



 **YARNDYE®**

YARNDYE®

HT Yarn Dyeing & Bleaching Machines
Yarn Hydro-extracting & Drying Machines



COMPANY PROFILE

KTM Krantz company history review	3
-----------------------------------	---

MACHINE DETAILS

HT yarn dyeing machine YARNDYE®	4
coupling technique for big batchs/short liquor dyeing technique	6
KTM KRANTZ alternator	7
package press	8
yarn dye production	9
horizontal yarn dye machine	10
cylindrical crosswound packages	11
conical crosswound packages	13
cylindrical pressed packages	15
preparation tank	16
handling of packages for dyeing, hydroextraction and FR-drying	17
loose stock - slamping - dyeing- prehydroextraction - drying	18
press dryer for packages	19
warp beam dyeing	21
electrical control panel	22
machine examples	23



KTM Krantz company history review

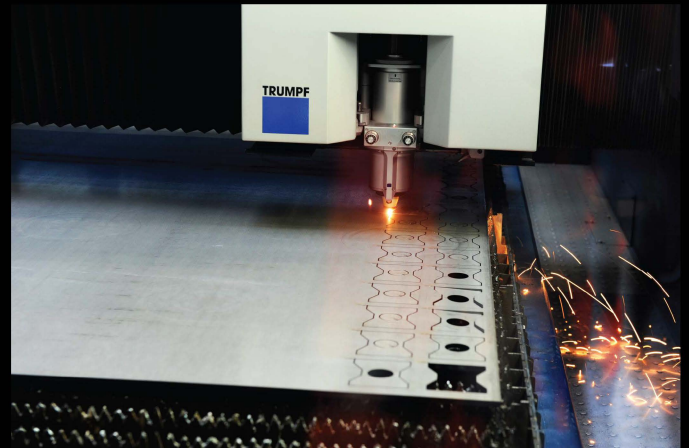
KRANTZ...this name represents over 135 years of industry history.

In the westernmost city of Germany, in Aachen, close to the borders of the Netherlands and Belgium, engineer Hermann Krantz founded the Maschinenfabrik H. Krantz for the production of textile machinery in 1882.

Since then, much more than 135 years of industry history are connected in Aachen/Germany with the name Krantz. After its foundation in 1882, Krantz company developed fast to a global player for the production of textile machinery for knits and woven fabrics, especially for the equipment for yarn dyeing, discontinuous piece dyeing and cross-wound bobbin dyeing.



worker welding



laser cutting machine

H. Krantz Textilmaschinen GmbH, Aachen, as an independently operating subsidiary of Babcock Textilmaschinen GmbH, has been a member of the Deutsche Babcock Group since 1992.

Till today, looking back on excellent reputation in the international textile finishing industry of manufacture of dyeing machines and with the assistance of a know-how of nearly 135 years, KTM KRANTZ company, as the following company for the wet finishing department of H. Krantz Textilmaschinen GmbH, Aachen, these days is still producing dyeing machines especially in the field of woven and knitted fabrics under strict quality standards and controls to ensure your success in the world market.



HT yarn dyeing machine YARNDYE®

KRANTZ goes green...Strong words for a strong and successful performance!

In these times, the world of textile dyeing and finishing faces enormous environmental challenges. Tremendous increases in the cost of electricity, water and effluent treatment and also entitled pressure to conserve resources, force the textile dye houses for a rethink of efficiencies and the production steps.

KTM KRANTZ Dyeing machines are in operation in more than 75 countries. KTM KRANTZ HT yarn dyeing machines can be supplied for capacities from 0,5 up to 2.000kg, a max. operating pressure of 140°C and a liquor ratio of 1:4 up to 1:6.

With the appropriate equipment the machines are suitable for the following universal applications:

- package dyeing
- loose stock dyeing in pack form
- hank dyeing in suspended form

The complete new developed and redesigned HT yarn dyeing machine YARNDYE® is the excellent result of more than 4 decades of experience in HT yarn dyeing technology.

