EMMEBI IMPIANTI
AEROTEXTILE TECHNOLOGY

MN ROTARY FILTER

The MN self-cleaning air rotary filter has been designed to filter the air continuously and in an over polluted environment with dust and fibre concentrations. The perforated sheet filter cylinder is self-supporting and the rotating is done by means of a belt drive actuated by a gear motor. The cleaning system is done by suctioning the filtering screen by means of a set of suction points that, by means of a chain mechanism actuated by a gear motor, translate horizontally.

The combined effect of the rotation and the translation allows the suction and the cleaning of all the filtering screen.

The filter, having a great range of filtering screens, can be utilized in different fields.

It is possible an easy inspection to the rotating system in the cleaned frontal area, checking the suction and the filtering screen with the system in operation.

The filter can be provided with a water manometer and a differential air pressure switch for the reading of the loss of load pressure and with a clean electrical contact to activate possible alarms.

The dust and/or the fibre collected by the suction points is sent by a fan to the bag packing system. The bag packing system can be a simple bag machine or a pocket filter.

Usually the self-cleaning air rotary filter is manufactured in four types and each type in four sizes.

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TECHNICAL DATA

Gear motor main voltage	**:**	**400 V - 50 Hz - 3F (440V - 60Hz - 3F)**
Installed power for the rotation	**:**	**0,25 kW**
Installed power for the translation	**:**	**0,18 kW**

TYPE	*FILTERING SURFACE*	*AIR CAPACITY*
MN 3/1	***6,75 mq***	***from 10.500 to 19.500 m3/h***
MN 3/2	***13,5 mq***	***from 21.000 to 39.000 m3/h***
MN 3/3	***20,25 mq***	***from 31.500 to 58.500 m3/h***
MN 3/4	***27 mq***	***from 42.000 to 78.000 m3/h***
MN 4/1	***9 mq***	***from 14.000 to 26.000 m3/h***
MN 4/2	***18 mq***	***from 28.000 to 52.000 m3/h***
MN 4/3	***27 mq***	***from 42.000 to 78.000 m3/h***
MN 4/4	***36 mq***	***from 56.000 to 104.000 m3/h***
MN 5/1	***11,25 mq***	***from 17.500 to 32.500 m3/h***
MN 5/2	***22,5 mq***	***from 35.000 to 65.000 m3/h***
MN 5/3	***33,75 mq***	***from 52.500 to 97.500 m3/h***
MN 5/4	***45 mq***	***from 70.000 to 130.000 m3/h***
MN 6/1	***13,5 mq***	***from 21.000 to 39.000 m3/h***
MN 6/2	***27 mq***	***from 22.000 to 78.000 m3/h***
MN 6/3	***40,5 mq***	***from 33.000 to 117.000 m3/h***
MN 6/4	***54 mq***	***from 44.000 to 156.000 m3/h***

The air capacity here above depends to the department, type of raw material, the application of the plant and the type of filter media installed.

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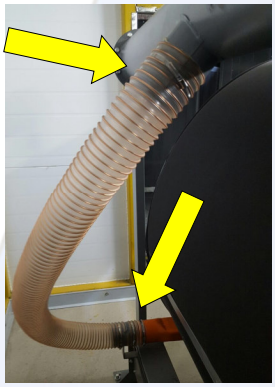
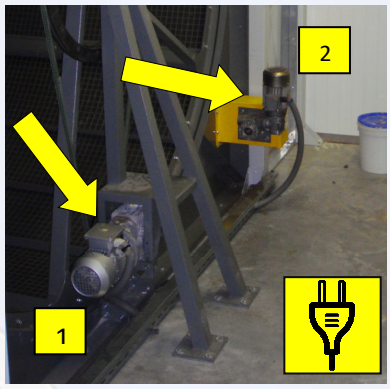
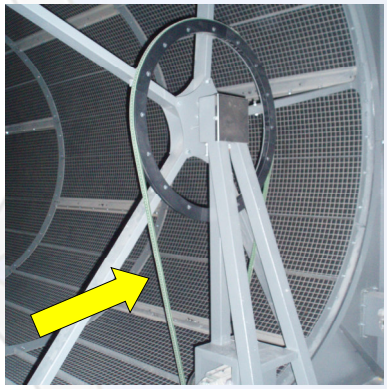
STARTING PROCEDURES

The self-cleaning air filter can indifferently work in a circuit in pressure or in depression, the latest is the preferred condition.

