

OPTIMUM[®]



2018 CATALOGUE

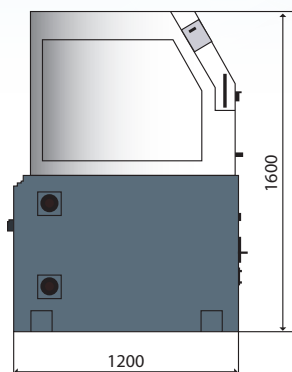
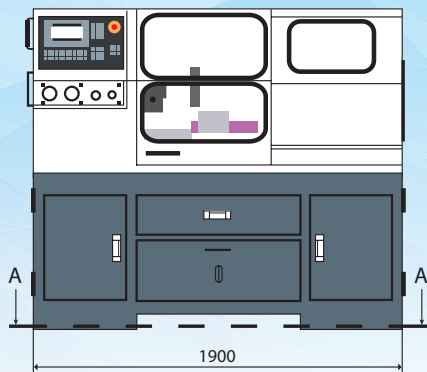
CNC Metal
Working
Machines



OPTImill[®]
OPTIturn[®]

CNC Turning Range

OPTiturn®



Type	L33HS
Stock code	L770
Electrical Connection	
Electrical connection	415 V / 3 Ph ~50 Hz
Spindle	
Spindle motor	3.7 kW / 5 hp
Spindle nose	A2-4
Spindle bore	Ø 42 mm
Machine Data	
Maximum turning diameter	275 mm
Maximum turning length	600 mm
Turning over cross slide	140 mm
Swing over bed	330 mm
Distance between centres	630 mm
Centre height	165 mm
Bed width	206 mm
Chuck diameter	Ø 150 mm
Chuck through hole (bore)	Ø 42 mm
Speed Range	
Spindle speed	40 - 4,000 rpm
Turret	
Type	Electric
Number of tool positions	6
OD tool size	16 x 16 mm
ID tool size	Ø 16 mm
Accuracy	
Positioning accuracy	± 0.025 mm
Repeatability accuracy	± 0.015 mm
Feed Speed	
X axis	2,000 mm/min.
Z axis	2,000 mm/min.
Torque Axis Motors	
X axis	4 Nm
Z axis	6 Nm
Tailstock	
Tailstock taper	MT 3
Tailstock - sleeve travel	100 mm
Dimensions	
Length x width x height	1900 x 1200 x 1600 mm
Coolant tank capacity	50 litres
Total weight	1,250 kg



“CNC Training”

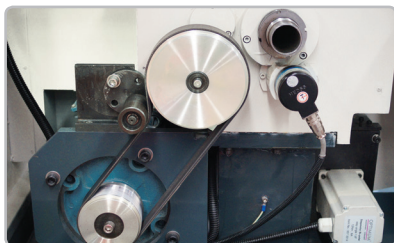
Learn the function, operation, preparation, diagnostic and maintenance of the machine

L33HS CNC controlled flatbed lathe

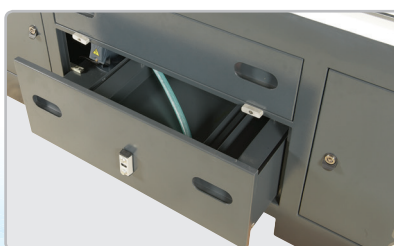
- Precise machining
- Braced machine bed made of grey cast iron
- Bed guideways inductively hardened (HRC 42-52) and precision ground
- Emergency stop push button
- Central lubrication
- Incremental position encoder for spindle positioning (thread cutting)
- Right-handed / left-handed rotation
- Precision ground ball screw
- Easy to maintain protective covers
- Rear access cover for maintenance purposes
- Safety switch at the front sliding door
- Safety PLC
- Servo motors made by SIEMENS
- Siemens Sinumerik 808D on PC free of charge (Computer workstation)
- Two-year SIEMENS warranty included
- CE Certified



Turret Changer: for 6 tools



Incremental position encoder for spindle positioning (thread cutting)



