

Motion Technology from Columbus McKinnon: Custom Solutions and Systems for the Heavy Industry

In steelmaking and other heavy industries, drive technology is expected to lift, move, and precisely position heavy loads under extremely adverse conditions, something that requires specific solutions and technical expertise.

Both are offered by Columbus McKinnon Engineered Products, which for many years has been one of the world's leading suppliers of special motion technology components for steelmaking and heavy industry under the Pfaff-silberblau brand.

- Standard screw jacks for loads ranging from 0.5 to 75 tons
- Heavy-duty screw jacks for loads ranging from 100 to 200 tons
- Special screw jacks for special solutions
- Special screw jacks for repositioning tundishes
- Complete pot lifting systems for coating lines

The highest levels of automation and productivity are required, particularly in plant construction. This in turn means more individual lifting and lowering mechanisms, feed drives and swivel actuators, together with their interfaces to electronic control systems.

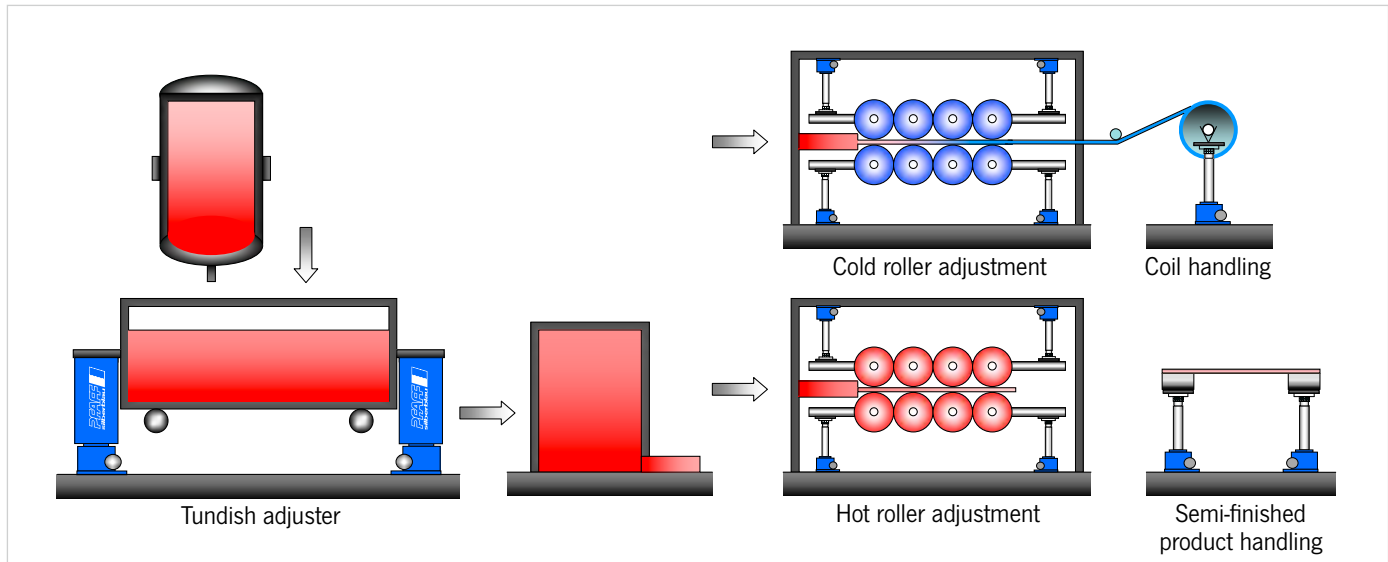
Particularly in heavy industry, the drive technology must function reliably under the harshest conditions for years and years. Pfaff-silberblau supplies individual components as well as complete solutions for lifting systems in the steel industry.

The products and services available extend from individual standard worm gear screw jacks to the development and manufacture of complete lifting systems, including the structural steel, control system, commissioning, and service. The customer benefits from the highest levels of transparency in all phases of the project, starting with the conclusion of the contract to the handover of the system.

