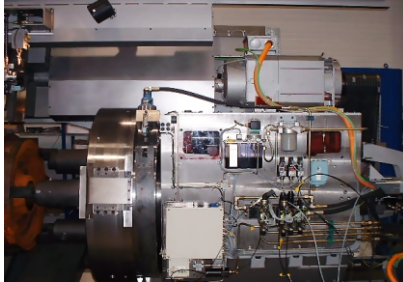
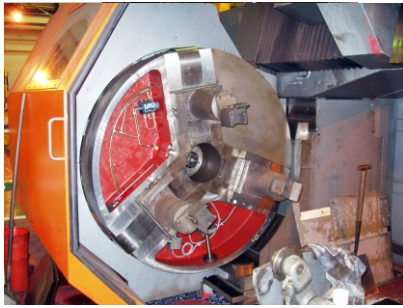




TSP
TDP



TDP – Wheelset lathe with 2 tool saddles TSP – Wheelset lathe with 1 tool saddle

These lathes are designed to accommodate various types of wheelsets with bearing boxes to meet the specific requirements for profiling dismantled wheelsets (wheels, brake discs...). The main mechanical components are made of SG cast iron. Usually, wheels are badly damaged with hardness up to 1400 N/mm². Solid and compact, TDP or TSP lathes do meet these requirements.

► Operation principle:

TDP achieves profiling two wheels in 25 minutes.

TSP achieves profiling four wheels in 35 minutes.

The lathe is CNC controlled and will master the 5 cycles:

- Wheelset positioning
- Profile measuring
- Wheel profiling and brake disc machining
- Profile measuring (accessory)
- Wheelset removal

► Information and services:

The machine is delivered completely assembled and inspected. As the electrical and hydraulic cabinets are mounted directly on the machine frame, civil works are easy to do and installation time is short.

The lathe is equipped with an Autodiagnostic and Telemaintenance system. At the end of the machining cycle, the CNC releases a profiling report that includes all useful information. This information can be exported to a Wheelset Management Database.

In the event of a failure, the CNC will display a message showing the faulty element. The telemaintenance system enables SCULFORT Service Department to connect to the lathe and help the operator to find the fault. This will avoid diagnostic mistakes and maximize lathe availability.

► Product:

In order to ensure the operator perfect ergonomics, the lathe comprises:

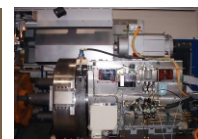
- A control panel facing the working area
- An Autodiagnostic and Telemaintenance system
- An elevator for wheelset positioning (TDP)
- A chip disposal device
- A fume extractor (optional)

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since 1878



TDP – Wheelset lathe with 2 tool saddles



These lathe is designed to accommodate various types of wheelsets with bearing boxes to meet the specific requirements for profiling dismantled wheelsets (wheels, brake discs...). The main mechanical components are made of SG cast iron. Usually, wheels are badly damaged with hardness up to 1400 N/mm². Solid and compact, TSP lathe does meet these requirements.