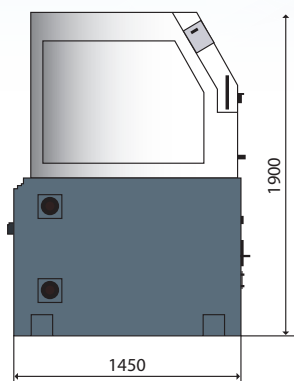
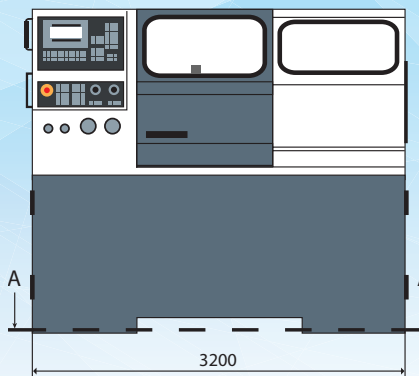
Coolant system: Draw type - easy disposal of chips



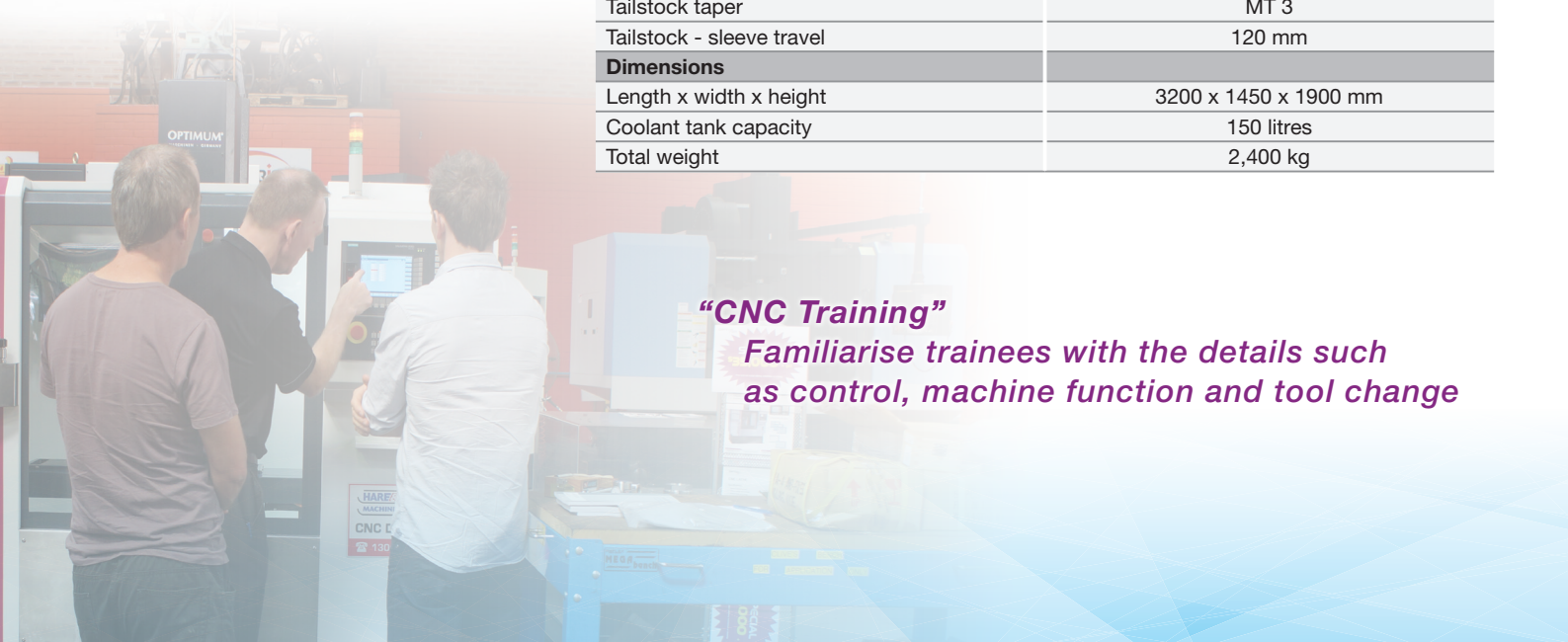
Siemens control:
SINUMERIK 808D

CNC Turning Range

OPTiturn®



Type	L40
Stock code	L771
Electrical Connection	
Electrical connection	415 V / 3 Ph ~50 Hz
Spindle	
Spindle motor	7.5 kW / 10 hp
Spindle nose	A2-6
Spindle bore	Ø 60 mm
Machine Data	
Maximum turning diameter	400 mm
Maximum turning length	900 mm
Turning over cross slide	240 mm
Swing over bed	400 mm
Distance between centres	1000 mm
Centre height	200 mm
Bed width	320 mm
Chuck diameter	Ø 200 mm
Chuck through hole (bore)	Ø 60 mm
Speed Range	
Spindle speed	25 - 2,500 rpm
Turret	
Type	Electric
Number of tool positions	8
OD tool size	20 x 20 mm
ID tool size	Ø 32 mm
Accuracy	
Positioning accuracy	± 0.025 mm
Repeatability accuracy	± 0.015 mm
Rapid Feed Speed	
X axis	6,000 mm/min.
Z axis	8,000 mm/min.
Torque Axis Motors	
X axis	6 Nm
Z axis	10 Nm
Tailstock	
Tailstock taper	MT 3
Tailstock - sleeve travel	120 mm
Dimensions	
