

8.5 *Roller Conveyor for Trailer*

8.5.1 General

Description

In general the Roller Conveyor for the Trailer consists of the following main components

- Side guidance
- Top/ lower Side guidance
- Catch
- Drive station
- Carrying rollers
- Roller chains
- Chain cover plates

Components

Top/ lower Side guidance and chain cover plates are structural steel parts with no need for maintenance.

Function

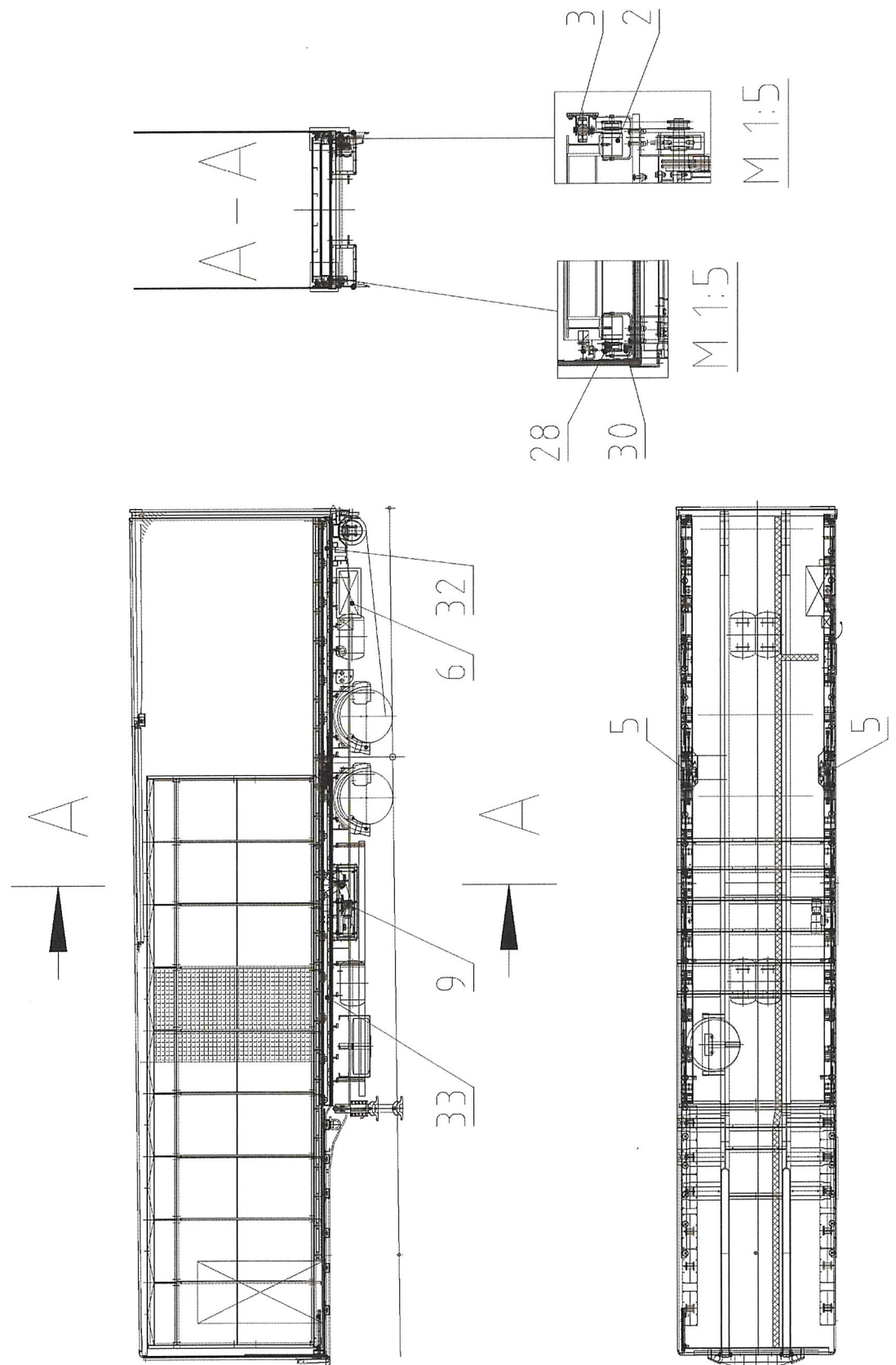
The deck consists of a shop bolted steel structures with two (2) channels on each longitudinal side of the deck. The channels are cross connected by steel members to provide a rigid frame. The roller drives are covered by sheet steel. The guide wheels are fixed to the side channels. All rollers are equipped with heavy duty ball bearing assemblies and lubricated for life.

