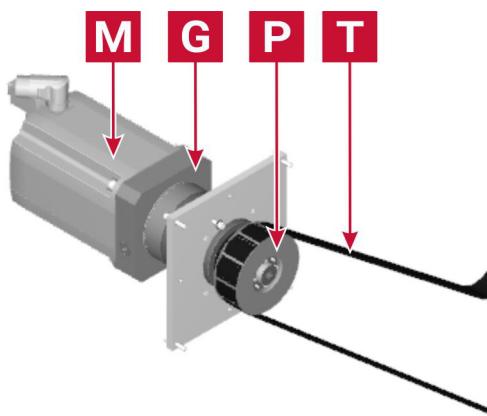


Figure 1 Transmission CF-DF

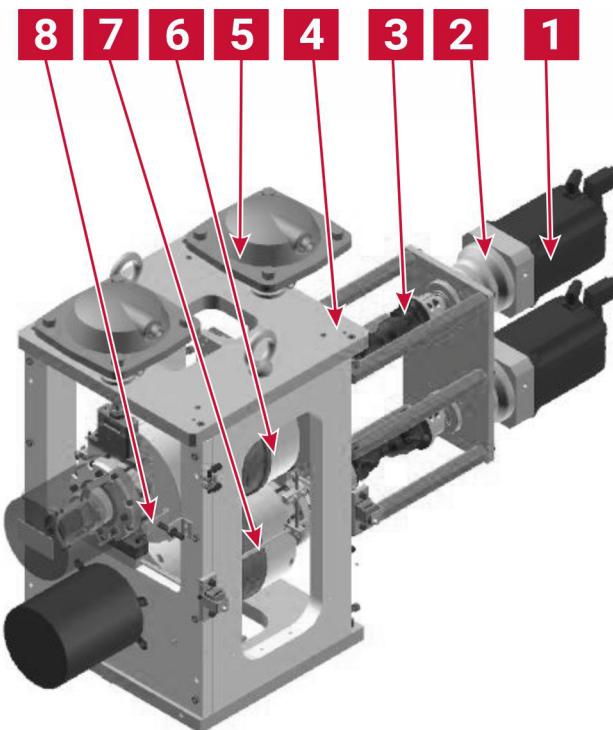
4.2.3 Thermobonding unit CF-THB

Technical description and features

The function of this process unit is to engrave the core.

The unit is composed of the following components:

1. Servomotor
2. Gear motor
3. Cardan shaft
4. Structure
5. Pneumatic actuator
6. Embossing roller
7. Anvil roller
8. Pneumatic actuator sensor



Technical specification	
Maximum speed of material:	Refer to purchasing contract
Max web width	Refer to product drawing
Technical data unit	
Servomotor:	4,55kW14,5Nm3000rpm SIEMENS/1FT7084-1AF71-1DG1-Z Y
Gearbox	SP100S-MC1-3-1K1 WITTENSTEIN/SIEMENS 1FT608.
Cardanic Joint	0.107.131 L=200+25 ELBE/

Transmission

The CF-THB transmission has the transmission configuration MGSU and is based upon the following units:

- Servo Motor (M)
- Gearbox (G)
- Cardanic joint (SU)

This unit transmission Assembly drawing is A5B38078

This unit transmission layout is illustrated by the sketch below:

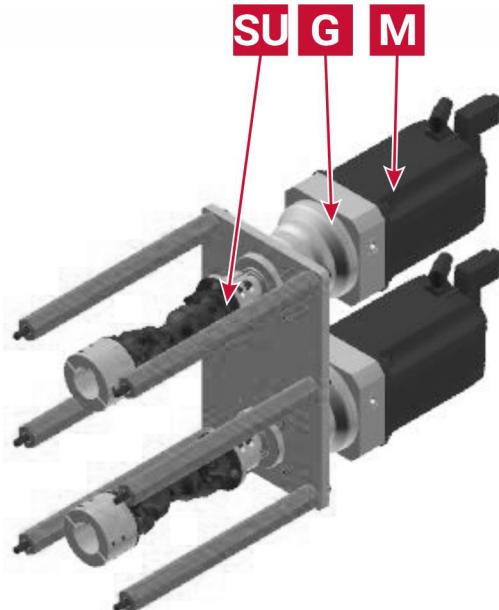


Figure 2 Transmission CF-THB

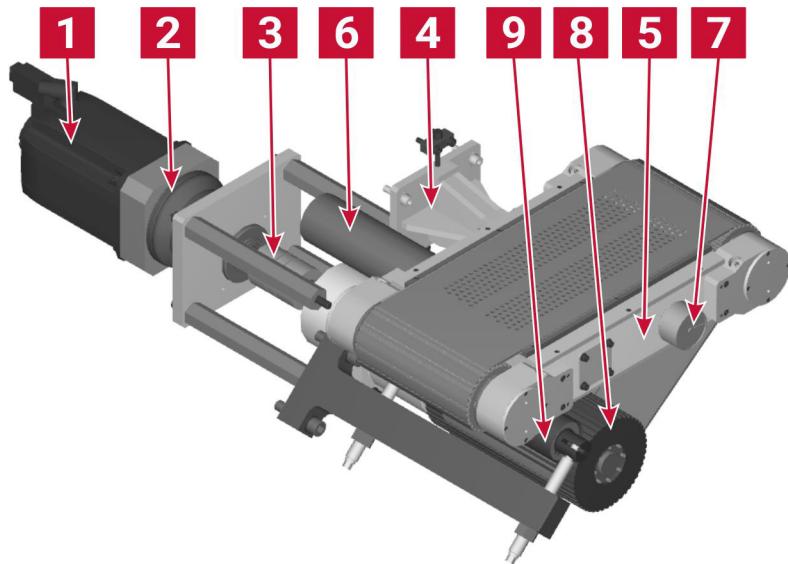
4.2.4 Conveyor CF-CV

Technical description and features

This process unit conveys the material along the line at the next unit.

The process unit consists of the following components:

1. servomotor
2. reduction gear
3. Coupling
4. conveyor support
5. vacuum box
6. vacuum hose
7. vacuum gauge
8. driven roller
9. tensioning roller



Technical specification	
Maximum speed of material:	Refer to purchasing contract
Max web width	Refer to product drawing
Technical data unit	
Servomotor:	4,55kW14,5Nm3000rpm SIEMENS/1FT7084-1AF71-1DG1-Z Y
Reduction gear	
Coupling	

Transmission

The CF-CV transmission has the transmission configuration MGC and is based upon the following units:

- Servo Motor (M)
- Reduction Gear (G)
- Coupling (C)

This unit transmission Assembly drawing is A5B29760.

This unit transmission layout is illustrated by the sketch below:

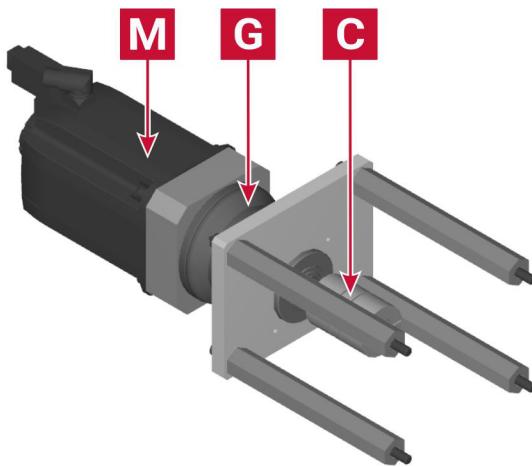


Figure 3 Transmission CF-CV

4.2.5 Embossing unit CF-EM

Technical description and features

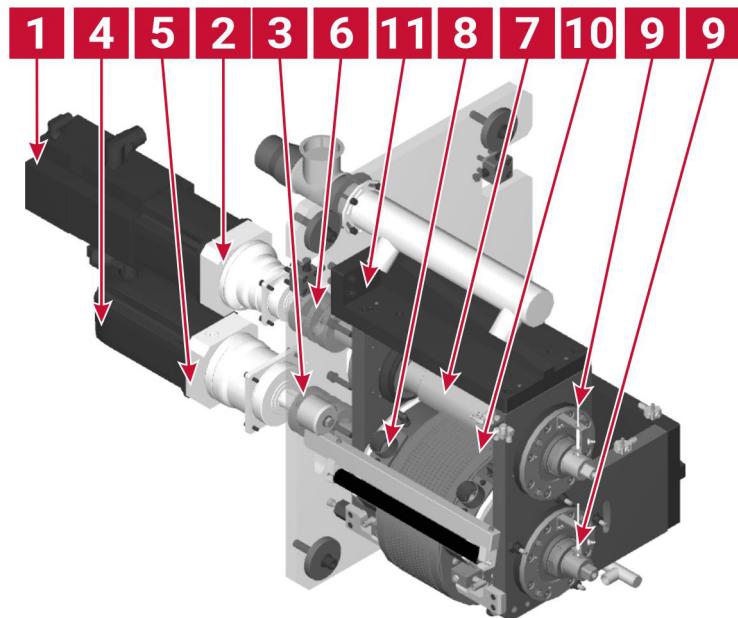
This process unit cuts a portion of core and move it onto the accelerator.

The transfer roller is fitted with two suction sectors that are connected to a suction fan.

All rollers are fitted on supports with special greasers to lubricate the bearings.

The unit is composed of the following components:

- | | |
|-----------------------------------|------------------------------------|
| 1. Cutting roller servomotor | 7. Cutting roller |
| 2. Cutting roller reduction gear | 8. Suction cams of transfer roller |
| 3. Cutting roller coupling | 9. Unit phasing detection sensor |
| 4. Transfer roller servomotor | 10. Transfer roller |
| 5. Transfer roller reduction gear | 11. Structure |
| 6. Transfer roller coupling | |



Technical specification	
Maximum speed of material:	Refer to purchasing contract
Max web width	Refer to product drawing
Technical data unit	
Cutting roller Servomotor:	10,4kW33Nm3000rpm SIEMENS/1FT7087-7SF71-1BG0-Z Y
Cutting roller Gearbox	SP100S-MC1-3-1K1 WITTENSTEIN/SIEMENS 1FT608.
Cutting roller Coupling	BIELLETT F265 Ø32 Ø50 SCHMIDT-KUPPLUN/F265.11 Ø32 Ø5
Vacuum roller Servomotor:	1FT7086-1AF71-1DG1 SIEMENS/1FT7086-1AF71-1DG1-Z Y
Vacuum roller Gearbox	SP140S-MC1-7-1K1 WITTENSTEIN/SIEMENS 1FT608.
Vacuum roller Coupling	BIELLETT F265 Ø40 Ø50 SCHMIDT-KUPPLUN/F265.11 Ø40 Ø5

Transmission

The CF-EM transmission has the transmission configuration MGC and is based upon the following units:

- Servo Motor (M)
- Gearbox (G)
- Coupling (C)

This unit transmission Assembly drawing is A5B25455 and A5B14373.

This unit transmission layout is illustrated by the sketch below:

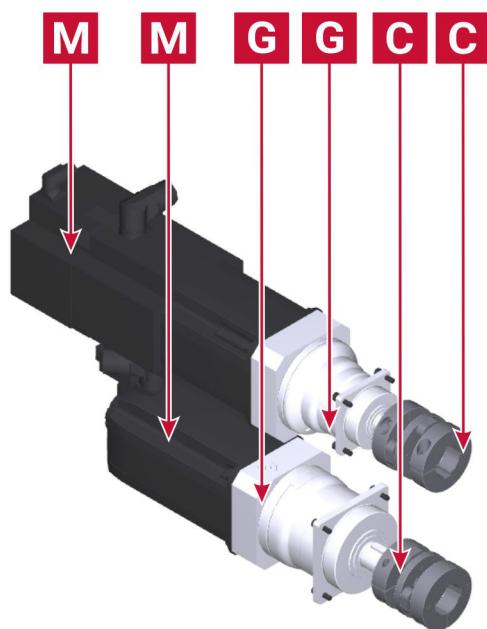
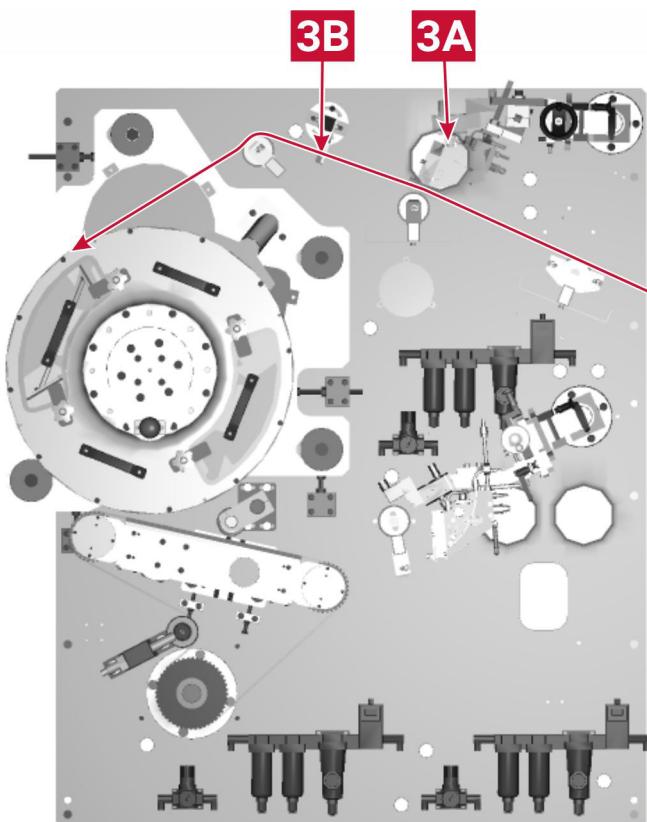


Figure 4 Transmission CF-EM

4.3 TISSUE UPPER PROCESS MODIFICATION (TIUP)

POS.	UNIT CODE	FUNCTION DESCRIPTION
3A	A5B00233F095	GLUE HEAD BRACKET SIZE PART
	A8B15100031	GLUE HEAD SUPPORT PLATE
3B	TIUP-WD	WEB DETECTION

Note: units not supplied with the upgrade kit and that are reused from existing machine are highlighted **in red**