Length x width x height	3200 x 1450 x 1900 mm
Coolant tank capacity	150 litres
Total weight	2,400 kg



“CNC Training”

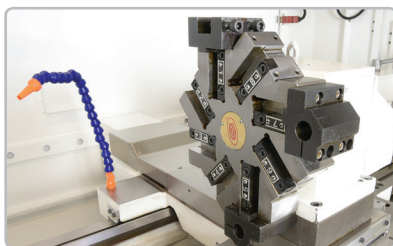
Familiarise trainees with the details such as control, machine function and tool change

L40 CNC controlled flatbed lathe

- Precise machining
- Braced machine bed made of grey cast iron
- Bed guideways inductively hardened (HRC 42-52) and precision ground
- Emergency stop push button
- Central lubrication
- Incremental position encoder for spindle positioning (thread cutting)
- Right-handed / left-handed rotation
- Precision ground ball screw
- Easy to maintain protective covers
- Rear access cover for maintenance purposes
- Safety switch at the front sliding door
- Safety PLC
- Servo motors made by SIEMENS
- Siemens Sinumerik 808D on PC free of charge (Computer workstation)
- Two-year SIEMENS warranty included
- CE Certified



Control Panel: Siemens 808D CNC



Tool Change: for 8 Tools



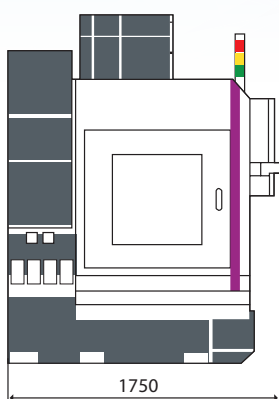
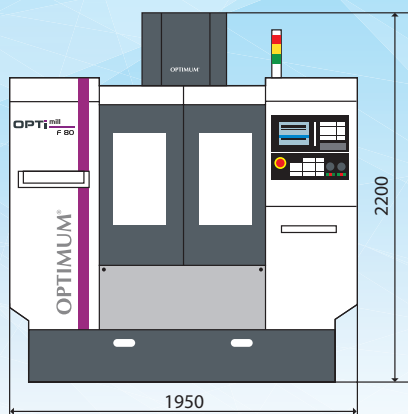
Tailstock: with Quill Graduations