1	Connect the suction points to the collecting equipment as: - PVC suction mouth with the supporting structure - Flexible pipes with PVC suction mouth and the main shaft	
2	Supply the electrical main to the rotating gear motor (1), then to the translating gear motor (2)	
3	Check that the belt drive is properly stretched	

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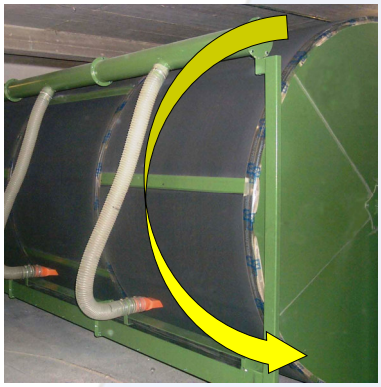
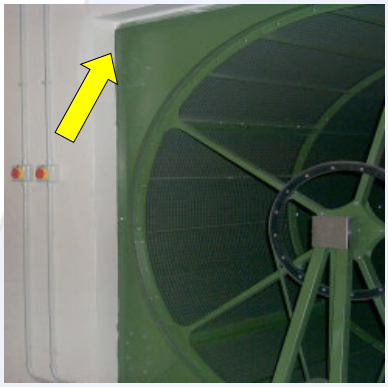
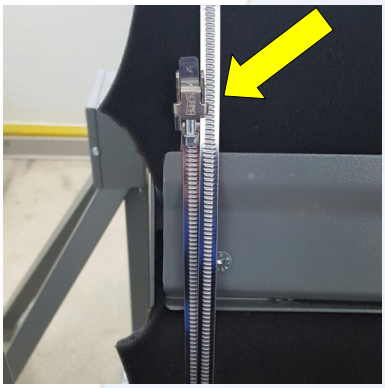
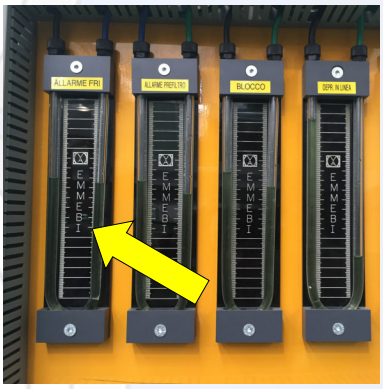
4	Check that the drum is running in the right direction. A wrong rotation (opposite direction) may break the filtering media.	
5	Check that the sealing between the structure (Pos. 5 Drawing C. N20) and the wall is perfectly done	
6	Mount the filtering screens a) insert the filtering screen under the support of the packing holder and tight the fixing screws b) rotate the filter of a sector and repeat the over described operation with a new screen	
7	c) stretch the first screen and hook it to the point packing d) mount the cover and tight the fixing screws	

8	e) repeat the tasks b) c) and d) up the completion of the filter f) mount the hose clamps at the side of each module, proportionally spacing the filtering screens and tight the screws of the hose clamps. ***Note***: after these tasks the filtering screens must appear smoothly stretched.	
9	Wind the felt sealing, insert the hose clamp, mount in accordance with the drawing and tight the screws of the hose clamps	
10	Adjust the position. There must be no contact points among the suction points and the drum. Any contact could tear the filter septum.	
11	Check that the differential air pressure switch is properly adjusted. This adjustment depends on the type of the filtering screen and however shall not exceed 600 Pascal. ***Pay Attention:*** This task is carried out by our technicians or shall be defined by the supplier.	