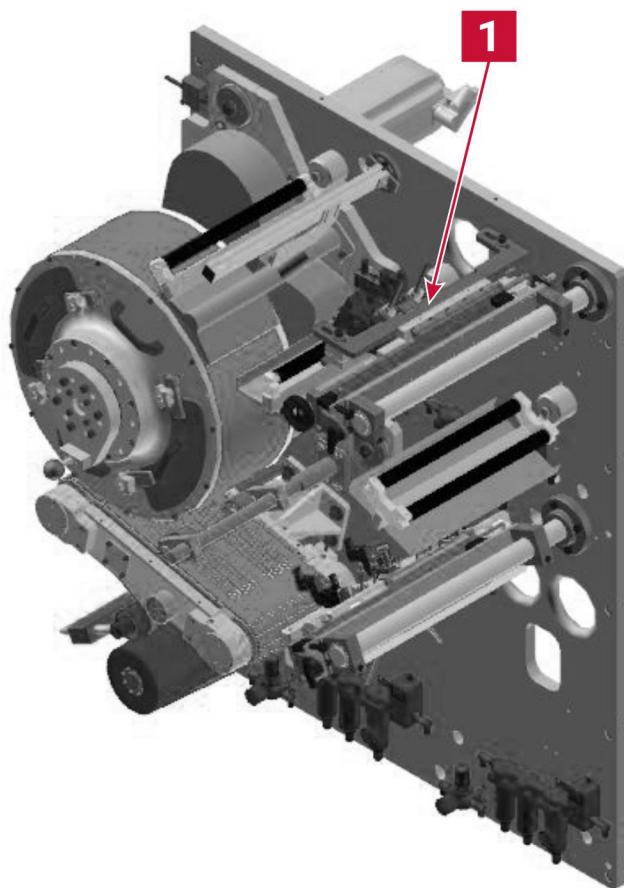
4.3.1 Glue applicator TIUP-GA

Technical description and features



WARNING

For technical description about Glue applicator (1), refer to the manufacturer's operating manuals.

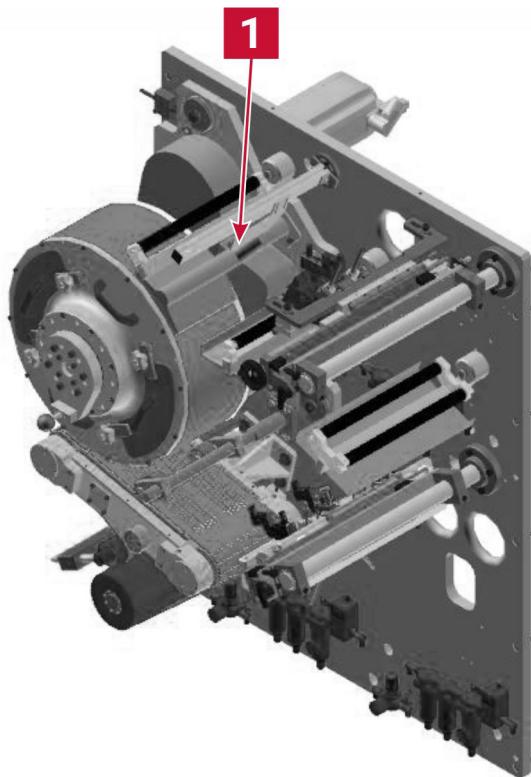


4.3.2 Web detection TIUP-WD



WARNING

For information about WEB DETECTION (1) sensor refer to paragraph 3.2 "WEB DETECTION".



5 OTHER ADDED COMPONENTS OF UPGRADE KIT

The upgrade kit is also equipped with:

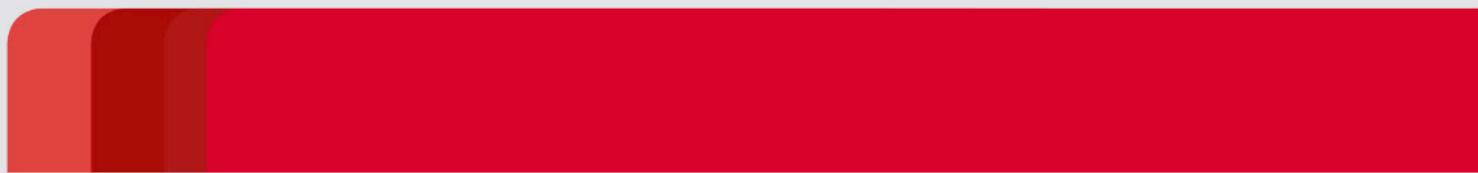
UNIT CODE	FUNCTION DESCRIPTION
C1B05804	M151A MOD A4B11300
A5B06818	SENSOR SUPPORT BAR L.550
A8B60012117	CONDENSATE COLLECTION TRAY
A5B00639	ASSY ROLLER D32 L400 300 DOP AG
E5B10063	MODULE 151A MODIFICATION
P5B04697	MODULE 151A MODIFICATION
C1B05805	M151B MOD A4B10539 - A4B12426
A5B00186	ASSY ROLLER D32 L400 300 SIN AG
C1B05807	M202B MOD A4B10543 - A4B11862
E5B10066	MODULE 202B MODIFICATION
P5B04701	MODULE 202B MODIFICATION
C1B05808	M251A MOD A4B11251
A8B11044254	MODULE PLATE 1120X890X30
C1B05809	M251B MOD A4B11146 - A4B11864
A5B00010	ASSY ROLLER D32 L400 300 SIN
A5B04281	SENSOR SUPPORT
A5B16979	TRAY SUPPORT
A8B11014458	PLATE 100X30X980
A8B11014459	PLATE 100X30X595
A8B11044255	MODULE PLATE 1120X1540X35
E5B10068	MODULE 251B MODIFICATION
P5B04703	MODULE 251B MODIFICATION
C1B05810	M252A MOD A4B11338
A8B11044256	MODULE PLATE 1340X1110X35
C1B05811	M252B MOD A4B11252

