

WMS – standard version

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Standard version	– bold face
option	– thin face, grey background

1. Basic parameters

			Basic	Basic +	Junior	Optimum	Standard	Profi
control			manual			programmable system		
	count of programs		-			2	20 (of which 6 programs directly accessible)	20
turntable	standard		15, 16.5, 18	15, 16.5, 18, 23	15, 16.5, 18	15, 16.5, 18, 23		
	with cut-out		15, 16.5, 18					
	standard, with weighing equip.		no		15, 16.5			
	with cut-out and weighing equipment		no					
	maximum load	kg	turntable standard, turntable with weighing equipment: 1200 turntable with cut-out: 1000			turntable standard: 1200, 1500, 2500 turntable with weighing equipment: 1200 turntable with cut-out: 1000		
	foot pedal		eligible		no			
	regulation [1]		no (contactor)		no (contactor), frequency converter			
	oriented stop [2]		no, standard		standard, precise			
mast		m	Basic	Basic +	2300, 3000, 3500			
	height of goods check [3]		no		no, optical, mechanical	optical		
prestretch device	performance		no	hand brake	hand b, elmag. b mech. p	hand b, elmag. b, mech.p, 1motor, 1motor Light	hand b., elmag. b., mechanical p., 1motor, 1motor Light, 2motor	hand b., elmag. b., mechanical p., 1motor, 1motor Light, 2motor
	tearing [4]		no				no, eligible with 1motor, 2motor	
top platen	for: turntable standard, turntable with cut-out		no		no, electric, portal	no, electric, pneumatic, portal		
	for turntable with weighing equipment		no		no, electric	no, electric, pneumatic		
additional accessories	access ramp		turntable with cut-out: no turntable with cut-out: eligible					
	pit frame		turntable with cut-out: no turntable with cut-out: eligible					
pallet photography	number and installation of cameras		no				no, 1 camera on a column, 2 cameras on a column	
pallet identification [5]			no				no, barcode scanner, barcode recognition from a photo [6]	

[1] control of turntable speed

[2] oriented stop – turntable stopping accuracy in the same position; see chap. 3.1.5

[3] goods height check during the wrapping; the pallet is wrapped all over the height

[4] automatic foil tearing at the moment of end of wrapping

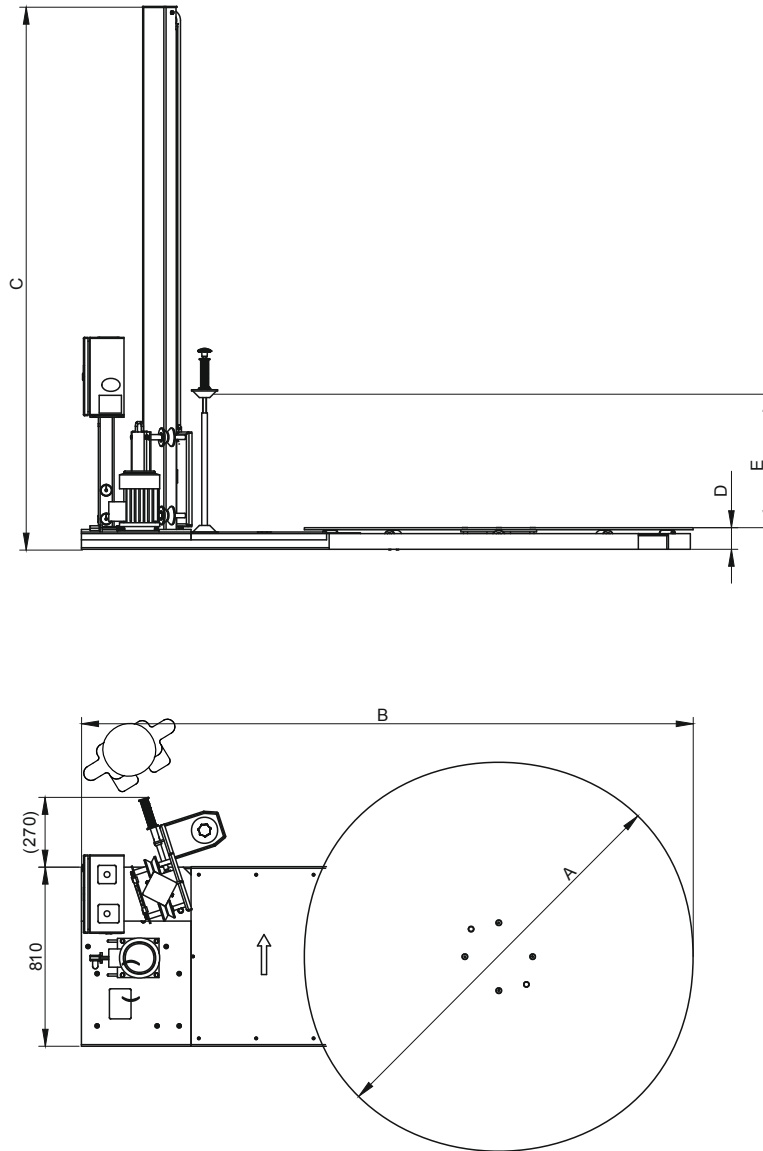
[5] is reasonable for machines equipped with weighing equipment, photo camera or both

