

# WS – standard version

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<b>Standard version</b>	– bold face
option	– thin face, grey background

## 1. Basic parameters

			WS ECONOMIC	WS PRACTIC
control			<b>programmable system</b>	
	count of programs		<b>2</b>	
turntable	basic		<b>15, 16.5, 18</b>	-
	with cut-out		-	<b>15, 16.5, 18</b>
	with scale		<b>15, 16.5</b>	
	control *)		<b>no (contactor), frequency converter</b>	
	oriented stop **)		<b>yes, precise</b>	
	turntable access ramp		optional	<b>no</b>
	pit frame		optional	<b>no</b>
Mast	height	mm	<b>2000</b>	
	height of goods check ***)		<b>optical sensor</b>	
prestretch device			<b>hand brake, mechanic, electromagnetic brake, single-motor LIGHT</b>	

\*) control of turntable speed

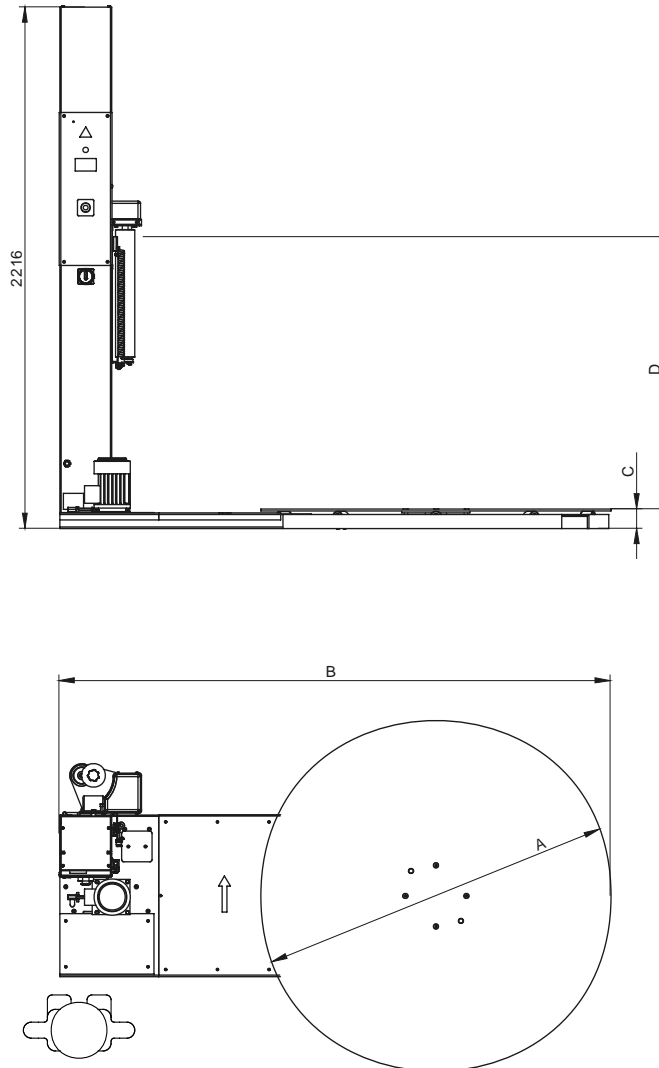
\*\*) oriented stop – turntable stopping accuracy in the same position; see chap. 3.1.1

\*\*\*) goods height check during the wrapping; the pallet is wrapped all over the height