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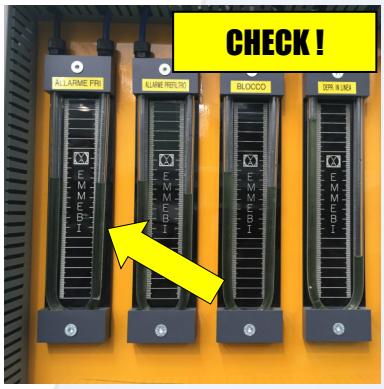
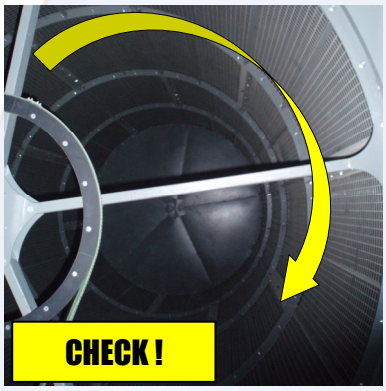
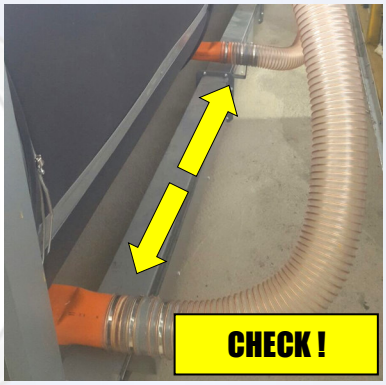
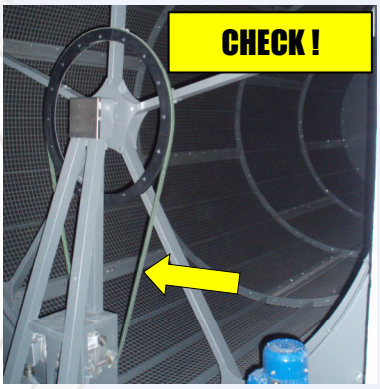
AEROTEXTILE TECHNOLOGY

MAINTENANCE PROCEDURES

1	Periodically check the loss of pressure of the filter by reading the manometer and make sure that does not exceed 600 Pascal	
2	Periodically check the rotation of the drum	
3	Periodically check the translation of the suction points	
4	Check the status and the stretching of the drive belt	

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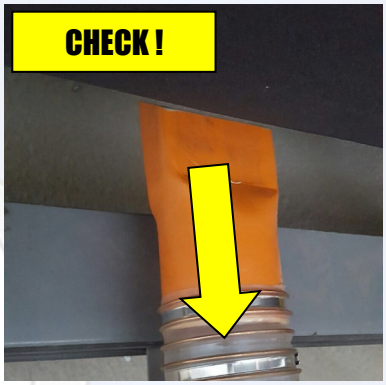
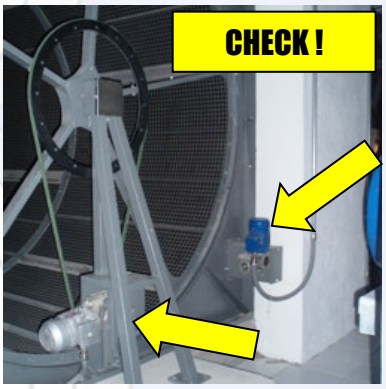
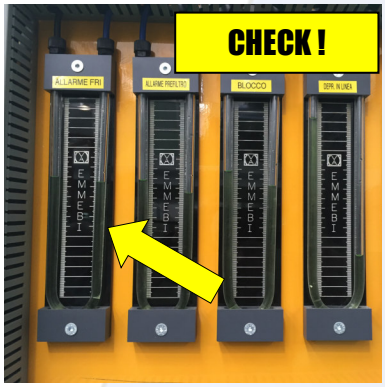
5	Check that the felt packing is in the proper position	
6	Check the filtering screens status	
7	Check that the suction points are free in the right position and that there is a correct air suction	
8	Periodically check the status of the ball bearings, of the belt drive and the running mechanisms	

9 Normally check that the differential air pressure switch is working



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MAINTENANCE LIST

For a proper maintenance of the system, all the components and the running mechanisms should be visually checked every day.