[6] there must be used a separate photo camera for identification of barcode from photo

2. Basic diameters

2.1. WMS Basic Plus

Figure contour – working place



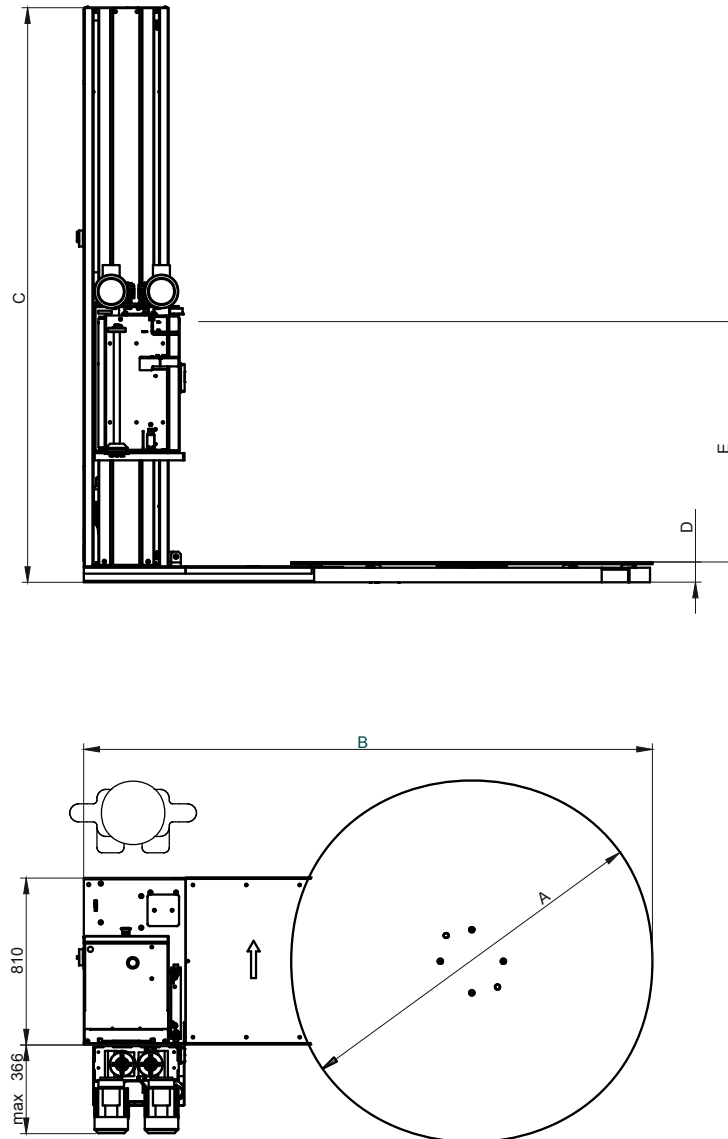
dimension		turntable size			mast		
		15	16.5	18	Basic Plus		
A	mm	1490	1650	1800			
B	mm	2350	2505	2655			
C	mm				2076		
D	mm	77	77	79			
E min. [1]	mm				510		
E max. [1]	mm				2000		
weight [2]	kg	max. 340	max. 370	max. 460			

[1] Wrap height – max. height between turntable and upper edge of foil on reel in prestretch device

[2] Actual weight according to machine equipment.