The rollers are linked by means of chains and double spurred sprockets placed in the channels in order to apply the drive to each roller. The sprockets are a integral part of the roller and sprockets and chain are engaged 180 degrees.

The roller deck is driven by a high efficiency shaft gear motor with a disc brake. An axle drive shaft distributes the rotation to the left and right drive section. The gear motor is totally enclosed and fan cooled. The drive section and the drive unit are totally embedded into the trailer.

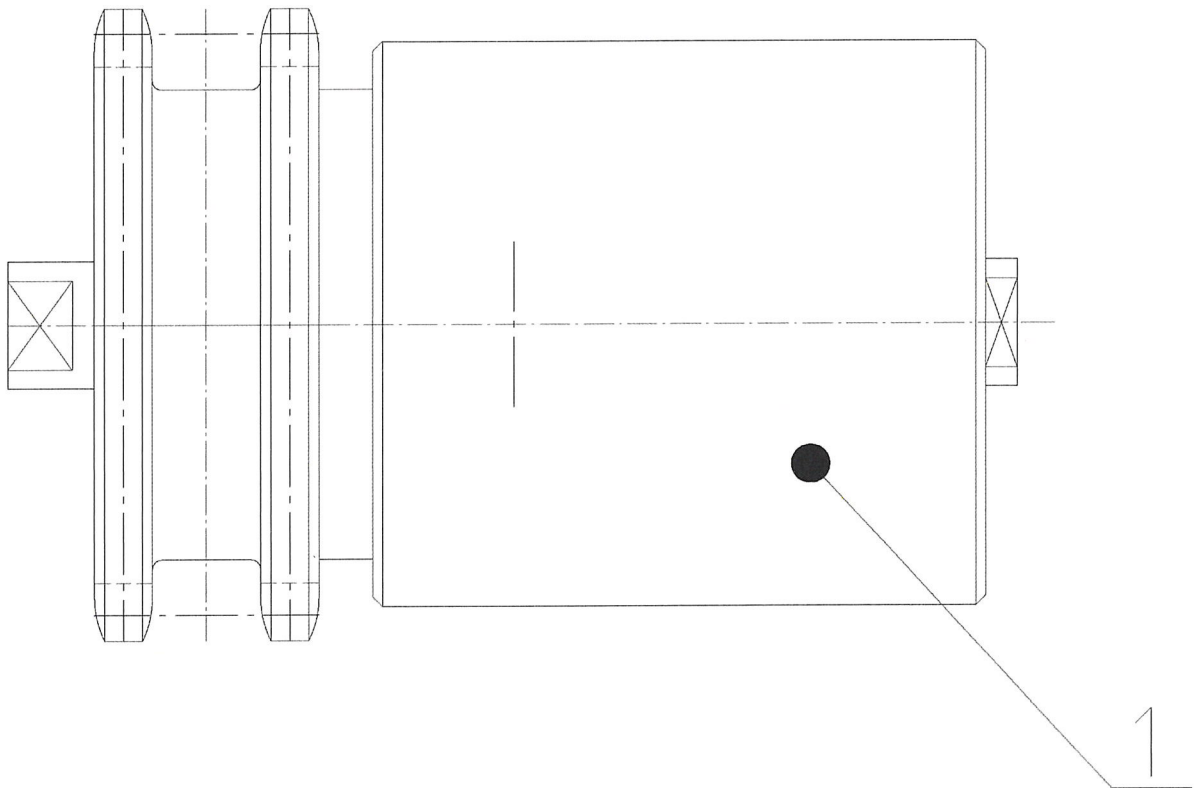
At the rear of the trailer the roller conveyor is equipped with a bolt at each side, to lock the carriage during the transfer of the pallet. To engage or disengage a hook located at the carriage is used.

Operation is via a control panel located at the rear of the trailer.



