TECHNICAL PRODUCT LINE

For Consumer & Technical Products

KORSCH

The Specialist.

Innovations
Made in Berlin
Since 1919

Specialization is the key. Since 1919, KORSCH has focused on our core competency of tablet compression technology.

This focus and resulting experience base is the foundation for the broadest and most innovative product line for tablet compression equipment.

For more than 40 years, KORSCH has developed new technology for the technical markets, including large formats, multi-layer, ringed pellets, and special shapes – all designed to operate in harsh, 24/7 environments.

KORSCH Technical Presses are used successfully all over the world and are supported by a global network or sales and service specialists.

www.korsch.com

Large Formats

Bi-/Tri-Layer

Four-/Five-Layer

Toxic Materials

Core Rod / Ringed Formats

Special Shapes

KORSCH Technical Line – Superior Performance

Technical rotary presses must be workhorses – in the most demanding environments, they must be productive, efficient and extremely reliable. They are frequently used to process aggressive or abrasive materials, and very large formats. The products they are used to manufacture include salt and detergent tabs, ceramic rings for catalysts, effervescent tablets, fertilizer tablets, or alkaline battery pellets, as well as some specialty consumer products. The technical line permits each machine to be configured to meet specific customer needs.

DETERGENT INDUSTRY

- **Dishwasher Tablets**
- **Laundry Detergent Tablets**
- **Multi-Layer Detergent Tablets**
- **Cleaning Tablets**
- **Multi-Layer Dishwasher Tablets**
- **Decalcification Tablets**
- **Industrial and Home Cleaning Products**

for Every Application

CONFECTIONARY / FOOD

- Sweetener
- Chewing Gum
- Candies
- Bouillon Cubes
- Coffee Tabs

CHEMICAL INDUSTRY

- Salt-Tablets
- Catalysts
- Batterie Pellets (AA, AAA, C, D)
- Battery Button Cells
- Ceramic Oxide Components
- Magnets
- Fertilizer Tablets
- Sintered Metal Components
- Airbag Tablets
- Blanks for Electronic Industry

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A Special Solution for each Application

- Large formats up to 64 mm diameter
- Roller guided press tools facilitate deep fill and insertion depth capability and high ejection forces
- Mushroom head guided tools for standard applications
- Effective handling of press material with gravity feeder and power feeder options
- Rotary star valve for product flow regulation
- Optimal feeding with bypass in material feed tube

- Low tamping force measurement and control capability for multi-layer formats
- On-demand layer sampling at production speeds
- Absolute separation of layers – closed feeder design
- Dust extraction to prevent cross contamination

- Safe compression of toxic materials
- Avoiding the emission of hazardous dusts
- Complementary Wash-in-Place solutions

- Available with a center pin in the lower punch for production of ring and multi-hole tablets
- Innovative center pin design avoids powder migration in the cams
- Punch and center pin fracture monitoring

The Technical Line
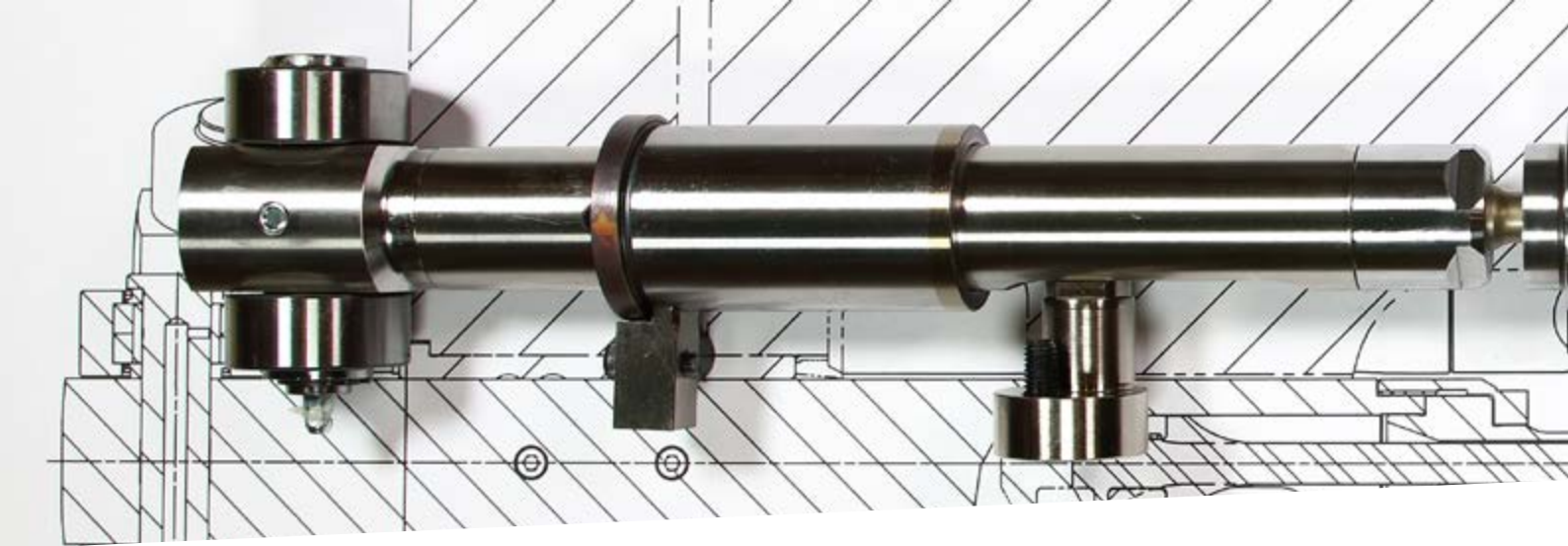# The Benefits at a Glance