Siemens control:
SINUMERIK 808D

CNC Milling Range

OPTImill®



Type	F80
Stock code	M905
Electrical Connection	
Electrical connection	415 V / 3 Ph ~50 Hz
Spindle	
Spindle motor	2.2 kW / 3 hp
Spindle motor torque	14 Nm
Spindle taper	BT30
Accuracy	
Positioning accuracy	± 0.025 mm
Repeating accuracy	± 0.015 mm
Tool Changer	
Number of tool stations	10 tools
Tool diameter max.	104 mm
Tool length max.	300 mm
Tool weight max.	6 kg
Time - tool changing	7 seconds
Axis Travels	
X axis	400 mm
Y axis	250 mm
Z axis	400 mm
Feed Drive Axes	
Rapid feed X / Y / Z axis	10,000 mm/min.
Torques Servo Motors	
X axis 5 Nm	3 Nm
Y axis 5 Nm	6 Nm
Z axis 6 Nm	6 Nm
Speed Range	
Speeds	50 - 9,000 rpm
Pneumatic	
Required air pressure	7 bars
Milling Table	
Distance spindle - table	90 - 490 mm
Table length x width	800 x 260 mm
T-slot size / number / distance	16 mm / 5 / 50 mm
Load (max.)	150 kg
Dimensions	
Length x width x height	1950 x 1750 x 2200 mm
Coolant tank capacity	160 litres
Total weight	1,800 kg



“CNC Training”

Learn the function, operation, preparation, diagnostic and maintenance of the machine

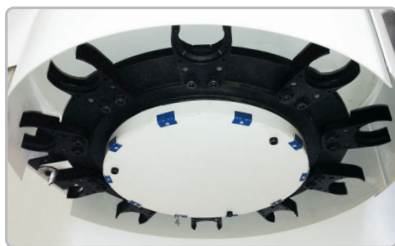
F80 Modern, powerful, easy to use machine

Ideal for part & prototype manufacturing, and the training sector

- Main spindle drive with servo motor
- Tool changer carousel type - 10 tool stations
- Spindle motor as standard with 8,000 rpm
- All linear guides with stainless steel covers
- Automatic central lubrication of the machine
- Integrated machine lamp
- Integrated coolant equipment with coolant tank with a capacity of 160 litres
- Access doors very generously designed to reduce cleaning time and maintenance time to a minimum
- Servo drive in all axes
- Siemens Sinumerik 808D on PC for free (computer workstation)
- Including 2-year Siemens warranty



Control Panel: Siemens 808D CNC



Tool Changer: for 10 Tools



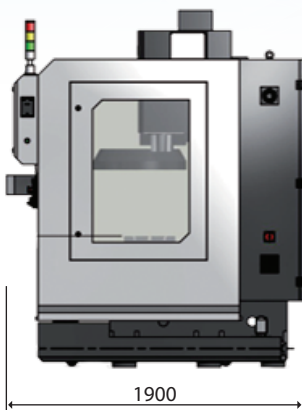
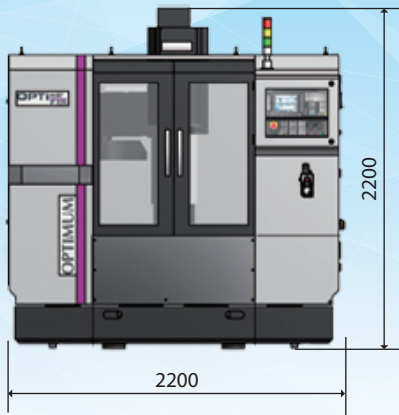
Handwheel Dial: electronic, portable



Siemens control:
SINUMERIK 808D

CNC Milling Range

OPTImill®



Type	F105
Stock code	M906
Electrical Connection	
Electrical connection	415 V / 3 Ph ~50 Hz
Milling Spindle	
Spindle motor	5.5 kW / 7.5 hp
Spindle motor torque	35 Nm
Spindle taper	BT40
Accuracy	
Positioning accuracy	± 0.025 mm
Repeating accuracy	± 0.015 mm
Tool Changer	
Number of tool stations	12 tools
Tool diameter max.	104 mm
Tool length max.	300 mm
Tool weight max.	6 kg
Time - tool changing	7 seconds
Axis Travels	
	8
X axis	550 mm
Y axis	305 mm
Z axis	460 mm
Feed Drive Axes	
Rapid feed X / Y / Z axis	10,000 mm/min.
Torques Servo Motors	
X axis	6 Nm
Y axis	6 Nm
Z axis	11 Nm
Speed Range	
Speeds	10 - 8,000 rpm
Pneumatic	
Required air pressure	7 bars
Milling Table	
Distance spindle	100 - 560 mm
Table length x width	800 x 320 mm
T-slot size / number / distance	14 mm / 3 / 100 mm
Load (max.)	300 kg
Dimensions	
Length x width x height	2200 x 1900 x 2200 mm
Coolant tank capacity	200 litres
Total weight	2,800 kg

