



*One stop solutions for processing
and packaging equipment*

Production Locations



INNOJET, Steinen, Germany



KILIAN, Cologne, Germany



TECPHARM, Barcelona, Spain

ROMACO  INNOJET
beyond technology Herbert Hüttlin

ROMACO  KILIAN
beyond technology

ROMACO  TECPHARM
beyond technology

ROMACO  NOACK
beyond technology

ROMACO  SIEBLER
beyond technology

ROMACO  MACOFAR
beyond technology

ROMACO  PROMATIC
beyond technology



NOACK / SIEBLER, Karlsruhe, Germany



MACOFAR / PROMATIC, Bologna, Italy



Changsha, China



one stop solutions

processing and packaging equipment

Granulation / Mixing

Material Handling

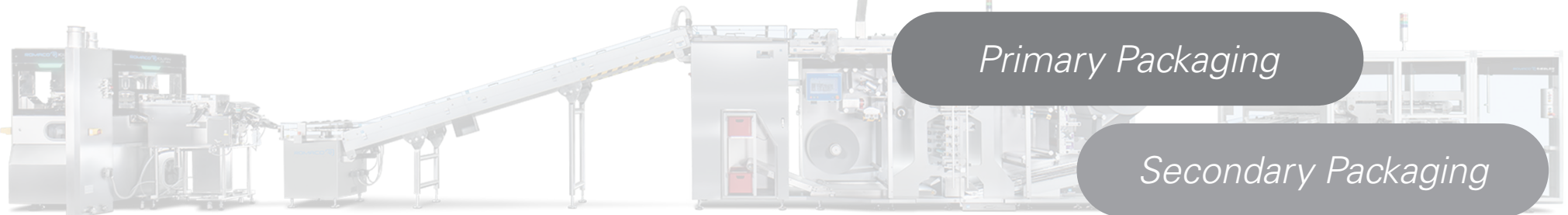
Tableting

Capsule Filling

Coating

Primary Packaging

Secondary Packaging



Icon description

Process



HS* Granulation



FB** Bottom Spray Granulation



FB Top Spray Granulation



FB Drying



FB Pellet Coating



FB Hot Melt Coating



Tableting



Tablet Coating



Lab

Technologies



HS Mixer & Granulator



Vertical Wet Transfer Accelerator



FB Dryer with Orbiter



FB Granulator with Orbiter & Rotojet



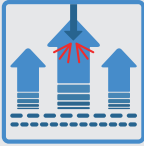
FB Coater with Orbiter & Rotojet



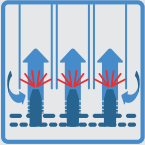
FB Granulator Top Spray with Orbiter



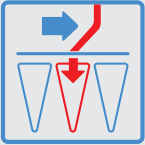
FB Dryer with Sieve Bottom Plate



FB Granulator Top Spray with Sieve Bottom Plate



FB Pellet Coater with Wurster



Sepajet Filter, Dynamic Cleaning



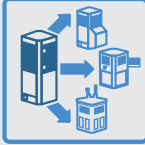
Orbiter Cleanable in Place (CIP)



Recorded Measurement



Data Analysis & Evaluation – any-time & anywhere



Physical Compression Simulation of all Tablet Presses



Segment technology

Notices Signs



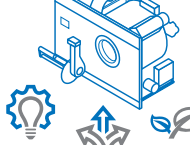
Containment



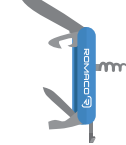
ATEX Certified



cool, fast, clean



Innovation, Versatility, Sustainability



Swiss Pocket Knife Versatility

* High Shear | ** Fluid Bed

Laboratory Services



Granulation / Mixing

Capsule Filling

Tableting

Coating

Material Handling

Process Laboratories



InnoTech – Steinen



India Customer Experience Centre – Hyderabad



Characterization and Optimization of Powders, Granules, Tablets & Production Processes & Scale up

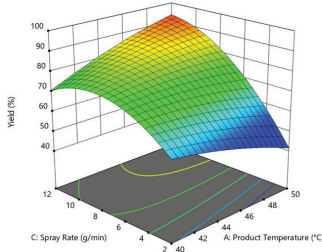
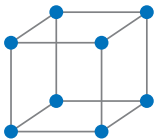


KiTech – Cologne



CoTech – Barcelona

Layer no. 1											
Main compression											
Cycle no.	Upper punch	Lower punch	Concave	Concave	Real	Real	Real	Real	Real	Real	Real
	Energy (J)	Energy (J)	Energy (J)	Energy (J)	Energy (J)	Energy (J)	Energy (J)	Energy (J)	Energy (J)	Energy (J)	Energy (J)
1	0.446	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404
2	0.446	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404
3	0.446	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404
4	0.446	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404
5	0.446	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404
Average	17.751	5.750	0.141	-0.005	5.607	0.302	412.3	3.85	11.41	112	
Max	18.800	5.900	0.151	-0.005	5.807	0.302	415.0	3.84	11.50	112	
Min	17.840	5.610	0.130	-0.009	5.749	0.302	410.0	3.84	11.36	112	
Max-Min	0.960	0.290	0.020	-0.004	0.058	0.000	4.000	0.000	0.140	0.000	
Std	18.218	5.897	0.147	-0.007	5.817	0.302	414.7	3.85	11.53	115	
Messages											
Cycle no.	Parameter	Condition	Unit	Value	Unit	Value	Unit	Value	Unit	Value	Unit
1	Temperature	Condition	°C	17.751	°C	17.751	°C	17.751	°C	17.751	°C
2	Energy (J)	Condition	J	5.750	J	5.750	J	5.750	J	5.750	J
3	Energy (J)	Condition	J	0.141	J	0.141	J	0.141	J	0.141	J
4	Energy (J)	Condition	J	-0.005	J	-0.005	J	-0.005	J	-0.005	J
5	Energy (J)	Condition	J	5.607	J	5.607	J	5.607	J	5.607	J
Average	17.751	5.750	0.141	-0.005	5.607	0.302	412.3	3.85	11.41	112	
Max	18.800	5.900	0.151	-0.005	5.807	0.302	415.0	3.84	11.50	112	
Min	17.840	5.610	0.130	-0.009	5.749	0.302	410.0	3.84	11.36	112	
Max-Min	0.960	0.290	0.020	-0.004	0.058	0.000	4.000	0.000	0.140	0.000	
Std	18.218	5.897	0.147	-0.007	5.817	0.302	414.7	3.85	11.53	115	

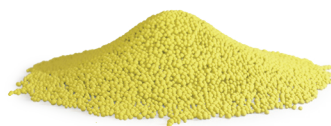


RCPC – Changsha

M-Lab (High Shear Mixing)



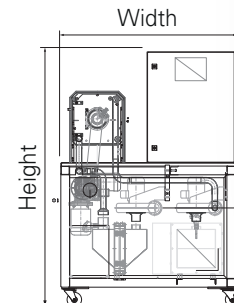
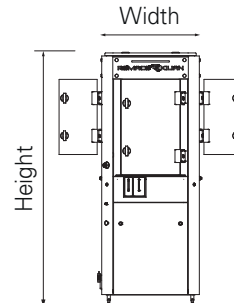
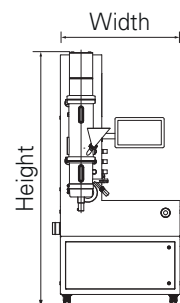
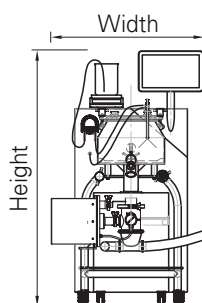
VENTILUS® Lab (Fluid Bed Processing)



KTP 1X (Tableting)



TPR Lab (Tablet Coating)

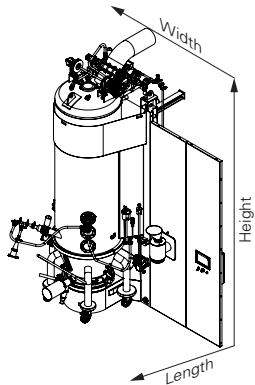
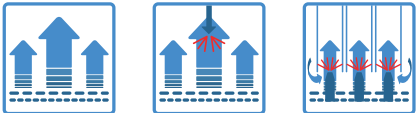
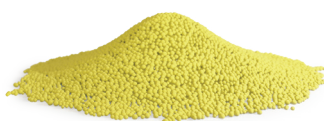


Technical Data	M-Lab (High Shear Mixing)	
Capacity (l)	2.5/5	
Capacity (l), min.–max.	0.6–4	
Measurements (mm), W x H x L	609 x 1,210 x 690	
	M-Pilot (High Shear Mixing)	
Capacity (l)	10/25	
Capacity (l), min.–max.	3–30	
Measurements (mm), W x H x L	609 x 1,638 x 885	
	VENTILUS® Lab (Fluid Bed Processing)	
Capacity (l), min.–max.	0.7–7	
Batch size (g)	250–5,000	
Particle size (µm)	10–2,000	
Measurements (mm), W x H x L	1,083 x 1,037 x 2,242	
	KTP 1X (Tableting)	
Max. tablet diameter (mm)	26*	
Max. die filling (mm)	20*	
Max. compression force (kN)	80	
Measurements (mm), W x H x L	830 x 1,971 x 830	
	TPR Lab (Tablet Coating)	
	Drum 1	Drum 2
Capacity (l), min.–max.	0.75–1.50	1.50–3.00
Measurements (mm), W x H x L	1,290 x 1,760 x 800	

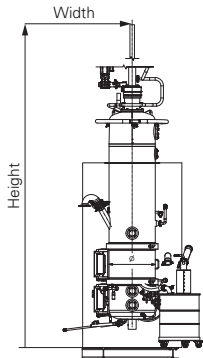
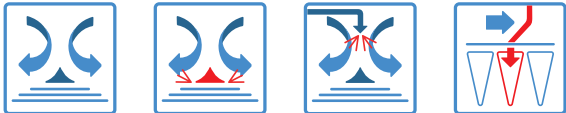
Fluid Bed Granulation

Bottom Spray – Top Spray – Wurster

Fluid Bed Dryer – Traditional



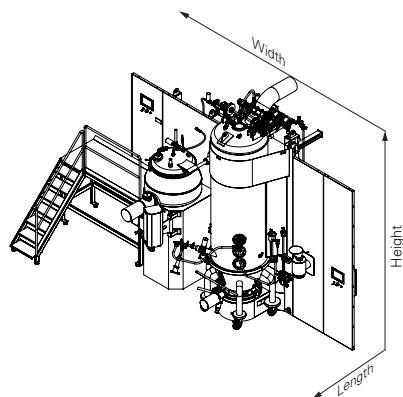
VENTILUS® Advanced Line



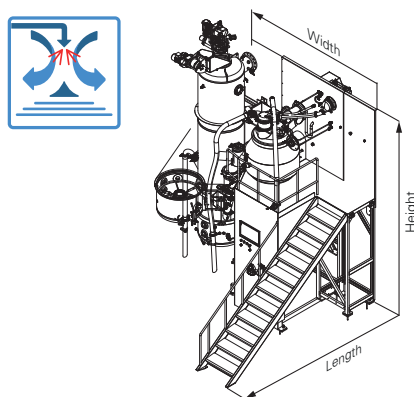
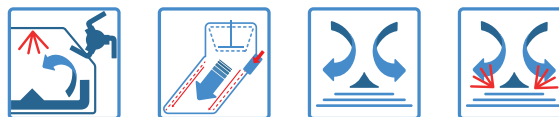
Technical Data			Fluid Bed Dryer – Traditional	
ITF size	Useful Capacity (l)			
	min.	max.		
ITF 30	6	24		
ITF 60	12	48		
ITF 100	22	88		
ITF 200	44	176		
ITF 300	66	264		
ITF 400	88	352		
ITF 600	132	528		
ITF 800	176	704		
ITF 1000	220	880		
ITF 1300	264	1,056		
			VENTILUS® Advanced Line	
V size	min.	max.		
V 75	18.8	64		
V 150	38	128		
V 300	75	255		
V 450	113	383		
V 600	150	510		
V 900	225	765		
V 1200	300	1,020		
V 1500	375	1,275		



IGT – Traditional



IGL – Advanced



Technical Data IGT – Traditional Line

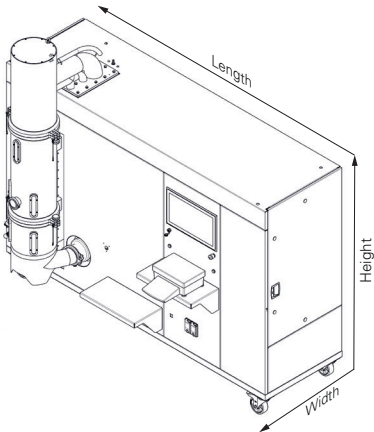
IGT size	Useful Capacity (l)	
	min.	max.
IGT 25	6	20
IGT 50	13	40
IGT 100	25	80
IGT 200	50	160
IGT 300	75	240
IGT 400	100	320
IGT 600	150	480
IGT 800	200	640
IGT 1000	250	800
IGT 1200	300	960
IGT 1400	350	1,120

IGL – Advanced Line

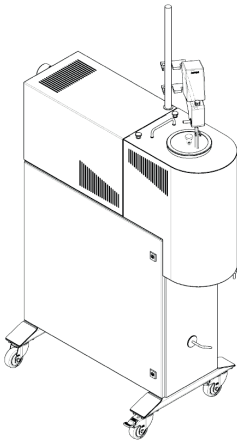
IGL size	min.	max.
IGL 75	20	60
IGL 150	40	120
IGL 300	75	240
IGL 450	110	360
IGL 600	150	480
IGL 900	225	720
IGL 1200	300	960
IGL 1500	375	1,200

Ventilus Pilot with Hot Melt Coating

Romaco Innojet VENTILUS® mobile Pilot Plant



IHD 5/50/300

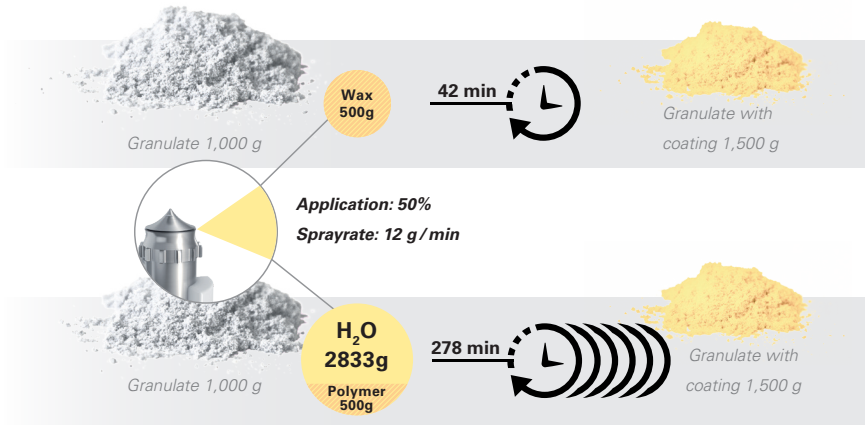


Technical Data

VENTILUS® Pilot

Process volume (l), min.–max.	2.5–34
Dimensions (mm), W × H × L	1,438 × 2,602 × 2,908
Weight (kg)	1,480