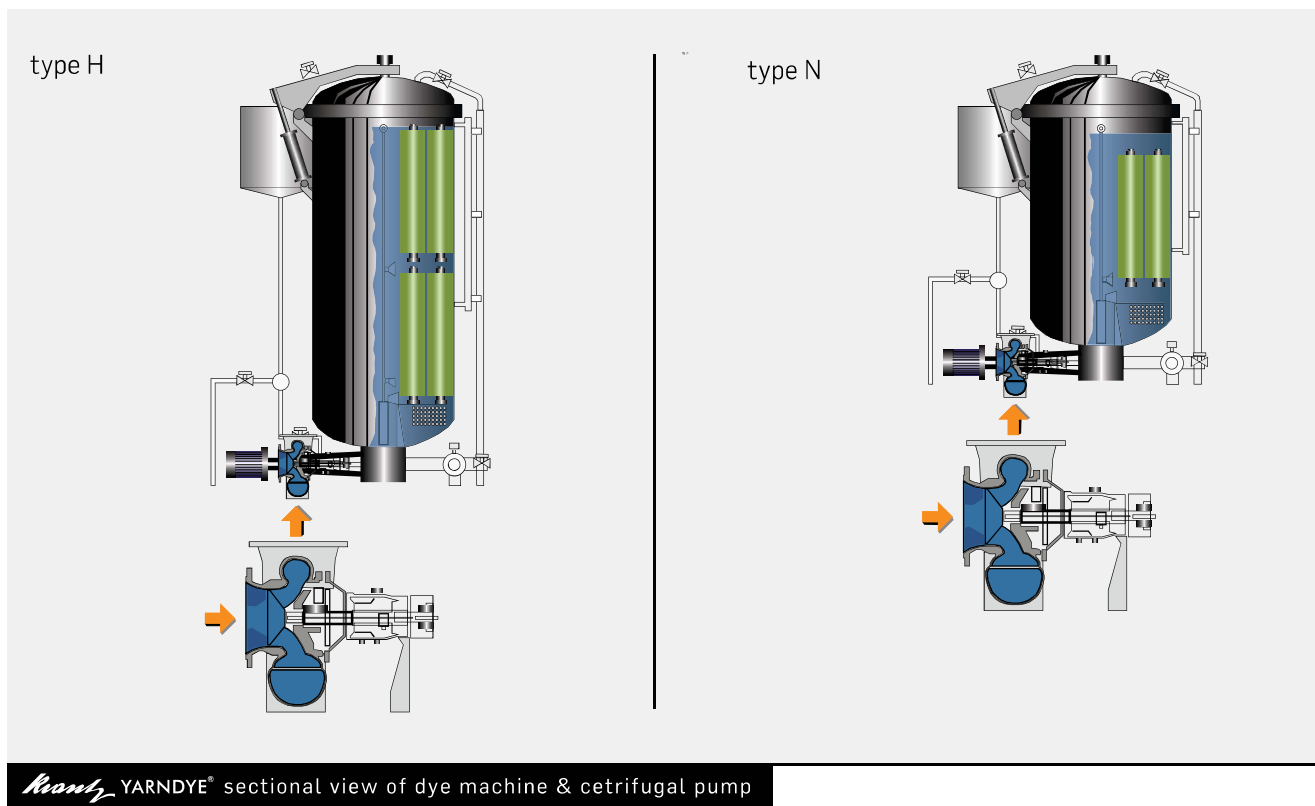


The new YARNDYE® with its increased productivity and enhanced reliability, offers complete new perspectives and possibilities for all progressive textile dyeing and finishing mills worldwide.

KRANTZ goes green...go with us and get be be inspired...

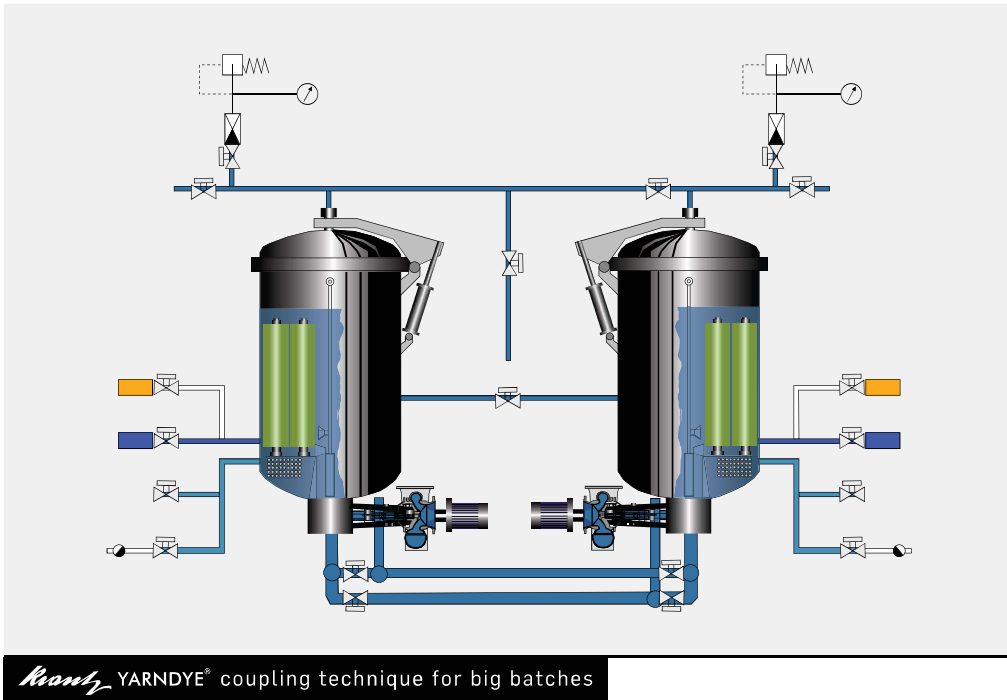


HT yarn dyeing machine YARNDYE®





Solutions for short liquor dyeing techniques and coupling technique for big batches



Krantz YARNDYE® coupling technique for big batches

To reduce the liquor volume, KRANTZ HT yarn dyeing machines are provided with an air-pad system. The machine is filled to the required ratio for the fabric to be dyed.

The machine is capable of running with approximately 40% of its maximum load for dyeing smaller lots. Even in this condition the air-pad technique permits the use of the most economical liquor ratio with flow reversal.

The sketch below shows the coupling system for dyeing machines with centrifugal pumps. The liquor exchange is fulfilled by means of the centrifugal pumps. Both machines can also work separately in case of need.



Krantz YARNDYE® short liquor dyeing technique





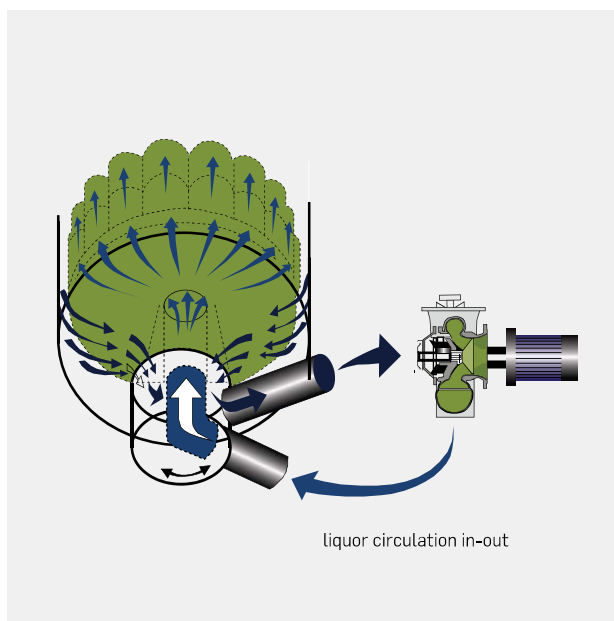
MACHINE DETAILS

KRANTZ alternator for the automatic change in direction of the liquor flow.

The liquor flow volume in the new YARNDYE® HT dyeing machine can be controlled by intermediate positions of the alternator (bypass).

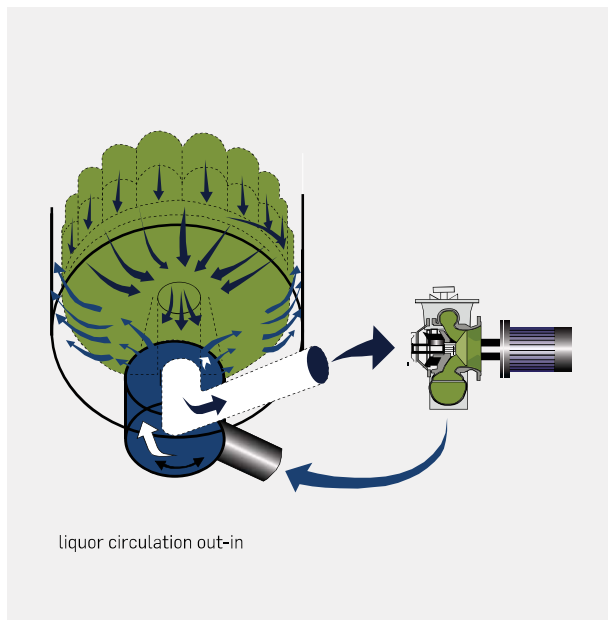
option:

pump motor with speed control for precise control of the liquor flow rate.



liquor circulation in-out

Krantz YARNDYE® liquor circulation in-out



liquor circulation out-in

Krantz YARNDYE® liquor circulation out-in





Package press

The below located picture shows a press for producing columns of pressed packages form KTM KRANTZ company.