Spare part	Frequence of intervention					
	Weekly	*Monthly*	*Every 3 months*	*Every 6 months*	*Every Year*	*Every 2 years*
Filter Media						
PVC aspiration mouths						
Green trapezoidal belt						
PVC superflex pipe						
Polyprophylen Sealing for dust						
Belts						
Gear Motor						
Pressure safety						

Check the status of the component

Change the component (adviced)

Change the component (max time)

Grease

We advice to keep one piece or set in your storehouse

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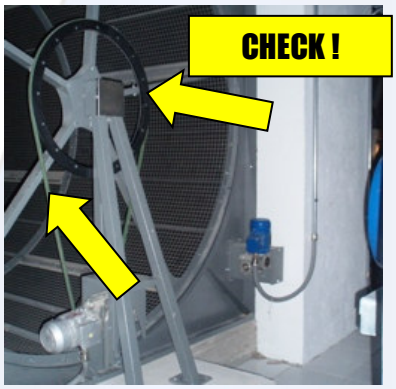
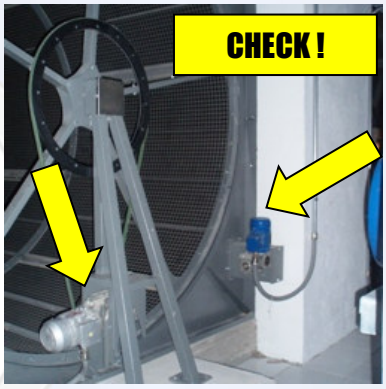
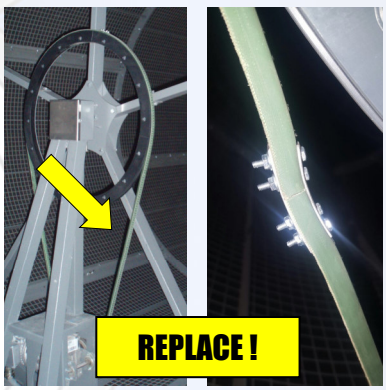
INTERVENTIONS

1	If the loss of pressure shown by the water manometer exceeds 300 Pascal and all the system works normally, then it is necessary to replace all the filtering screens.	
2	If the rotation of the shaft is not regular, check the rotating mechanisms and the ball bearings.	
3	If the translation of the suction points is not normal, check the functioning of the gear motor. If so, dismount the panel and check the belt drive and the running mechanism.	
4	If the belt drive is worn, then replace it. If the stretching due to the gear motor weight is not enough then it is necessary shortening the drive belt dismounting the junction plate.	

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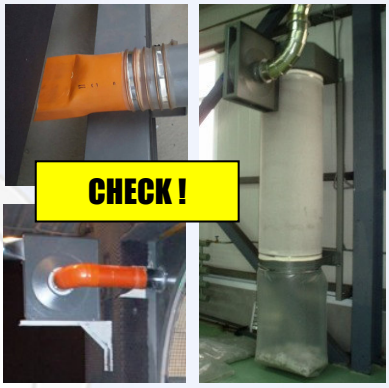
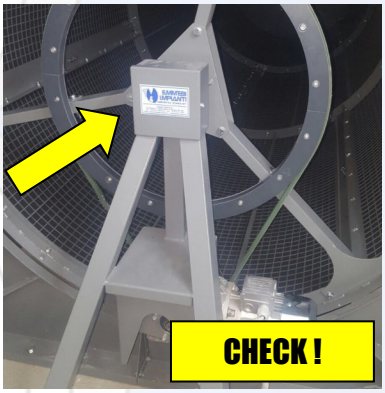
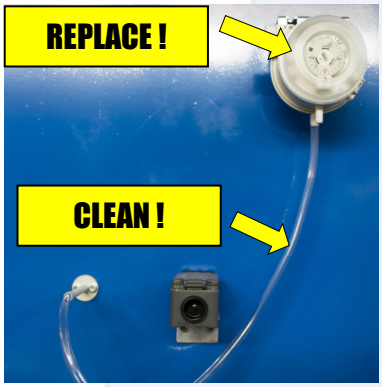
5	If the felt packing is worn then it is necessary to replace it. If its position is not correct then it is necessary to loose the clamp and set it in the right position.	
6	If one or more filtering screens are found damaged, it is necessary to replace them and find out the cause.	
7	If the suction points are found blocked then clean them. If they are worn, replace them. If their position is not the right one, set them properly. In case the suction is not enough, check the fan, the piping and the air pocket filter.	
8	If the ball bearings are found worn replace them. However the average working time is up to 20,000 hours.	