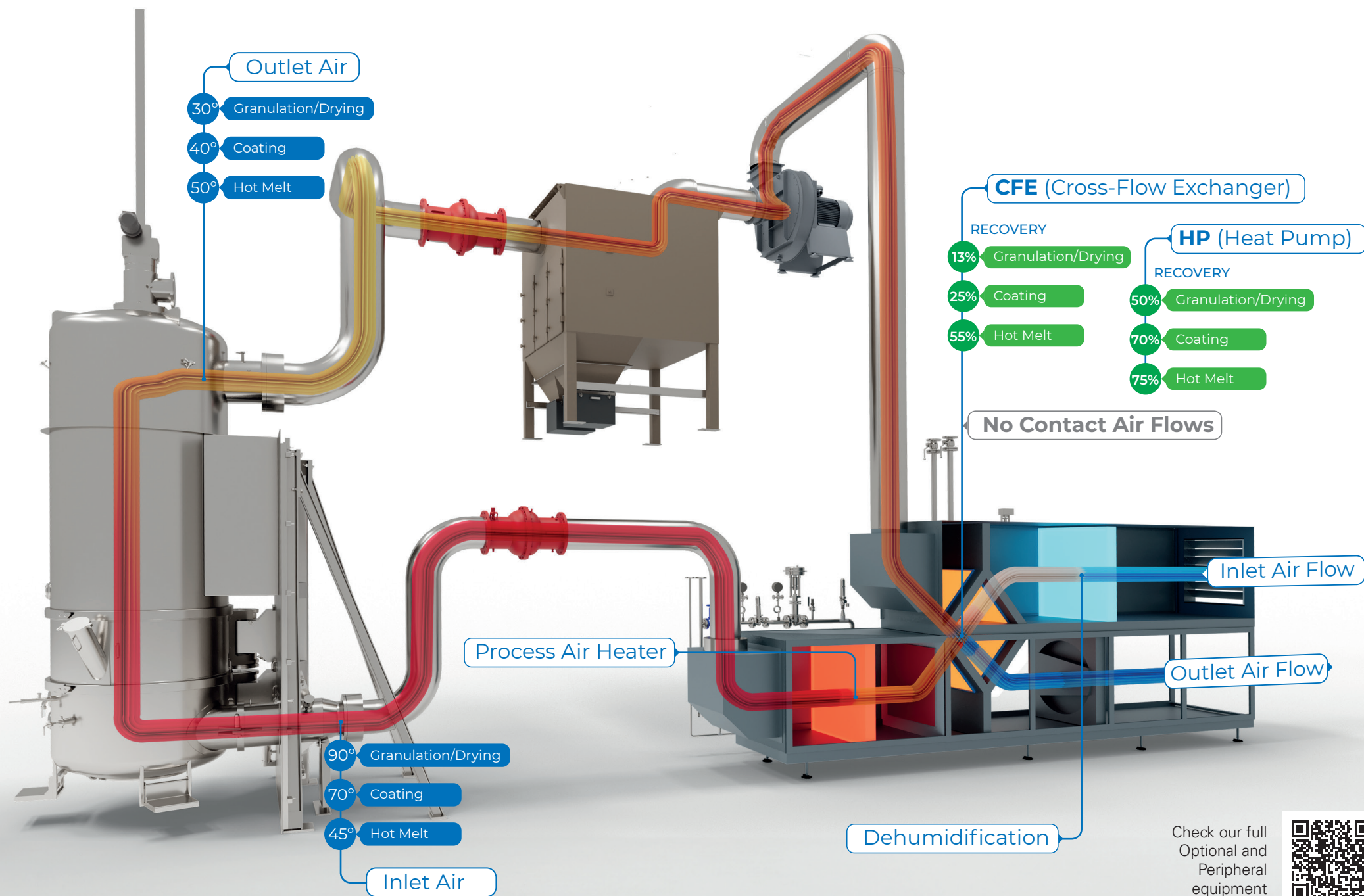
Hot melt coating



Coating with polymer solution



Heat Recovery System for granulation equipment



Check our full
Optional and
Peripheral
equipment



Tablet Presses

E / S Series

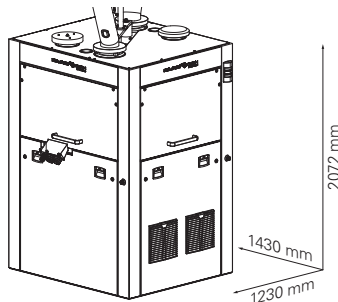
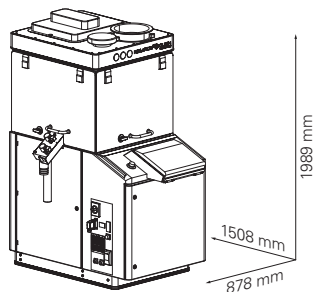
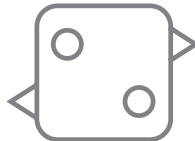
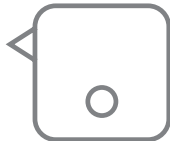
E 380 SMART / S 380 Prime



E 710 SMART



S 710 Prime



Technical Data

E 380 SMART

Machine configurations	Mono-layer
Number of press stations	19–44
Tool type (EU and TSM)	B, D, other
Die type	BBS, BB, B, D, other
Max. tablet diameter (mm)	11–35
Max. output (tablets/hour)	90,060–303,600
Max. die filling (mm)	18–27

S 380 Prime

Machine configurations	Mono-layer
Number of press stations	19–44
Tool type (EU and TSM)	B, D, other
Die type	BBS, BB, B, D, other
Max. tablet diameter (mm)	11–35
Max. output (tablets/hour)	90,060–330,000
Max. die filling (mm)	18–27

E 710 / S 710

Machine configurations	Mono-layer; Bi-layer
Number of press stations	44–85
Tool type (EU and TSM)	B, D, other
Die type	BBS, BB, B, D, other
Max. tablet diameter (mm)	11–25
Max. output (tablets/hour)	237,600–1,020,000
Max. die filling (mm)	18–22



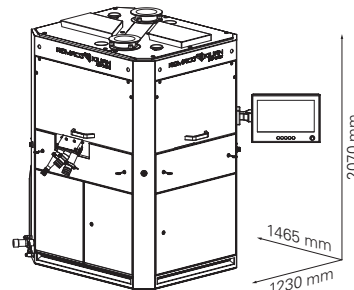
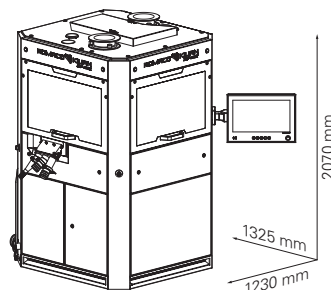
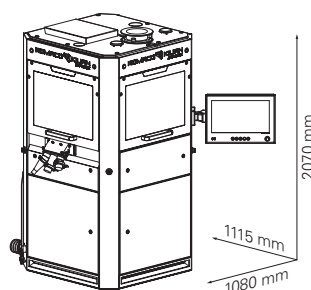
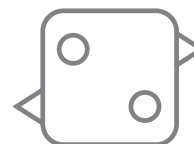
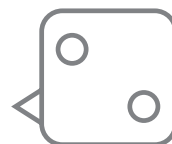
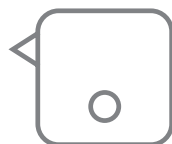
KTP 420X



KTP 590X



KTP 720X



Technical Data	KTP 420X
Machine configurations	Mono-layer
Number of press stations	22–66
Tool type (EU and TSM)	B, D, other
Die type	BBS, BB, B, D, segments, other
Max. tablet diameter (mm)	11–35
Max. output (tablets/hour)	105,600–475,200
Max. die filling (mm)	18–22
	KTP 590X
Machine configurations	Mono-layer; Bi-layer; Mono- & Bi-layer
Number of press stations	33–96
Tool type (EU and TSM)	B, D, other
Die type	BBS, BB, B, D, segments, other
Max. tablet diameter (mm)	11–35
Max. output (tablets/hour)	108,900–691,200
Max. die filling (mm)	18–22
	KTP 720X
Machine configurations	Mono-layer; Bi-layer
Number of press stations	39–115
Tool type (EU and TSM)	B, D, other
Die type	BBS, BB, B, D, segments, other
Max. tablet diameter (mm)	11–35
Max. output (tablets/hour)	117,000–1,380,000
Max. die filling (mm)	18–22

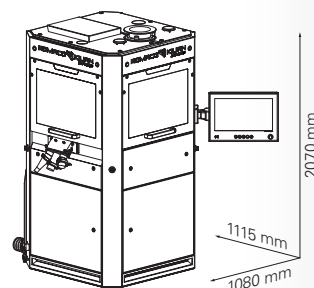
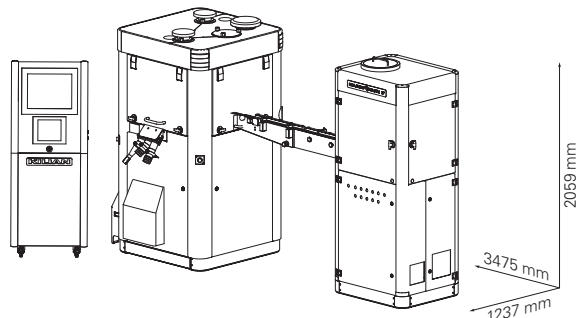
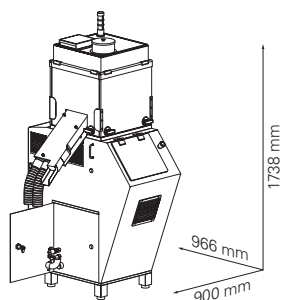
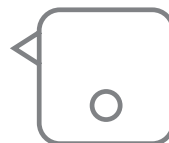
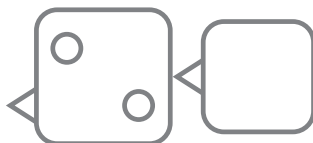
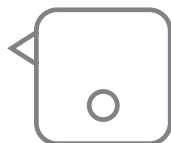
Tablet Presses

for special applications

R&D/Pilot production — KTP 180X

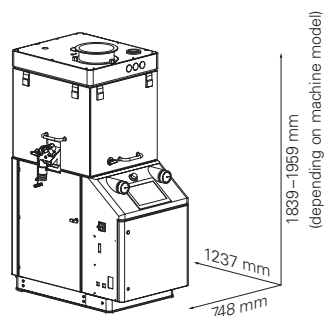
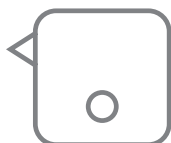
Tab-in-Tab — SYNTHESIS 500 TT /TTH

Containment — KTP 420X C

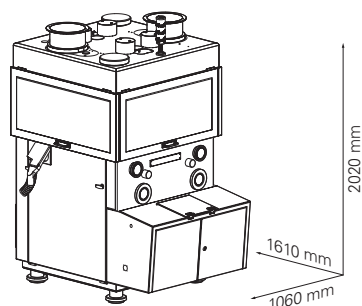
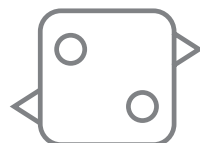


Technical Data	KTP 180X
Number of press stations	4–19
Tool type (EU and TSM)	B, D, B+D mixed
Die type	BBS, BB, B, D, B+D mixed
Max. tablet diameter (mm)	13–24
Max. output (tablets/hour)	16,800–79,800
Max. die filling (mm)	18–20
	SYNTHESIS 500 TT / TTH
Number of press stations	30–50
Tool type (EU and TSM)	B, D
Die type	BBS, BB, B, D
Max. tablet diameter (mm)	11–25
Max. output (tablets/hour)	45,000–140,000
Max. die filling (mm)	18–22
	KTP 420X C, Version OEB3
Containment level	OEB3 (OEL 10–100 µg/m ³), dry containment
Internal conditions	Under pressure redundantly controlled
Filtration system	Inlet HEPA H13 filter
Integrated transfer system	RTP Alpha/Beta port, continuous liner for samples and waste tablets
Software compliance	GAMP 5, CFR 21 Part 11
Safety features	Gloveports with controlled flaps, window controlling and locking, hand suction hose for pre-cleaning of press chamber

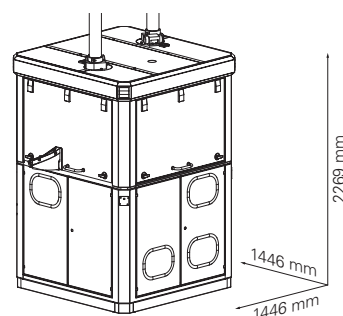
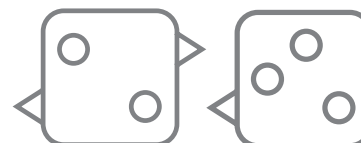
E 150 PLUS



RX



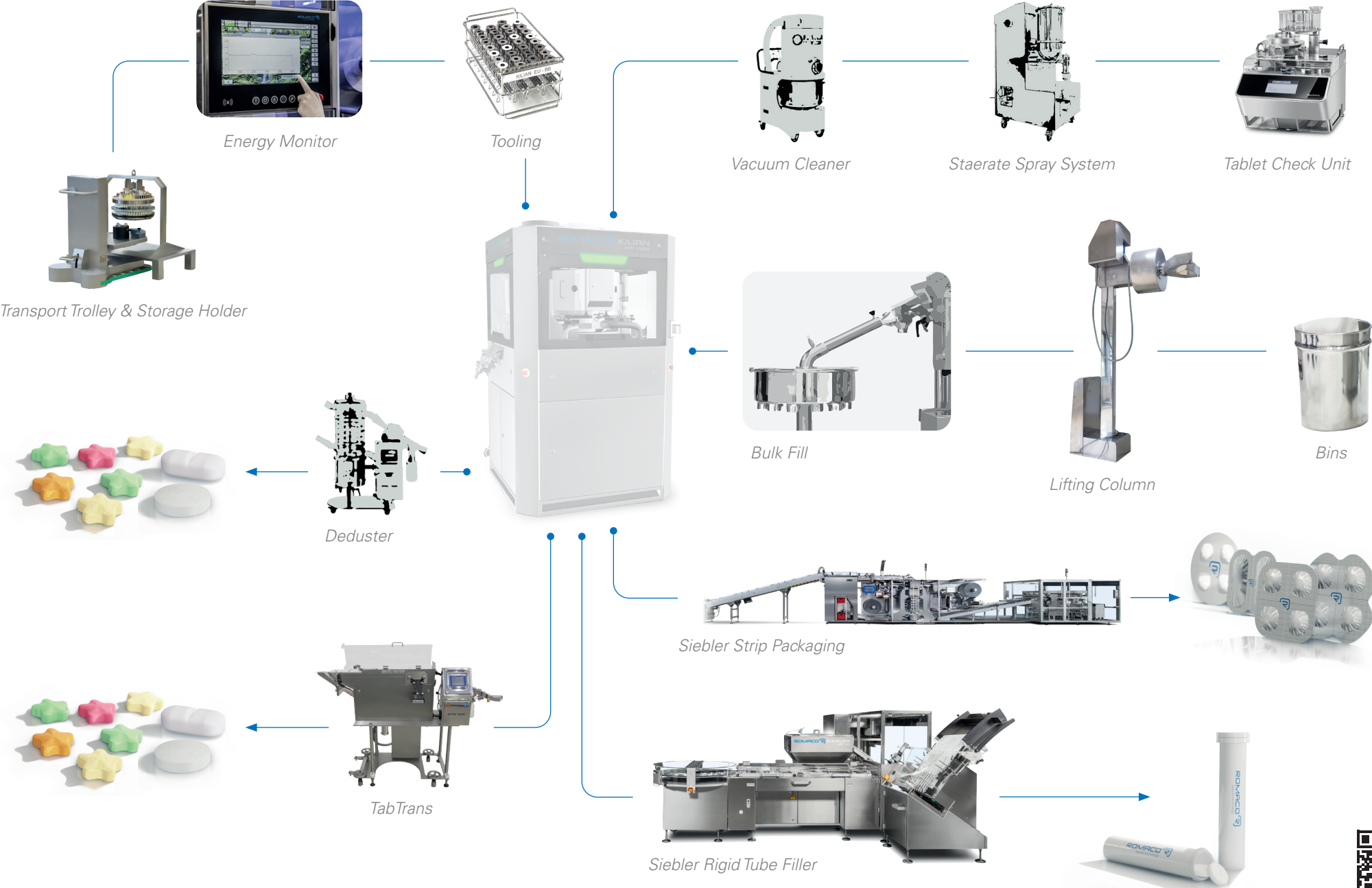
KTS 840 / KTS 1000



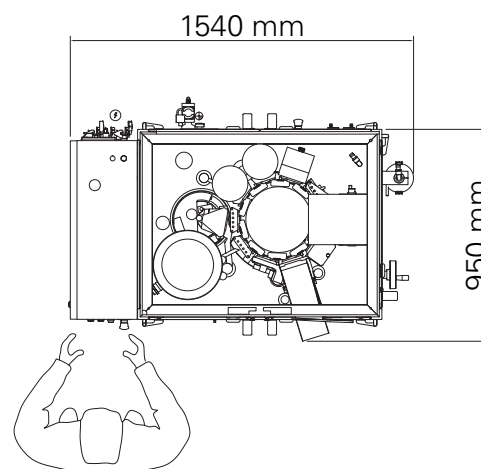
Technical Data	E 150 PLUS
Machine configurations	Mono-layer
Number of press stations	14–36
Tool type (EU and TSM)	B, D, other
Die type	BBS, BB, B, D, other
Max. tablet diameter (mm)	11–40
Max. output (tablets/hour)	45,360–224,640
Max. die filling (mm)	18–47
	RX
Machine configurations	Mono-layer; Bi-layer
Number of press stations	29–73
Tool type (EU and TSM)	depending on application
Die type	BBS, BB, B, D, other
Max. tablet diameter (mm)	11–45
Max. output (tablets/hour)	174,000–683,200
Max. die filling (mm)	18–33
	KTS 840 / KTS 1000
Machine configurations	Mono-layer; Bi-layer; Tri-layer
Number of press stations	25–43
Tool type (EU and TSM)	B, D, other
Die type	B, D, segments, other
Max. tablet diameter (mm)	19–75
Max. output (tablets/hour)	52,500–300,300
Max. die filling (mm)	22–57