Yarn dye production





Horizontal yarn dye machine





Cylindrical crosswound packages

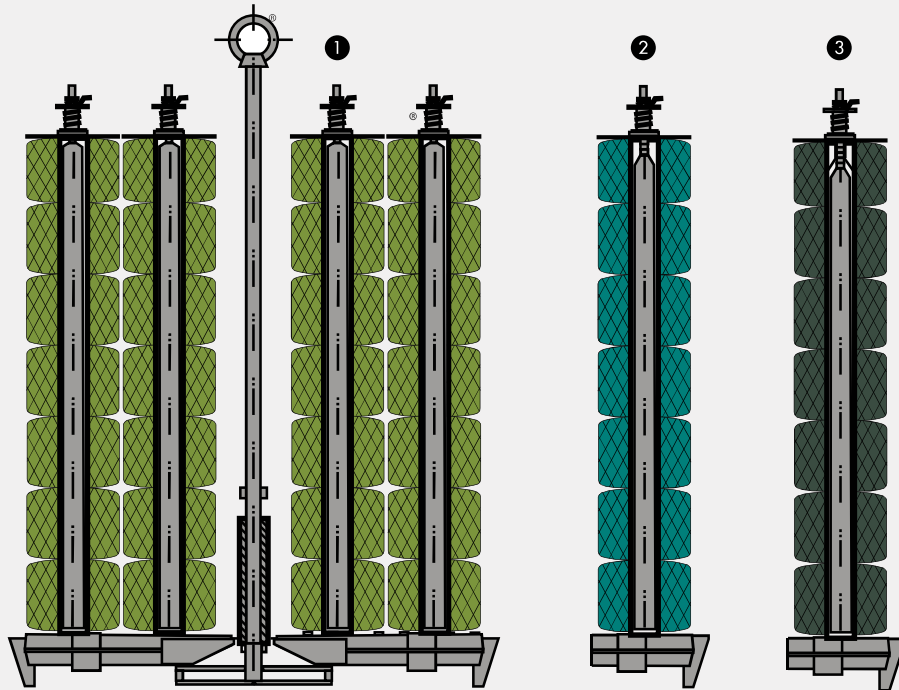
capacity (kg)							
machine sizes		cylindrical crosswound packages		machine sizes		cylindrical crosswound packages	
dia. (mm)	type	CO, CO/PES 6", dia. 200mm 1,6 kg	wool 6", dia. 295mm 3,6 kg	dia. (mm)	type	CO, CO/PES 6", dia. 200mm 1,6 kg	wool 6", dia. 295mm 3,6 kg
550	N	45		1.400 1.400	N	370	430
750	N	78	100		H	683	
800	N	90	100	1.500 1.500	N	403	455
1000	N	179	151	1.600 1.600	H	740	
1200	N	258	227		N	470	479
1200	H	515	454	1.800	N	940	
						605	

Kramb YARNDYE® cylindrical crosswound packages





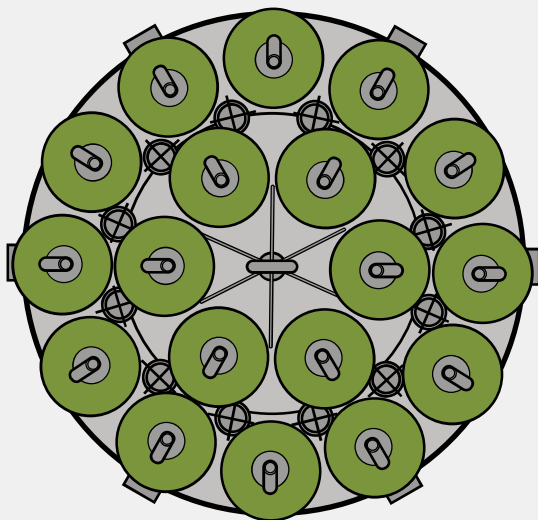
Cylindrical crosswound packages



various types of packages columns

- ① on perforated dye pipe
- ② on three-angled lance
- ③ system with dye pipe over lance

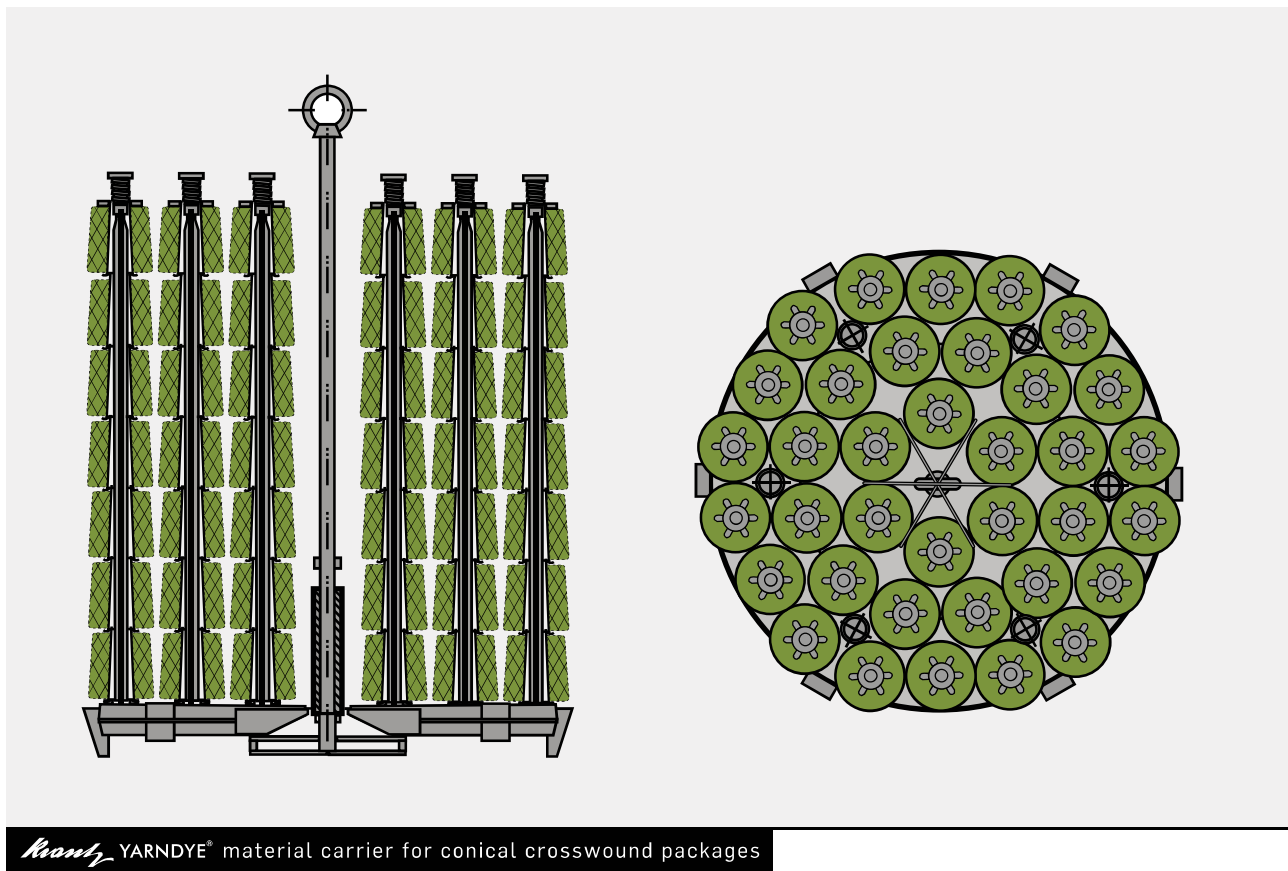
Krantz YARNDYE® material carrier for conical crosswound packages