## 2. Basic diameters

### 2.1. WS ECONOMIC – machine with standard turntable

Figure contour – working place



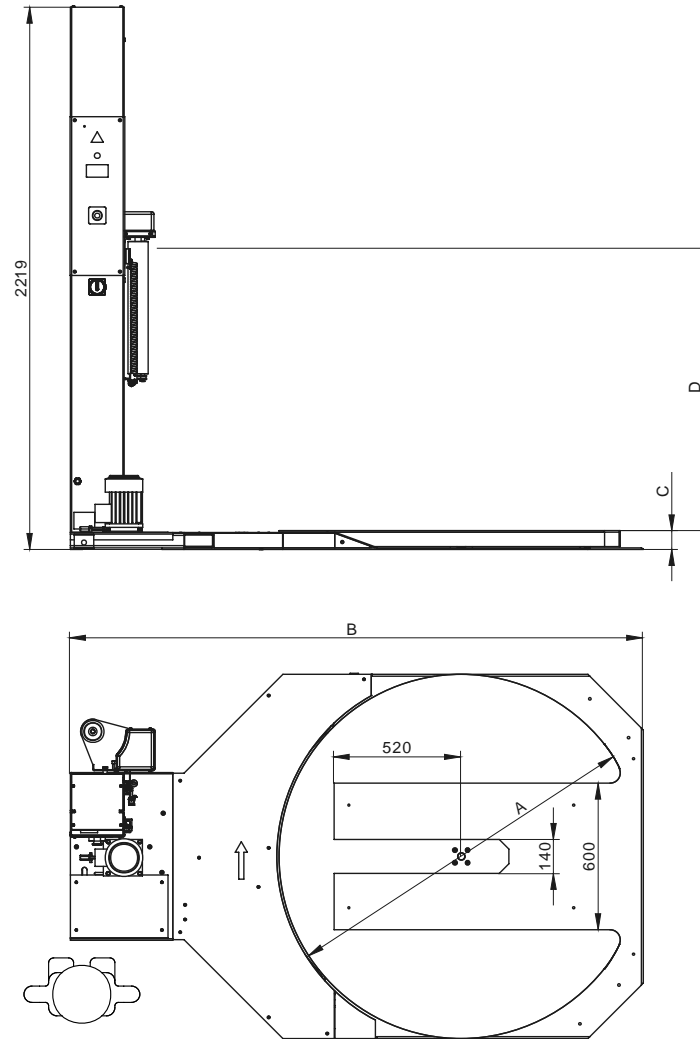
		WS 15	WS 16.	WS 18	WS 15 with scale	WS 16.5 with scale
<b>ECONOMIC</b>						
pallet diagonal max.	mm	<b>1490 (size 1200x800)</b>	1650 (size 1200x1000)	1800	1490 (size 1200x800)	1650 (size 1200x1000)
load capacity	kg	<b>2000</b>	2000	2000	1200	1200
A – diameter	mm	<b>1490</b>	1650	1800	1490	1650
B – length	mm	<b>2350</b>	2505	2655	2350	2505
C – turntable plane height		<b>77</b>	77	79	93	93
D – min. wrap height *)		<b>510</b>				
D – max. wrap height *)		<b>2250</b>				
turntable speed	1/min	<b>10</b>				
accuracy of turntable stop	°	see chap.. 3.1.1				
motor	W	<b>370</b>	370	370	370	370
weight	kg	<b>max. 370</b>	max. 390	max. 485	max. 440	max. 470

\*) Wrap height – max. height between turntable and upper edge of foil on reel in prestretch device

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

## 2.2. WS PRACTIC – machine with turntable with cut-out

Figure contour – working place



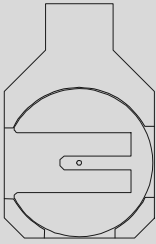
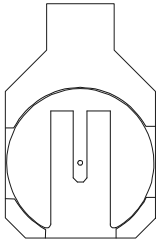
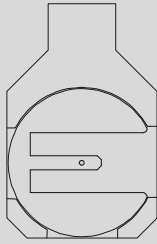
		WS 15 PRACTIC	WS 16.5 PRACTIC	WS 18 PRACTIC
pallet diagonal max.	mm	<b>1490 (size 1200x800)</b>	1650 (size 1200x1000)	1800
load capacity	kg	<b>1000</b>	1000	1000
A – diameter	mm	<b>1490</b>	1650	1800
B – length	mm	<b>2350</b>	2510	2655
C – turntable plane height		<b>78</b>	78	78
D – min. wrap height *)		<b>510</b>		
D – max. wrap height *)		<b>2250</b>		
turntable speed	1/min	<b>10</b>		
accuracy of turntable stop	°	see chap. 3.1.1		
motor	W	<b>370</b>	370	370
weight	kg	<b>max. 405</b>	max. 450	max. 500