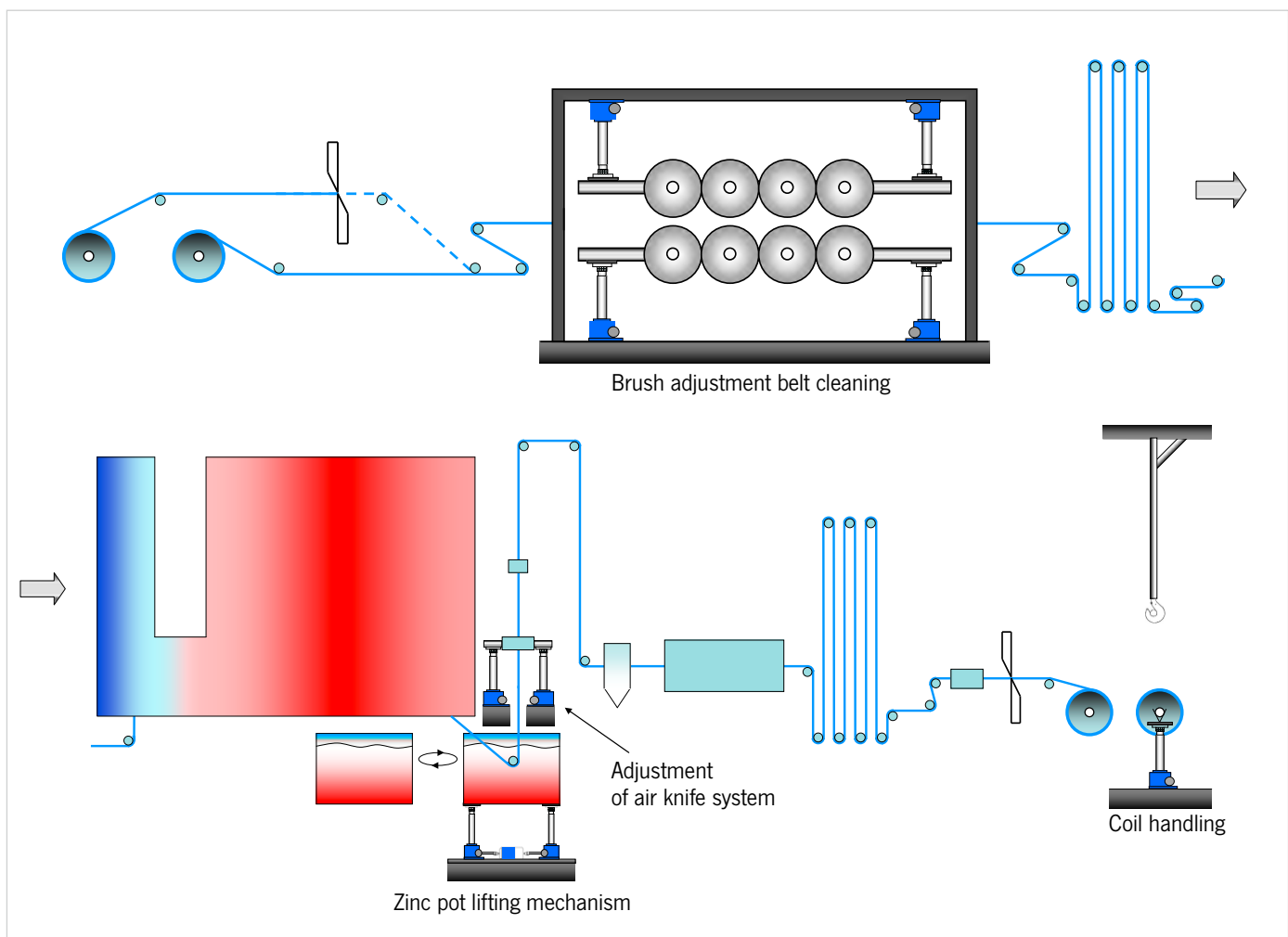


Motion Technology for the Heavy Industry: Steel and galvanizing processes

Pfaff components integrated in the „steel“ process



Pfaff components in continuous galvanizing lines



Motion Technology for the Heavy Industry: Robust and powerful lifting elements

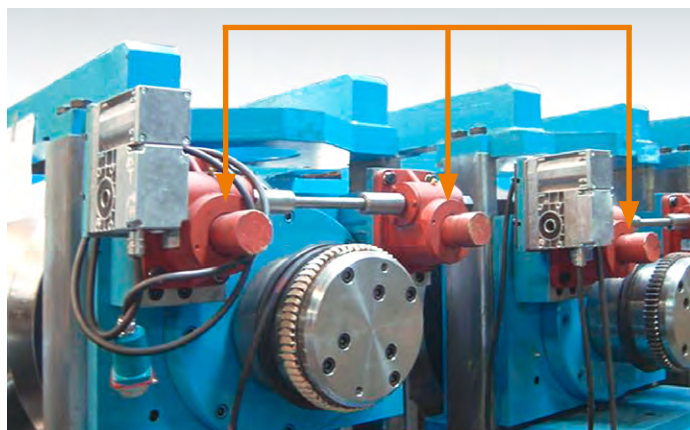
The advantages of screw jacks compared with a hydraulic solution are obvious.