2.2. Machines WMS Junior, WMS Optimum, WMS Standard, WMS Profi with standard turntable or with turntable with weighing equipment

Figure contour – working place



dimension		turntable size						mast		
		standard				with weighing equip.				
		15	16.5	18	23	15	16.5	2300	3000	3500
A	mm	1490	1650	1800	2300	1490	1650			
B	mm	2350	2505	2655	3150	2350	2505			
C	mm							2366	3066	3566
D	mm	77	77	79	79	91-96 [3]	91-96 [3]			
E min. [1]	mm							510	510	510
E max. [1]	mm							2430	3130	3630
weight [2]	kg	max. 490	max. 510	max. 600	max. 775	max. 825	max. 830			

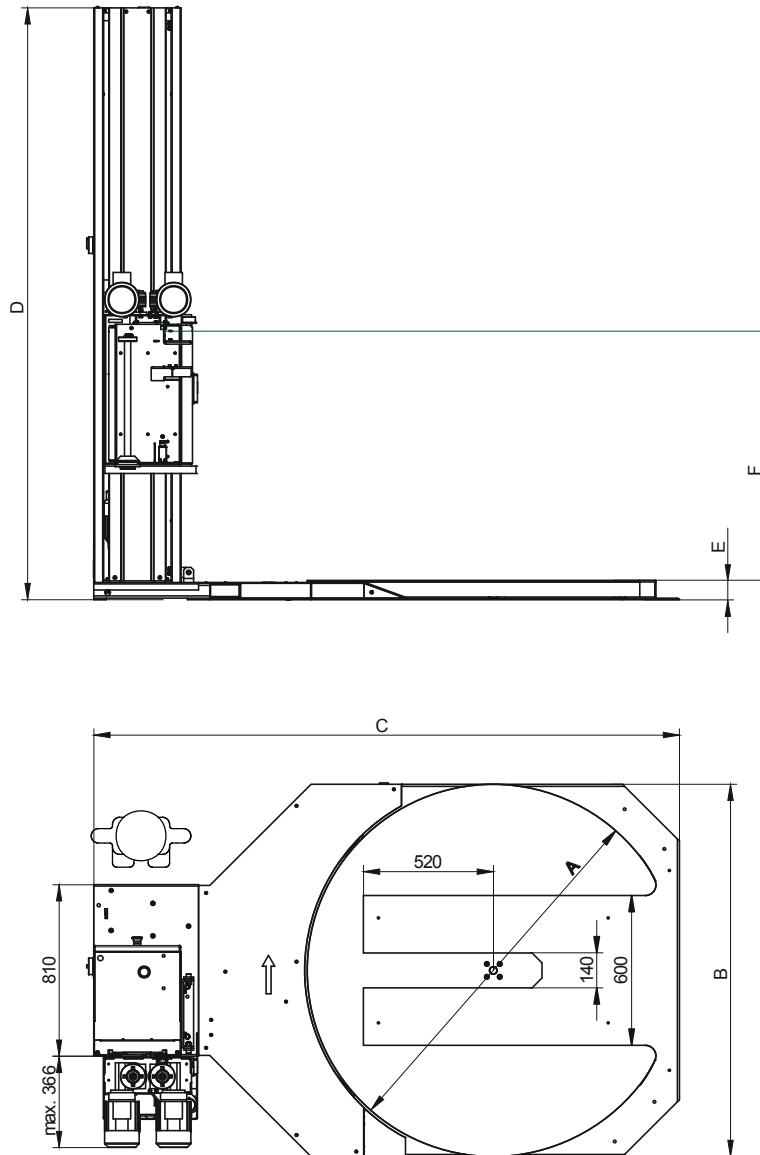
[1] Wrap height – max. height between turntable and upper edge of foil on reel in prestretch device

[2] Without top-platen; actual weight according to machine equipment.

[3] According to the height adjustment of tensiometers

2.3. Machines WMS Junior, WMS Optimum, WMS Standard, WMS Profi with turntable with cut-out

Figure contour – working place



dimension		turntable type				mast		
		15	16.5	18		2300	3000	3500
A	mm	1490	1650	1800				
B incl. barrier [1]	mm	1590	1750	1900				
C	mm	2354	2505	2655				
D	mm					2366	3066	3566
E	mm	78	78	78				
F min. [2]	mm					510	510	510
F max. [2]	mm					2430	3130	3630
weight [3]	kg	max. 520	max. 570	max. 615				

[1] Safety light barriers are mounted according to chap. 3.1.6 – they are not in the picture

[2] Wrap height – max. height between turntable and upper edge of foil on reel in prestretch device

[3] Without top-platen; actual weight according to machine equipment.