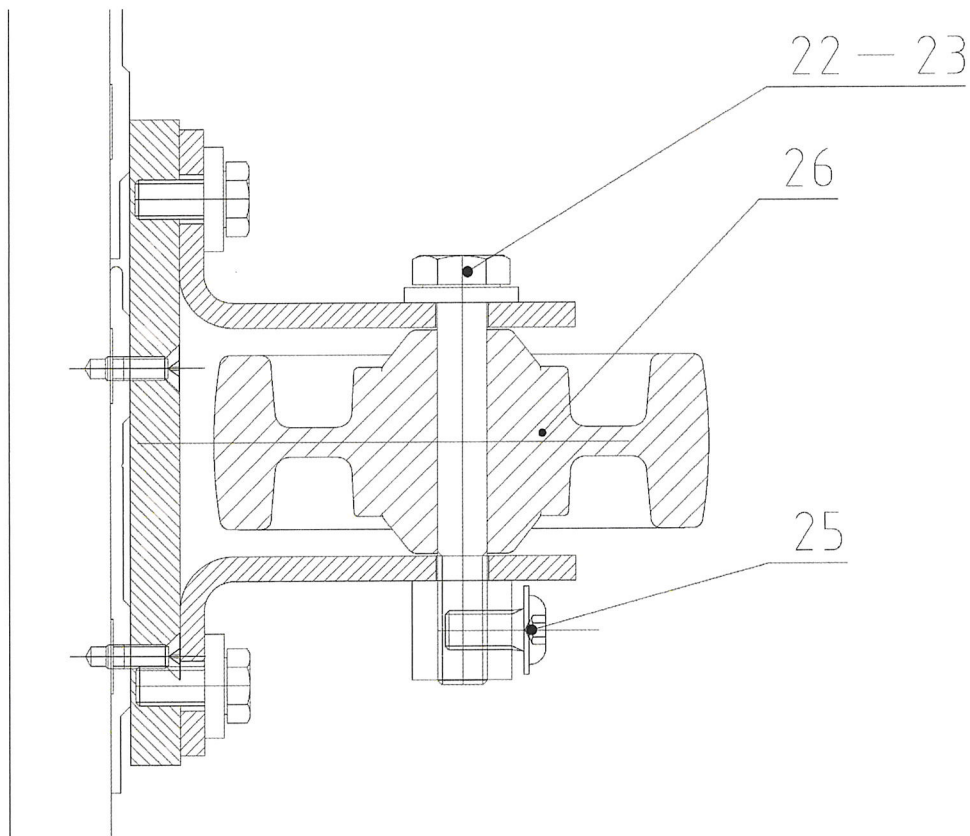
Item	Qty	Description	Type	Part ID No.	Refer to
2	32	Carrying Roller	5/8" x 180 Z=18	30 70181 02 00 000	
3	1	Side guidance		00 70181 03 00 000	
5	2	Catch for Pallets		20 70181 05 00 000	
6	1	Catch for Pallets - pneumatic		30 70181 06 00 000	
9	1	Drive Station		00 70181 09 00 000	
28	56	Top Side guidance		40 70181 00 00 007	
30	28	Lower Side guidance		30 70181 00 00 008	
32	18	Roller Chain 10B-1 a=627,1 P5/8" 93link + Conn. Link Spr. Clip E	DIN 8187	337	
33	10	Roller Chain 10B-1 a=658,8 P5/8" 97link + Conn. Link Spr. Clip E	DIN 8187	338	