- Self-locking trapezoidal screw (the load does not lower in the event of a system failure)
- High repeat and positional accuracy
- Robust and reliable
- Total synchronism in the case of multi-screw lifting systems (even if individual screws are subjected to uneven loading), no electrical synchronization control necessary
- Easy to install

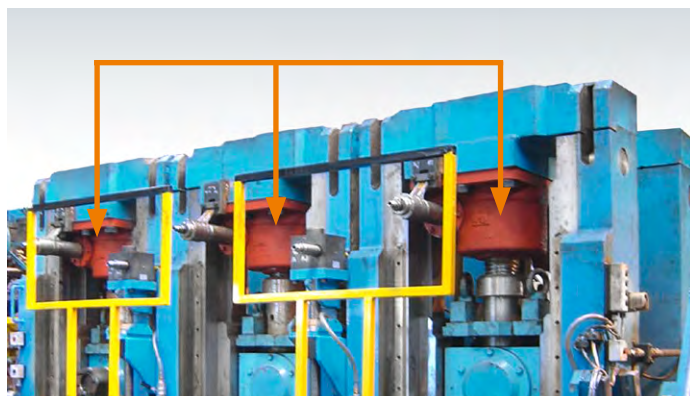
Technical data screw jacks from 35 to 100 ton					
Model size	Max. lifting load [kN]	Ratio N	Ratio L	Trapezoidal screw Tr	
SHE 35	350	10 2/3:1	32:1	100x16	
SHE 50.1	500	10 2/3:1	32:1	120x16	
SHE 75	750	12:1	36:1	140x20	

Refer to the „Compendium Screw jacks“ catalogue for the dimensions and other technical data of the 35 to 75 to screw jacks.

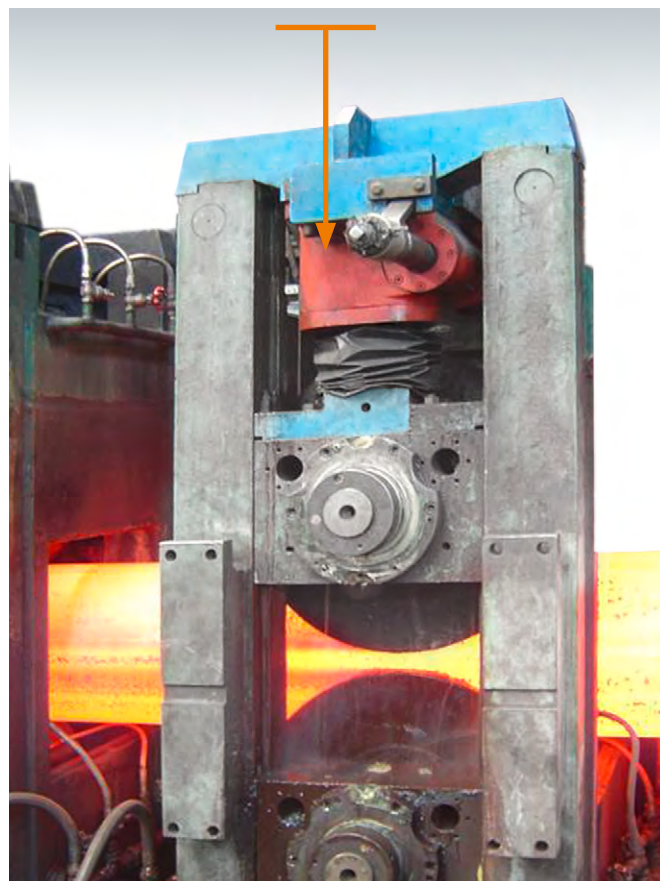
Technical data heavy-duty screw jacks >100 ton						
Model size	Max. lifting load [kN]	Ratio N	Ratio L	Trapezoidal screw Tr	Buttress-thread screw S	
SHE 100.1	1000	12:1	36:1	160x20	160x20/180x20	
SHE 150.1	1500	19:1	on request	190x24	190x24/200x24	
SHE 200.1	2000	17,5:1	on request	220x28	220x24	