3. Basic components parameters

3.1. Turntable

3.1.1. Turntable 15

		standard			with weighing eq.	with cut-out
gearing		gearbox		belt and chain transmission	belt and chain transmission	belt and chain transmission
load capacity	kg	1500	2500	1200	1200	1000
pallet diagonal max.	mm	1500 (dimension 1200×800)				
speed	1/min	10				
accuracy of stop	°	see tab. 3.1.5				
roller		standard plastic	solid plastic	standard plastic	standard plastic	standard plastic
motor (3×400V/50Hz)	W	370	370	370	370	370
cut-out orientation		-				see chap. 3.1.6

3.1.2. Turntable 16.5

		standard			with weighing eq.	with cut-out
gearing		gearbox		belt and chain transmission	belt and chain transmission	belt and chain transmission
load capacity	kg	1500	2500	1200	1200	1000
pallet diagonal max.	mm	1650 (dimension 1200×1000)				
speed	1/min	10				9
accuracy of stop	°	see tab. 3.1.5				
roller		standard plastic	solid plastic	standard plastic	standard plastic	standard plastic
motor (3×400V/50Hz)	W	370	370	370	370	370
cut-out orientation		-				see chap. 3.1.6

3.1.3. Turntable 18

		standard			with cut-out	
gearing		gearbox		belt and chain transmission	belt and chain transmission	
load capacity	kg	1500	2500	1200	1000	
pallet diagonal max.	mm	1800				
speed	1/min	10				8.5
accuracy of stop	°	see tab. 3.1.5				
roller		standard plastic	solid plastic	standard plastic	standard plastic	
motor (3×400V/50Hz)	W	370	370	370	550	
cut-out orientation		-				see chap. 3.1.6

3.1.4. Turntable 23

		standard		with cut-out
gearing		gearbox		belt and chain transmission
load capacity	kg	1500	2500	1000
pallet diagonal max.	mm	2300		
speed	1/min	6.66		6.66
accuracy of stop	°	see tab. 3.1.5		
roller		standard plastic	solid plastic	standard plastic
motor (3×400V/50Hz)	W	750		550
cut-out orientation		--		direct direct-axis machines

Marking of

standard

 and

optional

 equipment

3.1.5. Overpass of turntable (oriented stop)

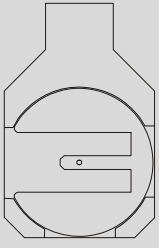
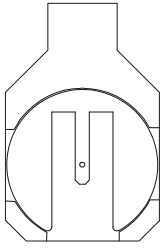
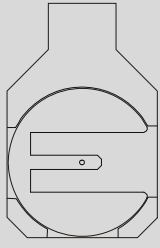
oriented stop (design of turntable)	mode	
	full range	continual conditions
standard (without converter)	±60°	±10°
precise (with converter)	±8°	±1°

full range: overpass is defined for range of load 0+1500 kg, for range of secondary pre-stretch : 70+120% and for maximal speed of turntable.

continual conditions: exactness of repeated stop for same secondary pre-stretch load (difference max. 100 kg) and speed of turntable.

3.1.6. Orientation of cut-out

For turntable with cut-out only. Orientation of cut-out for loading of goods on turntable with low-lift trolley

model	15, 16.5, 18 with cut-out		
orientation of cut-out			
	left	front	right

3.2. Mast

model		Basic	Basic Plus	2300	3000	3500
height	mm	746	2010	2300	3000	3500
width	mm	420	420	350		
depth	mm	250	250	435		
profile	mm	-	100×100	-		
film carriage drive		-	hand	180W 3×400V 50Hz		
Height of wrapping start [1]	mm	-	-	0, 75, 150		

[1] Enables setting of distance between turntable surface and lower edge of foil (at zero prestretching).

