

Magnetic components for conveyor installations

Magnetic

conveying systems



E n g l i s h

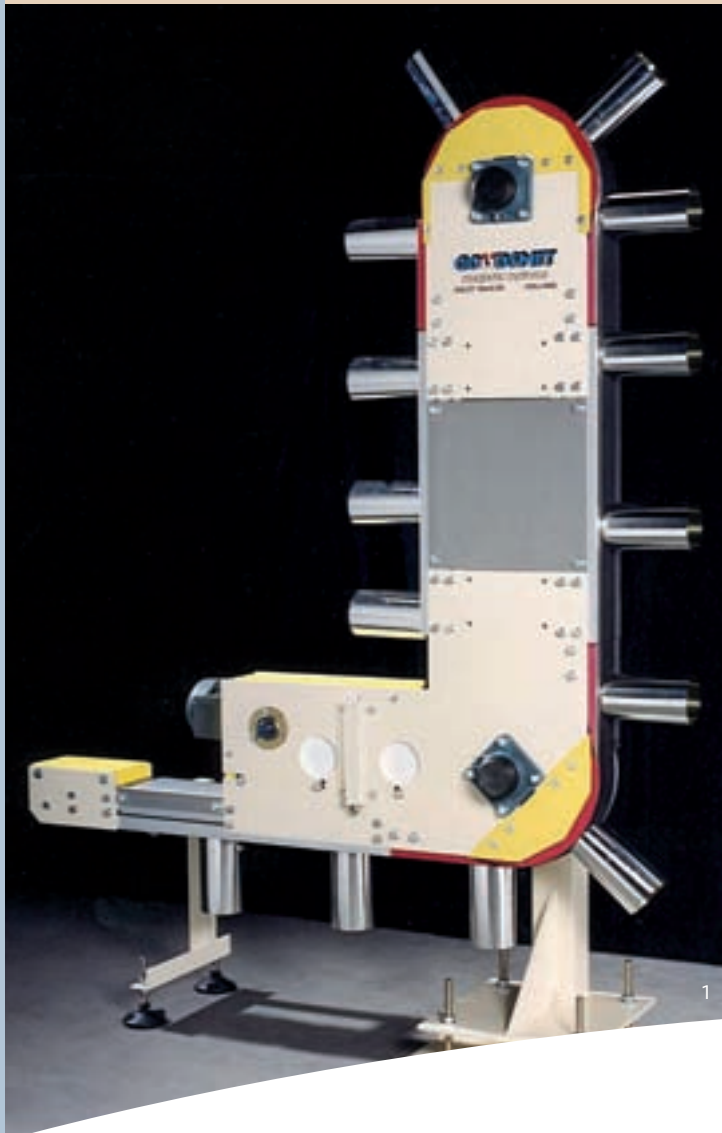
GOUDSMIT
MAGNETIC SYSTEMS

Magnetic components for conveyor installations



The ship of the desert sails on very little water. Camels walk with a curious, swaying gait. That is why people who travel by camel often become seasick. A caravan of camels effortlessly transports whole shiploads right through the desert and across high mountains. Camels are eminently suited for this work; they can survive for months without food or water. The special construction of their wide feet with a web of skin between the toes ensures that they do not sink down in the loose sand. Their eyes are protected by long eyelashes against sand and dust and their crack shaped nostrils can be closed up.

As far as endurance is concerned, Goudsmit's magnet systems are not inferior to the camel. Without any energy supply they keep on carrying their steel load. Even for extreme conditions Goudsmit offers custom-made solutions with sophisticated constructions.



This brochure is a guide for the design engineer. The extensive range of standard magnet components offers flexible possibilities for newly to be built conveyors or for adapting existing installations. It is also possible to have Goudsmit make the complete installation. This will guarantee that the installation is suited for its task. Magnetic conveyor installations have wide application:

- In the tin production industry for conveying can bodies, lids, cans, aerosols, crown caps and screw caps.
- In the cannery industry for conveying empty and filled cans.
- In the baking industry for conveying baking tins, pans and torques.
- In various other industries for conveying, for example, rolls of film, battery cases, coins, lamp caps. In short: all components made of ferrous metal and nickel can be conveyed.

A correct combination of magnetic rails and rollers is of great importance for the proper functioning of a conveyor installation. This brochure will help you make your choice. In case of doubt it is always possible to consult Goudsmit's specialists.

Goudsmit magnet components can be delivered in various sizes and designs.

For wet conditions stainless steel versions can be delivered with a magnetic system poured in PU resin. These are resistant to water and aggressive cleaning agents. Because the magnet components are custom produced under our own control, nearly any conceivable dimension can be delivered.

(1) The Up-ender Turn Conveyor for can bodies is built up with standard magnet components.

A correct combination of magnetic rails and rollers is of great importance for the proper functioning of a conveyor installation. This brochure will help you make a choice. In case of doubt you can always consult Goudsmit's specialists.

Permanent magnetic rails

Selection table for standard magnetic rail systems and their applications

Series Code	Dimensions Width x height w x h [mm]	Type of magnetic system	Application: For conveying	Maximum product sizes [mm]	Max. rising angle	Max. trans- port speed [m/min]
TB - 01	52 x 17	2 pole Ferrite at 1300 Gauss For dry conditions	Crown caps, lids, battery cases, screw caps, tomato cans	Lids Ø 153 Caps Ø 83	0 - 90°	120
			Vertical conveyance of empty cans (with the bottom on the conveyor belt)	Ø 65 x 145	0 - 90°	120
			Horizontal conveyance of empty cans (with the bottom on the conveyor belt)	Ø 65 x 231 Ø 99 x 178	0 - 45°	120
TB - 02	77 x 24	2 pole Ferrite at 1400 Gauss For dry conditions	Vertical and hanging conveyance of empty cans (bottom on belt)	Ø 99 x 178	0 - 270°	90
			Vertical conveyance of cylindrical can bodies	Ø 73 x 113	0 - 90°	120
TB - 03	102 x 24	2 pole Ferrite at 1500 Gauss For dry conditions	Vertical and hanging conveyance of empty cans (bottom on belt)	Ø 99 x 178 Ø 153 x 231 Ø 231 x 278	0 - 270°	120 120 90
			Vertical conveyance of cylindrical can bodies	Ø 99 x 119	0 - 90°	120
			Vertical and hanging conveyance of empty aerosols and 2 piece cans	Ø 65 x 178	0 - 270°	90
TB - 04	102 x 44	2 pole Ferrite at 1650 Gauss For dry conditions	Vertical conveyance of cylindrical can bodies	Ø 99 x 178	0 - 90°	90
			Vertical and hanging conveyance of empty aerosols and 2 piece cans	Ø 65 x 178 Ø 65 x 231	0 - 270°	120 90
			Vertical conveyance of filled cans (thickness of conveyor belt max. 3 mm)	Ø 83 x 46	0 - 90°	90
			Vertical conveyance of empty cans with the bottom on 9 mm thick Intralox belt	Ø 99 x 133	0 - 90°	90
TB - 14	102 x 44	2 pole Ferrite at 1850 Gauss For dry conditions	Vertical conveyance of cylindrical can bodies	Ø 153 x 231	0 - 90°	75
			Vertical and hanging conveyance of empty aerosols and 2 piece cans	Ø 65 x 231 Ø 65 x 153	0 - 270°	120 180
			Vertical conveyance of empty cans with the bottom on 9 mm thick Intralox belt	Ø 99 x 133	0 - 270°	120
			Vertical conveyance of filled cans (thickness of conveyor belt max. 3 mm)	Ø 65 x 102 Ø 73 x 103 Ø 99 x 60	0 - 90°	60 60 90
TB - 54	102 x 44	2 pole Ferrite at 1850 Gauss For wet conditions Water resistant	Vertical and hanging conveyance of empty cans, bottom on 9 mm thick Intralox belt	Ø 99 x 133	0 - 270°	120
			Vertical conveyance of filled cans (thickness of conveyor belt max. 3 mm)	Ø 65 x 102 Ø 73 x 113 Ø 99 x 60	0 - 90°	60 60 90
TG - 43	103 x 22	2 pole Neoflux® at 3550 Gauss For wet conditions Water resistant	Vertical and hanging conveyance of filled cans (thickness of conveyor belt max. 3 mm)	Ø 65 x 102 Ø 73 x 113 Ø 99 x 119	0 - 270° 0 - 270° 0 - 270°	60 60 90
			Sloping conveyance of filled cans on 9 mm thick Intralox belt	Ø 73 x 113 Ø 99 x 60	0 - 20° 0 - 30°	60 60
TG - 44	153 x 22	2 pole Neoflux® at 3650 Gauss For wet conditions Water resistant	Sloping conveyance of filled cans (thickness of conveyor belt max. 3 mm)	Ø 153 x 178	0 - 60°	60
			Sloping conveyance of filled cans on 9 mm thick Intralox belt	Ø 73 x 113 Ø 99 x 119	0 - 20° 0 - 30°	60 60