XT 600

XT 600 HD

TRP 700

TRP 1200

- A Special Solution for Each Application

- All Requirements of Technical Products Addressed

- Intuitive Controls with Smart-Touch HMI

MADE IN GERMANY

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Designed to Perform

Robust Design

KORSCH Technical Presses are built to operate in the most demanding production environments, with maximum efficiency and uptime. The robust design and meticulous selection of materials and surface treatments, ensure extended run durations in any 24/7 production setting.

Press Tools

Roller guided or standard mushroom head press tools are available depending on machine model. Punch holders with rollers offer guidance on both sides and shafts with patented heavy duty profile heads permiting extremely high loads and eliminating wear on press tools and compression rollers.

Heavy Tonnage

Industrial Rotary Presses from KORSCH offer up to 120 kN compression force capability depending on the model.

- XT 600: up to 100 kN
- XT 600 HD: up to 120 kN
- TRP 700: up to 120 kN
- TRP 1200: up to 100 kN
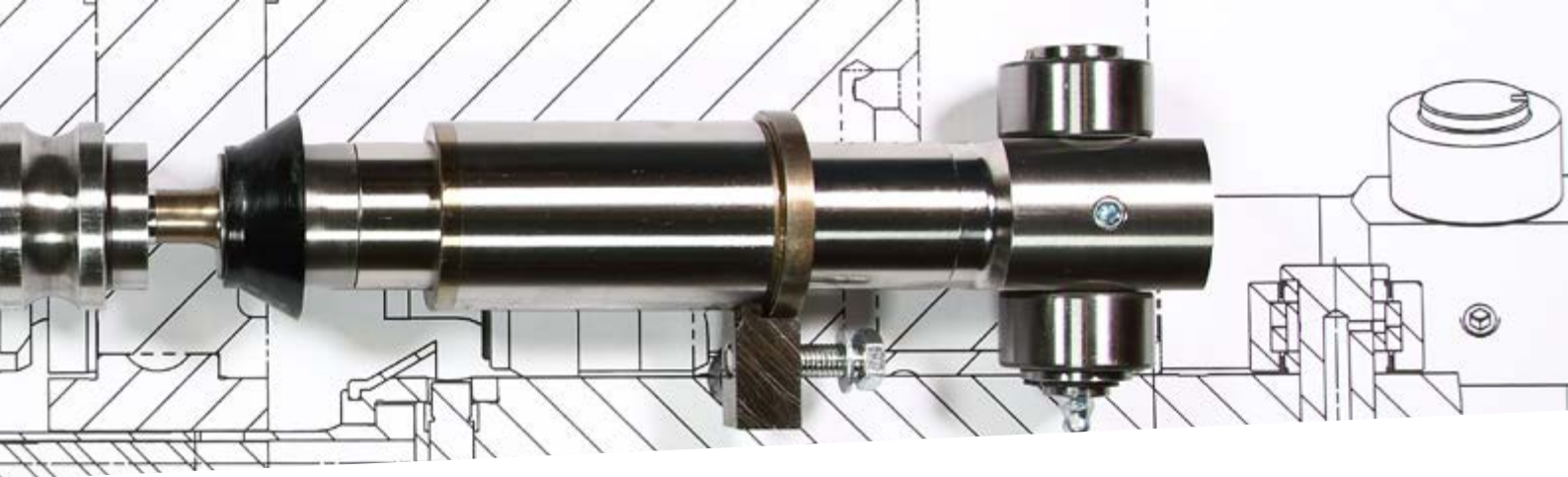
High Output Capability