8.5.2 Carrying Roller (Item 2)



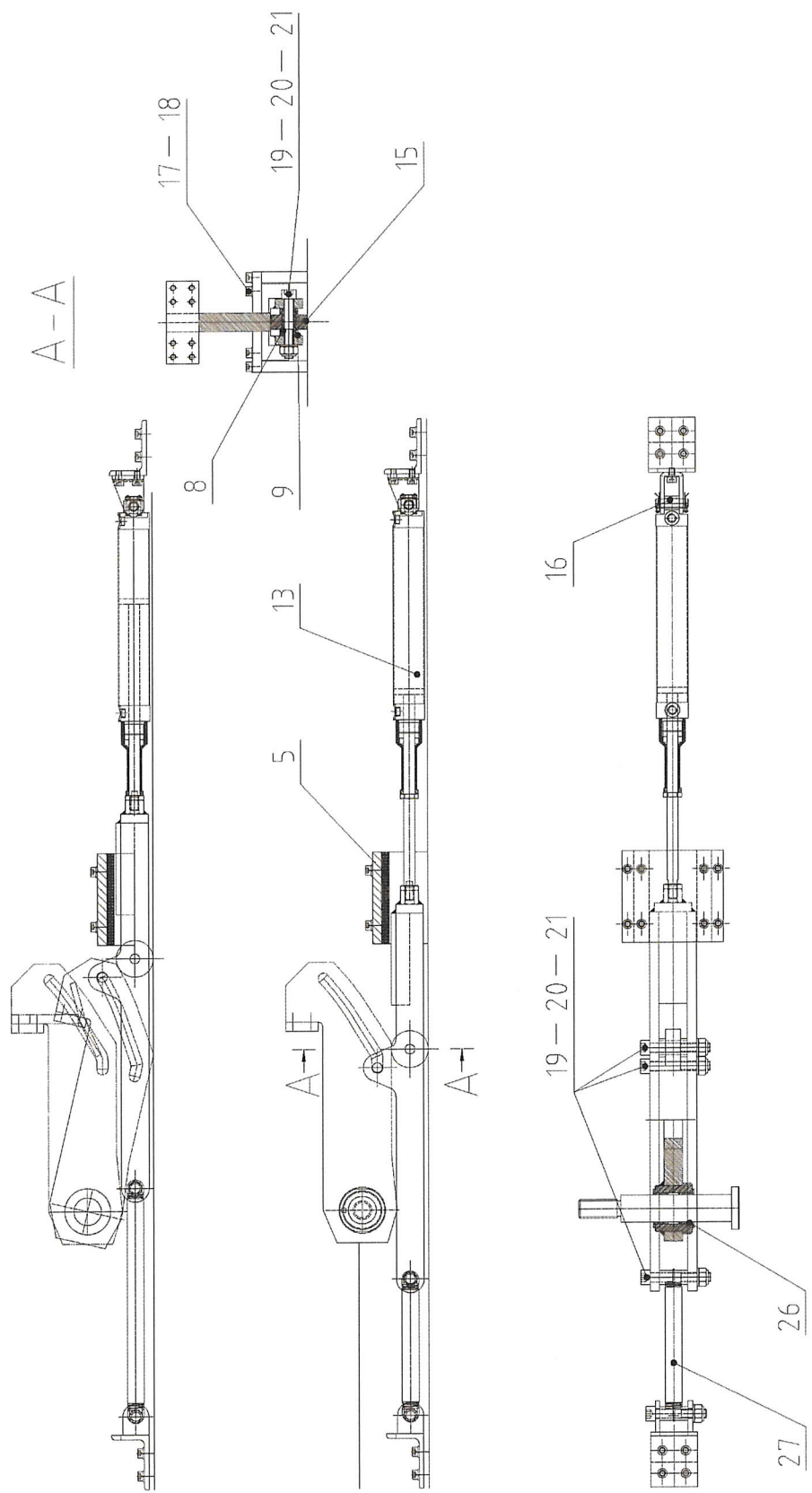
Item	Qty	Description	Type	Part ID No.	Refer to
1	1	Carrying Roller Ø89 x 180 / SW14 – Z = 15 - 5/8"	334	30 70181 02 00 000	DOH - Jennes

8.5.3 Side guidance (Item 3)



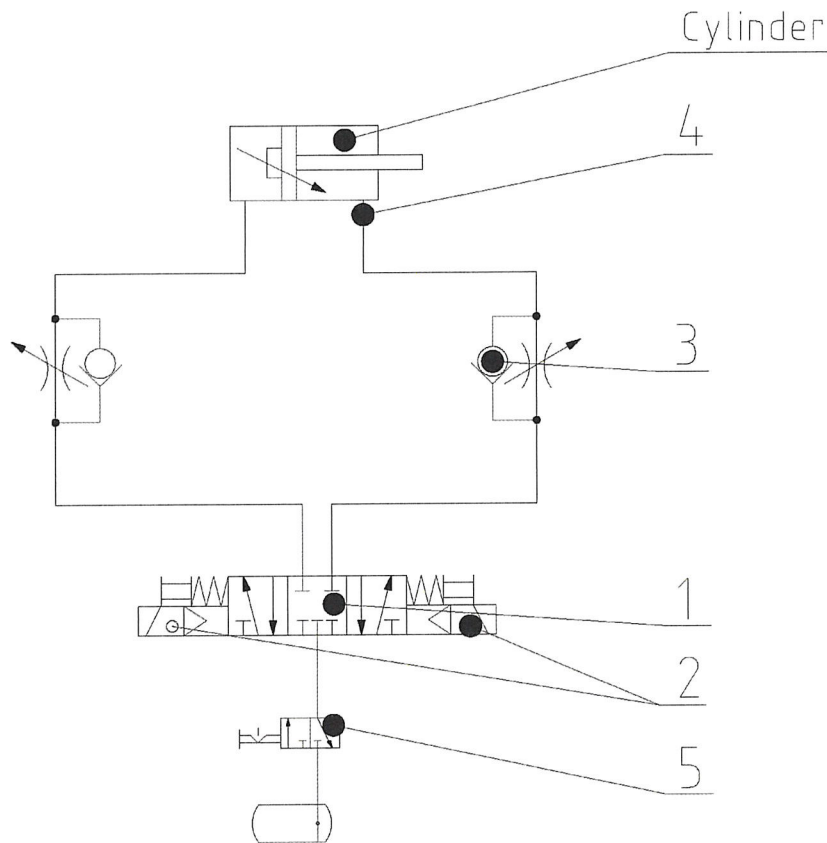
Item	Qty	Description	Type	Part ID No.	Refer to
22	52	Hexagon Head Screw M 10 x 80 - 8.8	DIN 931		
23	52	Conical Spring Washer for Screw joints M 10 – Spr.St.	DIN 6796		
25	62	Raised Head Screw with hexagon socket M 8 x 16 – 8.8	ISO 7380		
26	52	Wheel Ø100 x 35	Poth 100/10K	313	Blickle