\*) Wrap height – max. height between turntable and upper edge of foil on reel in prestretch device

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

### 2.2.1. 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	WS PRACTIC		
orientation of cut-out			
	left	front	right

## 3. Basic components parameters

### 3.1. Turntables

see chap. 2

#### 3.1.1. Overpass of turntable (oriented stop)

	mode	
	full range	continual conditions
oriented stop (design of turntable)		
<b>standard (without converter)</b>	<b>±60°</b>	<b>±10°</b>
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.

### 3.2. Mast

	mm	WS
height	mm	<b>2150</b>
width	mm	<b>220</b>
depth	mm	<b>260</b>
film carriage drive	W	<b>250</b>
Height of wrapping start *)	mm	<b>0, 75, 150</b>

\*) Enables setting of distance between turntable surface and lower edge of foil(at zero prestretching).

### 3.3. Prestretch device

WS		hand brake	mechanic prestretch	electromagnetic brake	Single-motor LIGHT
height	mm	<b>555 (without handle)</b>	685	688	754
width	mm	<b>158 (without sensor)</b>	335 (without sensor)	305 (without sensor)	386
depth	mm	<b>267 (without sensor)</b>	280 (without sensor)	210 (without sensor)	284
regulation of pre-stretch		<b>manual</b>	ne	electromagnetic brake	electric motor+gear
primary pre-stretch standard	%	-	130	-	180
primary pre-stretch optional	%	-	80, 130, 180	ne	80, 130, 180
secondary pre-stretch	%	-	-	0 až 100% (of braking force)	70 až 400

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

WS		<b>hand brake</b>	mechanic prestretch	electromagnetic brake	Single-motor LIGHT
power consumption of el. mg. brake	W	-	-	18	-
el. motor (3x400V 50Hz)	W				370

## 4. Parameters of additional accessories

### 4.1. Turntable access ramp

No for turntable with cut-out

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

### 4.2. Foil constriction roller

for turntables		<b>15, 16.5, 18 standard 15, 16.5, 18 with cut-out</b>
Height of wrapping start *)	mm	<b>76 to 140 mm</b>
Setting of height		<b>stepless</b>

\*) Enables setting of distance between turntable surface and lower edge of foil (at zero prestretching).

## 5. Additional information

### 5.1. Environment

environment	according HD60364-5-51:2009	<b>normal, AA5+AB5</b>
	according EN 60721-3-3	<b>3K3/3B1/3C1/3S1/3M1</b>
	workplace	<b>indoor, covered</b>
	degree of corrosion aggressiveness of the environment according to ISO 12944	<b>C2</b>
	temperature	<b>+5°C to +40°C</b>
	rate of temperature change	<b>max. 0.5°C/min.</b>
	relative humidity	<b>30% to 85% without condensation</b>
	altitude	<b>up to 2000 m</b>
	dust	<b>max. 2mg/m<sup>3</sup>, granular size max. 10 µm</b>
	explosive environment	<b>no (prohibited)</b>
	emission of noise	<b>63.9 dB</b>
	floor	<b>horizontal, concrete, flatness max. ±3 mm/2m</b>
	workplace lighting	<b>EN 12464-1</b>
	area around machine	<b>EN 547-1</b>
	interference elimination	<b>EN 61000-6-3</b>
	interference resistance	<b>EN 61000-6-1</b>

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

operating staff	age	<b>18 and more</b>
	burden	<b>17 kg (reel with film during loading)</b>
	aquaint with user manual	<b>obligatory</b>
revision	initial revision from manufacturer	<b>EN 60204-1</b>
	revision before operating	<b>according to national regulations</b>
CE certification		<b>yes</b>
service life		<b>50 000 hours</b>