Krantz YARNDYE® material carrier for conical crosswound packages



Conical crosswound packages

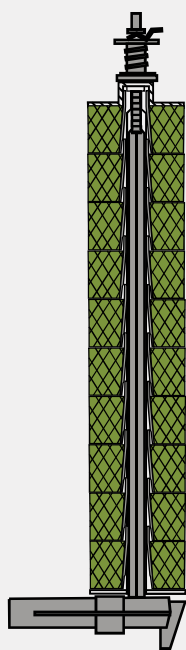


Krantz YARNDYE® material carrier for conical crosswound packages

capacity (kg)

machine sizes		cones		machine sizes		cones	
dia. (mm)	type	6" dia. 165mm 0,9 kg	6" dia. 210mm 1,6 kg	dia. (mm)	type	6" dia. 165mm 0,9 kg	6" dia. 210mm 1,6 kg
550	N	38	45	1.400	N	284	336
750	N	82	78	1.400	H	567	627
800	N	88	90	1.500	N	340	403
				1.500	H	643	740
1000	N	139	157	1.600	N	403	425
1000	H	277	270	1.600	H	780	850
1200	N	227	224	1.800	N	529	537
1200	H	416	437	1.800	H	1.020	1.075

Krantz YARNDYE® conical crosswound packages



Krantz YARNDYE® column with 10 pressed acrylic yarn packages on a dye tube

capacity (kg)

machine sizes

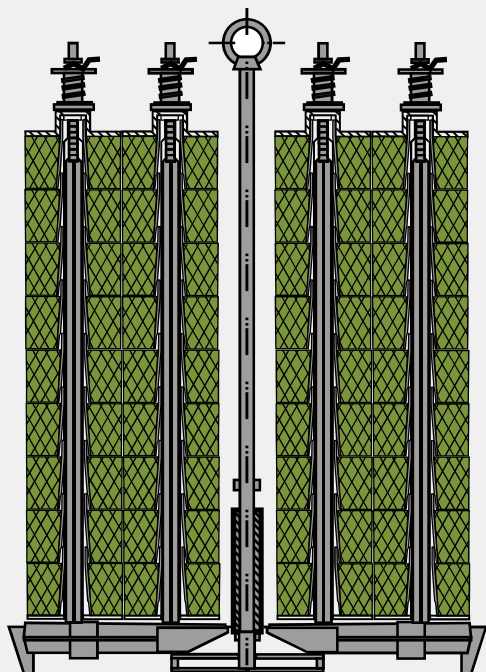
pressed packages Acrylic

dia. (mm)	type	6", dia. 210mm	6", dia. 295mm
750	N	98	116
1.000	N	224	174
1.200	N	280	261
1.200	H	546	522
1.500	N	504	522
1.500	H	924	1.044
1.600	N	532	551
1.600	H	1.064	

Krantz YARNDYE® cylindrical pressed packages



Cylindrical pressed packages



Kronz YARNDYE® material carriers with pressed packages

capacity (kg)

machine sizes		pressed packages wool, wool/PES		machine sizes		pressed packages wool, wool/PES	
dia. (mm)	type	6", dia. 200mm 1,6 kg	6", dia. 295mm 3,6 kg	dia. mm	type	6", dia. 200mm 1,6 kg	6", dia. 295mm 3,6 kg
550	N	54		1.400	N	445	550
				1.400	H	824	
750	N	95	130	1.500	N	486	583
800	N	108		1.500	H	891	
1000	N	179	151	1.600	N	567	615
				1.600	H	1.134	
1200	N	310	292				
1200	H	621	584	1.800	N	729	

Kronz YARNDYE® cylindrical crosswound packages



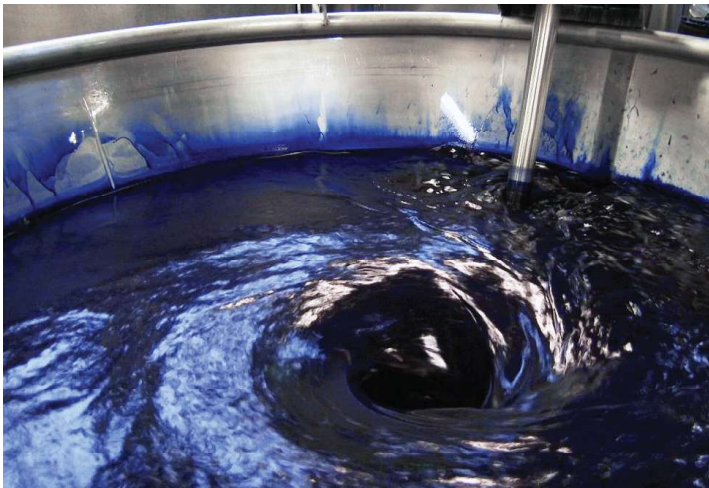
Preparation tank

The preparation tanks are used for the preparation of the treatment liquor bath including dyestuffs and chemicals or salt.