A5B00010	ASSY ROLLER D32 L400 300 SIN
A5B09152	GR.TUBAZIONE INFEED CONVEYOR
A8B11014466	PLATE 100X30X850
C1B04803	MOD EMBOSS A5B35915-A5B38073
C1B04804	MOD TRAN EMB A5B35916-A5B38074
A8B11044257	MODULE PLATE 1340X1320X35
E5B10070	MODULE 252B MODIFICATION
P5B04700	MODULE 252B MODIFICATION
C1B04791	MOD FRAMES A4B11187- A4B11867
A5B37878	AS RACK R.BT-2500-2715-PR.B RH
E5B09339	
P5B04039	
C1B05812	KIT MOD VENTIL SYSTEM A4B11264
B2049007291	KIT MOD PIPING 1388M1-M2 TECNOMETAL/
C1B05813	KIT MOD PLATFORM A4B11265
C1B05814	KIT MOD FLOOR SLOTS A5B36248
C1B05815	KIT MOD GLUE SYSTEM A4B11263
C1B05727	Prelancio impianto colle
C1B05946	UPDATE ELECTRICAL CABINETS
E5B10074	MC02 MODIFICATION
E5B10075	MC06 MODIFICATION
E5B10076	MC08 MODIFICATION
C1B05949	ELE&PNE COMPLETION
E5B10077	SERVOMOTOR CABLES MODIFICATION
E5B10078	ELECTRICAL COMPLETION
P5B04696	PNEUMATIC COMPLETION

6 SIZE PARTS

UNIT CODE	FUNCTION DESCRIPTION
C1B05816	KIT MOD SIZE P. MIDI A4B11268
A5B36091F003	SEALINGS FORMING CHAMB D1425
A5B36093F003	BRUSH COVER SEALINGS D1425
A5B39412F003	PRESSING FLAT ROLLER
A4B12427	ADD SIZE P. NEW BORN CHANNELS
A5B36089F021	DRUM WHEEL NB CHANNELS RH
A5B39412F004	ROLLER CHANNELS THB UNIT NB
A5B03789F077	ES ROLLER NB CHANNELS
E5B10071	SIZE P. NEW BORN CHANNELS
A4B12428	ADD SIZE P. MINI CHANNELS
A5B36089F022	DRUM WHEEL MINI CHANNELS RH
A5B39412F005	ROLLER CHANNELS THB UNIT MINI
A5B03789F078	ES ROLLER MINI CHANNELS
E5B10072	SIZE P. MINI CHANNELS
A4B12429	ADD SIZE P. MIDI CHANNELS
A5B36093F002	BRUSH ROLLER
A5B36093F004	BRUSH ROLLER SEALINGS D1425
A5B36089F023	DRUM WHEEL MIDI CHANNELS RH
A5B39412F006	ROLLER CHANNELS THB UNIT MIDI
A5B03789F083	ES ROLLER MIDI CHANNELS

7 Table of Figures



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