Example of type code of a magnetic rail:

TBAA100014

TB - 14: Series code

See the selection table on this page for magnetic rails and applications

AA: Magnetic construction

See table on page 4 for the various design variations.

1000: Length of the magnetic rail in mm.

2

(2) Sloping transport of filled cans on 9 mm thick Intralox belt with TG - 44 magnetic rails

Magnetic rails, functions and designs

The design of the magnetic rail depends on its position in the conveyor installation.

Magnetic rails can perform various functions in this.

The following table gives an explanation of these functions.

Table B: explanatory table of magnetic rail functions and designs.

AA : Straight through design

Magnetic rail for straight product flow with constant magnetic force.
Suitable for fitting in between other magnetic rails.

AB AC : Decreasing design

Magnetic rail with decreasing magnetic field for transfer from magnetic to non-magnetic conveyance and vice versa. The decreasing magnetic field guarantees a smooth and trouble-free transfer.
Type AB for fitting at the end of the magnetic path.
Type AC for fitting at the beginning.

AD AE : Reduced pole design

Magnetic rail with reduced magnetic pole for side-ways discharge at the end of the magnetic path.
Type AD with reduced North pole for discharge to the right.
Type AE with reduced South pole for discharge to the left.

AF AG : Reduced pole design

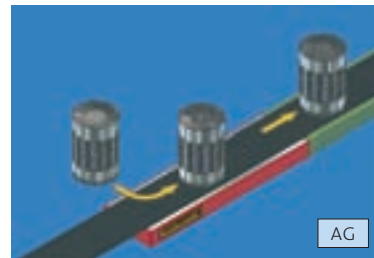
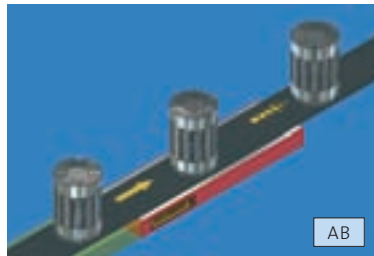
Magnetic rail with reduced magnetic pole for side-ways entry at the beginning of the magnetic path.
Type AF with reduced North pole for entry from the right.
Type AG with reduced South pole for entry from the left.

BA BB : Sloping design

Magnetic rail with sloping shape for optimum connection to a magnetic roller.
Type BA for fitting before a magnetic roller.
Type BB for fitting after a magnetic roller.

BC BD : Sloping and decreasing design

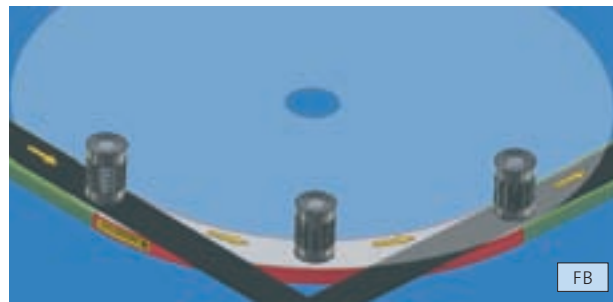
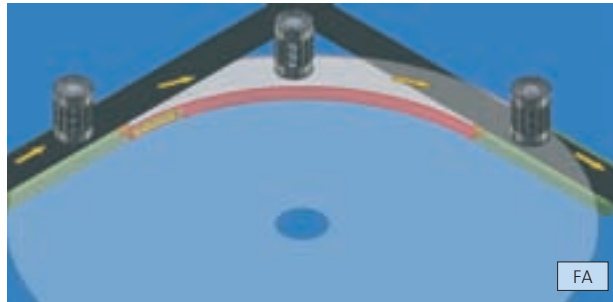
Magnetic rail with sloping shape and decreasing magnetic field for transfer from non-magnetic to magnetic conveyance and vice versa.
Type BC for fitting before a magnetic roller.
Type BD for fitting after a magnetic roller.



The technical information in this brochure is based on our many years of experience with magnetic conveyor systems. The data given in the table on page 3 and page 9 are guidelines. Application of these values in critical conditions can turn out differently. An important condition is the correct choice of conveyor belt. In tin production lines a simple PVC belt can often suffice, while in a wet or greasy environment much higher demands are made of belt surface and quality.

Tip: always seek advice from your conveyor belt supplier.

Table C: explanatory table of magnetic arcs & curves



Magnetic forces can vary with changes in temperature. With temperatures above 50°C the attraction reduces. However, this reverts to the original value if the magnet cools down to room temperature. If the temperature of the magnets rises to above the so-called Curie point, the magnetic force can definitely be lost. As a rule of thumb it can be accepted that Ferrite magnetic components can be used up to 200°C and Neoflux® magnetic components to 80°C.

DA: Magnetic arc design

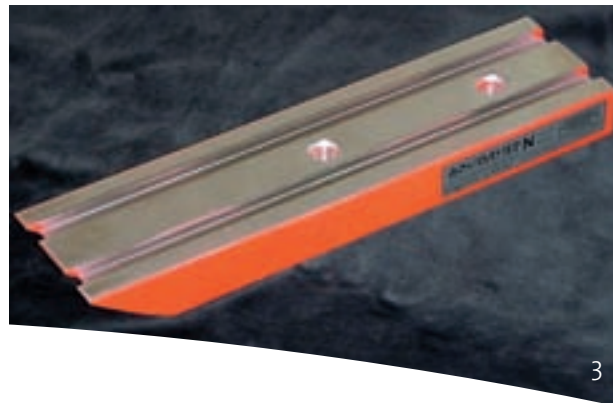
Magnetic arc rail for straight product flow with constant magnetic force.

Suitable for fitting in between other magnetic rails, as alternative to a magnetic roller.

FA FB: Magnetic curve design

Magnetic curve rail for a product flow that branches off is usually combined with a powered disc and crossed conveyor belts.