The tank is indirect steam heated by means of heating coils located at the ground of the tank (heating gradient is 5°C/min)

The tank is also fitted with a mixer and a level control system and cleaning automatically takes place after the dye process is finished.

As an option, our customers have the choice to take a separate hot water tank, which reduces the process time by 1-1.5h. The pump for the preparation tank is a reserve centrifugal-type pump.



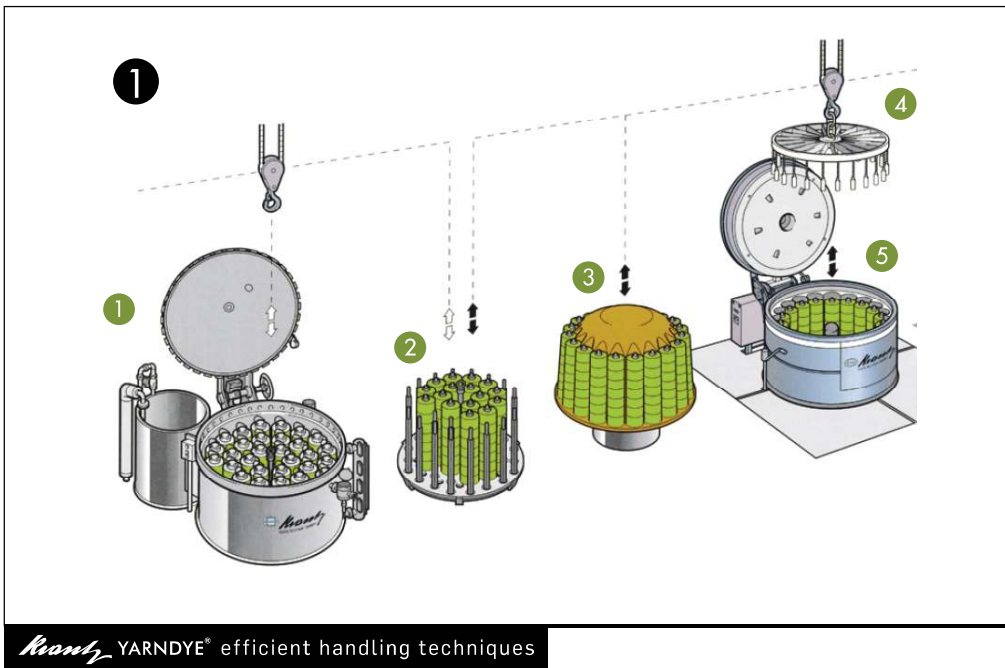
dye bath while splash protection cover of the tank is open



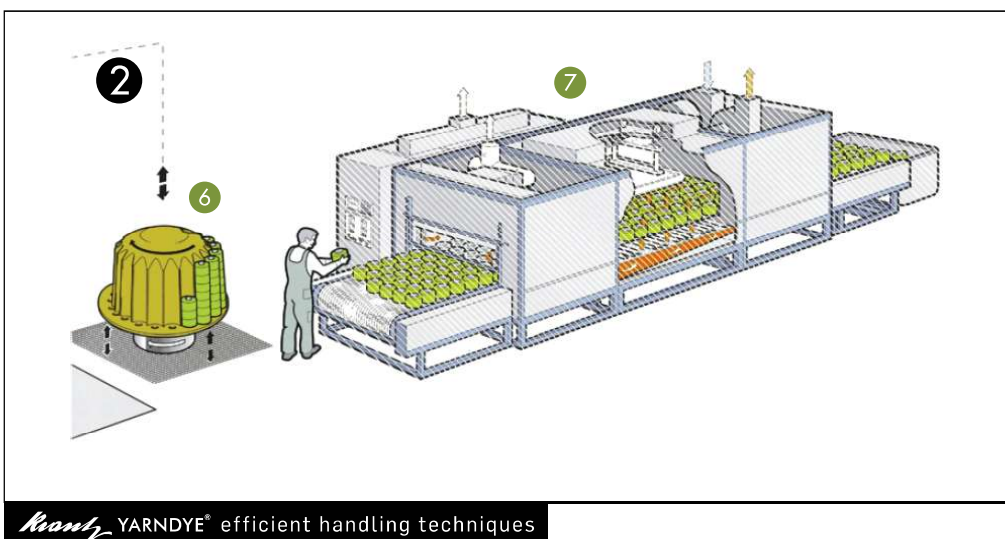


Efficient handling of packages for dyeing, hydroextraction and FR-drying

- 1 dyeing on plastic cores
- 2 transfer of the packages from the dye lance to the carrier rods of the magazine, matching the dimensions of the hydroextractor
- 3 maximum hydroextraction of each load in the centrifugal hydroextractor **HIGH-SPEED®**
- 4 After they have been hydroextracted, the lots are inserted in the lifting magazine and the carrier rods are removed
- 5 transfer of the packages from the lifting magazine to the conveyor belt of the RF-dryer



- 1 HT dyeing machine with material carrier
- 2 material carrier with lances and dye pipes
- 3 magazine for package columns
- 4 lifting system for systematically loading and unloading the package columns
- 5 special centrifugal hydro-extractor **HIGH-SPEED®** for max. hydroextraction of package columns



- 6 lift and turn magazine for easy unloading of dye tubes and bobbins
- 7 radio-frequency continuous flow dryer