3.3. Prestretch device

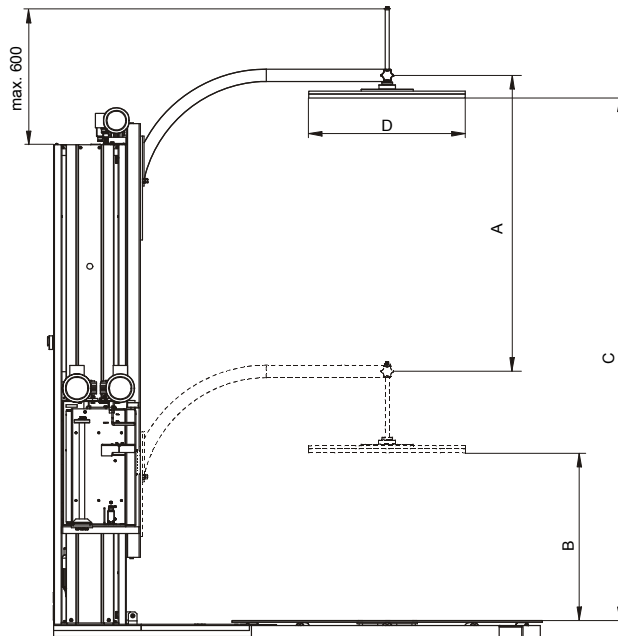
		Basic Plus [1]	hand brake	mechanic	el.mag. brake	1motor LIGHT	1motor	2motor
height	mm	410	617 (without handle)	717	717	787	836	820
width	mm	230	396	396	396	396	390	390
depth	mm	345	295	295	295	295	360	360
regulation of pre-stretch		hand	hand	transmiss.	el. mg. brake	motor + transmiss.	motor + transmiss.	2 motors
primary pre-stretch standard	%	-	-	130	-	180	180	-
primary pre-stretch optional	%	-	-	80, 130, 180	-	80, 130, 180	80, 130, 180, 230, 280	50 to 500
secondary pre-stretch	%	-	-	-	0 to 100 (brake force)	70 to 400	70 to 400	70 to 400
power consumption of el. mg. brake	W	-	-	-	18	-	-	-
motor (3x400V 50Hz)	W	-	-	-	-	370	370	driving 370 driven 250

Marking of **standard** and **optional** equipment

		Basic Plus [1]	hand brake	mechanic	el.mag. brake	1motor LIGHT	1motor	2motor
tearing of film		no	no	no	no	no	optional	optional

[1] Pre-stretch unit Basic Plus is included, it's not optional.

3.4. Top-platen



3.4.1. Electric top-platen

for mast	mm	2300	3000	3500
pressing force	N	approx. 500, set up fixed		
A – stroke	mm	1300	2000	-
B – min. height [1]	mm	850		
C – max. height [1]	mm	2450	3150	-
motor		120W 3x400/230V 50Hz		
chain		086		
plate		round, not oriented, foam rubber coating		
D – diameter of plate	mm	Ø 750		
diameter of plate	kg	max. 55	max. 65	-

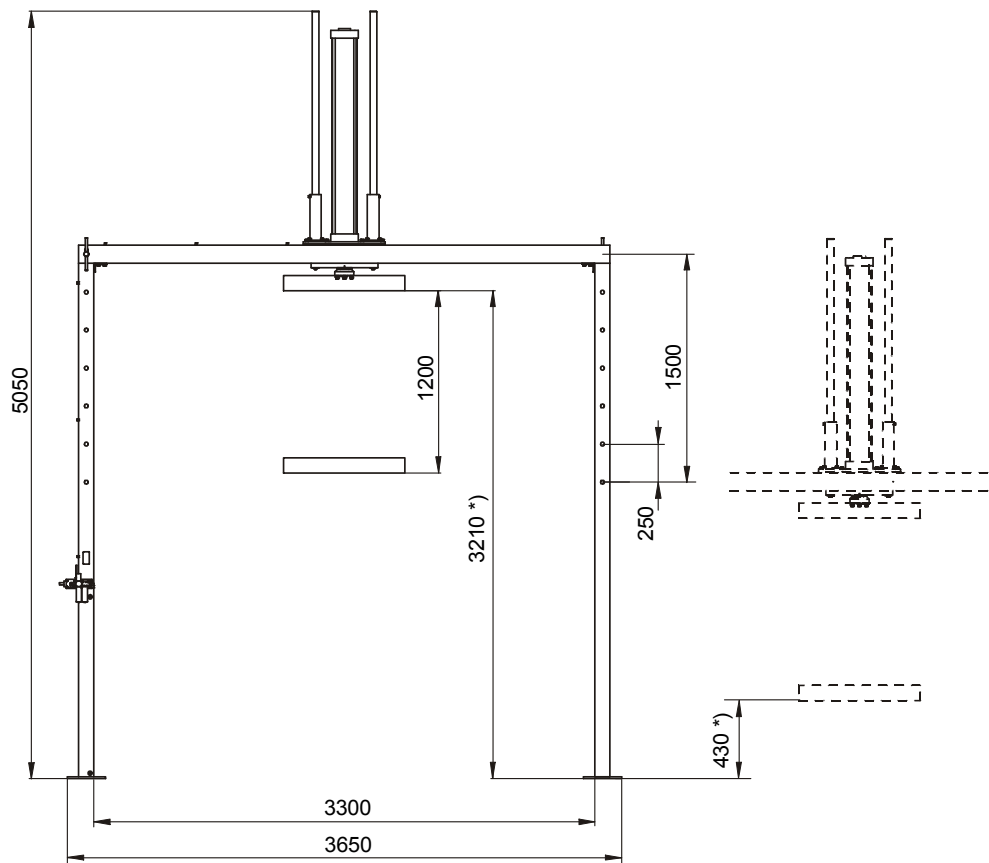
[1] min./max. height of the top platen over turntable (after displacement of platen axe, without spare for handling with pallet and without view for the possibility or impossibility of the top of goods wrapping on pallet)