The magnetic force is constant. Type FA for branching off to the right (curve rail clockwise). Type FB for branching off to the left (curve rail counter-clockwise).



(3) Besides the standard range of magnet components Goudsmit also supplies components in special designs. This magnetic rail has been designed with two cable grooves and bolt holes for confirmation. Special components with specific applications will be manufactured on request, exactly according to your specification.

Permanent magnetic rails

Magnetic rails, standard lengths and designs

T B A A 1 0 0 0 1 4 : Example of type code of a magnetic rail

TB - 14 : Series code

See table A on page 3 for magnetic rails and applications.

AA : Magnetic design

See table B on page 4 for the various design variations.

1 0 0 0 : Length of the magnetic rail in mm.

Type code of standard rail				Cross section W x T [mm]	Length L [mm]	Thread holes 2x M8 A / B [mm]	Weight [kg]
TB	AA	0100	01	52 x 17	100	20 / 60	0,6
TB	AA	0300	01	52 x 17	300	75 / 150	1,5
TB	AA	0500	01	52 x 17	500	75 / 350	2,5
TB	AA	0750	01	52 x 17	750	75 / 600	3,7
TB	AA	1000	01	52 x 17	1000	75 / 850	4,8

TB	AB	0300	01	52 x 17	300	75 / 150	1,5
TB	AC	0300	01	52 x 17	300	75 / 150	1,5

TB	AA	0100	02	77 x 24	100	20 / 60	0,9
TB	AA	0300	02	77 x 24	300	75 / 150	2,6
TB	AA	0500	02	77 x 24	500	75 / 350	4,2
TB	AA	0750	02	77 x 24	750	75 / 600	6,2
TB	AA	1000	02	77 x 24	1000	75 / 850	8,3

TB	AB	0300	02	77 x 24	300	75 / 150	2,6
TB	AC	0300	02	77 x 24	300	75 / 150	2,6

TB	AA	0100	03	102 x 24	100	20 / 60	1,1
TB	AA	0300	03	102 x 24	300	75 / 150	3,1
TB	AA	0500	03	102 x 24	500	75 / 350	5,1
TB	AA	0750	03	102 x 24	750	75 / 600	7,6
TB	AA	1000	03	102 x 24	1000	75 / 850	10,1

TB	AB	0300	03	102 x 24	300	75 / 150	3,1
TB	AC	0300	03	102 x 24	300	75 / 150	3,1

TB	AA	0100	04	102 x 44	100	20 / 60	1,7
TB	AA	0300	04	102 x 44	300	75 / 150	4,9
TB	AA	0500	04	102 x 44	500	75 / 350	8,1
TB	AA	0750	04	102 x 44	750	75 / 600	12,1
TB	AA	1000	04	102 x 44	1000	75 / 850	16,1

TB	AB	0300	04	102 x 44	300	75 / 150	4,9
TB	AC	0300	04	102 x 44	300	75 / 150	4,9

Type code of standard rail				Cross section W x T [mm]	Length L [mm]	Thread holes 2x M8 A / B [mm]	Weight [kg]
TB	AD	0300	01	52 x 17	300	75 / 150	1,5
TB	AE	0300	01	52 x 17	300	75 / 150	1,5
TB	AF	0300	01	52 x 17	300	75 / 150	1,5
TB	AG	0300	01	52 x 17	300	75 / 150	1,5

TB	BA	0335	01	52 x 17	335	50 / 100	1,5
TB	BB	0335	01	52 x 17	335	50 / 100	1,5
TB	BC	0335	01	52 x 17	335	50 / 100	1,5
TB	BD	0335	01	52 x 17	335	50 / 100	1,5

TB	AD	0300	02	77 x 24	300	75 / 150	2,6
TB	AE	0300	02	77 x 24	300	75 / 150	2,6
TB	AF	0300	02	77 x 24	300	75 / 150	2,6
TB	AG	0300	02	77 x 24	300	75 / 150	2,6

TB	BA	0335	02	77 x 24	335	50 / 100	2,6
TB	BB	0335	02	77 x 24	335	50 / 100	2,6
TB	BC	0335	02	77 x 24	335	50 / 100	2,6
TB	BD	0335	02	77 x 24	335	50 / 100	2,6

TB	AD	0300	03	102 x 24	300	75 / 150	3,1
TB	AE	0300	03	102 x 24	300	75 / 150	3,1
TB	AF	0300	03	102 x 24	300	75 / 150	3,1
TB	AG	0300	03	102 x 24	300	75 / 150	3,1

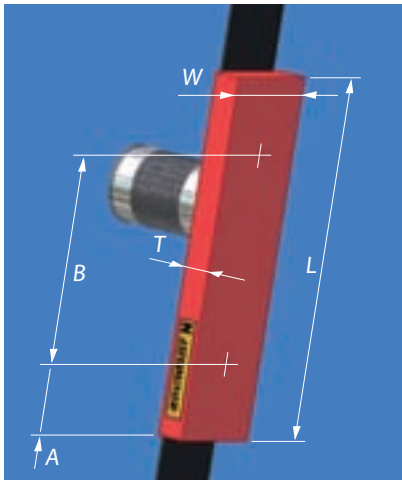
TB	BA	0335	03	102 x 24	335	50 / 100	3,1
TB	BB	0335	03	102 x 24	335	50 / 100	3,1
TB	BC	0335	03	102 x 24	335	50 / 100	3,1
TB	BD	0335	03	102 x 24	335	50 / 100	3,1

TB	AD	0300	04	102 x 44	300	75 / 150	4,9
TB	AE	0300	04	102 x 44	300	75 / 150	4,9
TB	AF	0300	04	102 x 44	300	75 / 150	4,9
TB	AG	0300	04	102 x 44	300	75 / 150	4,9

TB	BA	0335	04	102 x 44	335	50 / 100	4,9
TB	BB	0335	04	102 x 44	335	50 / 100	4,9
TB	BC	0335	04	102 x 44	335	50 / 100	4,9
TB	BD	0335	04	102 x 44	335	50 / 100	4,9

Goudsmit Magnetic Conveying Systems strives to be the best partner for magnetic conveyor systems, with a broad and comprehensive assortment of magnetic products and installations. By means of magnetic force we realise custom made systems and components which will guarantee a unique way of transporting. Quick, safe and above all effective.

Straight magnetic rail



Type code of standard rail				Cross section W x T [mm]	Length L [mm]	Thread holes 2x M8 A / B [mm]	Weight [kg]
TB	AA	0100	14	102 x 44	100	20 / 60	2,1
TB	AA	0300	14	102 x 44	300	75 / 150	6,2
TB	AA	0500	14	102 x 44	500	75 / 350	10,2
TB	AA	0750	14	102 x 44	750	75 / 600	15,2
TB	AA	1000	14	102 x 44	1000	75 / 850	20,3

TB	AB	0500	14	102 x 44	500	75 / 350	10,1
TB	AC	0500	14	102 x 44	500	75 / 350	10,1

TB	AA	0100	54	102 x 44	100	20 / 60	2,3
TB	AA	0300	54	102 x 44	300	75 / 150	6,6
TB	AA	0500	54	102 x 44	500	75 / 350	10,9
TB	AA	0750	54	102 x 44	750	75 / 600	16,2
TB	AA	1000	54	102 x 44	1000	75 / 850	21,6

TB	AB	0500	54	102 x 44	500	75 / 350	10,8
TB	AC	0500	54	102 x 44	500	75 / 350	10,8