KORSCH Technical Presses are built to run a top speed, with precision cam tracks, long filling lengths, and robust pre, main, and ejection stations. KORSCH is expert in the discharge handling and can deliver tablets to any downstream equipment line.

Large Formats, Deep Filling

Technical applications require often very large tablet sizes in diameter as well as in thickness that cannot be produced with standard tablet presses. The KORSCH Technical Line offers up to 64 mm tablet diameter and up to 60 mm filling depth depending on the model. Machines are customized to the product. Special solutions for material feed and tablet discharge are available.

Superior Wear Resistance

KORSCH Technical Presses are designed to stand up to the most abrasive products – with advanced surface treatments on the turret, die table, and press interior. Hardened steel guide bushings and cam track dramatically extend the life of the turrets and press tools.

- Shafts with roller guidance on both sides

- Ejection cams for high ejection forces

- Shaft tightness control

- Main bearing with temperature monitoring

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Intuitive Controls with Smart-Touch HMI

KORSCH Technical Presses are offered with both a Siemens PLC and Allen-Bradley PLC platform. A common, user friendly HMI presents an intuitive and graphical view of key process parameters. With login security, a product recipe capability, automatic weight control with tablet rejection, and a range of electronic audit trails to track alarms, events, and rejects, the KORSCH control system offers a simple yet powerful interface.

KORSCH offers seamless integration to upstream and downstream equipment, and the ability to pass process parameters to a central SCADA system. The integrated help capability permits immediate access to machine manuals, drawings, schematics and supportive videos at a touch of a button.

Integrated Help Capability

The Smart-Touch HMI sets a new standard for integrated help, and offers an extensive library of support documents to simplify, streamline, and supplement the operation of the machine, within the HMI.

- Direct link to support documents, including manuals, drawings, and schematics

- Multi-media support files (videos, pictures) to support equipment procedures (when available, machine change-over, calibration, etc.)

- Access to an electronic spare parts catalog

- Troubleshooting and diagnostic support
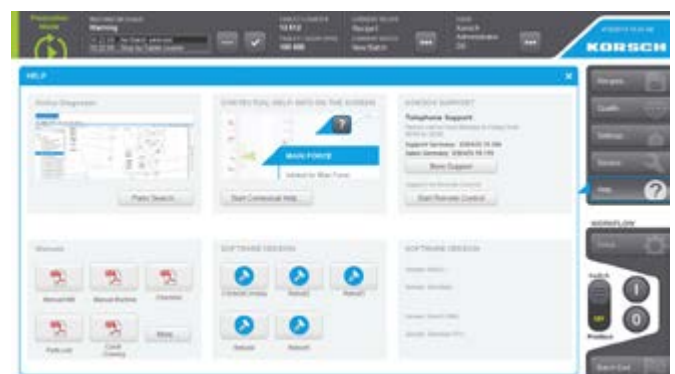
Network and SCADA Integration

The control system may be fully integrated to a central client network or SCADA system to permit real-time monitoring and acquisition of critical process parameters, centralized login, centralized product recipe management, and centralized batch data storage using a standard OPC server.

- Transfer of process parameters via OPC server

- Central login, recipe, and batch data administration

- Remote monitoring from a central control room
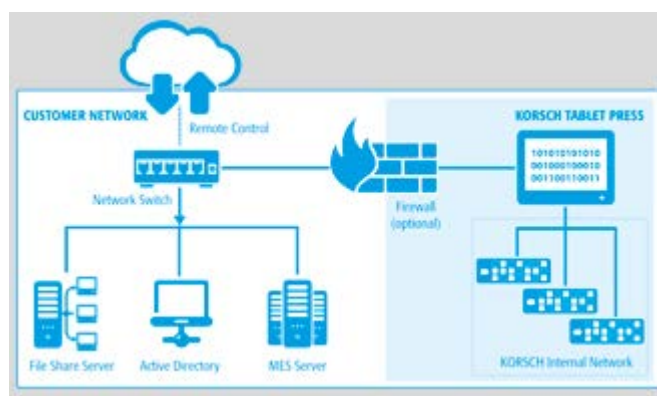
Press Force Control System

An advanced system to permit automatic weight regulation, the KORSCH press force control system uses an advanced algorithm to provide precise feedback to the dosing cam, based on the individual measurement of compression force. The result is a system that reacts with both speed and accuracy to maintain the process in control, and reject any tablets which are outside of established tolerances.