8.5.4 Catch for Pallets (Item 5)



Item	Qty	Description	Type	Part ID No.	Refer to
5	1	Sliding Guide		40 70181 05 00 002	
8	1	Bush Carrying Wheel – Ø 15 / 10 x 30		40 70181 05 00 005	
9	2	Bush Carrying Wheel – Ø 20 / 15 x 7		40 70181 05 00 006	
13	1	Pneumatic Cylinder DSEU 32	32–160–P–A / Distance 160 mm	318	Festo
15	1	Roller	LR5202NPPU / Ø 15 x 40 x 15,9	314	INA
16	1	Fastening Cylinder	LBE-32/40	317	Festo
17	8	Hexagon socket head Cap Screw with coarse threads M 6 x 30 – 8.8	DIN 912		
18	8	Spring Ring A 6 – Spr.St.	DIN 128		
19	3	Hexagon socket head Cap Screw with coarse threads M 10 x 65 – 8.8	DIN 912		
20	3	Washer B 10,5 – St.	DIN 125		
21	3	Hexagonal Nut M 10 – 8	DIN 985		
26	2	Collar Bush	BB3016DU	315	IHG
27	1	Extension Spring 2,0 x 18 x 132	Z141B	316	Gutekunst

8.5.5 Catch for Pallets - pneumatic (Items 6)

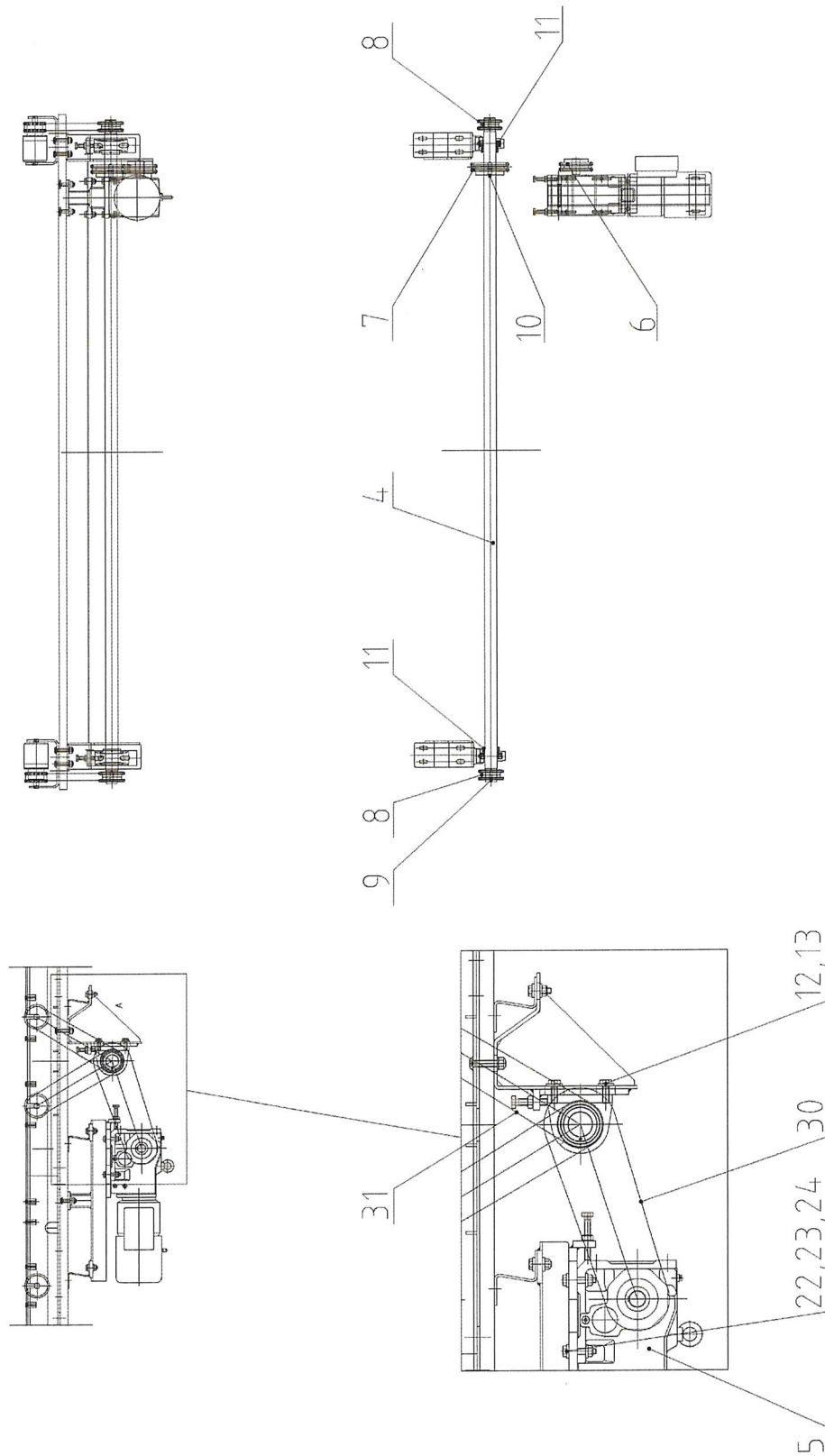


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quick coupling piece
sound absorber
band clamp fitting

Item	Qty	Description	Type	Part ID No.	Refer to
1	2	5/3 Control Valve	MFH-5/3B-1/4-B	319	Festo
2	4	Field Coil	MSFG-24DC/42AC	320	Festo
3	4	Check Valve with Choke	GR-1/4	321	Festo
4	1	Plastic Hose	PU-DUO-BS/25m	322	Festo
5	1	Cut-in Valve HE-D	MIDIG-1/4	323	Festo
6	4	Quick Coupling Piece	LCKN-1/8-PK-6	324	Festo
7	4	Quick Coupling Piece	CK-1/8-PK-6	325	Festo
8	4	Quick Coupling Piece	SCK-PK-6	326	Festo
9	20	Quick Coupling Piece	CK-1/4-PK-6	327	Festo
10	4	Quick Coupling Piece	FCK-3-PK-6-KU	328	Festo
11	4	Sound Absorber	U-1/4-B	329	Festo
12	50	Band Clamp Fitting	PP-378	330	Festo