TG	AA	0100	43	103 x 22	100	20 / 60	1,8
TG	AA	0300	43	103 x 22	300	75 / 150	5
TG	AA	0500	43	103 x 22	500	75 / 350	8,3
TG	AA	0750	43	103 x 22	750	75 / 600	12,4
TG	AA	1000	43	103 x 22	1000	75 / 850	16,5

TG	AB	0500	43	103 x 22	500	75 / 350	8,3
TG	AC	0500	43	103 x 22	500	75 / 350	8,3

TG	AA	0100	44	153 x 22	100	20 / 60	2,6
TG	AA	0300	44	153 x 22	300	75 / 150	7,4
TG	AA	0500	44	153 x 22	500	75 / 350	12,3
TG	AA	0750	44	153 x 22	750	75 / 600	18,4
TG	AA	1000	44	153 x 22	1000	75 / 850	24,5

TG	AB	0500	44	153 x 22	500	75 / 350	18,4
TG	AC	0500	44	153 x 22	500	75 / 350	18,4

Type code of standard rail				Cross section W x T [mm]	Length L [mm]	Thread holes 2x M8 A / B [mm]	Weight [kg]
TB	AD	0300	14	102 x 44	300	75 / 150	6,2
TB	AE	0300	14	102 x 44	300	75 / 150	6,2
TB	AF	0300	14	102 x 44	300	75 / 150	6,2
TB	AG	0300	14	102 x 44	300	75 / 150	6,2

TB	BA	0335	14	102 x 44	335	50 / 100	6,2
TB	BB	0335	14	102 x 44	335	50 / 100	6,2
TB	BC	0535	14	102 x 44	535	50 / 300	10,2
TB	BD	0535	14	102 x 44	535	50 / 300	10,2

TB	AD	0300	54	102 x 44	300	75 / 150	6,6
TB	AE	0300	54	102 x 44	300	75 / 150	6,6
TB	AF	0300	54	102 x 44	300	75 / 150	6,6
TB	AG	0300	54	102 x 44	300	75 / 150	6,6

TB	BA	0335	54	102 x 44	335	50 / 100	6,6
TB	BB	0335	54	102 x 44	335	50 / 100	6,6
TB	BC	0535	54	102 x 44	535	50 / 300	10,9
TB	BD	0535	54	102 x 44	535	50 / 300	10,9

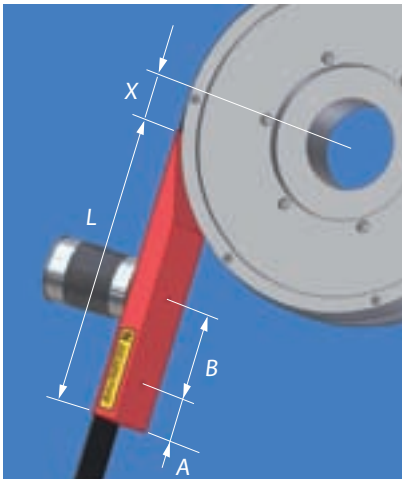
TG	AD	0300	43	103 x 22	300	75 / 150	5
TG	AE	0300	43	103 x 22	300	75 / 150	5
TG	AF	0300	43	103 x 22	300	75 / 150	5
TG	AG	0300	43	103 x 22	300	75 / 150	5

TG	BA	0335	43	103 x 22	335	50 / 100	5
TG	BB	0335	43	103 x 22	335	50 / 100	5
TG	BC	0535	43	103 x 22	535	50 / 300	8,3
TG	BD	0535	43	103 x 22	535	50 / 300	8,3

TG	AD	0300	44	153 x 22	300	75 / 150	7,4
TG	AE	0300	44	153 x 22	300	75 / 150	7,4
TG	AF	0300	44	153 x 22	300	75 / 150	7,4
TG	AG	0300	44	153 x 22	300	75 / 150	7,4

TG	BA	0335	44	153 x 22	335	50 / 100	7,4
TG	BB	0335	44	153 x 22	335	50 / 100	7,4
TG	BC	0535	44	153 x 22	535	50 / 300	12,3
TG	BD	0535	44	153 x 22	535	50 / 300	12,3

Sloping magnetic rail



When installing sloping magnetic rails it is important that you keep the correct distance from the centre of the magnetic roller to the magnetic rail, see measurement "X".

For magnetic roller of 400 mm diameter measurement "X" is 40 mm.

For magnetic roller of 220 mm diameter measurement "X" is 30 mm.

Arcs & curves

Permanent magnetic

T B F A 9 0 5 0 1 4: Example of type code of a magnetic rail

TB - 14: Series code:

See table A on page 3 for magnetic rails and applications.

FA: Magnetic construction

See table B on page 5 for the various design variations.

9 0 5 0: Angle & Radius; 90 = 90° 50 = radius of 500 mm.

Type code of standard arc rail				Cross section W x T [mm]	Angle A (°)	Radius R [mm]	Weight [kg]
TB	DA	4550	01	52 x 17	45°	500	2,0
TB	DA	4570	01	52 x 17	45°	700	2,6
TB	DA	9050	01	52 x 17	90°	500	3,8
TB	DA	9070	01	52 x 17	90°	700	5,3

TB	DA	4550	02	77 x 24	45°	500	3,3
TB	DA	4570	02	77 x 24	45°	700	4,6
TB	DA	9050	02	77 x 24	90°	500	6,7
TB	DA	9070	02	77 x 24	90°	700	9,3

TB	DA	4550	03	102 x 24	45°	500	4,2
TB	DA	4570	03	102 x 24	45°	700	5,9
TB	DA	9050	03	102 x 24	90°	500	8,6
TB	DA	9070	03	102 x 24	90°	700	12

TB	DA	4550	04	102 x 44	45°	500	6,8
TB	DA	4570	04	102 x 44	45°	700	9,7
TB	DA	9050	04	102 x 44	90°	500	13,5
TB	DA	9070	04	102 x 44	90°	700	19,4

TB	DA	4550	14	102 x 44	45°	500	7,3
TB	DA	4570	14	102 x 44	45°	700	10,5
TB	DA	9050	14	102 x 44	90°	500	14,6
TB	DA	9070	14	102 x 44	90°	700	21

TB	DA	4550	54	102 x 44	45°	500	13,9
TB	DA	4570	54	102 x 44	45°	700	23,2
TB	DA	9050	54	102 x 44	90°	500	27,6
TB	DA	9070	54	102 x 44	90°	700	46,2

Type code of standard arc rail				Cross section W x T [mm]	Angle A (°)	Radius R [mm]	Weight [kg]
TB	FA	9050	02	52 x 17	45°	500	5,2
TB	FA	9070	02	52 x 17	90°	700	7,3