## 5.2. Connection to supply system

			WS ECONOMIC, WS PRACTIC
el. installation	power supply		<b>TNC-S 3+PE+N 3x400/230V, 50Hz, EN 50160 *)</b>
			<b>TNC-S 1+PE+N 230V, 50Hz, EN 50160 *)</b>
	power requirement	kVA	<b>1.5 *)</b>
	protection	A	<b>16</b>
	voltage of control circuit	V	<b>24=</b>
IP code	motors		<b>IP55</b>
	switchboards		<b>IP54</b>
	sensors		<b>IP65</b>

\*) see type plate (depends on configuration and wiring)

## 5.3. Expendable material

foil wrapper	material		PE stretch foil
	roll diameter	mm	<b>max. 250</b>
	foil width	mm	<b>500</b>
	tube diameter	mm	<b>74 až 86</b>
	weight of full roll	kg	<b>cca. 17</b>
	foil thickness	µm	<b>20 to 40</b>

## 5.4. Manufacturers

		WS PRIME	WS ECONOMIC, WS PRACTIC
PLC		<b>---</b>	<b>PMA</b>
cells and sensors	optical		<b>Schneider</b>
	inductive		<b>Schneider</b>
contactors			<b>Schneider</b>
circuit breakers			<b>Schneider</b>
auxiliary relays			<b>Schneider</b>
distribution frames			<b>WAGO</b>
controllers			<b>Schneider</b>
motors:	turntable		<b>KEM</b>
	foil carriage		<b>Bonfiglioli</b>
	prestretch device		<b>Bonfiglioli</b>

Different components may be used, but do not affect the operation of the device

## 5.5. Standard colours

Mast, turntable plate, turntable drive	<b>RAL 5013</b>	<b>dark blue</b>	possible to change according to customers wish
turntable frame	<b>RAL 9006</b>	<b>silver grey</b>	<b>not possible to change</b>
moving parts	<b>RAL 3020</b>	<b>red</b>	<b>not possible to change</b>

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

safety parts	<b>RAL 1018</b>	<b>yellow</b>	<b>not possible to change</b>
others	<b>RAL 9005</b>	<b>black</b>	possible to change according to customers wish
	-	<b>galvanized parts without colouring</b>	<b>not possible to change</b>

## 5.6. Documentation

Standard language of accompanying documentation

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

Another languages: must be specified

\*) Count of impression for one machine.

\*\*\*) Delivered documentation (original or copy) delivered by producer of component

## 5.7. Weight

All weights are rounded to 5 kg.

turntable		<b>15</b>	16.5	18
standard	belt and chain transmission	<b>260 kg</b>	290 kg	375 kg
with cut-out		<b>295 kg</b>	340 kg	390 kg
with scale	gearbox	<b>330 kg</b>	370 kg	

mast WS	<b>80 kg</b>			
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prestretch device WS	hand brake	mechanic	el.mg. brake	single-motor LIGHT
	<b>10 kg</b>	30 kg	20 kg	45 kg

### 5.7.1. Weights of additional parts

access ramp	for turntable	15 standard	15 with cut-out	16.5 standard	18 standard
	basic	<b>70 kg</b>	<b>impossible</b>	70 kg	<b>70 kg</b>
	prolonged	<b>95 kg</b>	<b>impossible</b>	95 kg	<b>95 kg</b>
	with scale	<b>105 kg</b>	<b>impossible</b>	<b>105 kg</b>	-

pit frame	for turntable	15 standard	15 with cut-out	16.5 standard	18 standard
	WS	<b>35 kg</b>	<b>nelze</b>	-	<b>40 kg</b>
universal	WMS and WS	65 kg	<b>nelze</b>	-	-

holder of top sheet application	Width of the film	1200	1400
		<b>30 kg</b>	<b>30 kg</b>

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

### **5.8. Transport dimensions**

		délka	šířka	výška
<b>turntable</b>	15 standard	<b>2360</b>	<b>1500</b>	<b>410</b>
	15 with cut-out	<b>2360</b>	<b>1490</b>	<b>410</b>
	16.5 standard	2500	1650	410
	16.5 with cut-out	2515	1650	410
	18 standard	2650	1800	410
	18 with cut-out	2690	1800	410