Screw jacks for roll pass system



Screw jacks for a sizing stand

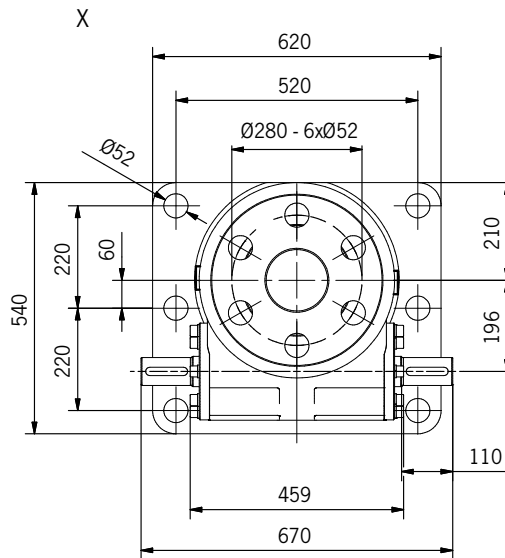
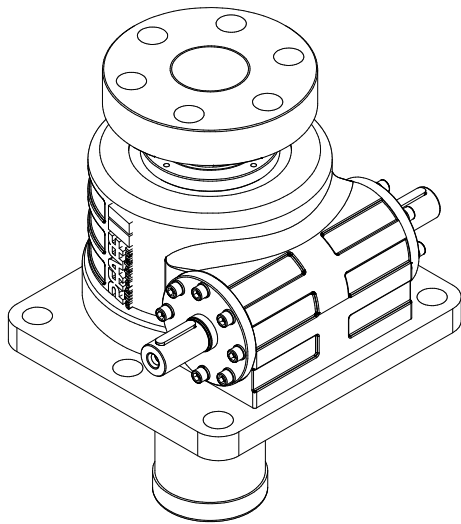
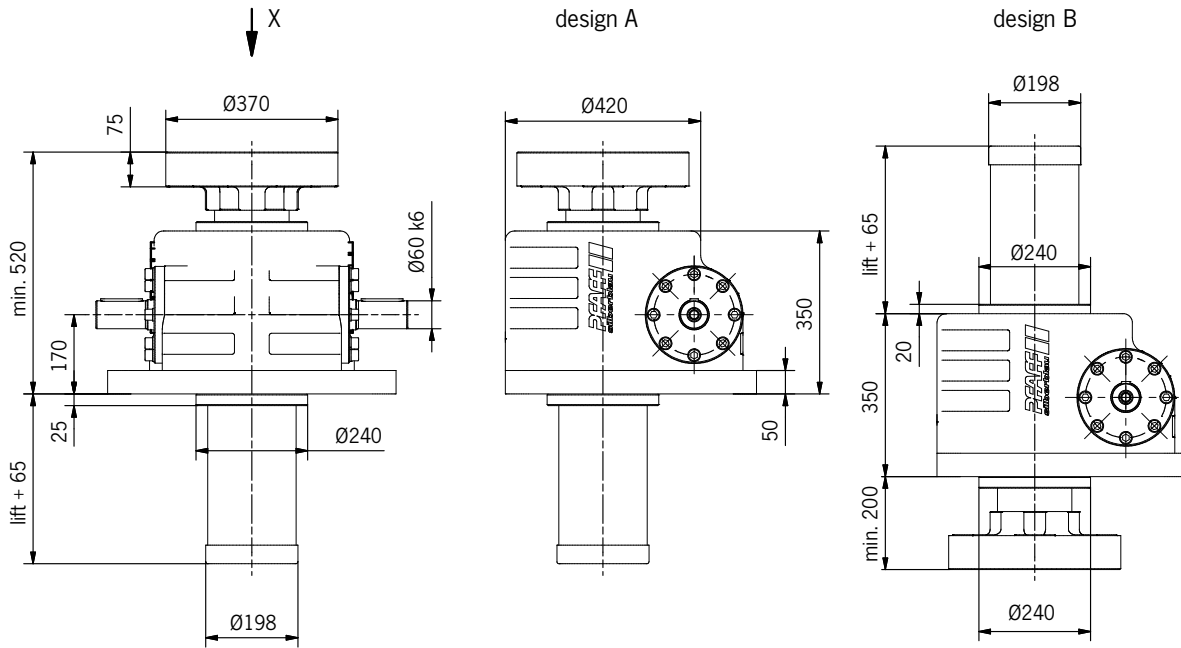