TB	FA	9050	03	77 x 24	45°	500	7,1
TB	FA	9070	03	77 x 24	90°	700	10

TB	FA	9050	04	102 x 24	45°	500	11,6
TB	FA	9070	04	102 x 24	90°	700	16,4

TB	FA	9050	14	102 x 44	45°	500	14,1
TB	FA	9070	14	102 x 44	90°	700	20

TB	FA	9050	54	102 x 44	45°	500	15,2
TB	FA	9070	54	102 x 44	90°	700	21,4

TB	FB	9050	02	52 x 17	45°	500	5,2
TB	FB	9070	02	52 x 17	90°	700	7,3

TB	FB	9050	03	77 x 24	45°	500	7,1
TB	FB	9070	03	77 x 24	90°	700	10

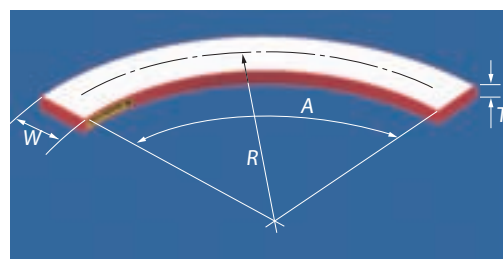
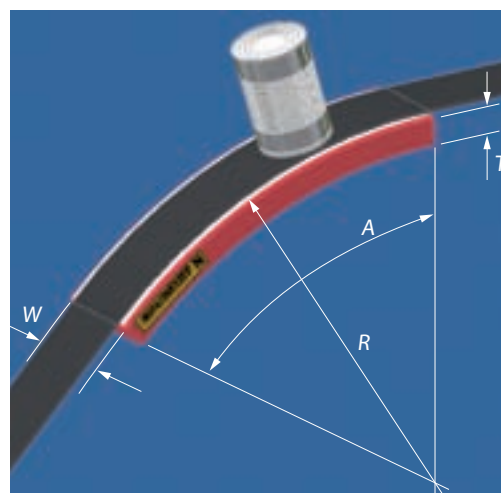
TB	FB	9050	04	102 x 24	45°	500	11,6
TB	FB	9070	04	102 x 24	90°	700	16,4

TB	FB	9050	14	102 x 24	45°	500	14,1
TB	FB	9070	14	102 x 24	90°	700	20

TB	FB	9050	54	102 x 24	45°	500	15,2
TB	FB	9070	54	102 x 24	90°	700	21,4



(4) A number of examples of magnetic components in different design. These special components with specific applications are made exactly to your specifications.



A correct combination of magnetic rails and rollers is of great importance for the proper functioning of a conveyor installation.

In case of doubt you can always consult Goudsmit's specialists.

Permanent magnetic rollers

Selection table for standard magnetic rollers and their applications



Example of type code of a magnetic roller:

TRAA400110

TRAA: Series code

See the selection table on this page for magnetic roller types and applications.

400110: Roller sizes

The first three figures indicate the diameter and the last three figures indicate the width.



(5) Magnetic roller in complete stainless steel construction for applications in wet conditions such as filling cans.

Type code		Sizes diameter x axle hole diameter x width D x d x W [mm]	Type magnetic system	Use in combination with magnetic rail series:	Application: For the conveying of:	Maximum product sizes [mm]	Advisable max. belt width: [mm]	Max. conveyance speed [m / min]
TR BB	220 075	Ø220 x Ø30 x 75	2 pole Ferrite intensified to 2900 Gauss For dry conditions	TB - 01 and / or TB - 02 and / or TB - 03	Crown caps, lids, battery cases, screw caps, tomato cans	Ø 83	60	90
TR BB	220 090	Ø220 x Ø30 x 90			Lids, screw caps	Ø 115	75	90
TR BB	220 120	Ø220 x Ø30 x 120			Lids, screw caps	Ø 153	100	90
TR AA	400 077	Ø400 x Ø105 x 77	2 pole Ferrite standard at 1900 Gauss For dry conditions	TB - 01 and / or TB - 02 and / or TB - 03 and / or TB - 04	Lids, screw caps	Ø 83	60	180
					Empty cans (bottom on belt)	Ø 65 x 145	60	90
TR AA	400 094	Ø400 x Ø105 x 94			Lids, screw caps	Ø 115	75	180
					Empty cans (bottom on belt)	Ø 99 x 133	75	120
			2 pole Ferrite intensified to 3200 Gauss For dry conditions (Also available in special design, completely in stainless steel, for wet conditions, water resistant)	TB - 03 and / or TB - 04 and / or TB - 14 and / or TB - 54	Can bodies (without bottom)	Ø 65 x 113	75	120
TR AA	400 110	Ø400 x Ø105 x 110			Empty cans (bottom on belt)	Ø 153 x 231	90	90
					Can bodies (without bottom)	Ø 83 x 116	90	120
TR BB	400 077	Ø400 x Ø105 x 77			Empty cans (bottom on belt)	Ø 73 x 133	60	90
					Empty aerosols and cans (bottom on belt)	Ø 52 x 133 Ø 65 x 178	60	120 90
TR BB	400 094	Ø400 x Ø105 x 94			Empty cans (bottom on belt)	Ø 99 x 133 Ø 99 x 178	75	180 120
					Can bodies (without bottom)	Ø 65 x 231	75	60
					Empty aerosols and cans (bottom on belt)	Ø 65 x 231 Ø 65 x 153	75	90 180
					Filled cans	Ø 73 x 103 Ø 83 x 46	75	60 90
TR BB	400 110	Ø400 x Ø105 x 110			Empty cans (bottom on belt)	Ø 153 x 231	90	120
					Can bodies (without bottom)	Ø 83 x 178	90	120
					Filled cans	Ø 99 x 60	90	90
TR BB	400 145	Ø400 x Ø105 x 145			Empty cans, drums and barrels (bottom on belt)	Ø 231 x 278	120	60
					Can bodies (without bottom)	Ø 99 x 119 Ø 99 x 178 Ø 153 x 231	120	120 90 75
TR GG	400 110	Ø400 x Ø105 x 110	2 pole Neoflux® super strong at 4300 Gauss completely in stainless steel, for wet conditions, water resistant	TB - 14 and / or TB - 54 and / or TG - 43	Aerosol can bodies (without bottom)	Ø 52 x 145 Ø 52 x 231 Ø 65 x 231	90	90 75 75
					Empty aerosols and cans (bottom on belt)	Ø 52 x 231 Ø 65 x 231	90	90 120
					Filled cans	Ø 65 x 102 Ø 73 x 113 Ø 99 x 119	90	90 75 60
TR GG	400 145	Ø400 x Ø105 x 145		TG - 44	Filled cans	Ø 153 x 114	120	45

This example of an application describes the lay-out of a magnetic elevator for empty cans $\varnothing 99 \times 119$ mm in size. Capacity is 440 cans/minute. With a belt speed of 110m/min the centre to centre distance of the cans is $110 / 440 = 0.25$ m. At this rate the cans do not stand too close to each other so that extra heavy drive power is not necessary.

Magnetic elevators

Example of application

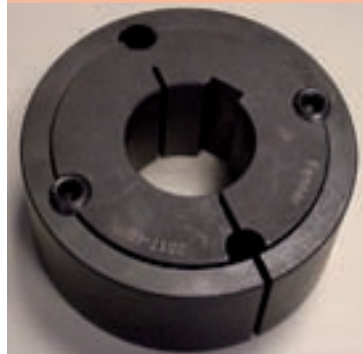
The table on page 3 shows that series TB-03 magnetic rails are suitable for conveying empty cans $\varnothing 99 \times 178$ mm in size with a maximum speed of 120 m/min. The table on page 9 indicates that type TRAA400094 magnetic roller is suitable for conveying empty cans $\varnothing 99 \times 133$ mm in size with a maximum speed of 120 m/min.