Tableting Peripherals & System Solutions



CD 40 E



Technical Data*

CD 40 E

Max. output (capsules/hour)

40,000

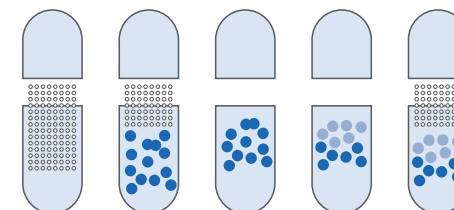
Capsule size

Standard capsules 000 to 5
Supro capsules A to E
DB CAPS "AA", "A", "B"

Weight, approx. (kg)

1,250

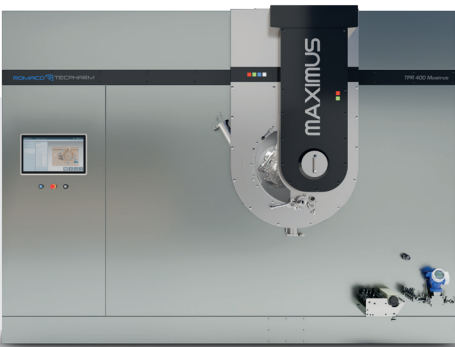
* Depending on product and machine configuration



Tablet Coaters



TPR MAXIMUS



Smart Tablet Coating from 5% to 100%



Self-adjusting Deflectors

Automatic push-button opening

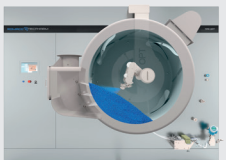
TPR OPT



Smart Tablet Coating from 10% to 100%



Min. Load



Max. Load

TPR STD



Coating from 40% to 100%

TPR OPT PILOT



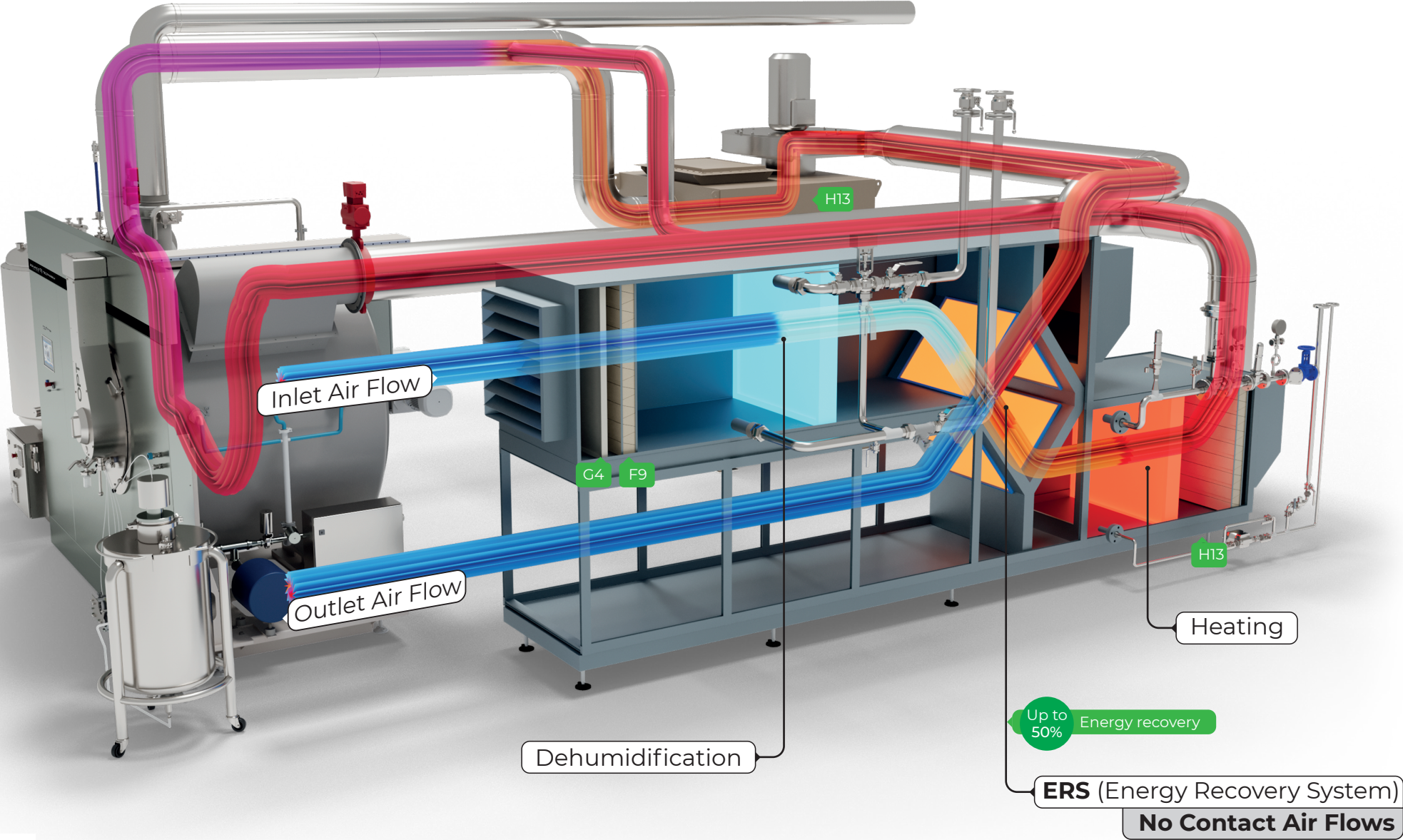
For R&D and small-batch sizes from 1 to 25 kg.
Modern solution as a mobile device.



Model	TPR Maximus / TPR OPT Capacity (l), min.–max.	
	TPR Maximus	TPR OPT
TPR 25 Pilot	–	1.5–37.5
TPR 50	–	7.5–75
TPR 100	–	15–150
TPR 200	30–300	
TPR 300	45–450	
TPR 400	60–600	
TPR 500	75–750	
TPR 600	90–900	
Model	TPR Standard Coater Capacity (l), min.–max.	
TPR i5-10	3.5–15	
TPR i50	7.5–75	
TPR 100	60–150	
TPR 150	90–225	
TPR 200	120–300	
TPR 300	180–450	
TPR 400	240–600	
TPR 500	300–750	
TPR 600	360–900	



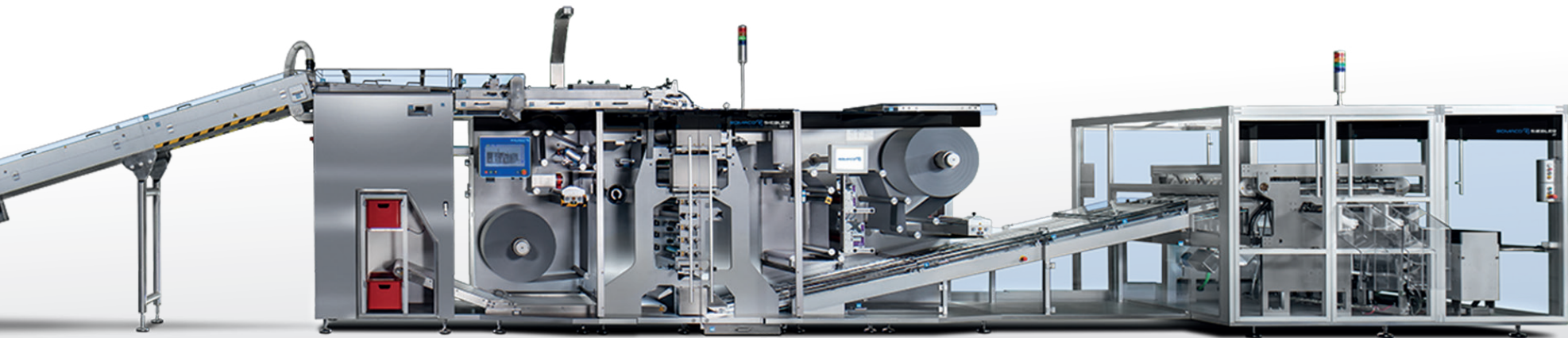
Energy Recovery System for tablet coating



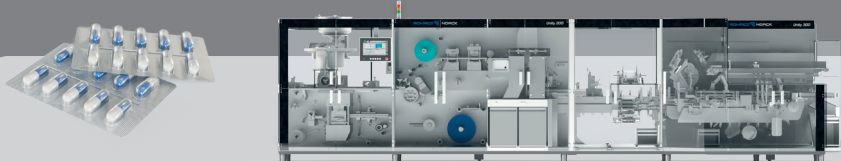
Check our full
Optional and
Peripheral
equipment

Primary Packaging

Secondary Packaging



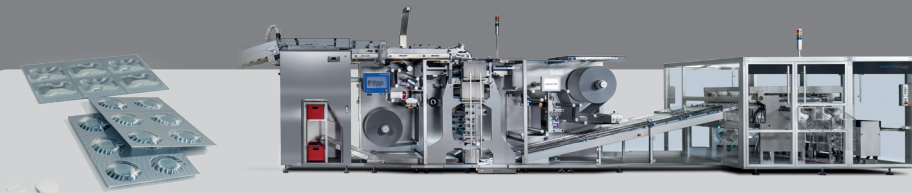
Blister Solutions



Rigid Tube Solutions



Strip Solutions



Pouch Solutions



Aseptic Powder Filling Solutions



Ophthalmic Solutions



Microspheres / Liquid & Powder HPAPIs Robotic Filling



Non-injectable Liquid Filling Solutions



Non-injectable Powder Filling Solutions



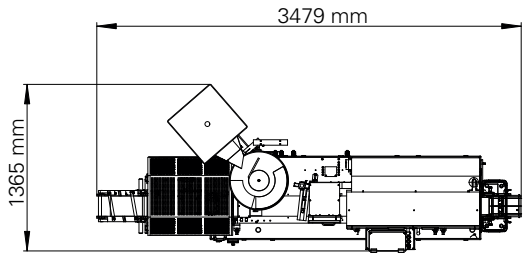
Blister Machines

Platen Sealing

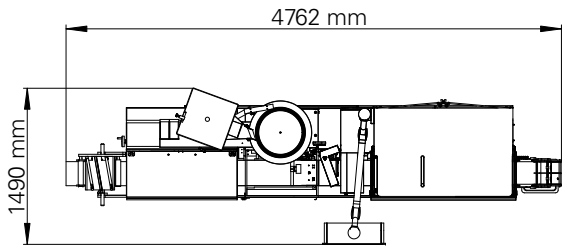


Technical Data	N 760	N 623
Max. output (Blister/min)	200	420
Max. forming area (mm)	155 × 138	225 × 158
Max. forming depth (mm)	25	25
Blister dimensions (mm), min.–max.	28 × 54 × 3 to 115 × 155 × 25	28 × 54 × 3 to 224 × 158 × 25

N 760



N 623





Technical Data	NBP 930	N 950 / NBP 950 / N 950 E	NBP 960	NBP 980
Max. Output (Blister/min)	300	500	600	800
Max. forming area (mm)	190 × 154	190 × 204	240 × 294	240 × 294
Max. forming depth (mm)	12	12	12	12
Blister dimensions (mm), min.–max.	60 × 30 × 3 to 150 × 100 × 12	35 × 20 × 3 to 162 × 204 × 12	30 × 3 × 60 to 90 × 12 × 145	30 × 3 × 60 to 90 × 12 × 145

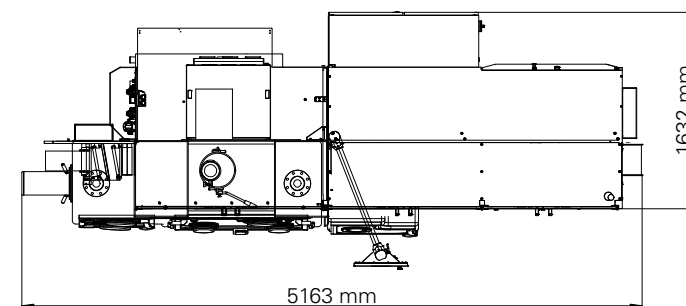
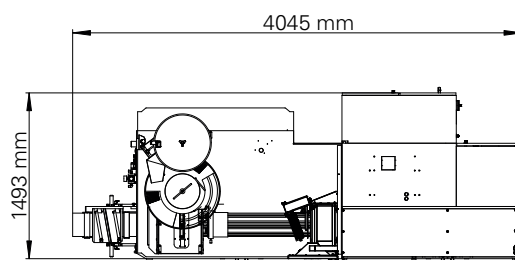
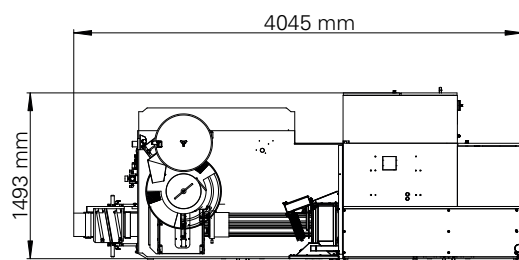
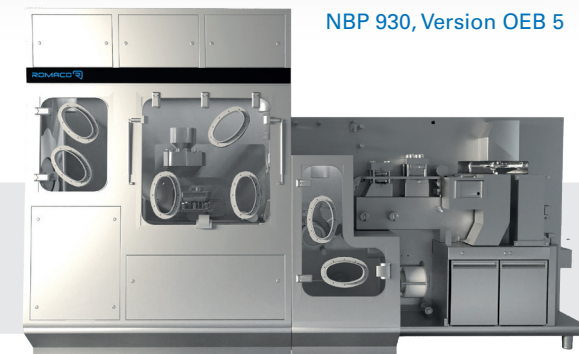
N 950