Loose stock Stamping - Dyeing - Pre-hydroextraction - Drying

capacity (kg)

machine sizes

loose stock

wool

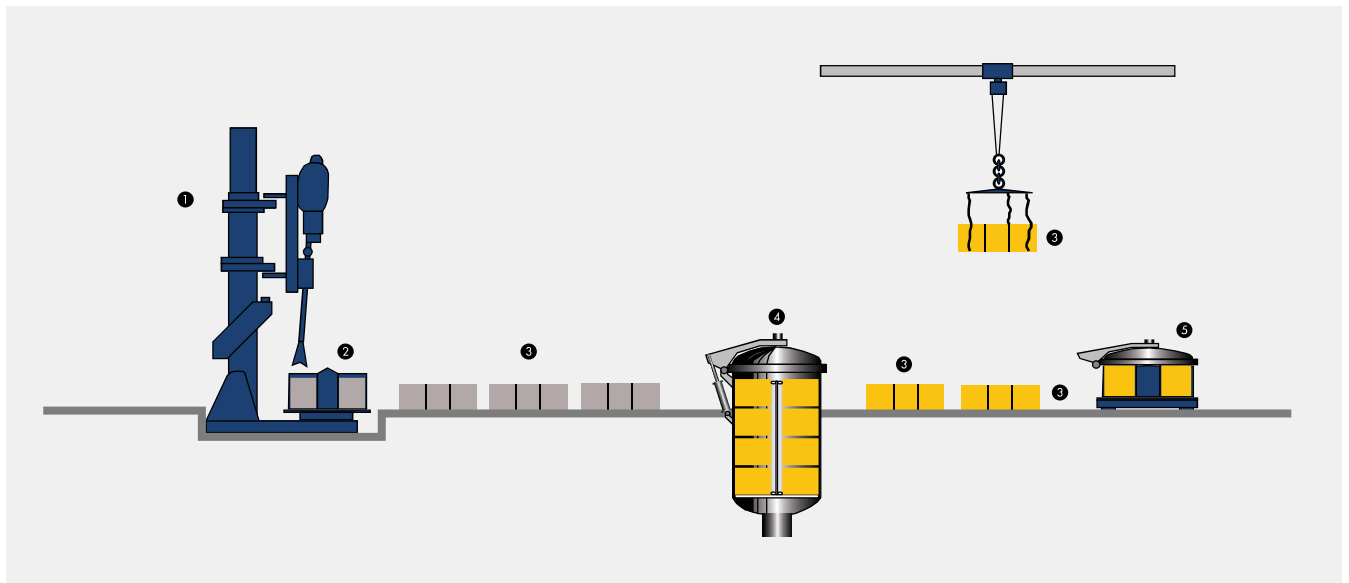
dia. (mm)	type	0,25 kg/l CO	0,3 kg/acryl	0,18 kg/l
1.000	N	150	180	110
1.000	H	300	360	220
1.200	N	220	255	160
1.200	H	440	510	320
1.400	N	335	405	240
1.400	H	670	810	480
1.500	N	360	420	260
1.500	H	720	840	520
1.600	N	450	540	325
1.600	H	900	1.080	650
1.800	N	525	630	380
1.800	H	1.050	1.260	760