For this elevator the following components are necessary:
 TBBA033503 / TRAA400094 /
 TBBD033503 / transfer to other belt /
 TBAA100003 / TBAA050003 /
 TBBA033503 / TRAA400094 /
 TBBD033503 / TBAB030003

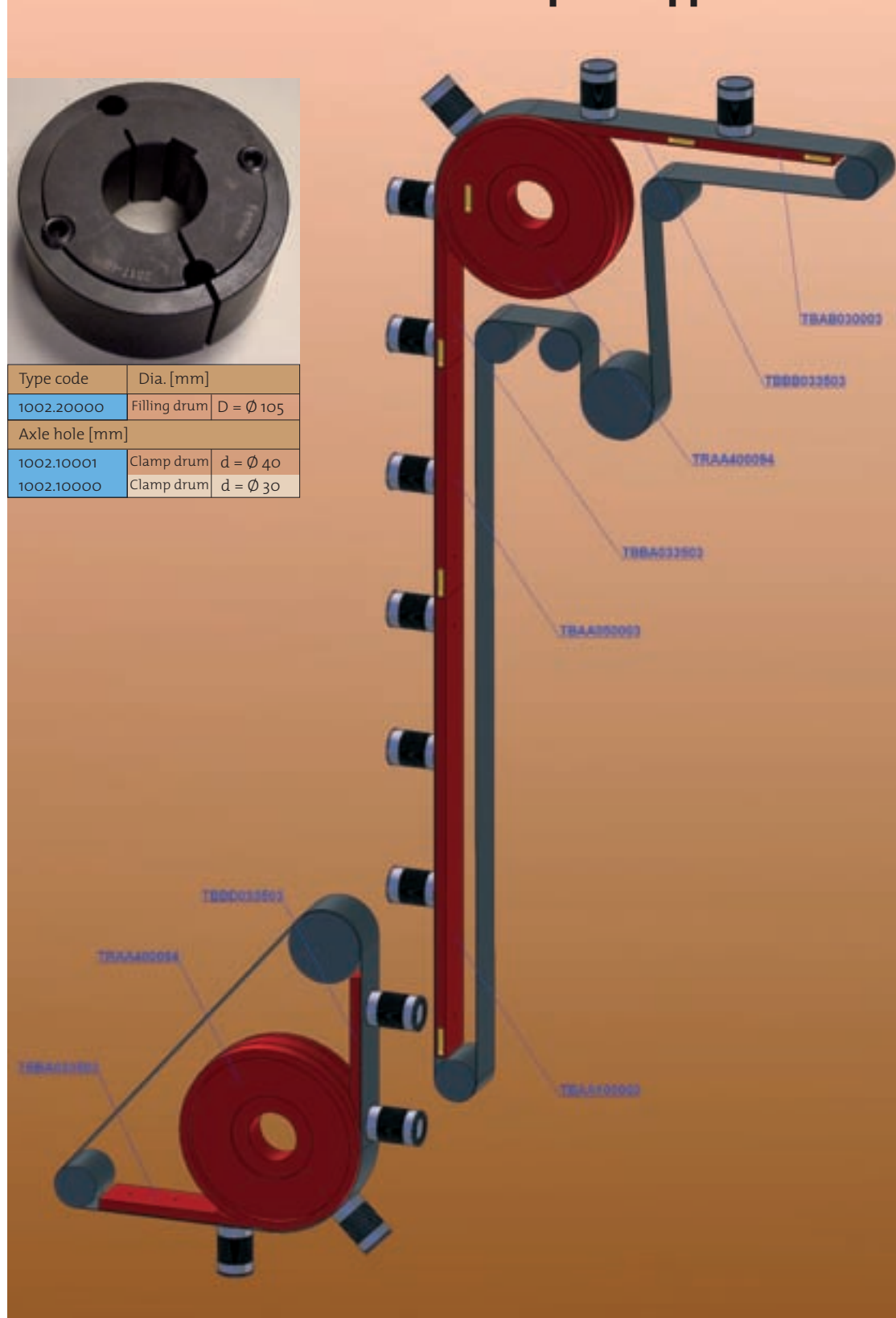
Page 4 explains the design and functions of the various components. The magnetic rollers are fitted to lowered axles with filling drums clamped on.

Fitting of magnetic rails and rollers always takes place in the direction of the conveyance looking towards the belt, with the North pole on the right hand side. The North pole side is marked with a yellow type sticker.

For determining the engine torque we start from the force necessary to convey one tin. In order to determine this, a spring balance, the selected magnetic rail and a piece of conveyor belt are necessary. With this force and the selected belt speed, from which follows how many cans are standing on the elevator, one can subsequently determine the necessary engine capacity.



Type code	Dia. [mm]	
1002.20000	Filling drum	D = \varnothing 105
Axle hole [mm]		
1002.10001	Clamp drum	d = \varnothing 40
1002.10000	Clamp drum	d = \varnothing 30



Magnetic lid-stacking rolls are used for stacking and un-stacking various products such as lids, bottoms, rings and discs. They are used, for example, in the canned-food industry for transporting lids to the filling/sealing machines. These stacking rolls are also frequently used in production lines for lids, rings and discs. For example, for stacking rings after a press or at the entry and exit of a furnace for heat treatment.

Magnetic lid stack rollers

Magnetic lid stack rollers are supplied in two loose halves, provided with a 25 mm axle hole with driver slot. Both halves are fixed to an anti-magnetic stainless steel axle. By varying the distance between both halves the roller can be easily adjusted to the diameter of the product. On request we will send you detailed technical drawings of these lid stack rollers.



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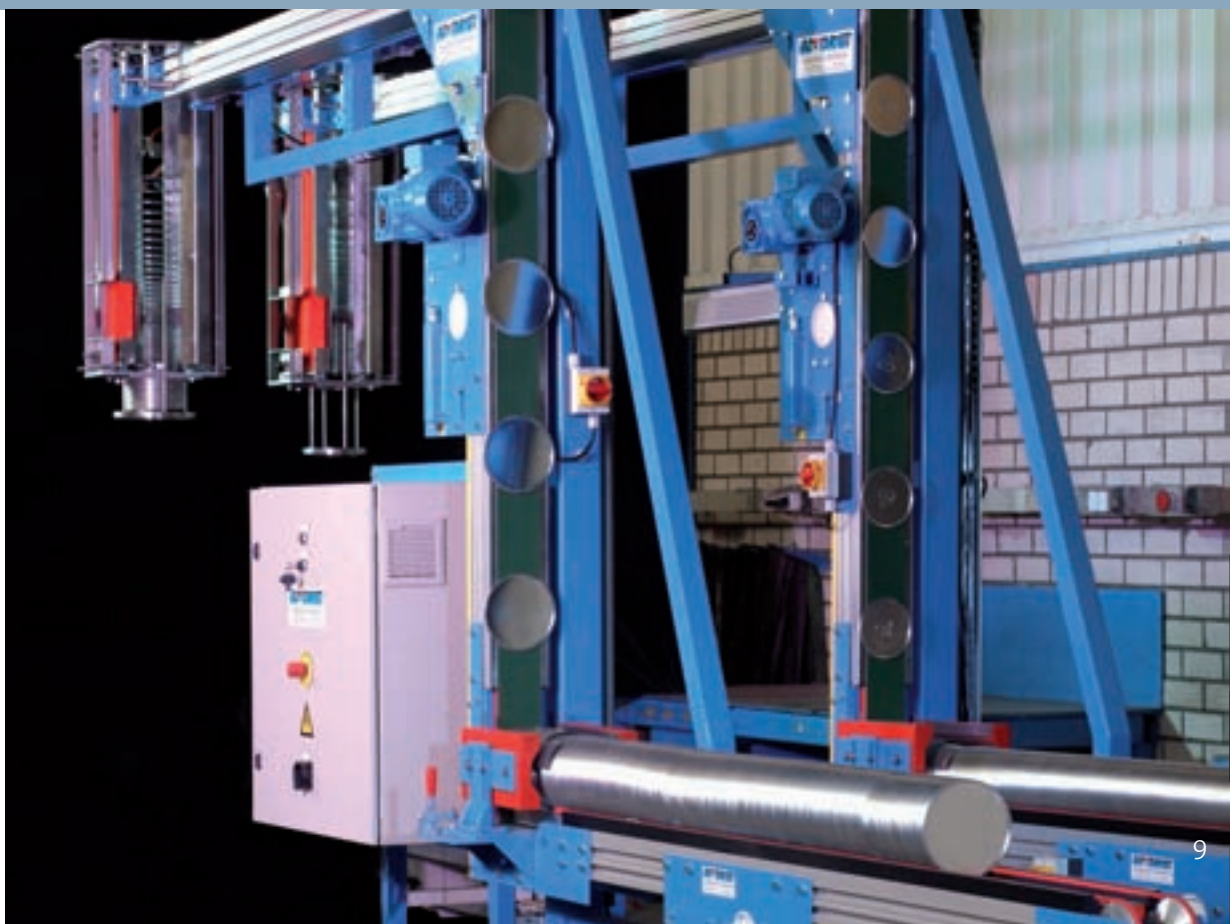
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Type code of lid stack roller	External diameter of D [mm]	Hollow axle diameter of d [mm]	Total roller width dependent on product diameter of [mm]	Suitable for product diameters of [mm]
TR US 0060 01	Ø 220	Ø 25H9	110 - 155	54 - 100
TR US 0100 02	Ø 250	Ø 25H9	145 - 185	90 - 130
TR US 0120 03	Ø 280	Ø 25H9	170 - 230	115 - 180