NBP 950



NBP 930, Version OEB 5



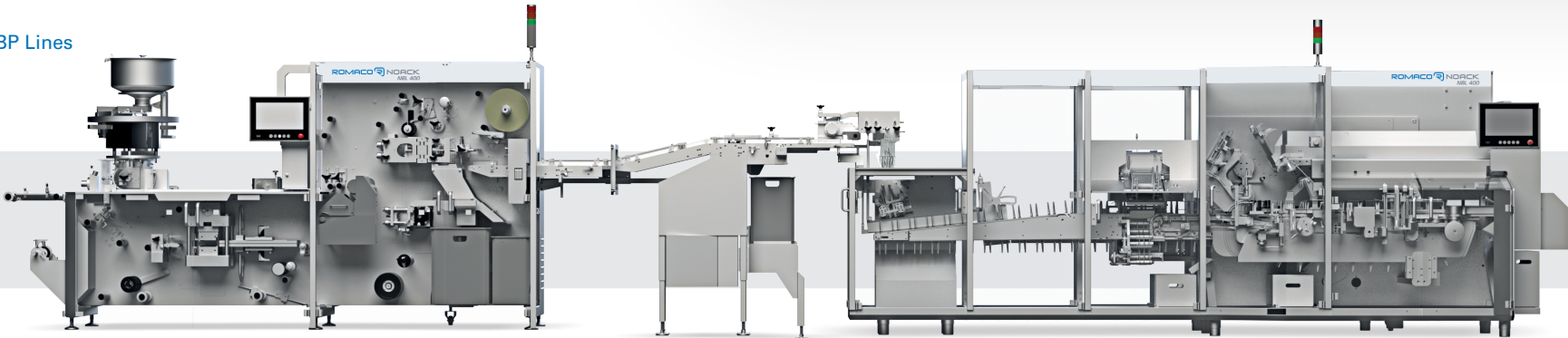
Blister Lines

Flexible Configuration

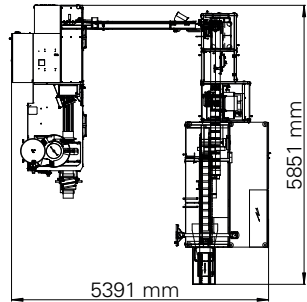
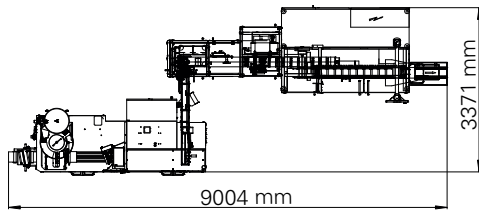
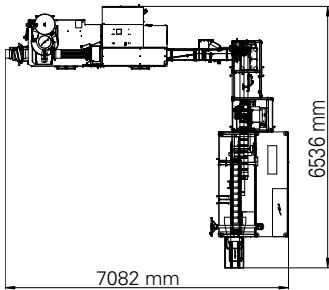
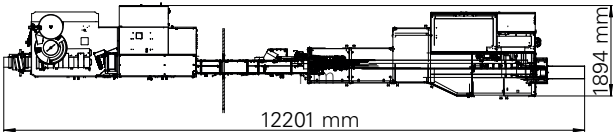


Technical Data	NBP 930 + PC 4201	NBL 400	NBP 950 + PC 4000
Max. output (Blister/min)	300	400	500
Max. forming area (mm)	190 × 150	190 × 204	190 × 204
Max. forming depth (mm)	12	12	12
Output (cartons/min), min.–max.	10–200	10–300	10–400
Carton dimensions (mm), A × B × C, min.–max.	35 × 15 × 65 to 105 × 100 × 160	35 × 15 × 65 to 105 × 100 × 160	20 × 15 × 60 to 120 × 80 × 210
Blister dimensions (mm), min.–max.	60 × 30 × 3 to 150 × 100 × 12	35 × 20 × 3 to 162 × 204 × 12	35 × 20 × 3 to 162 × 204 × 12

NBL 400 / NBP Lines



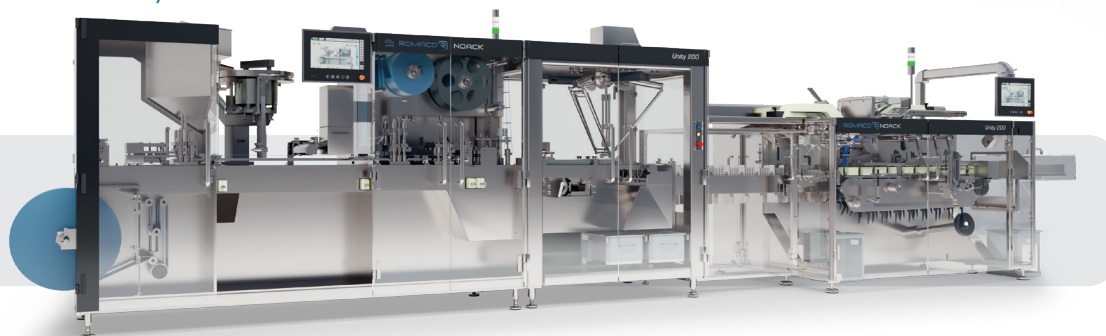
NBP Line Options



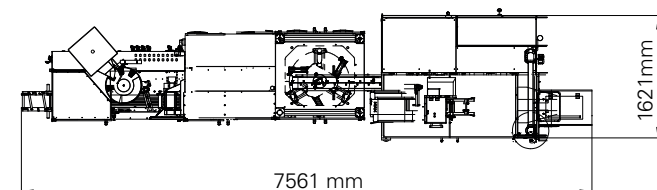


Technical Data	Unity 200	Unity 300
Max. output (Blister/min)	200	300
Max. forming area (mm)	138 × 155	154 × 190
Max. forming depth (mm)	25	12
Output (cartons/min), min.–max.	10–200	10–200
Carton dimensions (mm), A × B × C, min.–max.	20 × 15 × 60 to 120 × 80 × 200	35 × 15 × 65 to 105 × 100 × 160
Blister dimensions (mm), min.–max.	30 × 3 × 60 to 115 × 12 × 155	30 × 3 × 60 to 100 × 12 × 150

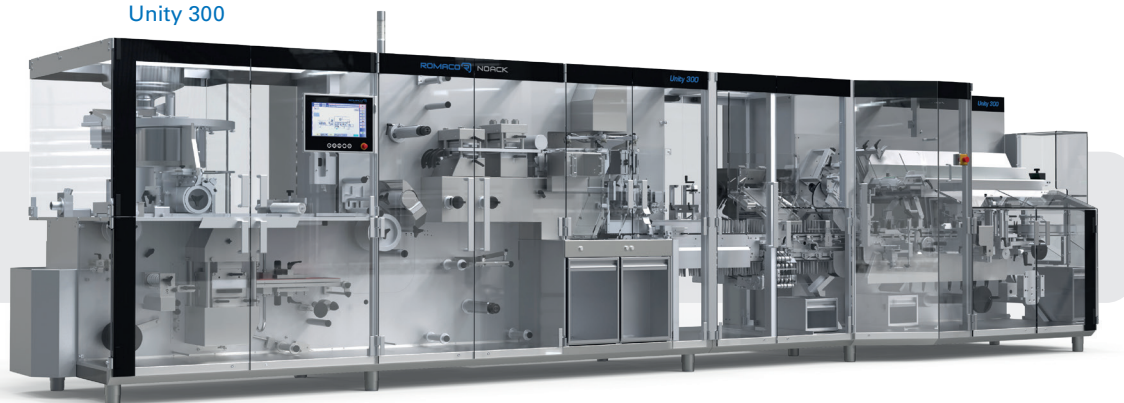
Unity 200



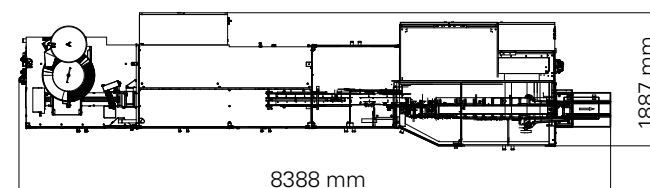
Unity 200



Unity 300



Unity 300



Blister Lines

Monobloc – High speed

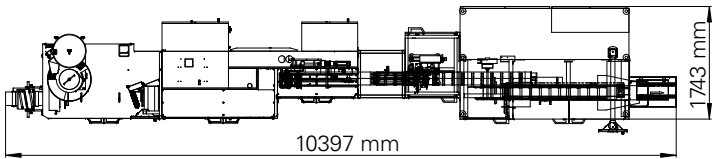


Technical Data	Unity 500	Unity 600
Max. output (Blister/min)	500	600
Max. forming area (mm)	190 × 204	240 × 294
Max. forming depth (mm)	12	12
Output (cartons/min), min.–max.	10–400	10–350
Carton dimensions (mm), A × B × C, min.–max.	20 × 15 × 65 to 120 × 90 × 210	35 × 15 × 65 to 95 × 100 × 150
Blister dimensions (mm), min.–max.	30 × 3 × 60 to 90 × 12 × 145	30 × 3 × 60 to 90 × 12 × 145

Unity 500



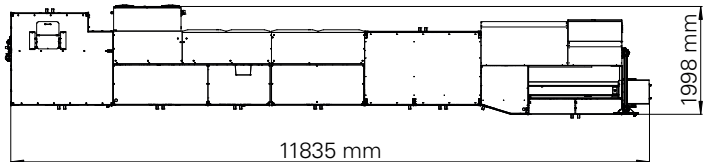
Unity 500

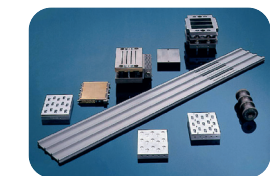


Unity 600



Unity 600





Format Parts



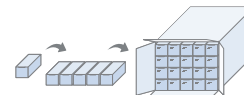
Lifting Column



Inkjet Printer



Print & Verify Systems



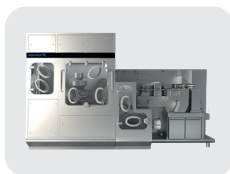
Track & Trace



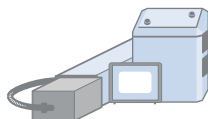
Bundler



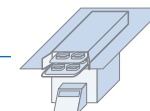
Energy Monitor



Isolation Technology



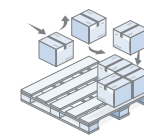
Laser Printer



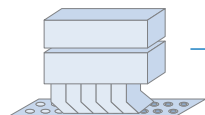
Checkweigher



PAK 100



Palletizer



Tube Feeder



Various Feeding Device Options



Foil Lifting Device



Cooling Unit



Foil Trolley



Vacuum Cleaner



Testing Center



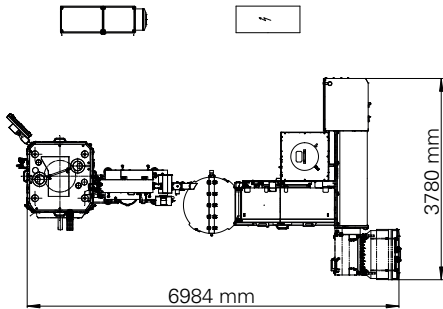
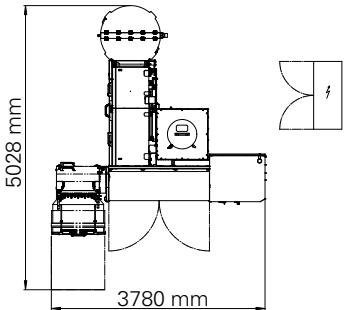
PAK 320



Rigid Tube Packaging Machines

STF 120

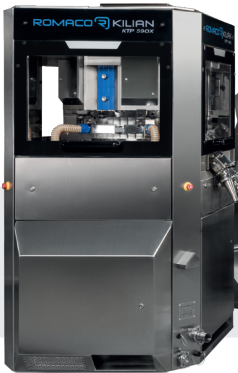
STF 120



Technical Data	STF 120
Max. output (tubes/min)	120
Max. feed rate (tablets/hour)	100,000
Tablet lanes	8
Tablet diameter (mm), min.–max.	16–33
Tablet thickness (mm), min.–max.	3–10
Tablet hardness (kN)	≥ 40
Tablets per tube, min.–max.	5–30
Tube length (mm), min.–max.	70–180
Tube diameter (mm), min.–max.	18–35
Remote Assist connection	Ethernet
PDA interface	OPC UA



KTP 590X



STF 120



HM 1E effervescent

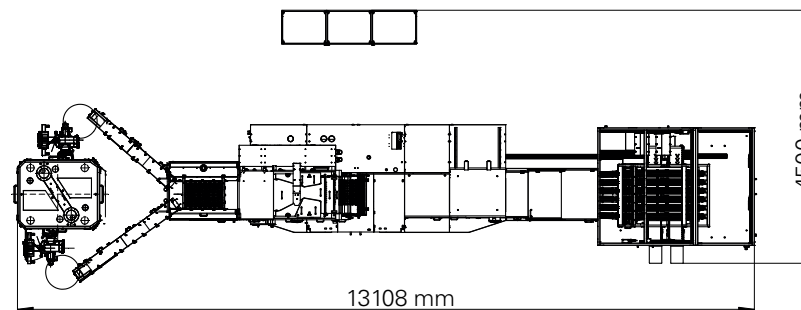
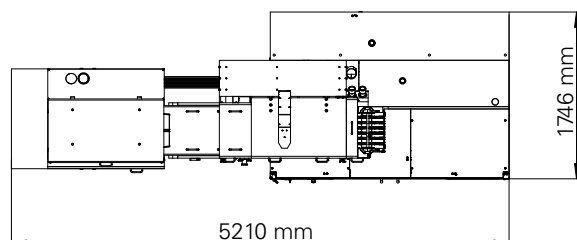
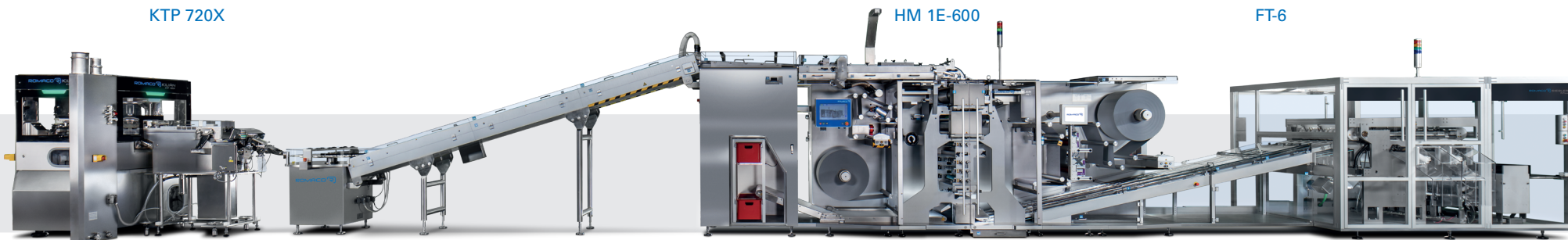


Technical Data	HM 1E-230	HM 1E-350	HM 1E-600
Max. foil width (mm)	240	360	600
Max. no. of lanes	4	8	12
Output (tablets/min)	1,000	2,000	3,000
Remote Assist connection	Ethernet		
PDA Interface	OPC UA		

KTP 720X

HM 1E-600

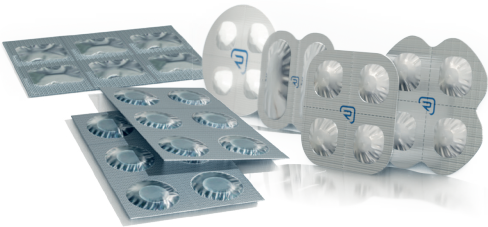
FT-6



Strip Packaging

HM 1 Series

HM 1 strip



Technical Data	HM 1-230	HM 1-350	HM 1-600
Max. foil width (mm)	240	360	600
Max. no. of lanes	10	15	20
Max. output (tablets/min)	3,500	5,250	7,000
Max. output (capsules/min)	1,800	3,000	4,000
Remote Assist connection	Ethernet		
PDA Interface	OPC UA		