9 If the differential air pressure switch does not work, check that the air pipings are not blcoked otherwise clean them. If the pipings are free, then replace the differential air pressure switch.



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FILTER MEDIA MAINTENANCE

TYPE	Ø	NUMBER OF SECTOR	FILTER MEDIA POLYURETAN TYPE	FILTER MEDIA linear meter	SEALING FELT linear meter
MN 3/1	1440 mm	1	n. 3 1500x1350x12mm	5	5
MN 3/2		2	n. 6 1500x1350x12mm	10	
MN 3/3		3	n. 9 1500x1350x12mm	15	
MN 3/4		4	n. 12 1500x1350x12mm	20	
MN 4/1	1910 mm	1	n. 4 1500x1350x12mm	6,5	6,5
MN 4/2		2	n. 8 1500x1350x12mm	13	
MN 4/3		3	n. 12 1500x1350x12mm	19,5	
MN 4/4		4	n. 16 1500x1350x12mm	26	
MN 5/1	2390 mm	1	n. 5 1500x1350x12mm	8	8
MN 5/2		2	n. 10 1500x1350x12mm	16	
MN 5/3		3	n. 15 1500x1350x12mm	24	
MN 5/4		4	n. 20 1500x1350x12mm	32	
MN 6/1	2870 mm	1	n. 6 1500x1350x12mm	9,5	9,5
MN 6/2		2	n. 12 1500x1350x12mm	19	
MN 6/3		3	n. 18 1500x1350x12mm	28,5	
MN 6/4		4	n. 24 1500x1350x12mm	38	

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ASSEMBLING DRAWINGS

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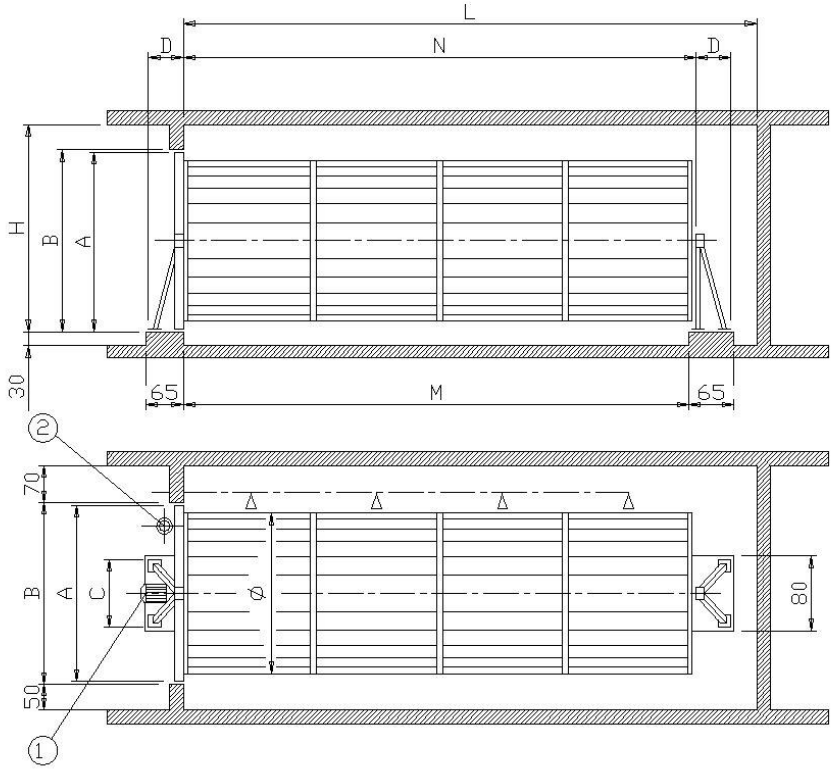
TECNOLOGIA - AEROTESSILE