Kranz YARNDYE® cylindrical pressed packages

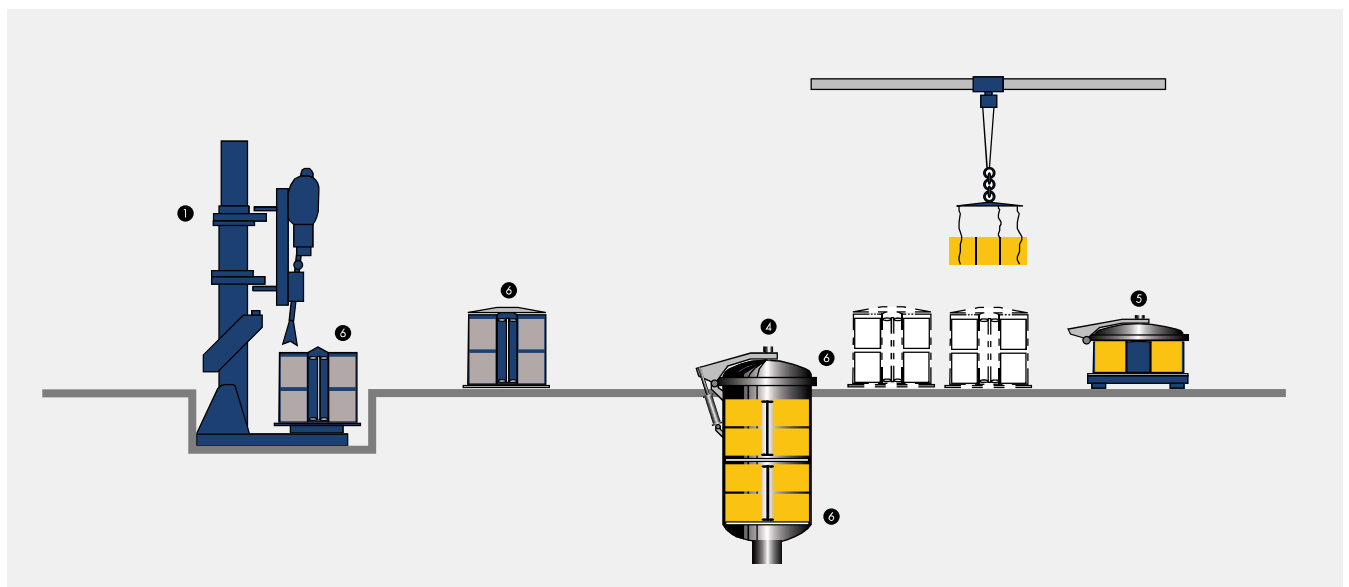




Loose stock Stamping - Dyeing - Pre-hydroextraction - Drying



Kranz YARNDYE® handling of loose stock

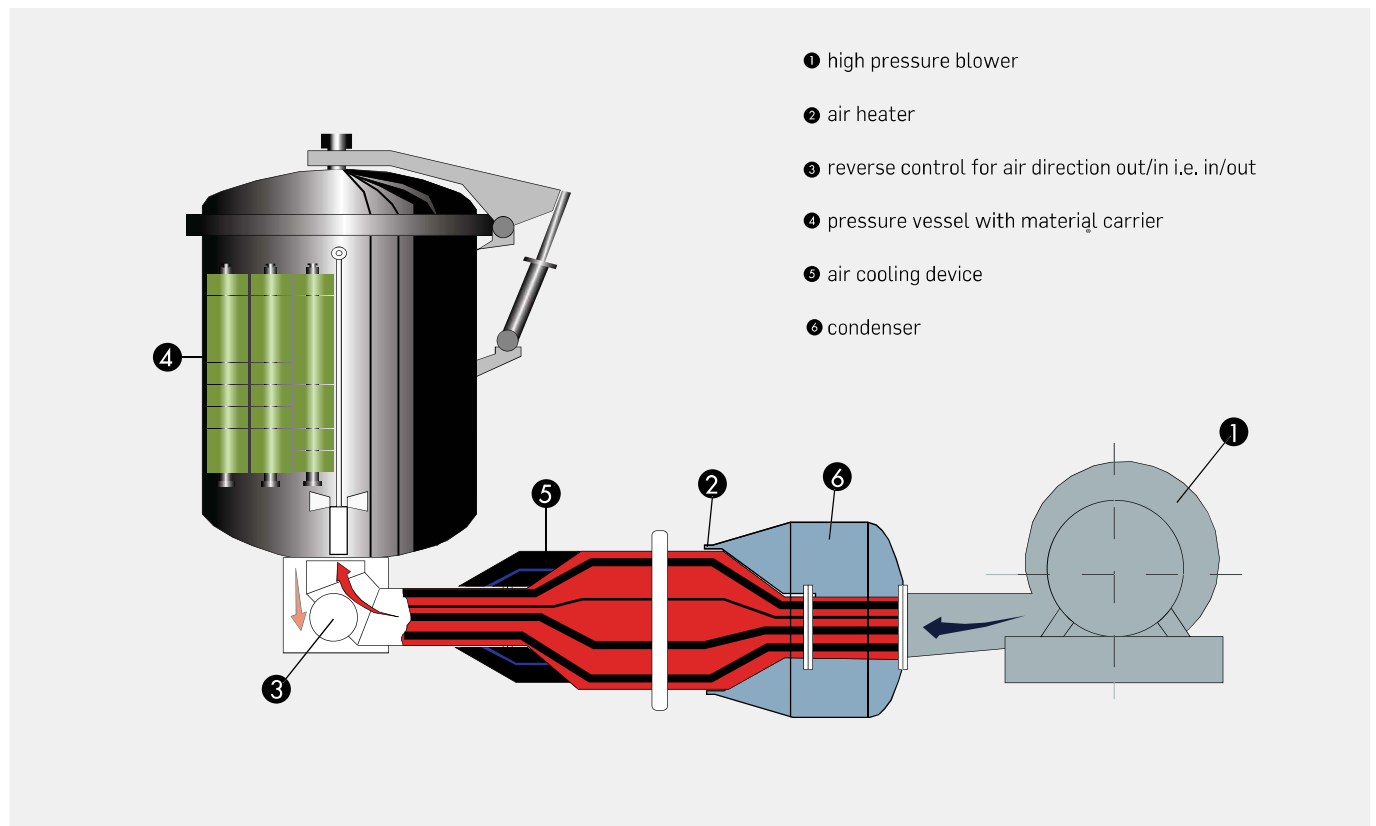


Kranz YARNDYE® handling of loose stock

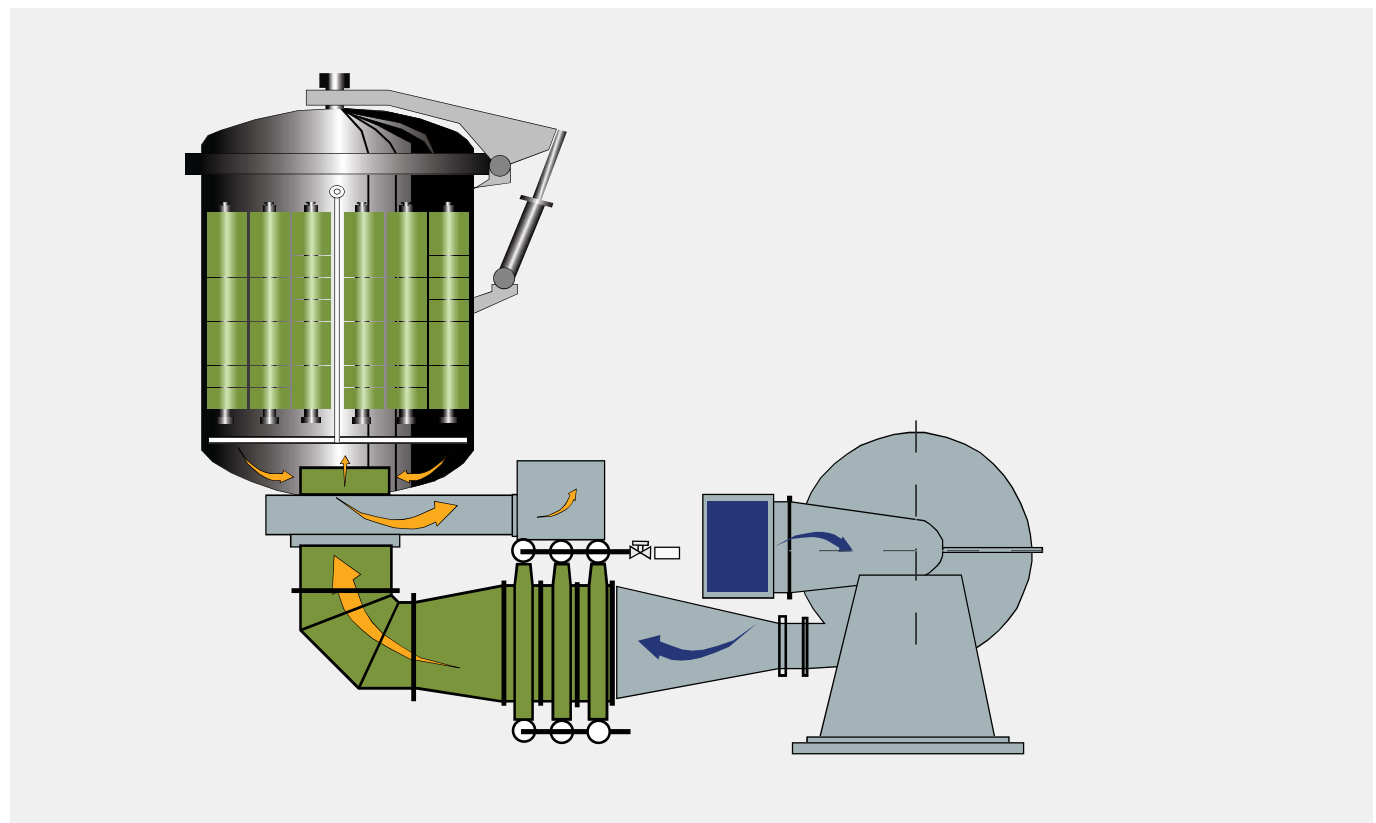
- ❶ stamping machine
- ❷ pre-packing cylinder
- ❸ material cakes with lifting plates
- ❹ HT-dyeing machine with material carrier
- ❺ rimless hydroextractor
- ❻ material carrier with 2 cakes each on lifting plates