SURFACE WHEEL LATHE CHARACTERISTICS

Type	Surface Wheel Lathe	TDP
Track	Track gauge	1000 - 1435 - 1 676 mm
Wheelset	Maximum wheelset weight	4 tons
	Axle length	1600 to 2700 mm
Wheels	Wheel diameter on tread	600 to 1 250 mm
Brake discs	Brake discs diameter	250 to 700 mm
Driving motors	Quantity	2
	Spindle motors	71 Kw
	Spindle rotation speed	0 to 80 rev/min
Chucks	Quantity	2
	Diameter	1 180 mm
	Jaws	3
	Radial stroke of jaws	230 mm
	Clamping effort per jaw	4 000 daN
Spindles	Spindle stroke	500 mm
	Spindle motion speed	2 m/min
	Sleeve diameter	240 mm
	Sleeve stroke	460 mm
	Max. sleeve effort	7,5 tons
	Sleeve motion speed	1 m/min
Tool saddles	Quantity	2
	Vertical stroke	600 mm
	Horizontal stroke	1 500 mm
	Feed speed range	0 to 4 mm/r
	Fast feed speed	6 m/min
	Maximum cutting effort	4 000 daN
	Minimum cutting depth	0.2 mm
	Maximum cutting depth	10 mm
	Cutting speed	40 to 120 m/min
CNC	Model	SIEMENS 840D
	Measure increment	1 µm
	Software increment	1, 10, 100... µm
	Measure display	1 µm
	Program language	SIEMENS Step7 (Ladder)
TDP lathe dimensions	Length	9 240 mm
	Width	3 280 mm
	Height	4 160 mm
Hydraulic group	Tank capacity	400 l
	Length	1 700 mm
	Width	1 000 mm
	Height	1 400 mm
Approximate weights	TDP lathe	46 000 kg
	Accessories	9 000 kg
Power supply	Total power installed	200 Kw
	Feed Voltage	AC 400V (± 10%) 3ph – 50-60Hz
Operating performances	Average cycle time (depending of wheel diameter)	25 minutes
	Section of chips (class B wheels 110 kg max)	Max. 16 mm2
Reprofiling allowances	Difference between the wheel diameters on a wheelset	< 0.1 mm
	Radial eccentricity	< 0.05 mm
	Wheel tyre strength	max. 3 000 N/mm2



TSP – Wheelset lathe with 1 tool saddle



This lathe is designed to accommodate various types of wheelsets with bearing boxes to meet the specific requirements for profiling dismantled wheelsets (wheels, brake discs...). The main mechanical components are made of SG cast iron. Usually, wheels are badly damaged with hardness up to 1400 N/mm². Solid and compact, TSP lathe does meet these requirements.

SURFACE WHEEL LATHE CHARACTERISTICS		
Type	Surface Wheel Lathe	TSP
Track	Track gauge	1000 - 1435 - 1 676 mm
Wheelset	Maximum wheelset weight	4 tons
	Axle length	1600 to 2700 mm
Wheels	Wheel diameter on tread	600 to 1 250 mm
Brake discs	Brake discs diameter	250 to 700 mm
Driving motors	Quantity	1
	Spindle motors	71 Kw
	Spindle rotation speed	0 to 80 rev/min
Chucks	Quantity	1
	Diameter	1 180 mm
	Jaws	3
	Radial stroke of jaws	230 mm
Spindles	Clamping effort per jaw	4 000 daN
	Spindle stroke	500 mm
	Spindle motion speed	2 m/min
	Sleeve diameter	240 mm
	Sleeve stroke	460 mm
	Max. sleeve effort	7,5 tons
Tool saddles	Sleeve motion speed	1 m/min
	Quantity	1
	Vertical stroke	600 mm
	Horizontal stroke	1 500 mm
	Feed speed range	0 to 4 mm/r
	Fast feed speed	6 m/min
	Maximum cutting effort	4 000 daN
	Minimum cutting depth	0.2 mm
	Maximum cutting depth	10 mm
	Cutting speed	40 to 120 m/min
CNC	Model	SIEMENS 840D
	Measure increment	1 µm
	Software increment	1, 10, 100... µm
	Measure display	1 µm
	Program language	SIEMENS Step7 (Ladder)
TDP lathe dimensions	Length	9 240 mm
	Width	3 280 mm
	Height	4 160 mm
Hydraulic group	Tank capacity	400 l
	Length	1 700 mm
	Width	1 000 mm
	Height	1 400 mm
Approximate weights	TDP lathe	40 000 kg
	Accessories	9 000 kg
Power supply	Total power installed	120 Kw
	Feed Voltage	AC 400V (± 10%) 3ph – 50-60Hz
Operating performances	Average cycle time (depending of wheel diameter)	35 minutes
	Section of chips (class B wheels 110 kg max)	Max. 16 mm ²
Reprofiling allowances	Difference between the wheel diameters on a wheelset	< 0.1 mm
	Radial eccentricity	< 0.05 mm
	Wheel tyre strength	max. 3 000 N/mm ²