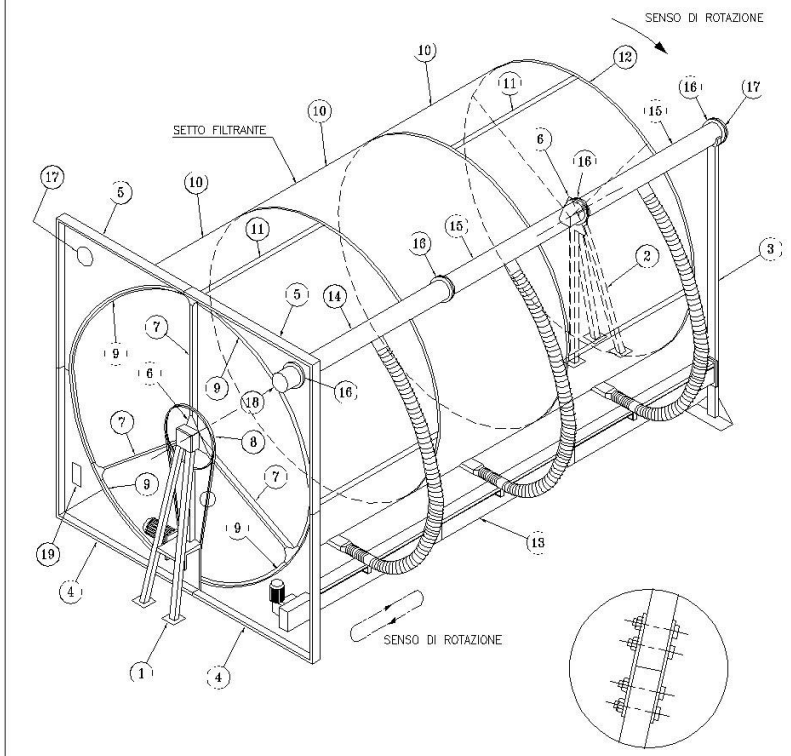
N. DISEGNO: NORM. 01
DATA O AGG.: 26-11-97
DENOMINAZIONE: FILTRO ROTANTE TIPO MN



NB: IL DISEGNO RAPPRESENTA L'ESECUZIONE SINISTRA.

(2) MOTORIDUTTORE CARRINO KW 0.18 - Amp. 0,74 (380V)
(1) MOTORIDUTTORE FILTRO KW 0.25 - Amp. 0,80 (380V)

TIPO	Ø	A	B	C	D	H	L	N	M	SUP.FILT. mq
MN 3 / 1	144	170	172	57	60	210	250	161	150	6.75
MN 3 / 2							400	311	300	13.5
MN 3 / 3							550	461	450	20.25
MN 3 / 4							700	611	600	27
MN 4 / 1	191	210	212	54	47	250	250	161	150	9
MN 4 / 2							400	311	300	18
MN 4 / 3							550	461	450	27
MN 4 / 4							700	611	600	36
MN 5 / 1	239	250	252	51	41	290	250	161	150	11.25
MN 5 / 2							400	311	300	22.5
MN 5 / 3							550	461	450	33.75
MN 5 / 4							700	611	600	45
MN 6 / 1	287	300	302	48	38	340	250	161	150	13.5
MN 6 / 2							400	311	300	27
MN 6 / 3							550	461	450	40.5
MN 6 / 4							700	611	600	54



POS.	DESCRIZIONE		
1	TRABATTELLO ANTERIORE		
2	TRABATTELLO POSTERIORE		
3	SOSTEGNO CARRINO		
4	CASSONE INFERIORE		
5	CASSONE SUPERIORE		
6	CILINDRO – PIASTRA SUPPORTO		
7	CILINDRO – RAZZA ANTERIORE		
8	CILINDRO – FLANGIA DI TRASCINAMENTO		
9	SUPPORTO PARAPOLVERE		
10	MODULO IN LAMIERA FORATA		
11	TEGOLO		
12	CILINDRO – LAMIERA FINALE		
13	CARRINO		
14	CARRINO – CANALE DI ASPIRAZIONE 1° MODULO		
15	CARRINO – CANALE DI ASPIRAZIONE MODULI CENTRALI		
16	CARRINO – FLANGIA DI ASPIRAZIONE		
17	CARRINO – FLANGIA CIECA		
18	CARRINO – RACCORDO		
19	FLANGIA CIECA		