- (6) This conveyor belt transfers lids from an eccentric press after which the lids are stacked up with a stack roller. The chute placed horizontally after the stack roller has not been installed on this photo.
- (7) Lid stack rollers can be supplied in various sizes and designs. Besides the standard range also in special designs.
- (8) Here we see a powered lid stack roller which has been installed immediately after the discharge from a "lining" machine. Subsequently the lids are transported into a "curing" oven which is provided with a round belt conveyor.

Lids and bottoms

Complete supply installations



For the supply of lids and bottoms to closing or filling machines Goudsmit supplies complete supply installations (see photo 9).

Such an installation consists of a round belt conveyor, a distribution unit (see photo 11), an elevator and a buffer store (see photo 10). The installation is supplied complete with sensors and control box.

The stack of lids, rings or bottoms is laid manually on the round belt conveyor. After this it is simple to remove any packaging. At the end of the round belt conveyor there is a distribution unit which magnetically spreads out the lids and conveys them one by one to the elevator belt. Subsequently the elevator transports the lids to the buffer store which feeds the lids to the closing machine.

These installations can also be supplied in complete stainless steel construction for the cannery industry.

Type code of complete feeder installation	Product Diameter of [mm]	Capacity (lid /min)
TC DT 0052 01	Ø 52 - Ø 100	300
TC DT 0090 02	Ø 90 - Ø 130	300
TC DT 0118 03	Ø 118 - Ø 180	300

The complete feeder installations are normally supplied with the following specifications:

Round belt's transport length: 2,000 mm

Distribution unit for one product diameter.

Elevator's rising height 2,850 mm

Buffer store height: 1,000 mm, including one flange for connection to a filling-sealing machine.

Conversion to other tin diameters is simple and quick to carry out. The distribution unit is fitted with snap fasteners so that it can be quickly exchanged for another unit diameter. The buffer store can be adjusted to various diameters and can be supplied with exchangeable output flanges in various sizes for connection to the filling-sealing machine. In this way the installation can also be converted for other products, such as, for example, rings.

Sensors on the buffer store in combination with the control box ensure a regular and guaranteed supply.

(9) Before delivery the installations are extensively tested.

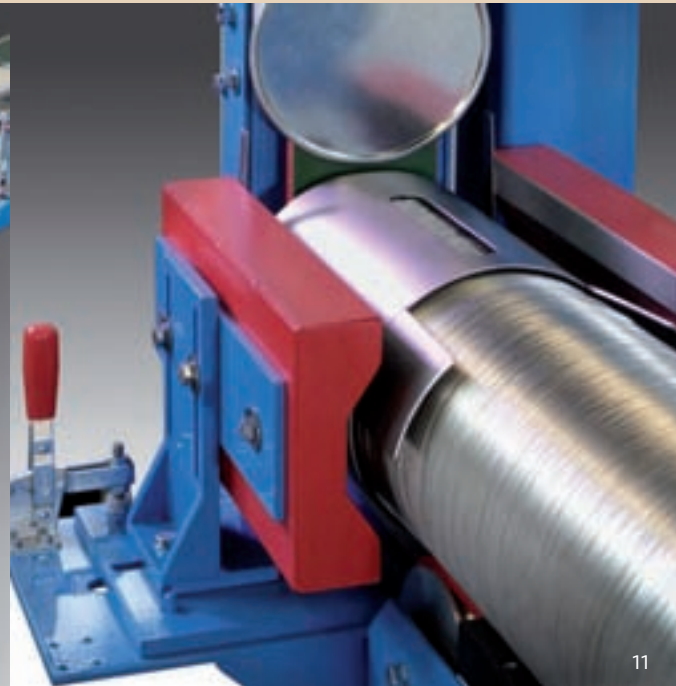
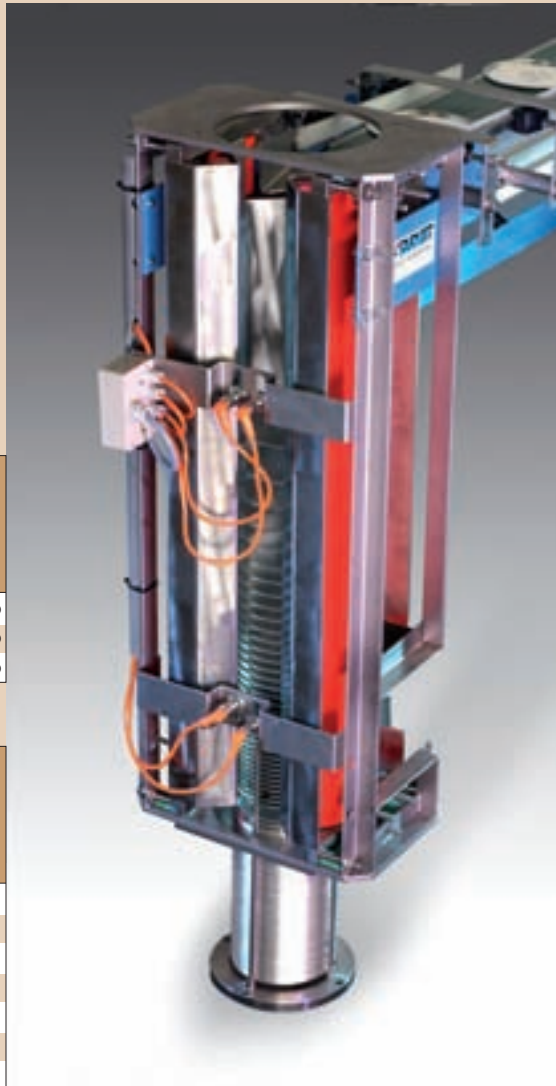
(10) The double sensors guarantee correct signalling from the lid level.