- Press force monitoring and regulation for precise tablet weight control

- Single tablet rejection across the full speed range (optional)

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TRP 1200

Up to 100 kN **Up to 44 mm Diameter** **Up to 40 mm Filling Depth**

Triple Sided Technical Rotary Press for Large Formats and Deep Filling Depths

The KORSCH flagship for technical applications, the TRP 1200 offers a rugged, flexible, and advanced design that supports single-layer, bi-layer, tri-layer, and ringed formats. A patented turret segment changeover permits a full tool replacement in less than 2 hours, which offers an unprecedented level of efficiency and uptime. Heavy tonnage compression columns, and a unique carrier plate design isolate vibration to ensure the lowest operating noise levels. The long feeder lengths and deep fill depth permit large formats with precise tablet weight control.

Special Applications

- Single-layer, bi-layer or tri-layer formats

- Ring and multi-hole tablets: turret including center pin holder

- Dishwashing tablets: star wheel tablet discharge and conveyor belt

- Ceramics and sintered metals

Robust compression column design

Large windows for superior accessibility and visibility

Roller-guided press tools

Dust extraction system permits extremely long run times before any maintenance or cleaning is required

Intuitive Controls with Smart-Touch HMI

Quick-disconnect components

Segmented turret (6 segments) for fast change

Patented carrier plate design permits extreme reduction in operating noise level and vibration

Lowered machine base for ergonomic die table height even

Large access panels in the base of the machine for maximum serviceability
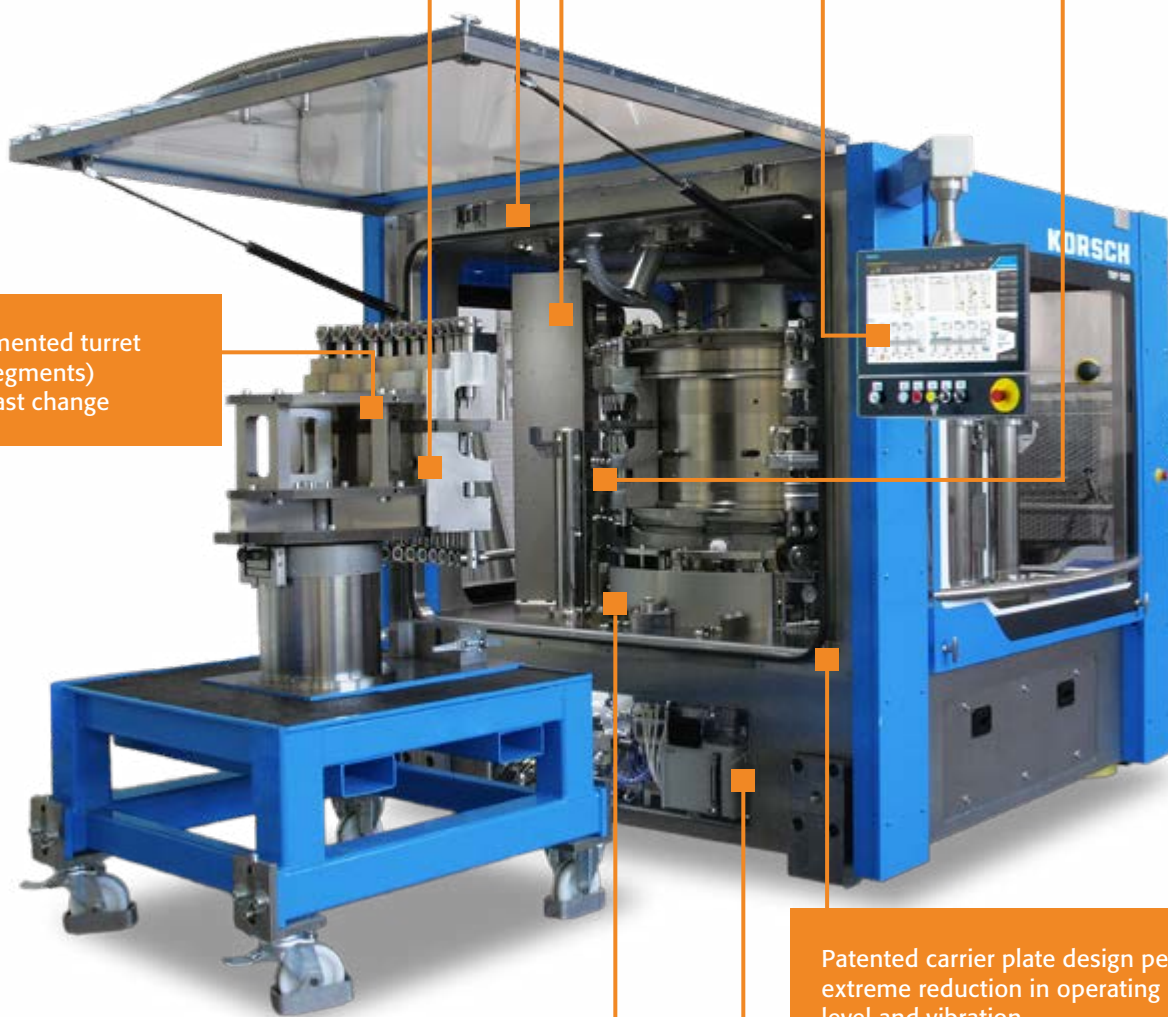
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XT 600 HD