Screw jacks for roll pass system in a rolling mill

Heavy-duty screw jack SHE 100.1

Dimension drawing

Dimension drawing



Options heavy-duty screw jack SHE 100.1



Anti-turn device



Ball screw,
planetary roller screw



Long safety nut
with speed monitoring



Buttress-thread screw

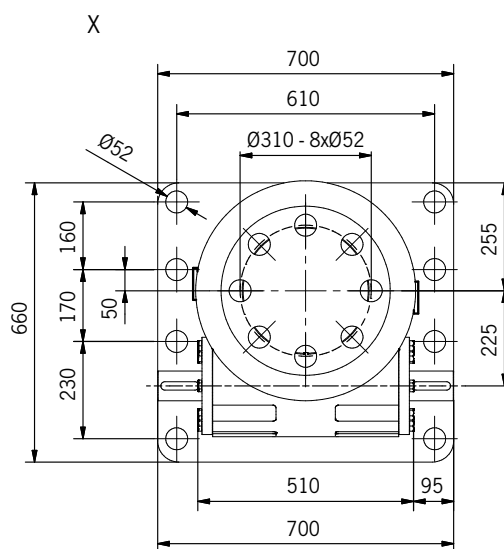
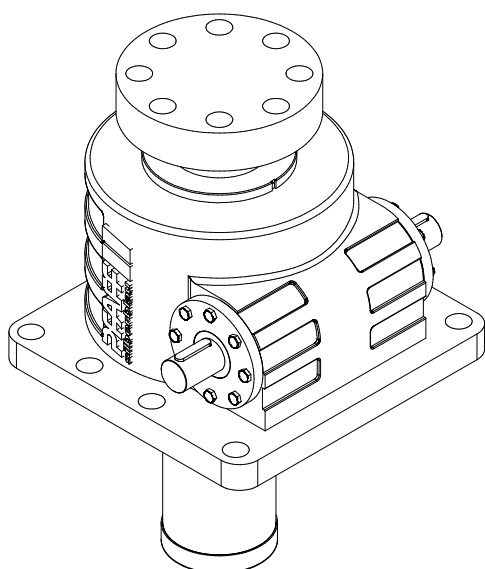
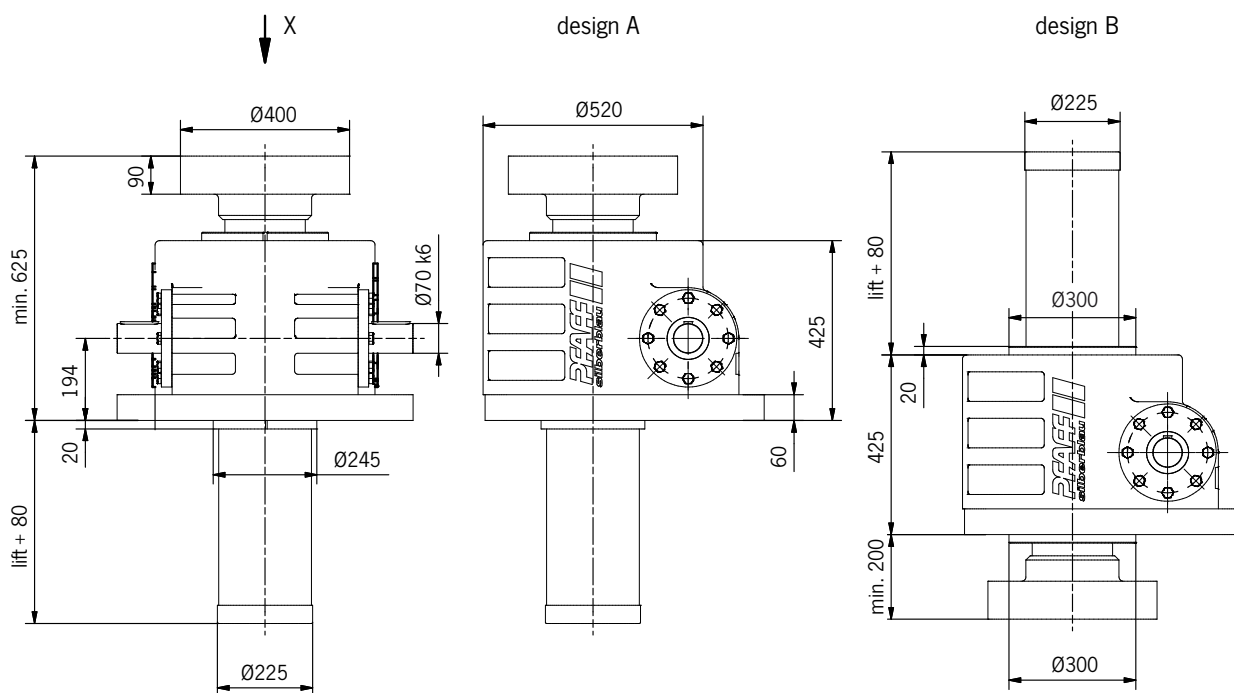
CAD & go