REV.	DATA	DESCRIZIONE	DISEGNATORE	CONTROLLATO	APPROVATO

APPARECCHIATURA: FILTRO ROTANTE TIPO MN

TITOLO: ASSIEME

PROGETTO n°: 20N

SCALA: /

DATA: 27.05.02

DISEGNO N°: AS (tipologia) MN (N° disegno) A (revisione)

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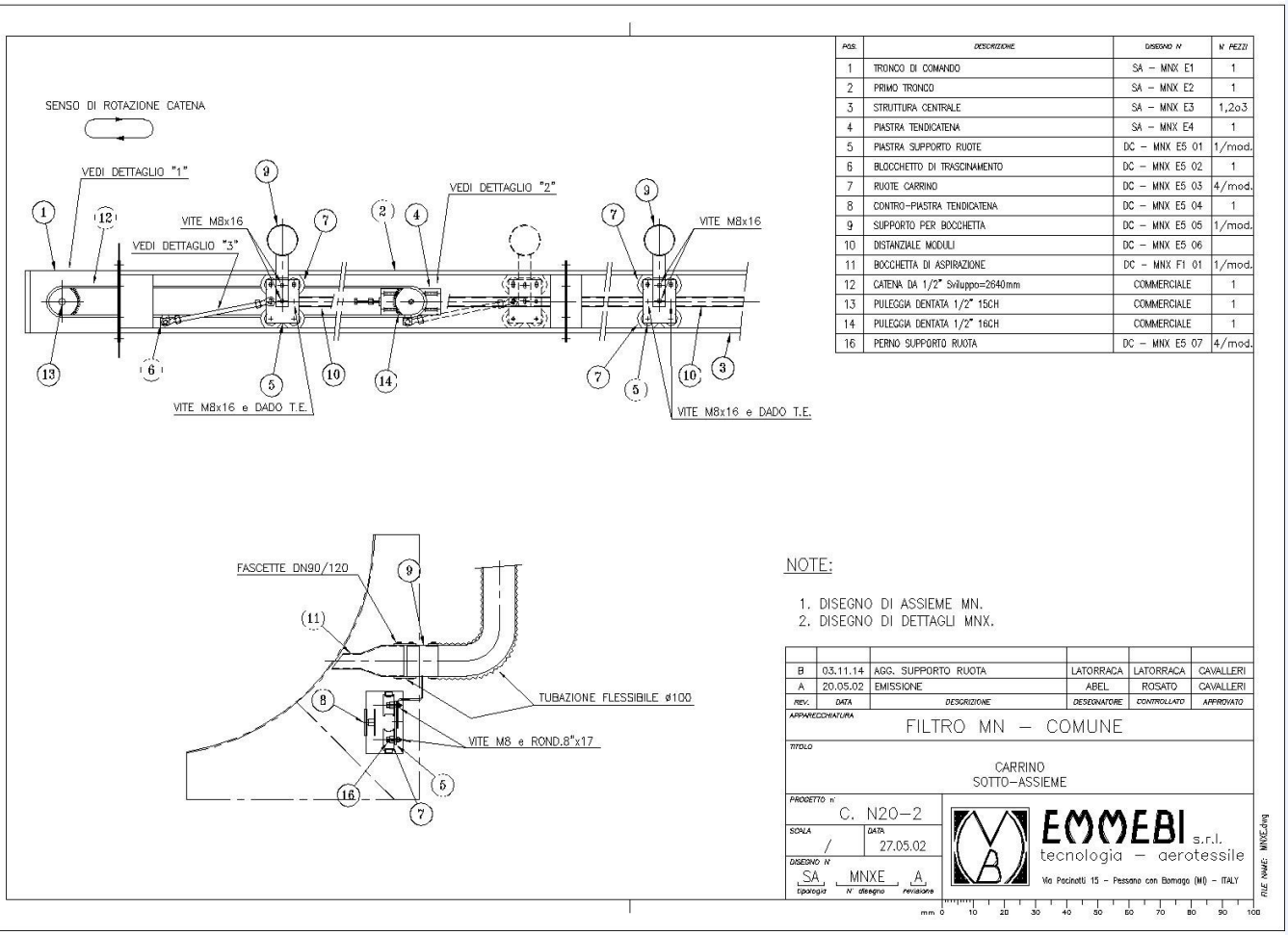
FILE NAME: MN.dwg