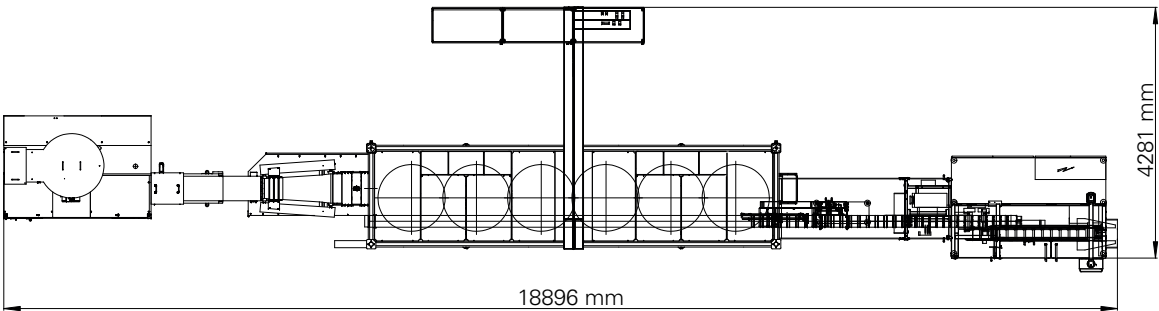
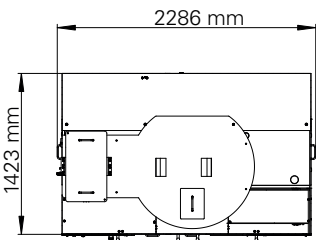
HM 1-230



FT2-900



PC 4250

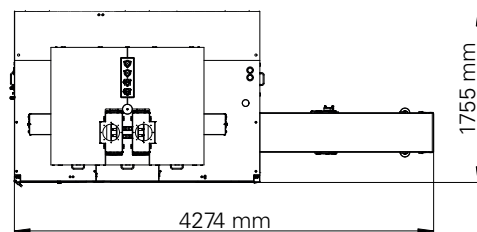
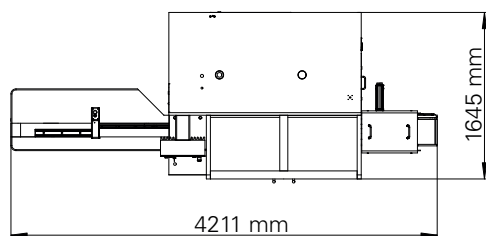


HM 2

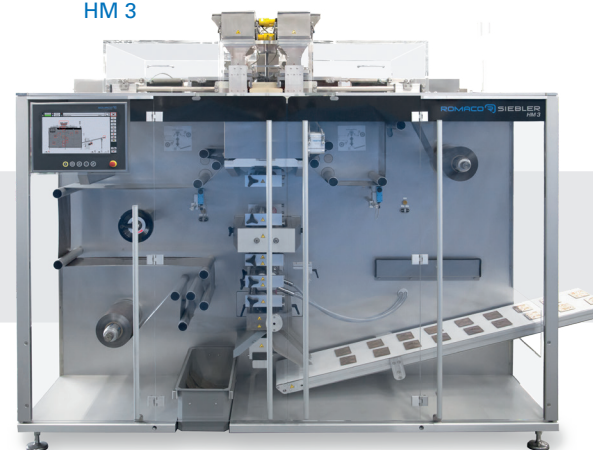


Technical Data

	HM 2-230	HM 2-350	HM 2-600	HM 3-350
Max. foil width (mm)	240	360	600	360
Max. no. of lanes	4	8	25	8
Max. output (packs/min)	600	1,200	2,500	960
Remote Assist connection	Ethernet			
PDA Interface	OPC UA			



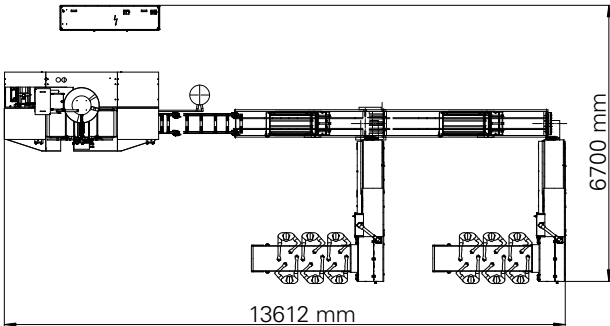
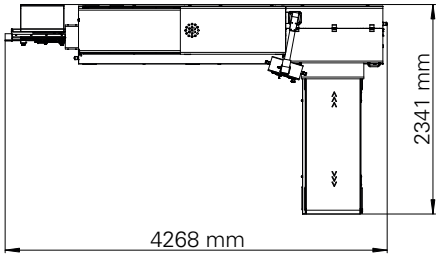
HM 3



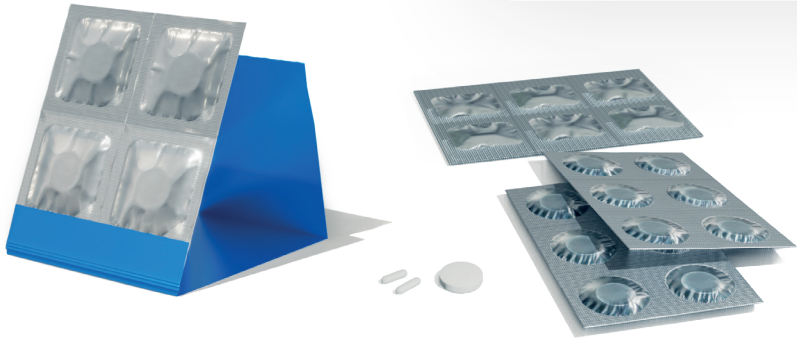
Single Tablet Packaging

Catch Cover

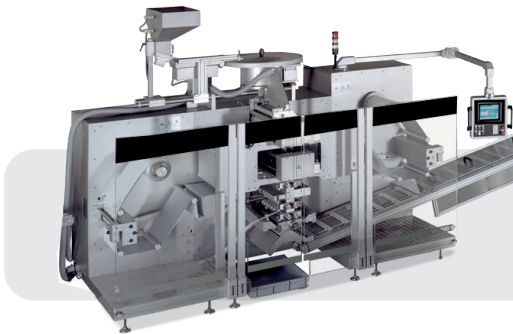
CM 1-500 single machine



Technical Data	CM 1-500
Envelope paper quality (g/sqm)	80–100
Max. working width (mm)	100–500
No. of catch covers/cycle	2–10
Max. capacity of catch (covers/min)	600
Remote Assist connection	Ethernet
PDA interface	OPC UA



HM 1-600



CM 1-500





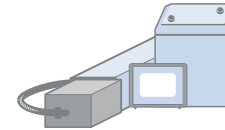
Cooling Unit



Lifting Column



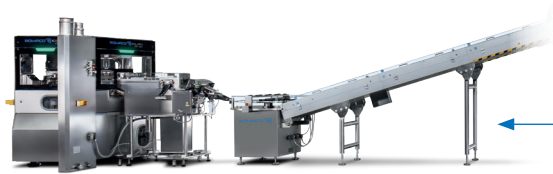
Foil Evaluation Services



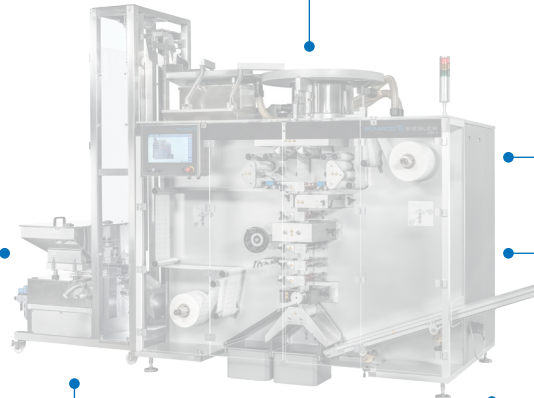
Laser Printer



Inkjet Printer



Line Integration with Tablet Press



Line Integration with FlexTrans and Cartoner



Foil Lifting Device



Vacuum Cleaner



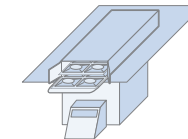
Format Parts Trolley



OEB3 Solution



Energy Monitor



Checkweigher



Line Integration with FixTrans and Cartoner



Macro Powder Filling

Bottles

MACRO-D 8

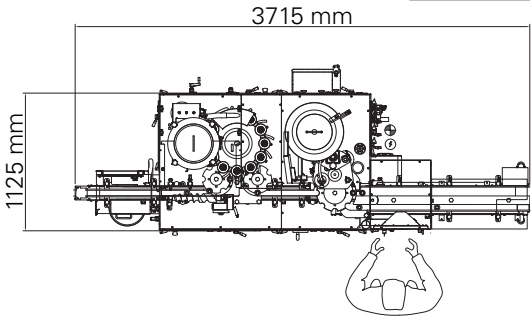


Technical Data*

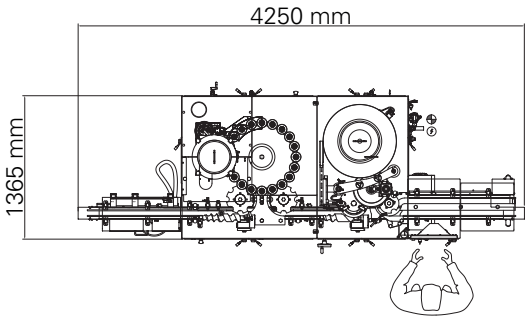
	MACRO-D 5	MACRO-D 8
Output up to (bottles/hour)	5,000	8,000
Format diameter range (mm), min.–max.	30–60	
Format height range (mm), min.–max.	50–170	
Standard dosing range (cc), single shot, min.–max.	6–90	
Installed power (kW), only dosing – with closing unit	5–7	
Compressed air consumption (l/min)	200	

** Depending on product and machine configuration*

MACRO-D 5



MACRO-D 8

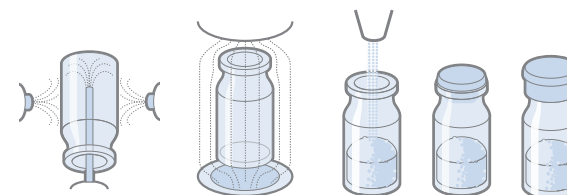
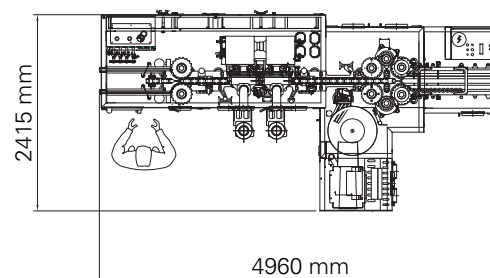


Technical Data*	MICRO 6	MICRO 9	MICRO 18	MICRO 9 2D	MICRO 18 2D	MicroMaxX 18	MicroMaxX 18	MicroMaxX 24	MicroMaxX 24
Output up to (vials/hour), single dose	5,000	9,000	18,000	9,000	18,000	9,000	18,000	12,000	24,000
Vials diameter range (mm), min.–max.	20–52					16–52	16–32	16–52	16–32
Vials height range (mm), min.–max.	40–110					35–110	35–75	35–110	35–75
Minium dose (mg)	20		50	20	50	20		50	
Maximum dose (mg)	1,500								

MicroMaxX 24



MICROMAXX 24

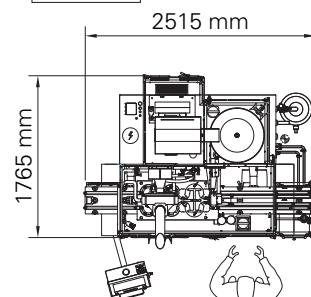


* Depending on product and machine configuration

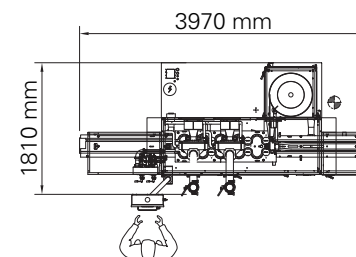
MICRO 18



MICRO 18



MICRO 18 2D



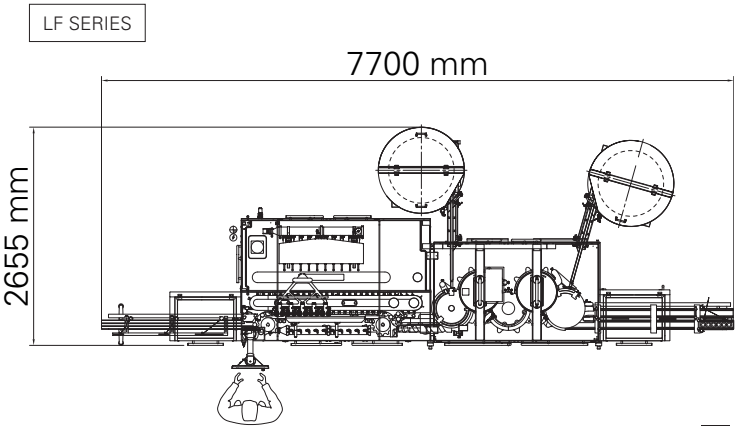
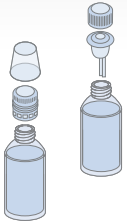
Liquid Filling Lines

Bottles



Technical Data*	LF 200 L	LF 200	LF 200 S
Process	Non-aseptic		
Applications	Syrups, Nutraceutical Supplements		
Motion	Continuous		
Output up to (bottles/hour)	9,000	12,000	15,000
Filling range (ml), single shot, min.–max.	25 ÷ 450	5 ÷ 250	5 ÷ 70
Bottle diameter range (mm), min.–max.	25–80	20–62	20–38
Bottle height range (mm), min.–max.	40–180		

* Depending on product and machine configuration

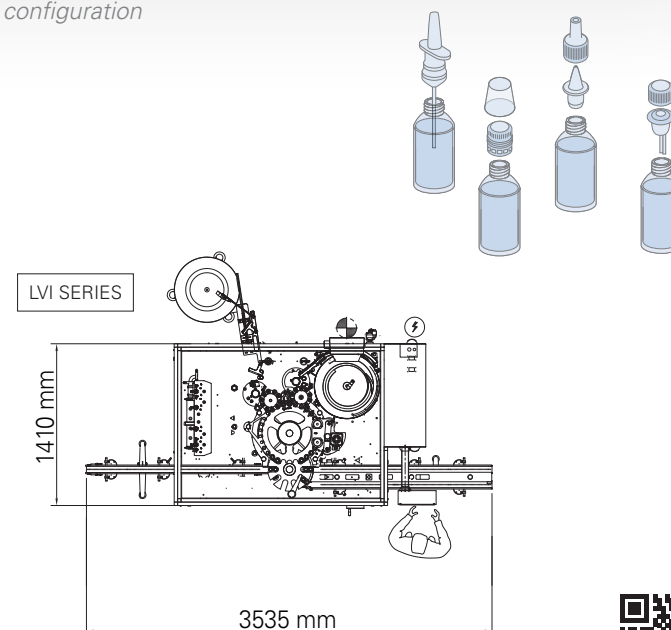




Technical Data*	LVI 4	LVI 6	
Motion		Intermittent	
Output up to (pieces/hour)	4,000	4,000 (single pitch)	7,200 (double pitch)
Filling range (cc)	1 ÷ 500	1 ÷ 250	1 ÷ 125
Vial diameter range (mm), min.–max.	16–70	16–60	16–48
Vial height range (mm), min.–max.	35–170	35–130	35–130
Cap diameter range (mm), min.–max.	15–35		
Max. spray cap height range (mm), with dip tube	110	N/A	N/A
Installed power (kW)	5		
Compressed air (bar)	6		