Heavy-duty screw jack SHE 150.1

Dimension drawing

Dimension drawing



Options heavy-duty screw jack SHE 150.1



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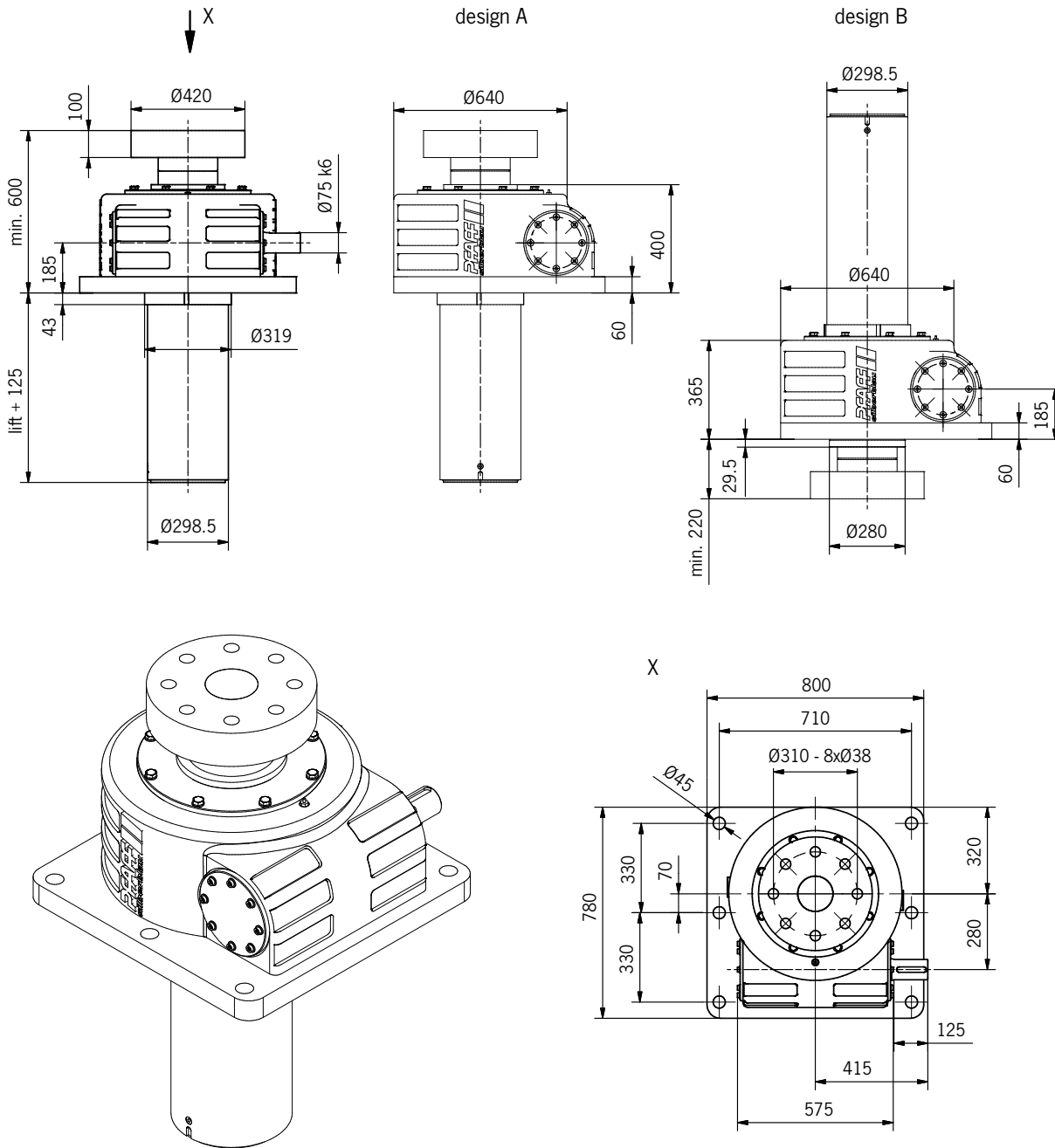
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Heavy-duty screw jack SHE 200.1

Dimension drawing

Dimension drawing



Options heavy-duty screw jack SHE 200.1



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