Up to 120 kN	Up to 34,5 mm Diameter	Up to 477.000 Tabl./h.	Up to 40 mm Filling Depth

Double-Sided Rotary Press for Large Formats and High Compression Forces

The double rotary press XT 600 HD permits the production of single-layer or bi-layer tablets. The XT 600 HD offers a 60 kN pre and 120 kN main compression capability. A minimum of components in the compression zone combined with smooth, easy-to-reach surfaces lay the foundation for quick and easy cleaning. The robust XT 600 HD with the new, easily accessible compression columns, meets all the requirements of a modern rotary press. The robust and versatile XT 600 HD is best suited for the production of salt tablets, catalysts, dish washer tabs, fertilizers as well as industrial and homecare cleansers.

Special Applications

- Bi-layer tablets: bi-layer conversion kit
- Ring or multi-hole tablets: turret including center pin holder
- Effervescent tablets: powder or liquid spraying to avoid sticking
- Containment OEB 3 execution for a higher level of operator safety

Heavy duty turret with longer tool guiding length, dust bellows and exchangeable guiding bushings

Optional rotary valve for controlled product supply

Innovative "spot on" punch lubrication

Split window execution on all 4 sides for smaller footprint and full accessibility

High capacity feeders for maximum output

Optimized dust extraction through the multi function corner columns

Intuitive Controls with Smart-Touch-HMI and compression force control for fully automated 24/7 production

Turret shrouding with integrated oil barrier

Exchange of turret by external lifting device possible

High torque easy to maintain drive system

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TRP 700

Up to 120 kN	Up to 64 mm Diameter	Up to 241,000 Tabl./h.	Up to 40/60 mm Filling Depth

Double-Sided Technical Rotary Press for Large Format, Heavy Tonnage, and Deep Filling Depths

With a press force capability up to 120 kN the TRP 700 offers a rugged, flexible and advanced design that supports single-layer, multi-layer, and ringed formats. The tool holders with double guide rollers, ensure smooth punch travel and no wear on the punch heads or cams. Build for continuous 24/7 operation, the TRP 700 has proven to be effective across a wide range of formats and applications, delivering excellent product quality and unparalleled uptimes.