* Depending on product and machine configuration

LVI Series



Liquid Filling

Ophtalmic



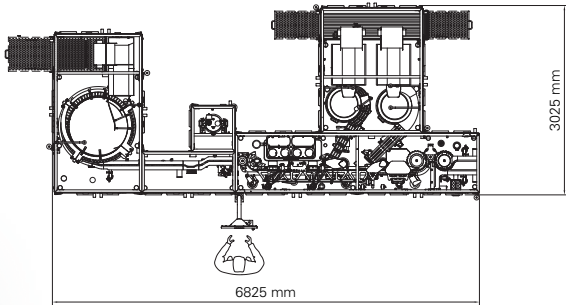
Technical Data*	Oftalmica	MacoFill	
Process	Aseptic, Non-aseptic		
Applications	Ophtalmic, Nasal spray		
Output 10 ml (vials/hour), single dose	12,000	7,200 (double pitch)	3,600 (single pitch)
Vial dimensions diameter (mm), min.–max.	16–32	16–32	33–51.6
Vial dimensions height (mm), min.–max.	42–80	42–123	
Filling range (ml), min.–max.	1–30	0.2–100	
Installed power (kW)	35	20	
Compressed air consumption (NI/min)	920	850	

* Depending on product and machine configuration

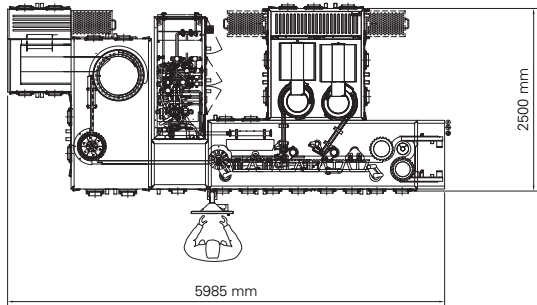
Oftalmica



OFTALMICA



MACOFILL



MicroRobot



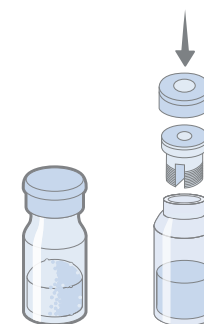
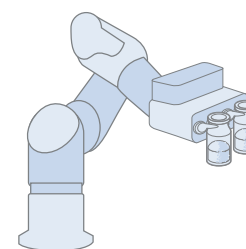
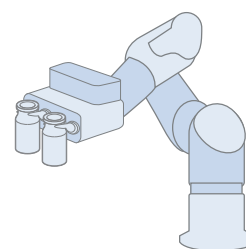
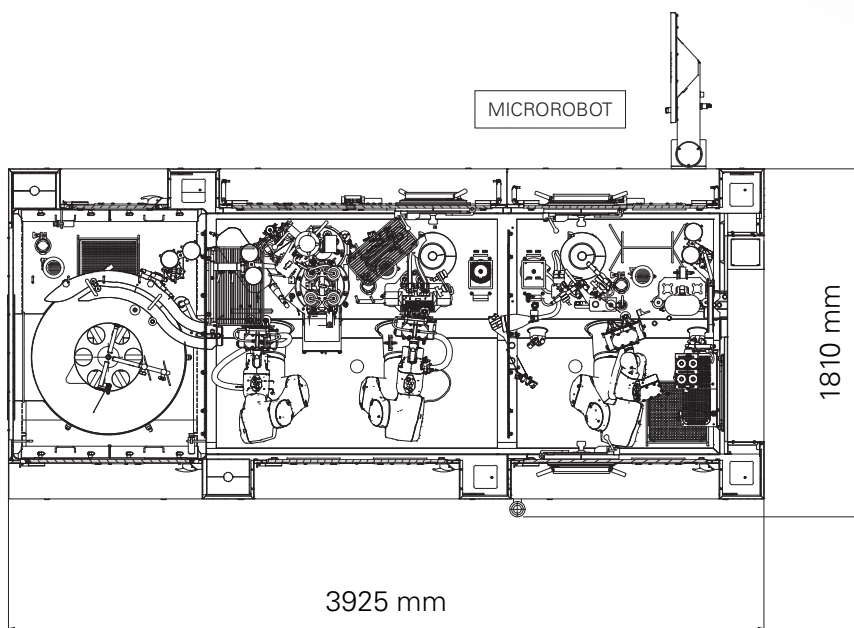
Technical Data*

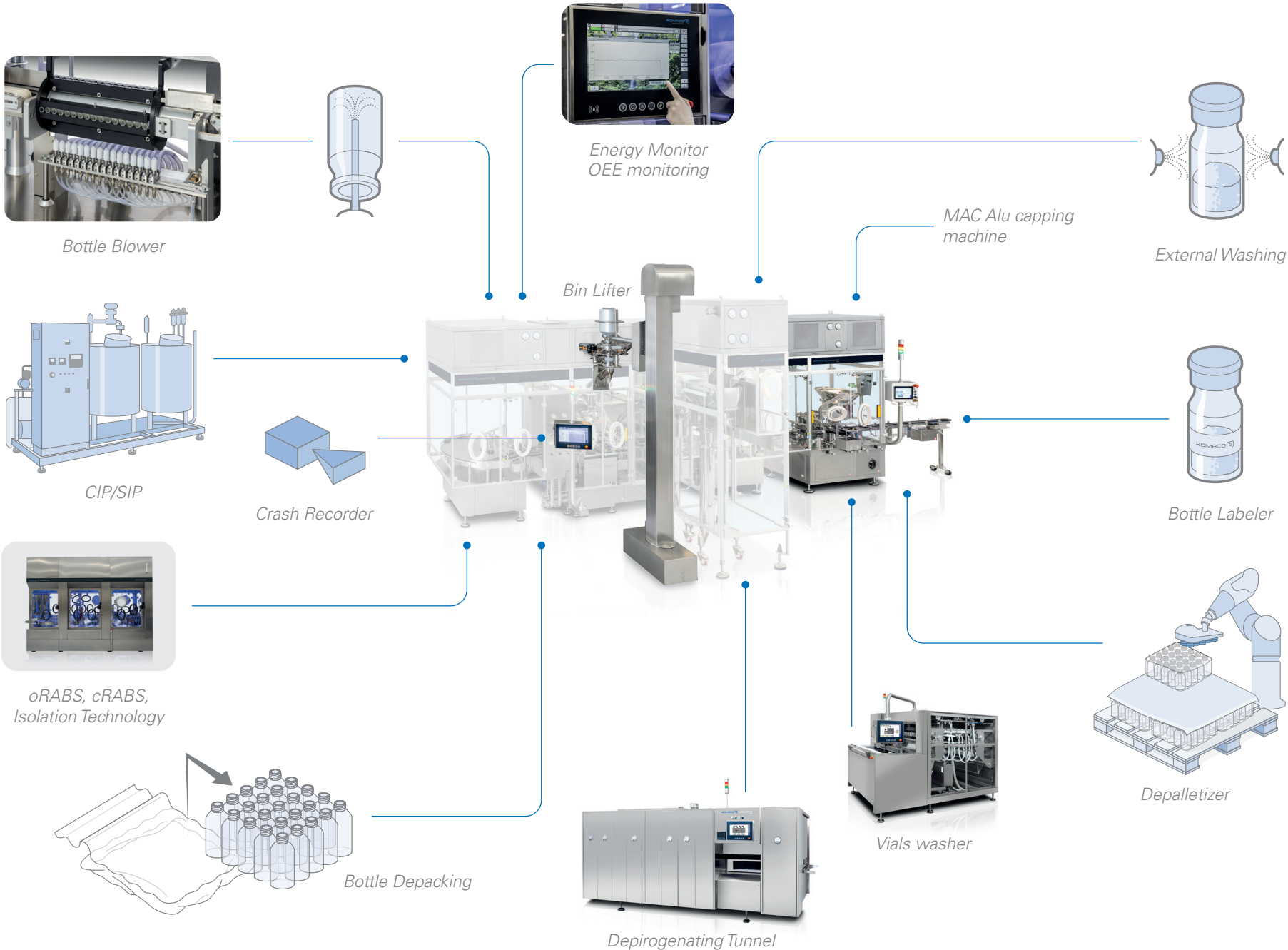
MicroRobot

Containment	cRABS, Isolation technology
Product	Microspheres, Powder, Liquid
Applications	Hormones, oncological products, vaccines, scaling-up processes, etc.
Output up to (vials/hour), single dose	2,000
Vial diameter range (mm), min.–max.	16–52
Vial height range (mm), min.–max.	35–110
Minimum dose (mg)	30
Minimum dose liquid (ml)	0.5
Installed power (kW), without UDAF	22

* Depending on product and machine configuration

Up to OEB 5

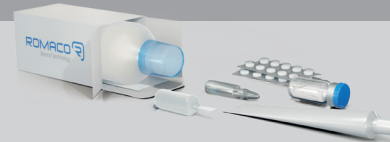




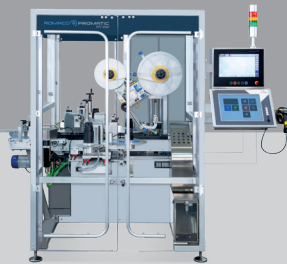
Vertical Carton Packing



Horizontal Carton Packing



Track & Trace



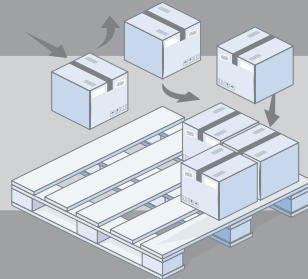
Case Packing & Aggregation



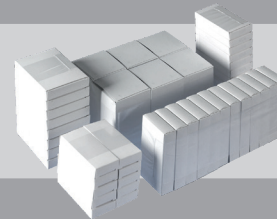
Stretch Banding



Palletizer



End of Line Solutions



Secondary Packaging for OEMs



Vertical Cartoner

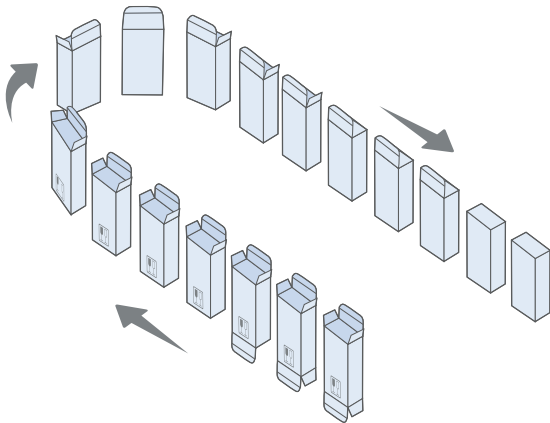
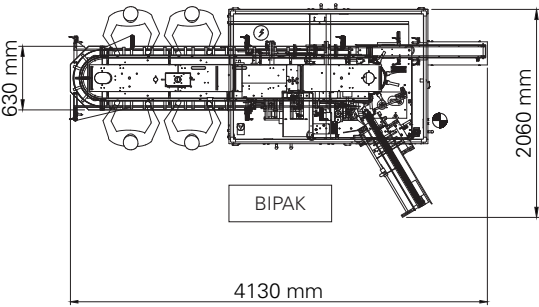
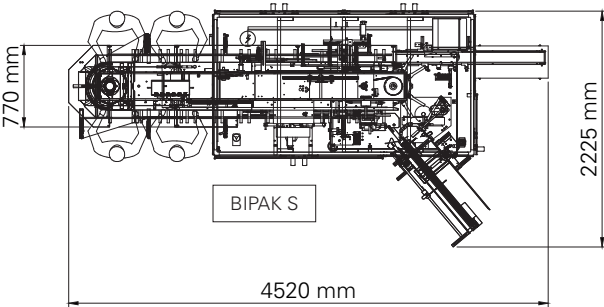


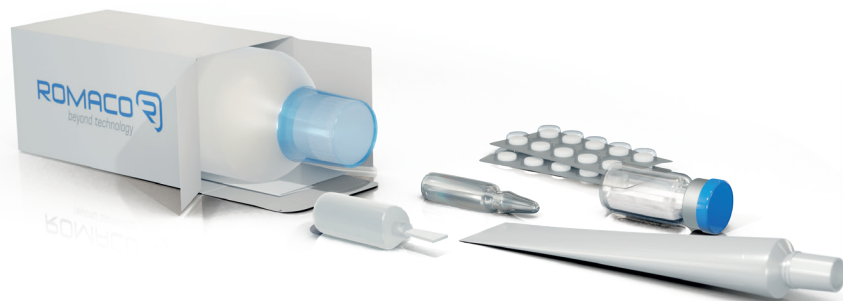
Technical Data*

Output up to (cartons/min), intermittent motion	45		60	
Output up to (cartons/min), continuous motion	80		100	
Installed power (kW)	3			
Size range (mm)	min.	max.	min.	max.
A	30	150	20	120
B	20	100	18	80
C	60	250	50	250

* Depending on product and machine configuration. Machine working both minimum and maximum range formats may require product analysis

BIPAK with manual feeding / with automatic feeding system



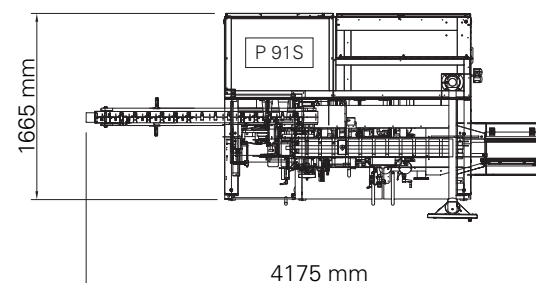
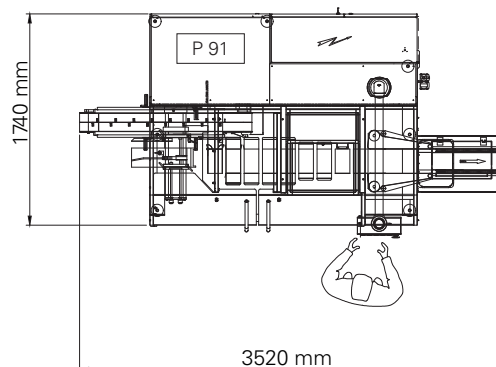
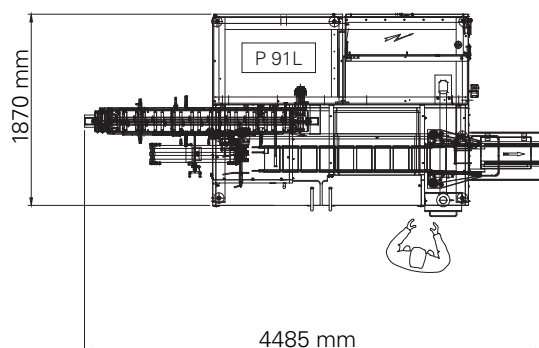
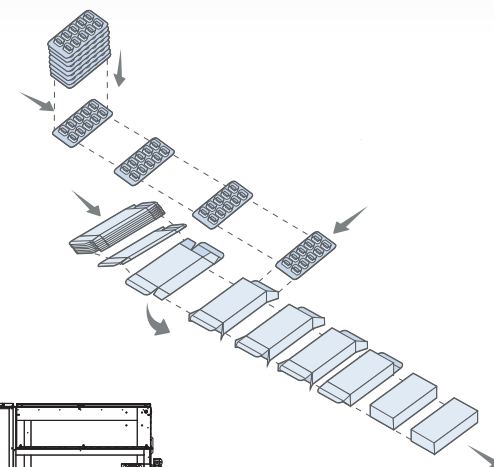


P 91 Series



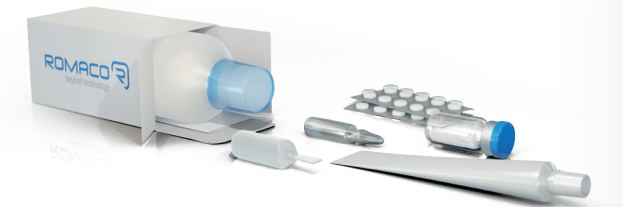
Technical Data*	P 91L		P 91		P 91S	
Output up to (cartons/min)	70		90		120	
Motion	Intermittent					
Size range (mm)	min.	max.	min.	max.	min.	max.
A	35	150	20	120	15	95
B	15	80	15	80	15	70
C	70	250	60	200	60	160
A+B		230		200		165