(11) With snap fasteners the distribution unit can be quickly changed for other product diameters.

(12) Four transport installations take bottoms and rings to a folding machine for paint tins.

Type code of distribution store	Product Diameter of [mm]	Length of magnet [mm]
TC DB 0052 01	Ø 52 - Ø 100	1.000
TC DB 0090 02	Ø 90 - Ø 130	1.000
TC DB 0118 03	Ø 118 - Ø 180	1.000

Type code of distribution store	Product Diameter of [mm]	Length of magnet [mm]
TC DD 0070 00	Ø 70	310
TC DD 0079 00	Ø 79	310
TC DD 0088 00	Ø 88	310
TC DD 0101 00	Ø 101	310
TC DD 0109 00	Ø 109	310
TC DD 0118 00	Ø 118	310
TC DD 0127 00	Ø 127	310
TC DD 0135 00	Ø 135	310
TC DD 0163 00	Ø 163	310
TC DD 0175 00	Ø 175	310
TC DD 0189 00	Ø 189	310



Complete palletizing installation



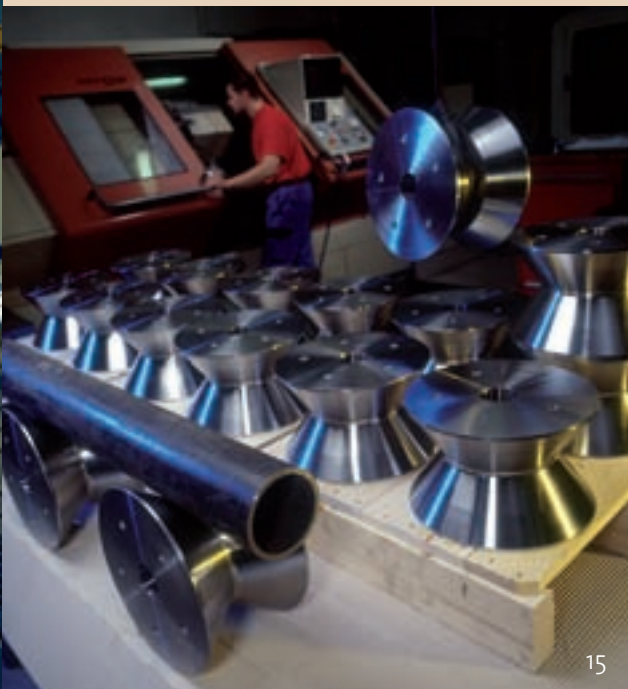
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(13) These complete depalletizing installations are designed for a Greek firm and take care of the supply of aerosols to two filling installations. The installations, including PLC control, have been built and tested completely in house. The pallets full of aerosols are placed in the high bunkers. After release by means of pressing a button the layers of aerosols are placed one by one on the supply belt of the filling installation. The cardboard sections separating the layers are laid down in one flowing movement in the lower bunkers. The capacity of these installations is 200 aerosols per minute, or one layer of aerosols per 45 seconds.

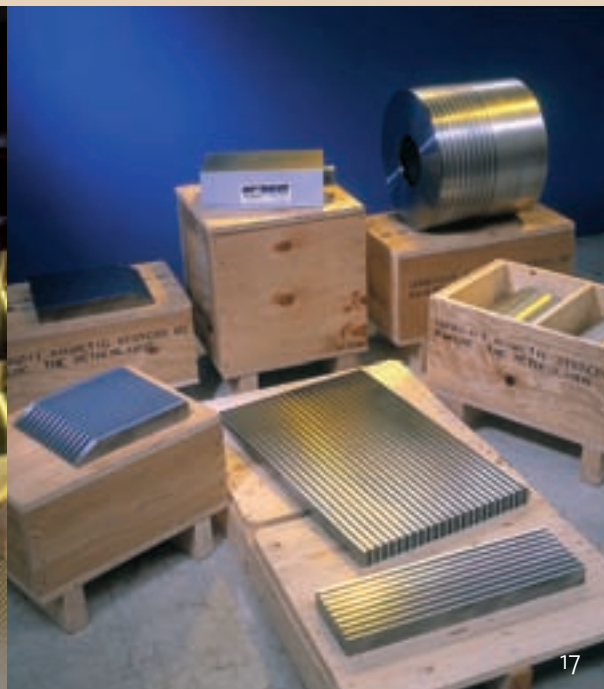


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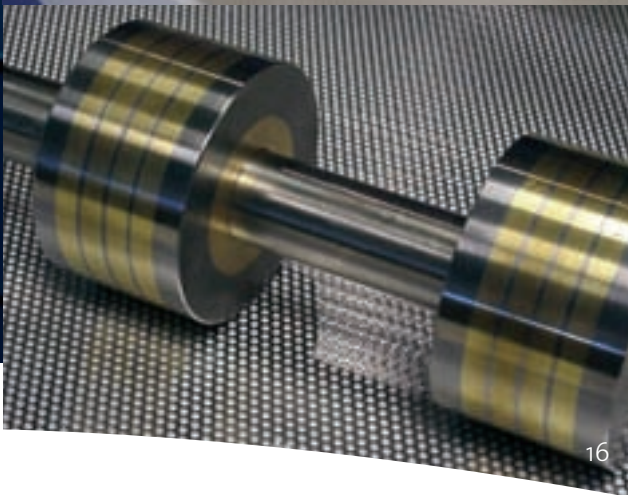
(14) The palletizing head is designed with a permanent magnetic system and with vacuum suction pads so that the aerosols and the cardboard separators can be handled at the same time. After the magnetic system is switched off the aerosols let go but the suction pads continue to hold the sheet that lies in between so that this sheet can be laid aside separately in a bunker.



15



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16

(15) The supply program of magnetic components is much more extensive than can be seen in this brochure.
This photo shows the production of heavy magnetic diablo rollers for conveying steel pipes in rolling mills.

(16) Also fine polar magnetic rollers are available in many sizes and magnetic qualities.

(17) A number of magnet components is ready for despatch. These components are applied in flat grinding machines. For transporting and fixing steel products, which are subject to grinding treatment.



On request we will gladly send you these brochures.

MagVacu® Combigripper

The MagVacu® Combigripper developed and patented by Goudsmit comprises a combination of magnetism and vacuum technique and handles plates of (perforated) steel, aluminium or stainless steel to a thickness of 12 mm. Conversion for different products is not necessary.

Magnetic sheet separators

in permanent and electromagnetic design ensure that oiled plates do not stick to each other during pick-up and prevent a lot of damage in a high tech environment. Application in plate processing industries, among others, and in robotised production cells for the production of welding compositions.

Magnetic grab head

Here magnetism is used instead of vacuum technique in the grippers of robot arms. These magnetic grab heads are used for picking up or gripping, among others, pressed steel parts, blanks and perforated steel plates.

Palletizing magnets

These magnets load and unload pallets and traypack packagings in a twist of the hand, but are also intended for stacking and unstacking various filled and empty packagings. Furthermore, the light weight Neoflux® palletizing magnet is suitable for fitting in 'pick and place' units or in robots.



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