Special Applications

- Single and multi-layer executions (up to 5-layers)

- AA, AAA, C, and D-size batteries: turret including center pin holder

- Picking and sticking products: upper and lower punch are twisted in opposite directions (TWIST option)

- The TRP 700 can be delivered as a single rotary press for R&D

- Dishwashing tablets: star wheel tablet discharge and conveyor belt

Roller-guided punches with heavy-duty head profile (patented)

Robust design

Extended precompression rail for difficult products

Intuitive Controls with Smart-Touch HMI

Patented PUNCH TWIST design for sticky products

High ejection force capability

Discharge chute or conveyor-belt outlet

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KORSCH Global
Service Network

BERLIN

BOSTON

MUMBAI

HONGKONG

JAKARTA
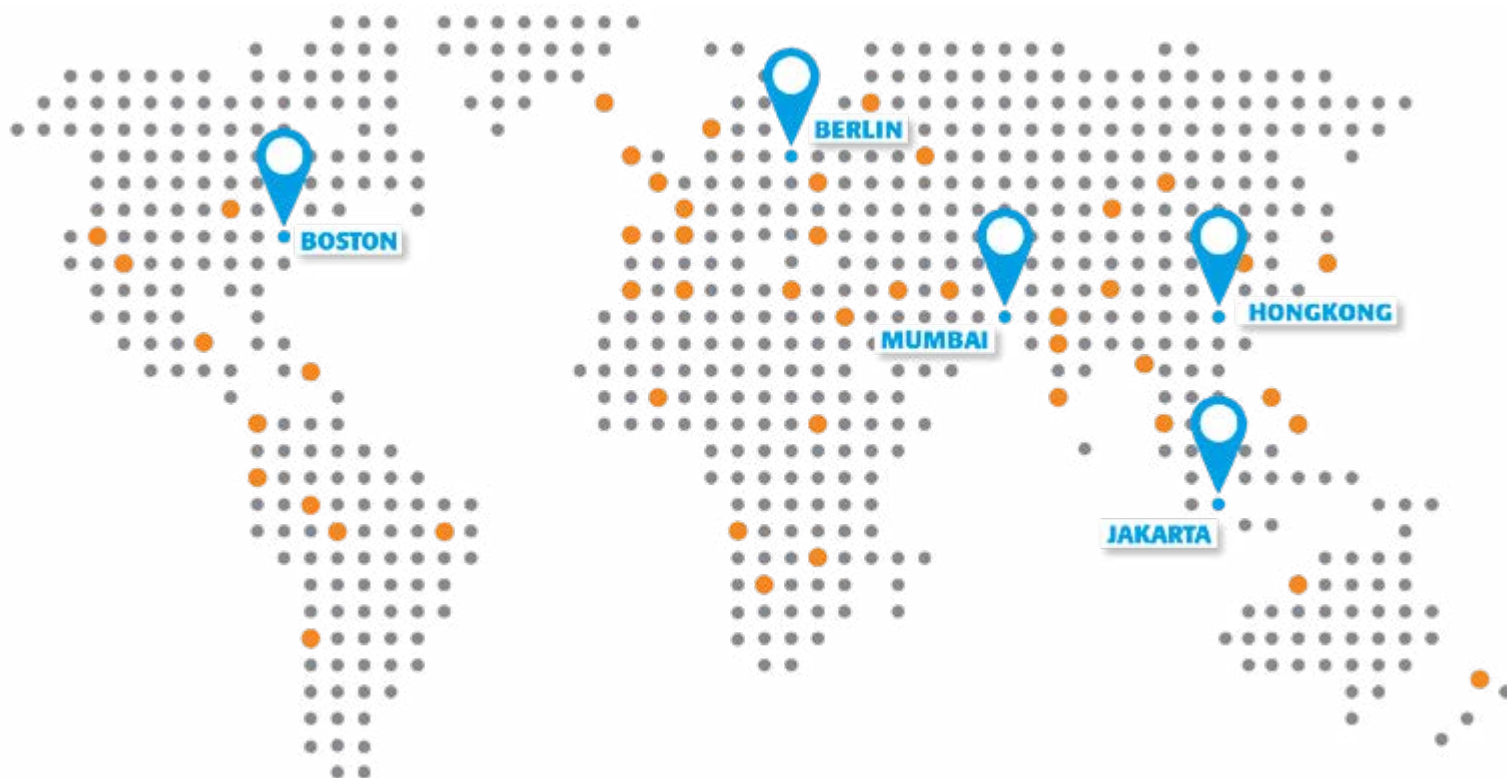
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TRP 1200

Technical
Rotary Press

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PRODUCT RANGE

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Technical Data

KORSCH TRP 1200

Press Tools		D45	D35	D28
Number of Punch Stations		54	72	84
Main Compression Force max.	kN	100	100	100
Precompression Force max.	kN	40	20	20
Tablet Diameter max.	mm	44	34	27
Filling Depth max.	mm	40	40	40
Turret Speed max.	RPM	25	25	25
Tablet Output max.	tabs/h	243,000	324,000	378,000
Pitch Circle Diameter	mm	1,200	1,200	1,200
Tablet Thickness max.	mm	30	30	30
Machine Dimensions	mm/ L x W x H	2,450 x 2,160 x 2,240 – Dimensions are identical for all versions		
Net Weight of the Machine	kg	15,000	15,000	15,000
Total Electrical Load	kVA	50	50	50

Technical modifications reserved.