* Depending on product and machine configuration



Horizontal Cartoner

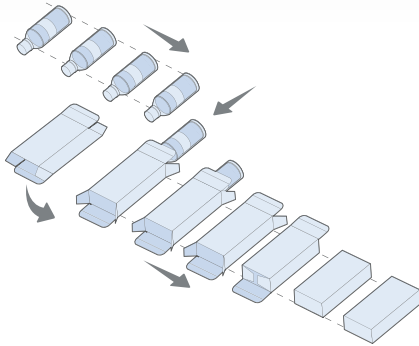
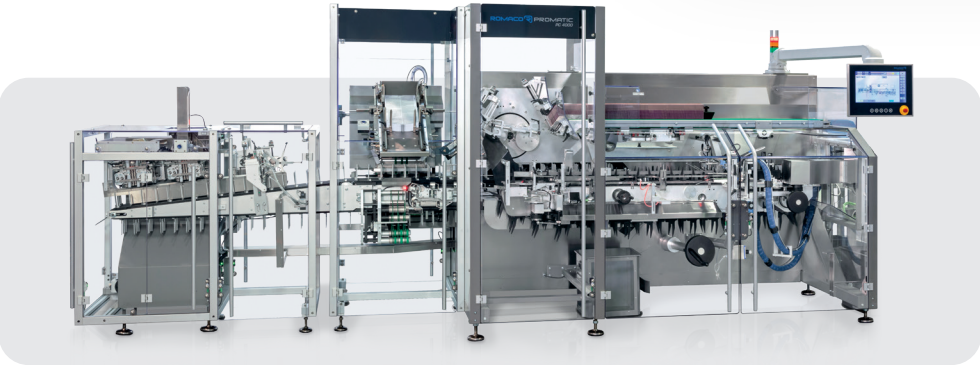
Continuous motion



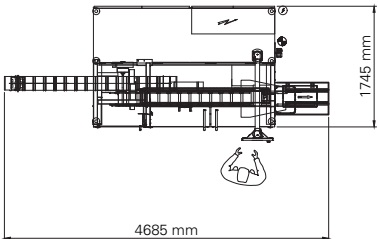
Technical Data*	PC 4150		PC 4201		PC 4250		PC 4300		PC 4350		PC 4400		PC 4450	
Output up to (cartons/min)	150		200		250		300		350		400		450	
Motion	Continuous													
Size range (mm)	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
A	30	160	25	105	20	120	20	95	25	95	20	75	25	75
B	20	100	15	100	15	80	15	70	15	100	15	70	15	90
C	70	210	70	160	70	210	70	200	70	200	70	160	70	160
A+B		260		205		200		165		195		145		165

PC 4000 Series

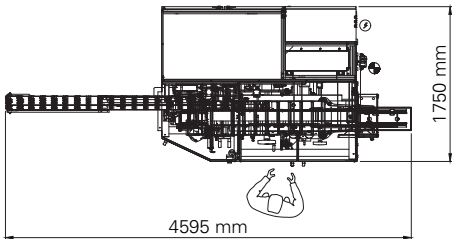
* Depending on product and machine configuration



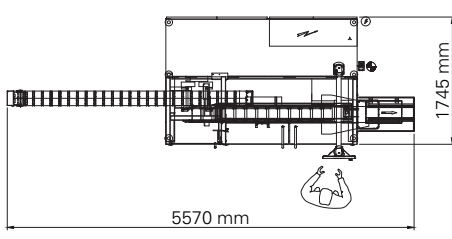
PC 4150 - PC 4250



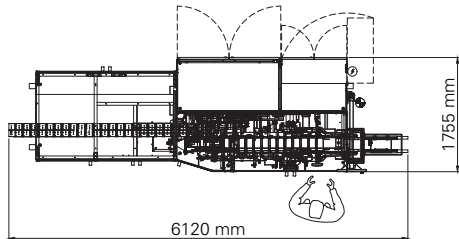
PC 4201



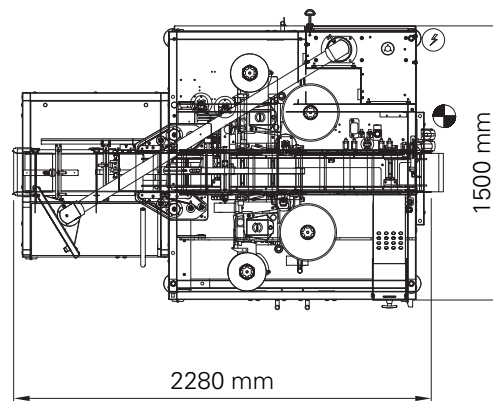
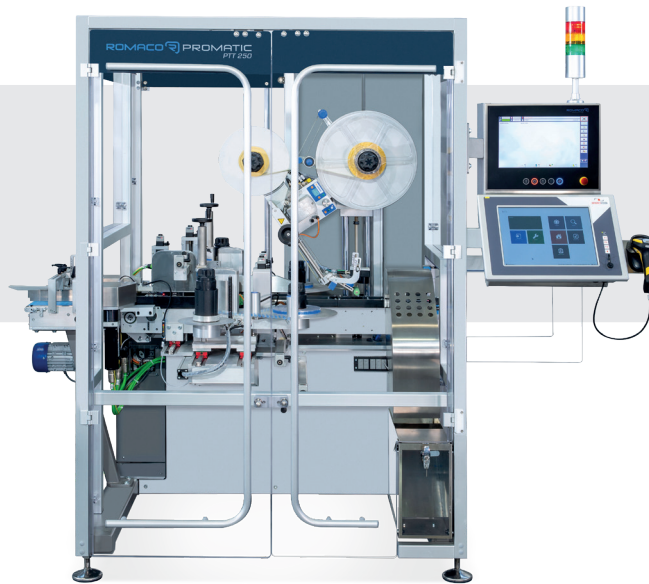
PC 4300 - PC 4400



PC 4350

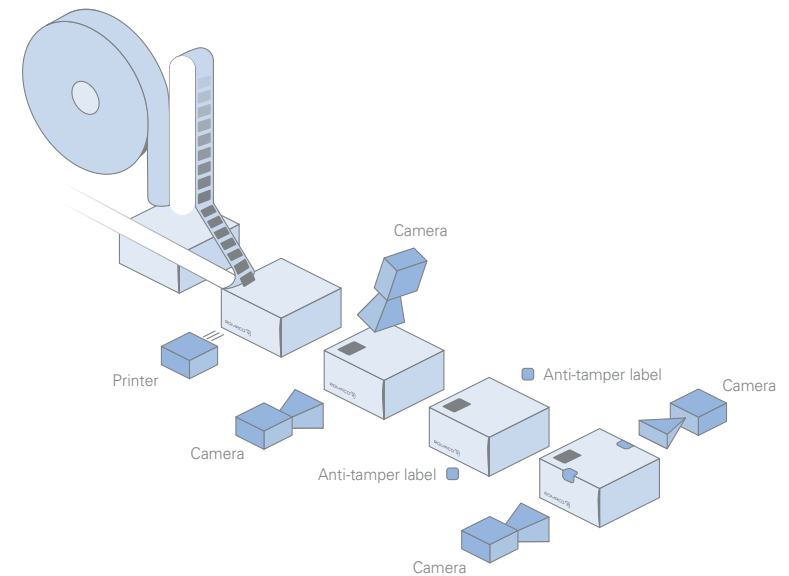


PTT SERIES

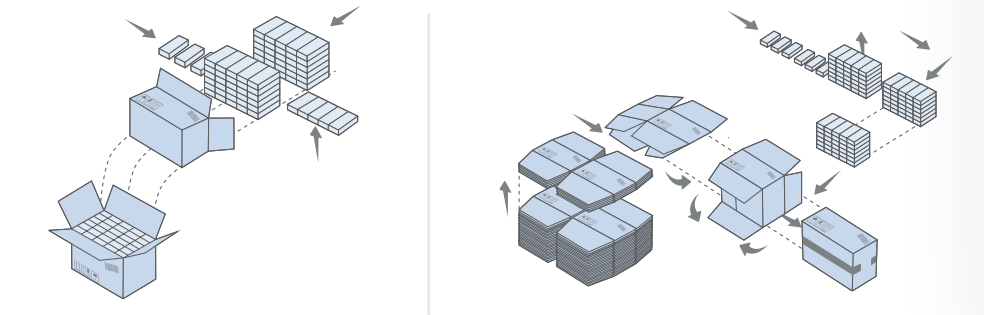


Technical Data*	PTT 250		PTT 400	
Output up to (cartons/min)	250		400	
Size range (mm)	min.	max.	min.	max.
A	20	105	20	75
B	15	100	15	70
C	60	210	70	160

* Depending on product and machine configuration

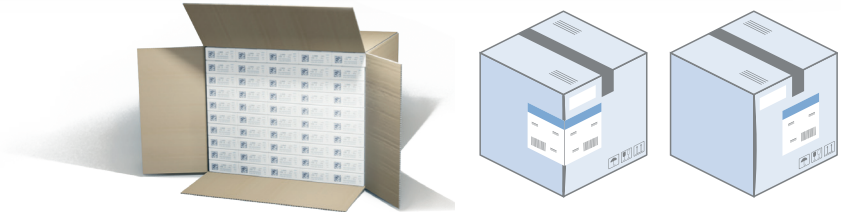
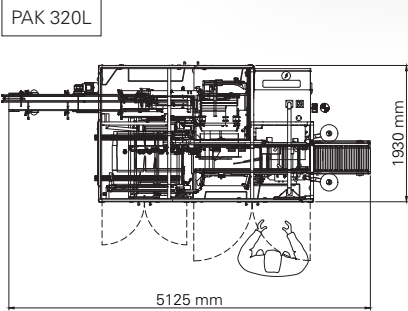
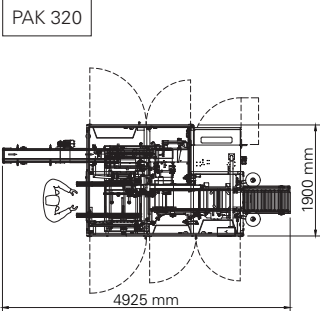
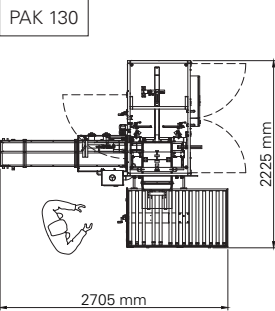


Case Packer

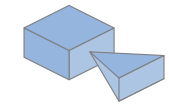


Technical Data*	PAK 100		PAK 130		PAK 320		PAK 320L	
Process	semi-automatic		semi-automatic		automatic		automatic	
Aggregation	no		yes		yes		yes	
Output up to (case/min)	5		5		8		8	
Installed power (kW)	1		3		6.5		7	
Air consumption (NI/min)	180		75		500		550	
Weight, approx. (kg)	550		700		1,800		1,850	
Carton/Bundle size range (mm)	min.	max.	min.	max.	min.	max.	min.	max.
A	20	300	20	300	20	160	20	160
B	15	100	15	100	15	100	15	100
C	60	210	60	250	60	210	60	210
Case size range (mm)	min.	max.	min.	max.	min.	max.	min.	max.
a3	230	550	230	550	200	500	200	600
b3	160	500	140	500	150	350	150	400
c3	150	350	150	350	120	350	120	350

* Depending on product and machine configuration



Secondary Packaging Lines Peripherals & System Solutions



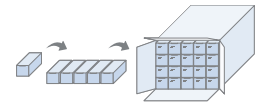
Crash Recorder



Energy Monitor
OEE monitoring

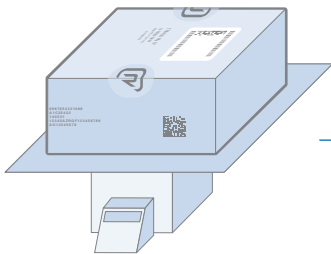
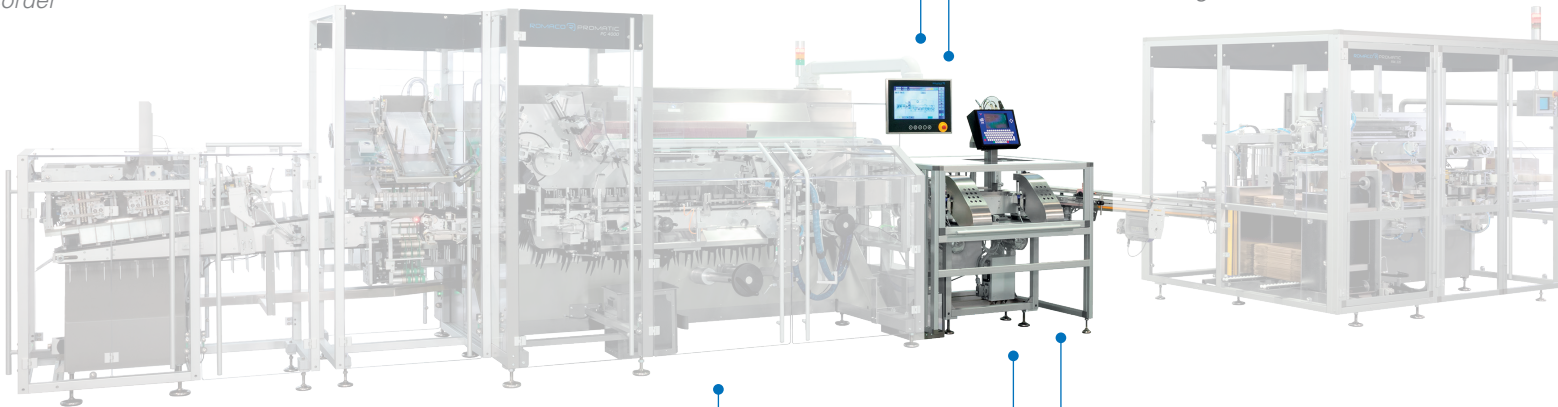


Case Carry
For aggregation

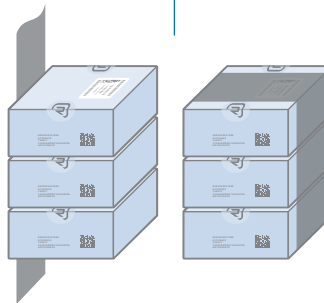


Track & Trace

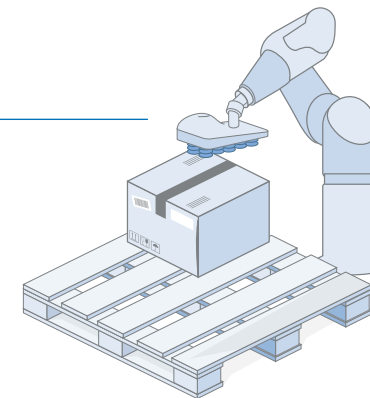
Carton Carry
For serialization, vignette
application, tamper evident



Check Wheigher



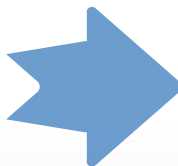
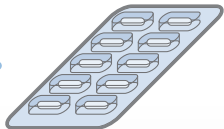
Stretch Bander



Palletizer



Isolation Competence out of one hand



Technical Data

Aseptic Containment Solutions

High Potent Containment Solutions

Shell material

Stainless steel AISI 316L

Internal roughness

< 0.5 µm

Environment classification

Grade A (ISO 4.8)

Grade C (ISO 7)

Internal conditions

Pressure management, controlled T and rH%

Pressure management, optional monitoring of T and rH%

Containment level

Up to OEB5 (OEL < 1 µg/m³)

Air tightness

Class III (according to ISO 10648:2)

Ventilation strategy

UDAF, 0.45 ± 20% m/s, dedicated AHU system

Turbulent air flow

Bio-decontamination agent

Vapour Phase Hydrogen Peroxide (VPHP), aerosol Hydrogen Peroxide (aHP), H₂O₂ ppm monitoring system, catalytic filter (optional)