3.4.2. Pneumatic top-platen

for mast	mm	2300	3000	3500
air press	MPa	0.6 to 1.5 MPa		
pressing force	N	min. 300, max. 950 – adjustable		
A – stroke	mm	1300		
B – min. height [1]	mm	850	-	-
C – max. height [1]	mm	2450	-	-
pneumatic cylinder		diameter of piston 40 mm		
plate		round, not oriented, foam rubber coating		
D – diameter of plate	mm	Ø 750		
Weight	kg	max. 65	max. 70	-

[1] min./max. height of the top platen over turntable (after displacement of platen axe, without spare for handling with pallet and without view for the possibility or impossibility of the top of goods wrapping on pallet)

3.4.3. Portal top-platen



*) Wrap height – the height of the goods incl. the height of turntable (chap. 2.1, 2.2, diameter D, or chap. 2.3, diameter E) with standard plate size 100 mm after displacement of platen axe, without spare for handling with pallet and without view for the possibility or impossibility of the top of goods wrapping on pallet.

		for all version of turntables and masts
top-platen control		manual
air press	MPa	0.6 to 1.5 MPa
pressing force	N	min. 0, max. 13000 – adjustable
pneumatic cylinder		diameter of piston 160 mm
plate		rectangular, not oriented, with the cut-outs for banding
dimensions of plate	mm	1000x600; according to order

Marking of **standard** and **optional** equipment

4. Parameters of additional accessories

4.1. Turntable access ramp

Version of turntable access ramp		standard	extended 1700	for turntable with scale		
for turntable		15, 16.5, 18, 23	15, 16.5, 18, 23, 25	15 with scale, 16.5 with scale		
width	mm	1000	1000	1000		
length (total)	mm	1247	1677	1778		
long of sloping part	mm	1027	1457	1558		
height	mm	76	76	93		
slope	°	4	2,8	3.25		
weight	kg	max. 70	max. 95	max. 105		

4.2. Foil constriction roller

for turntables		15, 16.5, 18, 23 standard 15, 16.5, 18, 23 with cut-out 15, 16,5 with weighing equipment
Height of wrapping start [1]	mm	38 to 154 mm
Setting of height		continuous

[1] Enables setting of distance between turntable surface and lower edge of foil(at zero prestretching).

5. Additional information

5.1. Environment

environment	according D60364-5-51:2009	normal, AA5+AB5
	according EN 60721-3-3	3K3/3B1/3C1/3S1/3M1
	workplace	indoor, covered
	temperature	+5°C to +40°C
	rate of temperature change	max. 0.5°C/min.
	relative humidity	30% to 85% without condensation
	attitude	up to 2000 m
	dust	max. 2mg/m ³ , granular size max. 10 µm
	explosive environment	no (prohibited)
	emission of noise	63.9 dB
	floor	horizontal, concrete, flatness max. ±3 mm/2m
	area around machine	EN 547-1
	interference elimination	group. 1 class B according to EN 55011
	interference resistance	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-6
operating staff	age	18 and more
	burden	17 kg (reel with film during loading)
	acquaint with user manual	obligatory
revision	initial revision from manufacturer	EN 60204-1
	revision before operating	IEC 60364-4-41, IEC 60364-6
CE certification		yes
service life		50 000 hours