8.5.6 Drive Station (Item 9)



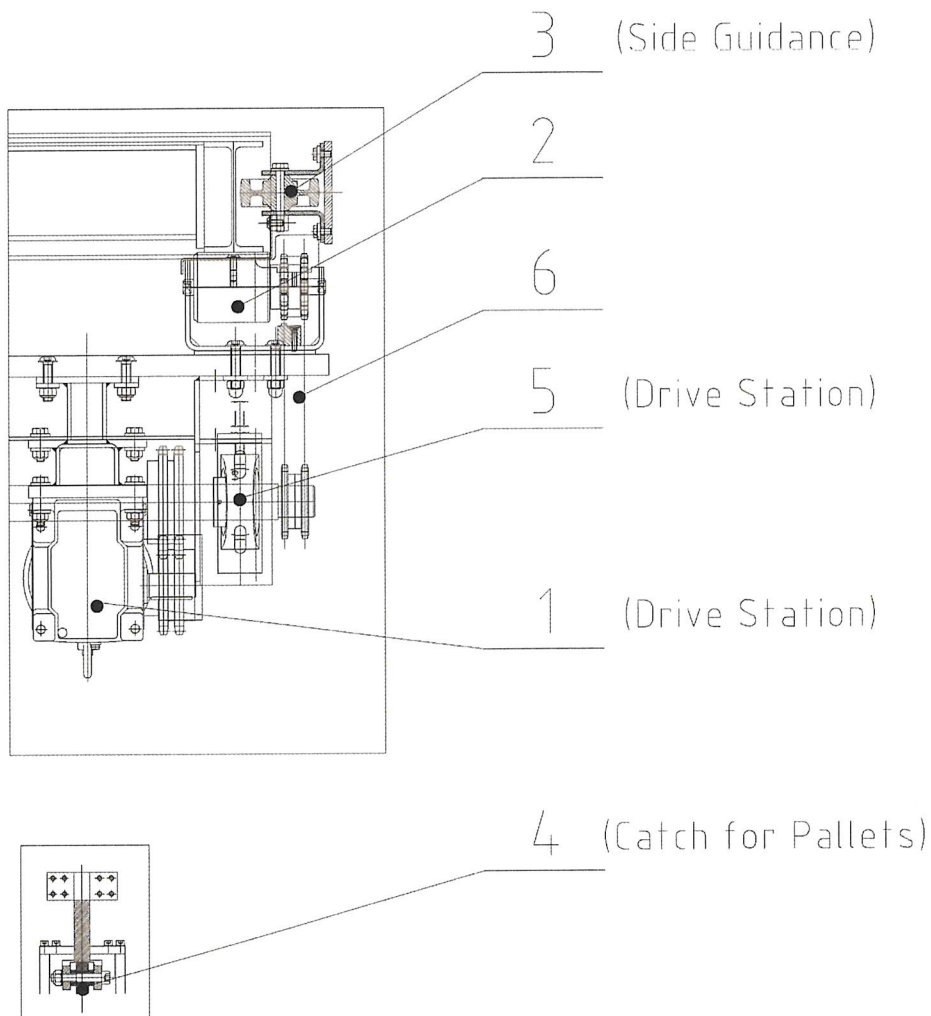
Item	Qty	Description	Type	Part ID No.	Refer to
4	1	Motor Shaft	Ø45 x 2430	20 70181 09 00 001	
5	1	Bevel Gear motor	SK 9012.1 – 80L/4 2 Bre 10HL TF 0,70 / 0,85 kW	311	Nord
6	1	Double Chain Wheel with Bush and Hole with feather key groove	Ø30H7 / B = 44 Z19 – 12B2 – TL2517	331	
7	1	Double Chain Wheel with Bush and Hole with feather key groove	Ø45H7 / B = 44 Z22 – 12B2 – TL2517	332	
8	2	Chain Wheel for two single Roller Chains with Bush and Hole with feather key groove	Ø40H7 / B = 35 Z17 – 2 x 10B1 – TL1610	333	
9	2	Flat Key 12 x 8 x 40	DIN 6885/1		
10	1	Flat Key 14 x 9 x 50	DIN 6885/1		
11	2	Pedestal Bearing	PSEH - 45	312	INA
12	4	Hexagon socket head Cap Screw with coarse threads M 12 x 35 – 8.8	DIN 933		
13	4	Conical Spring Washer for Screw joints M 12– Spr.St.	DIN 6796		
22	4	Hexagon socket head Cap Screw with coarse threads M 10 x 55 – 8.8	DIN 933		
23	8	Washer B 10,5 – St.	DIN 7349		
24	4	Counter Nut M10 - 8	DIN 985		

30	1	Roller Chain 12B-2 a=337,9 P3/4" 55link + Conn. Link Spr. Clip E	DIN 8187	335	
31	4	Roller Chain 10B-1 a=317,4 P5/8" 55link + Conn. Link Spr. Clip E	DIN 8187	336	