--

Filtration system

Inlet and outlet HEPA 14 filters, recirculation HEPA 14 Bi-Bo filters

Inlet and outlet HEPA 14 filters, alternative HEPA 14 Bi-Bo filters

Wash-in-Place system

Manual spray guns, automatic spray balls

Integrated transfer systems

SLTP, RTP Alpha/Beta port

RTP Alpha/Beta port, continuous liner, HCSBV

Software compliance

GAMP 5, CFR 21 Part 11

Compliances

GMP, Annex 1 Manufacture of Sterile Medicinal Products, Annex 2 Manufacture of Biological Medical Products for Human Use, Annex 11 Computerized Systems, Annex 15 Qualification and validation in software compliance, FDA

Product

Powder, Liquids, Microspheres

Tablets, Blisters



Air-tightness



HEPA filtration



LAF



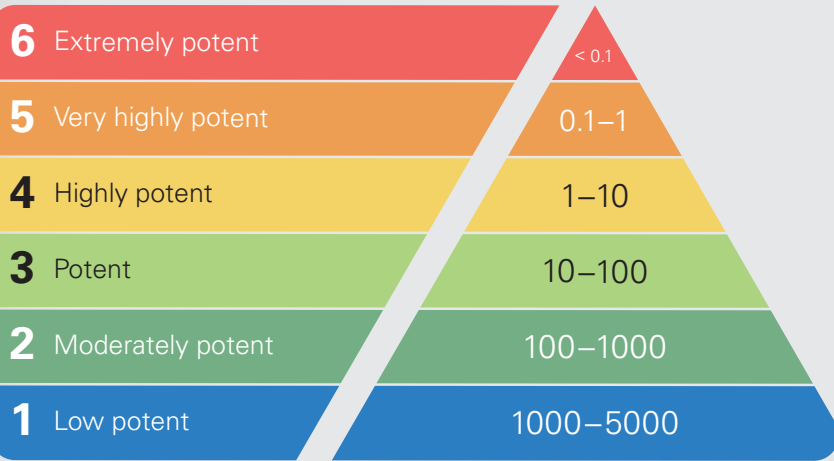
HPAPI handling



VPHP decontamination



WIP



OEB Occupational Exposure Band

OEL Occupational Exposure Limit (µg/m³)

For our Customers

Less
Material
Loss

50%

Energy
Reduction

50%



Equipment CO₂
neutral manufactured



🌿 Avoiding

🌿 Reducing

🌿 Compensating

🌿 Future

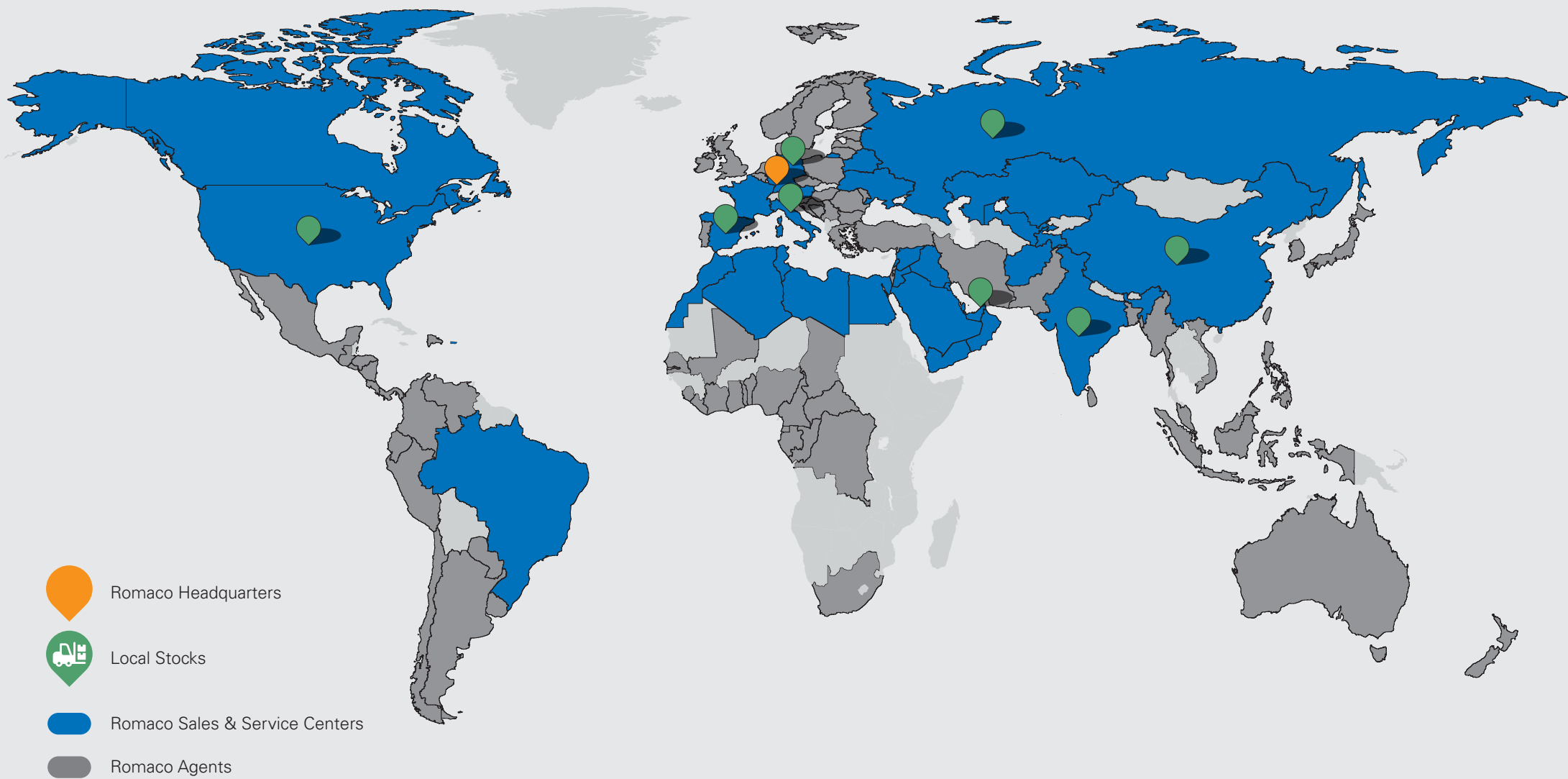
For our Environment



46/27%*
CO₂

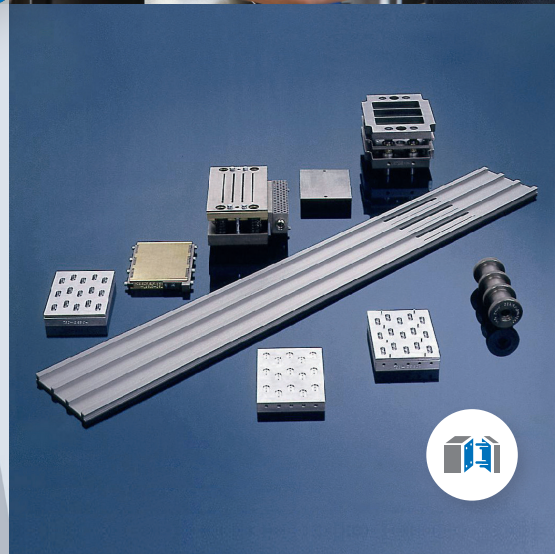
Until 2030
*Scope 1+2/3

Romaco Worldwide





Global Customer Service

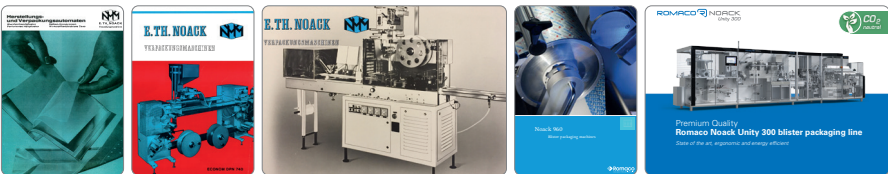


History

Kilian since 1875



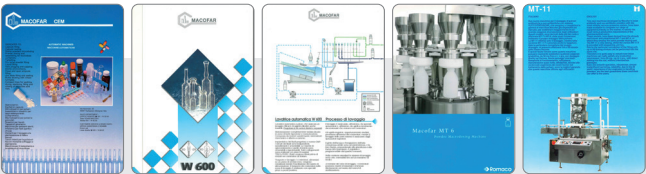
Noack since 1934



Siebler since 1948



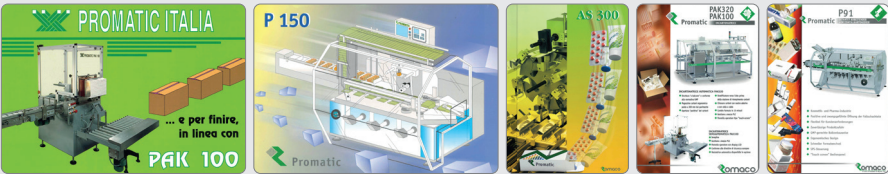
Macofar since 1972



Innojet since 1997



Promatic since 1985



Tecpharm since 2013





Vial Lyophilization line with Isolator



Freeze Dryer



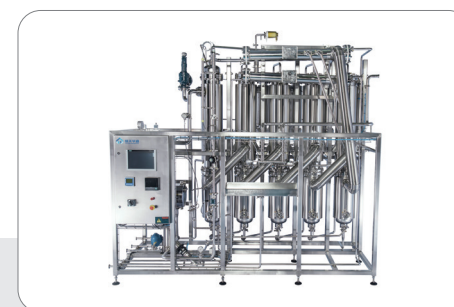
PFS Pre-filled Syringe Line



BFS Blow-Fill-Seal Machine

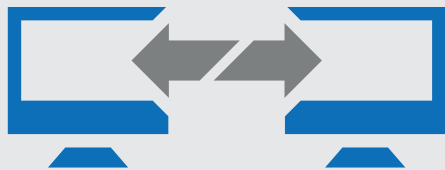


Compounding System

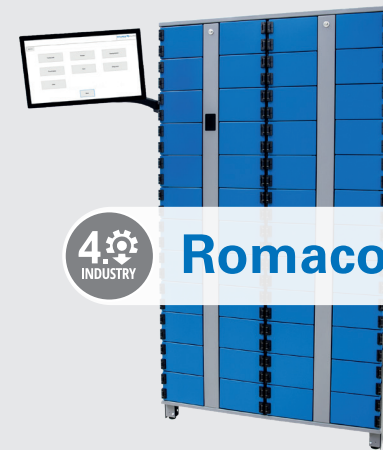
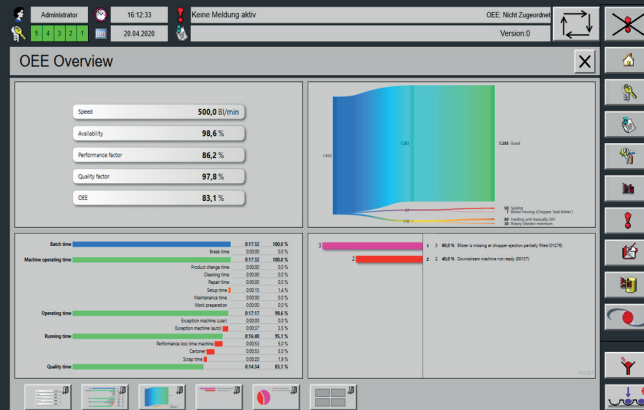


Water Treatment System

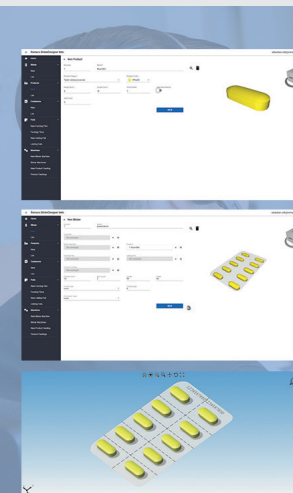
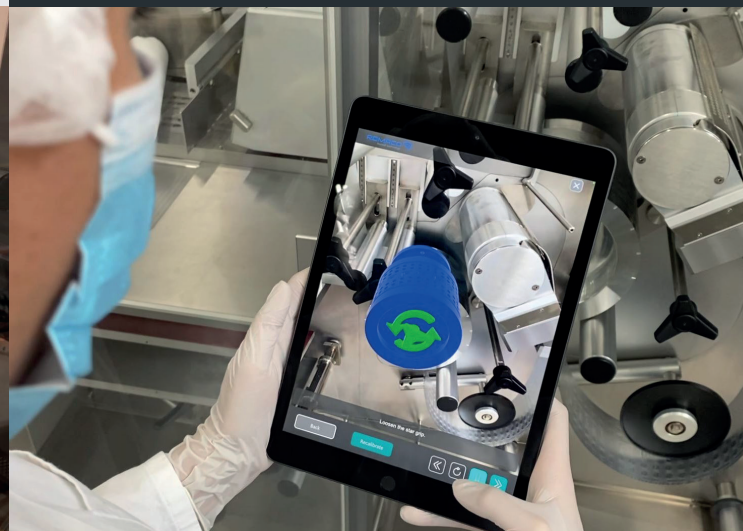
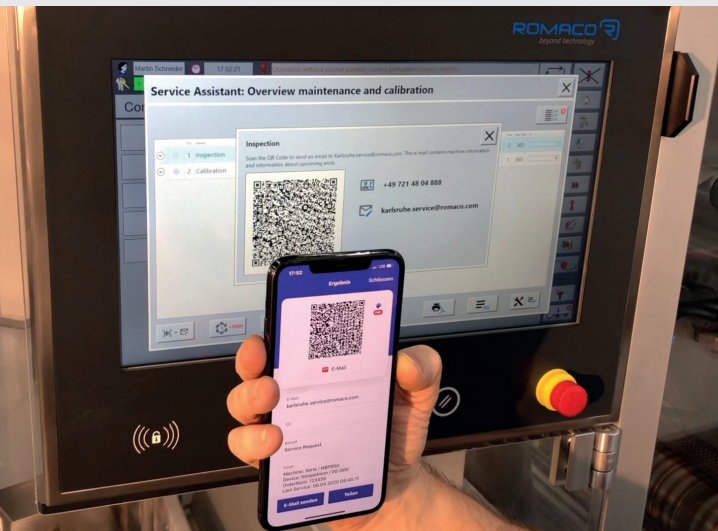




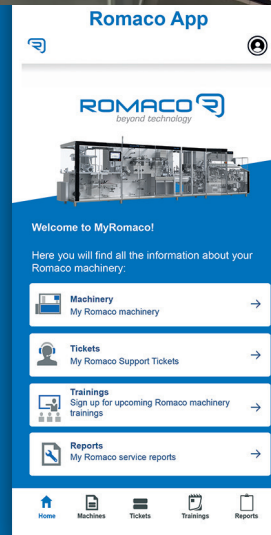
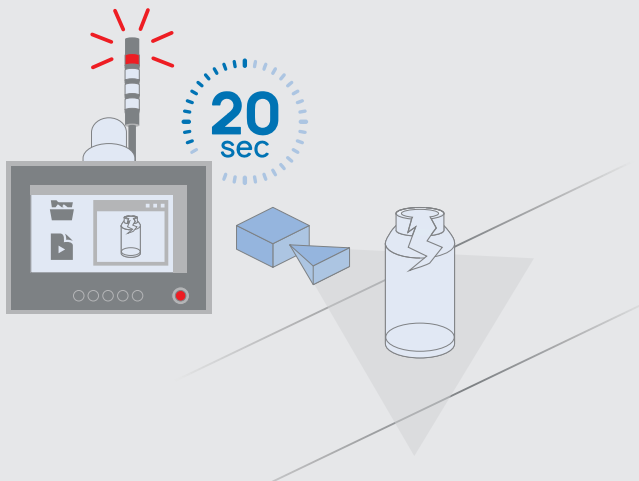
OPC UA



Romaco Digital



Blister Magic
create your own
blister design





Romaco Website



Virtual Showroom



*Augmented Reality
Tecpharm OPT TPR Coater*



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Coating – Tecpharm

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Strips/Rigid Tubes – Siebler

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