Pressure dryer for packages



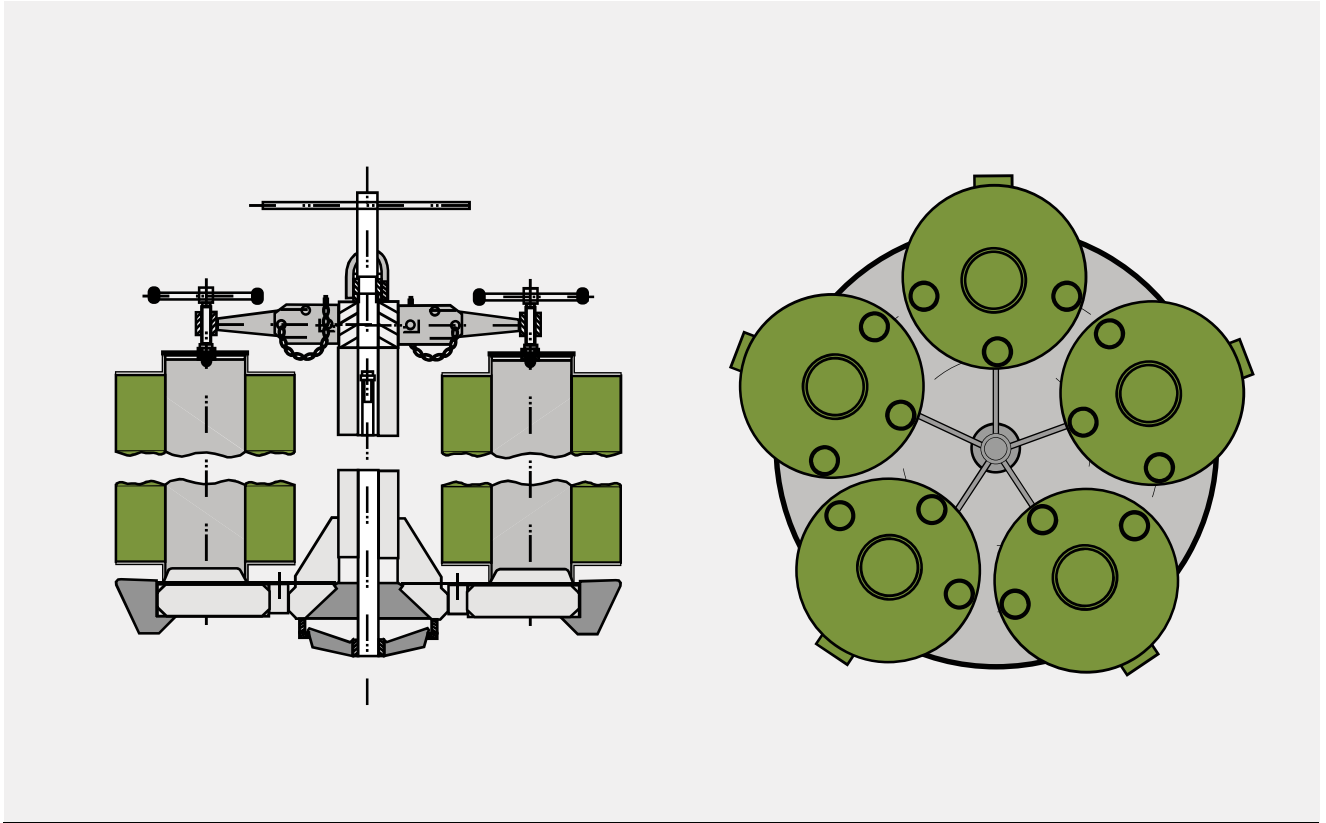
Kranz YARNDYE® pressure dryer for packages



Kranz YARNDYE® pressure dryer for packages



Warp beam dyeing



Kranz YARNDYE® material carriers for warp beams





MACHINE DETAILS

Electrical control panel

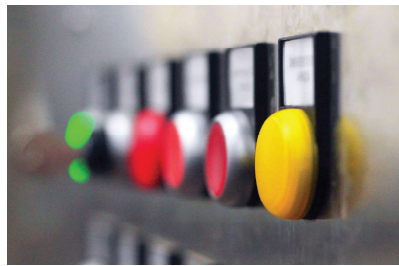
the whole switch board & electric cabinet is made from stainless steel.

All relevant motors, such as motor for the reel, for the circulation pump or for frequency-controlled A/C motors and the corresponding inverters are all made by high-end manufacturers from Europe.

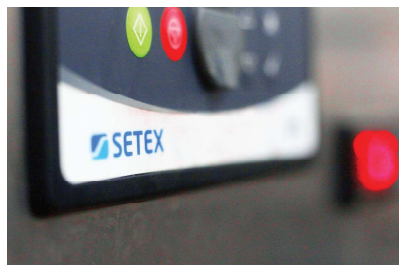
Krantz just uses high-end controllers from top manufacturers such as the Secom series from Setex or Sedomat series from Sedo-Treepoint.

With these controllers, even very sophisticated automation tasks can be realized without problems. Integrating an automatic dye kitchen becomes a standard task.

Complex machines can easily and directly be operated by using the integrated touch-screen.



additional control buttons



controller SECOM series



controller SEDOMAT series

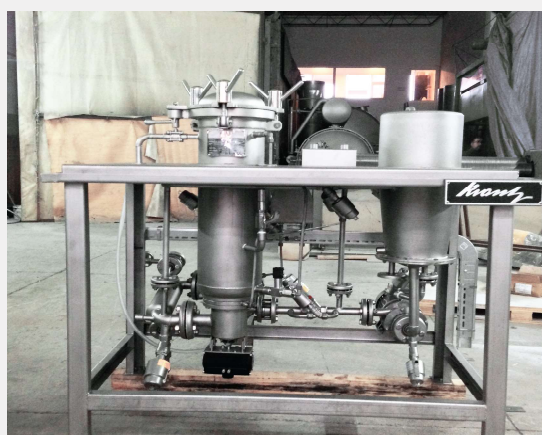


frequency-controlled inverters





Machine examples





 GERMAN TECHNOLOGY
designed & developed in Germany

sales & distribution

HochstraÙe 42
52078 Aachen
Germany
T +49.241.560 002 87
F +49.321.210 914 30
E info@ktmkrantz.com

factory I

Osmangazi Mahallesi
Küçükyazma Cad. No:13/2
Esenyurt-Istanbul/TR
T +90.212.858 08 08
F +90.212.858 00 70
E info@ktmkrantz.com

factory II

Yazlik Yenimahalle
D-130 Karayolu Cad. No:87/A
41650 Gölcük-Kocaeli/TR
T +90.262.343 30 90
F +90.262.343 30 90
E info@ktmkrantz.com