mm 0 10 20 30 40 50 60 70 80 90 100



POS.	DESCRIZIONE	DISEGNO N°	N° PEZZI
1	TRONCO DI COMANDO	SA – MNX E1	1
2	PRIMO TRONCO	SA – MNX E2	1
3	STRUTTURA CENTRALE	SA – MNX E3	1,2o3
4	PIASTRA TENDICATENA	SA – MNX E4	1
5	PIASTRA SUPPORTO RUOTE	DC – MNX E5 01	1/mod.
6	BLOCCHETTO DI TRASCINAMENTO	DC – MNX E5 02	1
7	RUOTE CARRINO	DC – MNX E5 03	4/mod.
8	CONTRO-PIASTRA TENDICATENA	DC – MNX E5 04	1
9	SUPPORTO PER BOCCHETTA	DC – MNX E5 05	1/mod.
10	DISTANZIALE MODULI	DC – MNX E5 06	
11	BOCCHETTA DI ASPIRAZIONE	DC – MNX F1 01	1/mod.
12	CATENA DA 1/2" Sviluppo=2640mm	COMMERCIALE	1
13	PULEGGIA DENTATA 1/2" 15CH	COMMERCIALE	1
14	PULEGGIA DENTATA 1/2" 16CH	COMMERCIALE	1
16	PERNO SUPPORTO RUOTA	DC – MNX E5 07	4/mod.

NOTE:

1. DISEGNO DI ASSIEME MN.
2. DISEGNO DI DETTAGLI MNX.

REV.	DATA	DESCRIZIONE	DESEGNATORE	CONTROLLATO	APPROVATO
B	03.11.14	AGG. SUPPORTO RUOTA	LATORRACA	LATORRACA	CAVALLERI
A	20.05.02	EMISSIONE	ABEL	ROSATO	CAVALLERI

APPARECCHIATURA: FILTRO MN – COMUNE

TITOLO: CARRINO SOTTO–ASSIEME

PROGETTO n°: C. N20–2
SCALA: /
DATA: 27.05.02
DISEGNO N°: SA (tipologia) MNXE (N° disegno) A (revisione)

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Via Pacinotti 15 – Pessano con Bornago (MI) – ITALY

FILE NAME: MNXE.dwg

mm 0 10 20 30 40 50 60 70 80 90 100

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SPARE PARTS LIST

pos	ITEM	MN 3/...				MN 4/...				MN5/...				MN6/...			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	Gear motor for translation 	n.1 0,18 kW				n.1 0,18 kW				n.1 0,18 kW				n.1 0,18 kW			
2	Gear motor for rotation 	n.1 0,25 kW				n.1 0,25 kW				n.1 0,25 kW				n.1 0,25 kW			
3	Belt drive 	n.1 2,5m				n.1 3,5m				n.1 4m				n.1 5m			
4	Belt drive splicer 	n. 1				n. 1				n. 1				n. 1			
5	PVC suction point 	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

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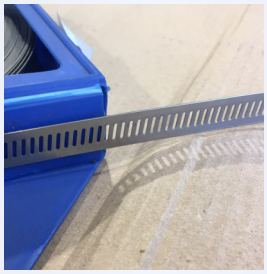
pos	ITEM	MN 3/...				MN 4/...				MN5/...				MN6/...			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
6	Superflex pipe 	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
7	Hose clamp for PVC mouth 	4	8	12	16	4	8	12	16	4	8	12	16	4	8	12	16
8	Hose clamp 	3	5	7	9	3	5	7	9	3	5	7	9	3	5	7	9
9	Hose clamp clip 	3	5	7	9	3	5	7	9	3	5	7	9	3	5	7	9
10	Wheel for PVC mouth 	4	8	12	16	4	8	12	16	4	8	12	16	4	8	12	16

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pos	ITEM	MN 3/...				MN 4/...				MN5/...				MN6/...			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
11	PVC Sector 	n.4				n.4				n.4				n.4			
12	Sealing Felt 	n. 1				n. 1				n. 1				n. 1			