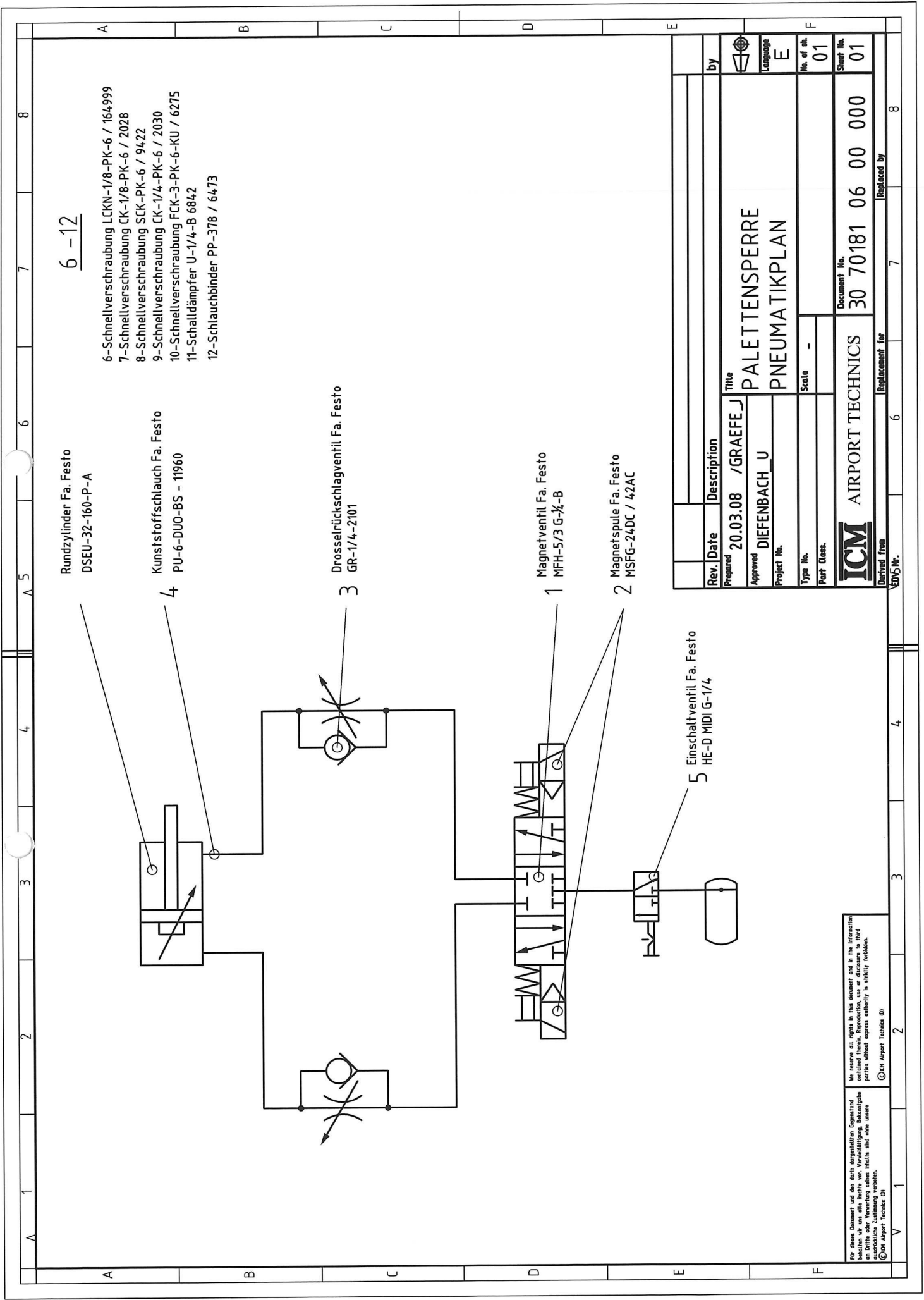
8.5.7 Technical Data

Conveying height	1.210 mm
Dead weight	1.455 kg
Capacity	5.000 kg
Height	130 mm
Length	9.500 mm
Number of Rollers	2 x 16
Roller diameter	90 mm
Centre to centre distance Roller	626,26 mm 658 mm
Pitch of Roller chain	15,875 mm
Number of guide Rollers	2 x 13
Roller diameter	100 mm
Speed	0.2 m/sec.
Acceleration / Deceleration	0.08 m/sec. ²
Drive	0.7 kW 0,85 kW

8.5.8 Lubrication Points



Item	Component	Lube points	Lubricant	Interval	Quantity +Type	Comments
1	Bevel gear	1	ISO VG 220	2 years	1,9 liters Oil change	See Nord Operating manual
2	Carrying Roller	div.	-	-	As required Spray on	Köhler + Bovenkamp Lubricant
3	Wheel	-	-	-	-	Service-free
4	Roller	-	-	-	-	Service-free
5	Pedestal Bearing	1	-	-	-	See Ina Operating Manual
6	Chains	div.	-	-	As required Spray on	Köhler + Bovenkamp Lubricant



Rundzylinder Fa. Festo
DSEU-32-160-P-A

Kunststoffschlauch Fa. Festo
PU-6-DUO-BS - 11960

Drosselrückschlagventil Fa. Festo
GR-1/4-2101

Magnetventil Fa. Festo
MFH-5/3 G-1/4-B

Magnetspule Fa. Festo
MSFG-24DC / 42AC

Einschaltventil Fa. Festo
HE-D MIDI G-1/4

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- 6-Schnellverschraubung LCKN-1/8-PK-6 / 164999
- 7-Schnellverschraubung CK-1/8-PK-6 / 2028
- 8-Schnellverschraubung SKK-PK-6 / 9422
- 9-Schnellverschraubung CK-1/4-PK-6 / 2030
- 10-Schnellverschraubung FCK-3-PK-6-KU / 6275
- 11-Schalldämpfer U-1/4-B 6842
- 12-Schlauchbinder PP-378 / 6473

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