5.2. Connection of the machine

			Basic, Basic Plus	Junior	Optimum	Standard	Profi
compressed air	input	MPa	-	0.6 to 1.5 [1]			
	working	MPa	-	0.6 [1]			
air consumption	pneumatic top-platen		-	approx.32 l/cycle [1]			
	portal top-platen		-	approx. 48 l/cycle [1]			
el. installation	power supply		TNC-S 3+PE+N 3×400/230V, 50Hz ČSN EN 50160 (EN 50160)				
	power requirement	kVA	0.7	3.1	2.7	4.3	4.3
	protection	A	16	16	16	16	16
	voltage of control circuit	V	24=				
IP-code	motors		IP55				
	switch boards		IP54				
	sensors		IP65				

[1] For machines equipped with pneumatic or portal top-platen only

Marking of

standard

 and

optional

 equipment

5.3. Expendable material

foil wrapper	material		PE stretch foil
	roll diameter	mm	max. 250
	foil width	mm	500
	tube diameter	mm	74 to 86
	weight of full roll	kg	approx. 17
	foil thickness	µm	20 to 40

5.4. Manufacturers

		Basic Basic +	Junior	Optimum Standard	Profi	Automatic
pneumatic components		-	FESTO			
PLC		-			Schneider	
cells and sensors		Telemecanique				
	inductive	Telemecanique				
contactors		Telemecanique				
circuit breakers		Merlin Gerin				
auxiliary relays		Telemecanique				
distribution frames		WAGO				
controllers		Telemecanique				
motors:	turntable	Bonfiglioli, Siemens, Lenze				
	foil carriage	-	Bonfiglioli			
	top-platen	-	Bonfiglioli			
	elmag. brake	-	Lenze			
	prestretch device	-	Bonfiglioli			

5.5. Standard colours

mast, turntable frame	RAL 9006	grey	possible to change according to customers wish
moving parts	RAL 3020	red	not possible to change
safety parts	RAL 1018	yellow	not possible to change
others	RAL 9005	black	possible to change according to customers wish
	-	galvanized parts without colouring	not possible to change

5.6. Documentation

Customer's country	CZ, SK	DE, A	PL	RU, post soviet states	others
count of impression [1]	1	1	1	1	1
User's guide	CZ	DE	PL	RU	GB
Wiring diagram	CZ	DE	GB	GB	GB
Manuals of components (sensors, converters)	CZ (GB) [2]	DE (GB) [2]	DE (GB) [2]	DE (GB) [2]	DE (GB) [2]
Spare parts catalogue	on demand CZ	on demand DE	on demand PL	on demand RU	on demand GB
CE certification	CZ	DE	GB	GB	GB
Certificate of warranty	CZ	DE	GB	GB	GB
Overtake protocol	CZ	DE	GB	GB	GB
Documentation on CD ROM	on demand (languages consistent with standard documentation)				

Another languages: must be specified

[1] Count of impression for one machine.

[2] Delivered documentation (original or copy) delivered by producer of component

Marking of

standard

 and

optional

 equipment

5.7. Weights

All weights are rounded to 5 kg.

5.7.1. Basic components weights

turntable		15		16.5		18		23	
		G	B	G	B	G	B	G	B
standard		255 kg	260 kg	285 kg	290 kg	370 kg	375 kg	550 kg	-
with cut-out		-	295 kg	-	340 kg	-	385 kg	-	-
with weighing equipment		-	590 kg	-	560 kg	-	-	-	-

G – gearbox; B – belt and chain transmission

Mast	Basic	25 kg
	Basic Plus (together with switchbox and prestretch device)	80 kg

Mast	Junior and better	plastic cover	sheet cover
	2300	115 kg	120 kg
	3000	-	150 kg
	3500	-	170 kg

Prestretch device	Basic Plus [1]	hand brake	mechanical	el.mag. brake	1motor	1motor LIGHT	2motor
without tearing	-	20 kg	40 kg	30 kg	65 kg	50 kg	70 kg
with tearing	-	-	-	-	65 kg	-	70 kg