KORSCH tablet presses comply with the EC machinery directive as well as with the EMC guidelines. KORSCH tablet presses are delivered with CE certificate.

Peripherals delivered with KORSCH tablet presses also comply with these regulations.

The technical specifications included in this document represent optimal parameters and are dependent on product quality and machine settings. The maximum compression force varies in relation to tablet/punch size, and output. The maximum output varies in relation to material, tablet/punch size, and compression force.

XT 600 HD

Technical
Rotary Press

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Technical Data

KORSCH XT 600 HD

Number of Punch Stations		65	53	39
Number of Compression Stations Main/Pre		2/2	2/2	2/2
Press Tools	EU/TSM	D19	D28	D35
Main Compression Force	kN	120	120	120
Pre-compression Force	kN	120	120	120
Tamping Force	kN	120	120	120
Tablet Diameter max.	mm	18	27	34
Filling Depth max.	mm	40	40	40
Turret Speed, Single-Layer	RPM	5 – 70	5 – 70	5 – 60
Turret Speed, Bi-Layer	RPM	5 – 70	5 – 60	5 – 50
Tablet Output, Single-Layer max.	tabs/h	546,000	445,000	281,000
Tablet Output, Bi-Layer max.	tabs/h	273,000	191,000	117,000
Pitch Circle Diameter	mm	740	740	740
Tablet Thickness max.	mm	20	20	20
Machine Dimensions	mm/ L x W x H	1,650 x 1,890 x 2,220 – Dimensions are identical for all versions		
Net Weight of the Machine	kg	7,500	7,500	7,500
Total Electrical Load	kVA	50	50	50

Technical modifications reserved.

For pharmaceutical applications GMP and 21CFR11 conform machine executions are optionally available.

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TRP 700/900

Technical
Rotary Press

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Technical Data

KORSCH TRP 700/TRP 900 Single-Layer and Multi-Layer Version

		TRP 700						TRP 900 5-Layer
Number of Punch Stations		23	31	37	39	47	55	67
Max. Main Compression Force Single-Layer Version Multi-Layer Version	kN kN	120 120	120 120	120 120	100 –	100 –	100 50	– 50
Max. Precompression Force	kN	40	40	40	20	20	20	20
Tamping Force Multi-Layer Version	kN	70	70	70	–	–	30	30
Max. Tablet Diameter	mm	64	49	44	39	34	27	27
Ejection Force	kN	40	40	40	20	20	20	20
Max. Filling Depth	mm	40 (60)	40 (60)	40	40	40	40	40
Turret Speed	RPM	5–30	5–30	5–30	5–30	5–30	5–30	5–30
Max. Tablet Output	tabs/h	82,800	111,600	133,200	140,400	169,200	198,000	120,600
Pitch Circle Diameter	mm	780	780	780	780	780	780	1,000
Die Diameter/Neck	mm	80/92	70/76	56/62	46/54	45/51	38/44	38/44
Max. Shaft/Head Diameter	mm	65/75	50/60	45/50	40/50	35/45	28/40	28/40
Upper Punch Insertion Depth Single-Layer Version Multi-Layer Version	mm mm	2–6 2–17	2–6 2–17	2–6 2–17	2–6 –	2–6 –	2–6 2–25	– 2–25
Machine Dimensions	mm/ L x W x H	1,400 x 1,400 x 2,650	1,400 x 1,400 x 2,650	1,400 x 1,400 x 2,650	1,400 x 1,400 x 2,240	1,400 x 1,400 x 2,240	1,400 x 1,400 x 2,240	1,500 x 1,500 x 2,240
Net Weight of the Machine	kg	8,000	8,000	8,000	7,500	7,500	7,500	10,000
Total Connected Electrical Load	kVA	52	52	52	35	35	35	50

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