[1] Basic Plus – the weight of prestretch device is included into weight of mast

Electric top-platen	for mast	2300				3000			
		15	16.5	18	23	15	16.5	18	23
	for turntable	55 kg	55 kg	55 kg	60 kg	65 kg	65 kg	65 kg	65 kg

pneumatic top-platen	for mast	2300				3000			
		15	16.5	18	23	15	16.5	18	23
	for turntable	85 kg	85 kg	90 kg	90 kg	-	-	-	-

portal top-platen	for mast	2300				3000			
		15	16.5	18	23	15	16.5	18	23
	for turntable	15, 16.5, 18, 23				15, 16.5, 18, 23			
		360 kg							

5.7.2. Weights of additional parts

access ramp – for turntable	15	16.5	18	23	25	27
basic	70 kg	70 kg	70 kg	75 kg	-	-
prolonged 1700	95 kg	95 kg	95 kg	100 kg	-	-
for turntable with scale	105 kg	105 kg				-

Not used for turntables with cut-out

pit frame	for turntable	15	16.5	18	23	25	27
		standard	standard	standard	standard	standard	standard
standard	WMS, profile 50×50	35 kg	35 kg	40 kg	45 kg	-	60 kg
	WMS, profile 80×60	60 kg	-	65 kg	-	-	-
universal	for WMS and WS	65 kg	-	-	-	-	-

Not used for turntables with cut-out

holder of top sheet application	width of the foil	1200	1400
		30 kg	30 kg

5.8. Transport dimensions

Dimension of the machine in tilting status, without transport frame, without beam

On the basis of the order, is possible to deliver separately mast with pre-stretch equipment and turntable

Transport dimensions are rounded to the top and for multiplicand 5mm

"without bars", "left bars", "upright bars", "right bars" - orientation of light bars - see chap. 3.1.6

mast	2300				3000			
	length		width	height	length		width	height
	without top-platen	with top-platen			without top-platen	with top-platen		
15 standard	2350	2500	1500	645	3025	3200	1500	695
15 cut-out, without bars	2345	2500	1490	645	3025	3200	1490	695
15 cut-out, left bars	2400	2500	1630	645	3025	3200	1630	695
15 cut-out, front bars	2440	2500	1600	645	3025	3200	1600	695
15 cut-out, right bars	2400	2500	1640	645	3025	3200	1640	695
16.5 standard	2500	2500	1650	645	3025	3200	1650	695
16.5 cut-out, without bars	2540	2540	1650	645	3025	3200	1650	695
16.5 cut-out, left bars	2600	2600	1790	645	3025	3200	1790	695
16.5 cut-out, front bars	2635	2635	1760	645	3025	3200	1760	695
16.5 cut-out, right bars	2595	2595	1800	645	3025	3200	1800	690
18 standard	2650	2650	1800	645	3025	3200	1800	695
18 cut-out, without bars	2695	2695	1800	645	3025	3200	1800	695
18 cut-out, left bars	2750	2750	1940	645	3025	3200	1940	695
18 cut-out, front bars	2790	2790	1910	645	3025	3200	1910	695
18 cut-out, right bars	2750	2750	1950	645	3025	3200	1950	695
23 standard	3150	3150	2300	645	3150	3200	2300	695
23 cut-out	3245	3245	2450	645	3245	3245	2450	695

mast	3500							
	length		width	height				
	without top-platen	with top-platen						
15 standard	3550	3725	1500	735				
15 cut-out, without bars	3550	3725	1490	735				
15 cut-out, left bars	3550	3725	1630	735				
15 cut-out, front bars	3550	3725	1600	735				
15 cut-out, right bars	3550	3725	1640	735				
16.5 standard	3550	3725	1650	735				
16.5 cut-out, without bars	3550	3725	1650	735				
16.5 cut-out, left bars	3550	3725	1790	735				
16.5 cut-out, front bars	3550	3725	1760	735				
16.5 cut-out, right bars	3550	3725	1800	735				
18 standard	3550	3725	1800	735				
18 cut-out, without bars	3550	3725	1800	735				
18 cut-out, left bars	3550	3725	1940	735				
18 cut-out, front bars	3550	3725	1910	735				
18 cut-out, right bars	3550	3725	1950	735				
23 standard	3550	3725	2300	735				
23 cut-out	3550	3725	2450	735				