“CNC Training”

Familiarise trainees with the details such as control, machine function and tool change

F105 Compact solution for small batch production in middle class and training sector

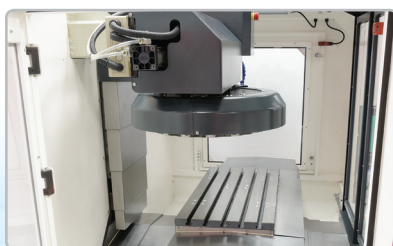
- Main spindle drive with servo motor
- Tool changer carousel type - 12 tool stations
- Spindle motor as standard with 8,000 rpm
- All linear guides with stainless steel covers
- Automatic central lubrication of the machine
- Integrated machine lamp
- Integrated coolant equipment with coolant tank with a capacity of 200 litres
- Access doors very generously designed to reduce cleaning time and maintenance time to a minimum
- Servo drive in all axes
- Siemens Sinumerik 808D on PC for free (computer workstation)
- Including 2-year Siemens warranty



Control Panel: Siemens 808D CNC



Tool Changer: for 12 Tools



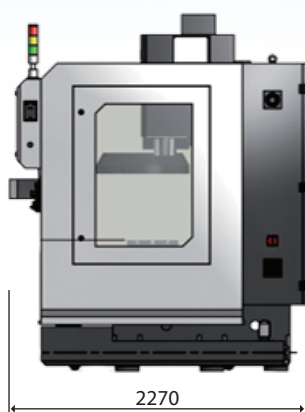
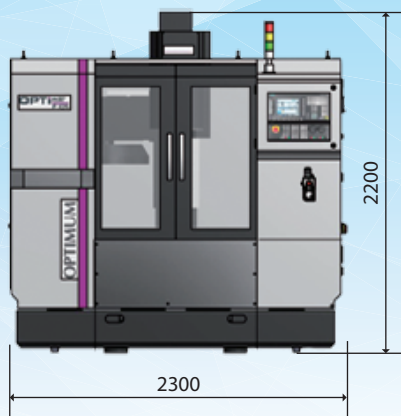
Left Side Door Open: Access to inside



Siemens control:
SINUMERIK 808D

CNC Milling Range

OPTImill®



Type	F150
Stock code (Carousel type ATC)	M907
Stock code (Arm type ATC)	M908
Electrical Connection	
Electrical connection	415 V / 3 Ph ~50 Hz
Milling Spindle	
Spindle motor	7.5 kW / 10 hp
Spindle motor torque	40 Nm
Spindle taper	BT40
Accuracy	
Positioning accuracy	± 0.025 mm
Repeating accuracy	± 0.015 mm
Tool Changer	
Number of tool stations	16 tools
Tool diameter max.	89 mm
Tool length max.	300 mm
Tool weight max.	8 kg
Time - tool changing	7 seconds
Axis Travels	
X axis	650 mm
Y axis	500 mm
Z axis	500 mm
Feed Drive Axes	
Rapid feed X / Y / Z axis	24,000 mm/min.
Torques Servo Motors	
X axis	6 Nm
Y axis	6 Nm
Z axis	11 Nm
Speed Range	
Speeds	10 - 10,000 rpm
Pneumatic	
Required air pressure	7 bars
Milling Table	
Distance spindle	100 - 600 mm
Table length x width	900 x 500 mm
T-slot size / number / distance	14 mm / 3 / 100 mm
Load (max.)	350 kg
Dimensions	
Length x width x height	2300 x 2270 x 2200 mm
Coolant tank capacity	210 litres
Total weight	3,500 kg

"CNC Training"

Learn the function, operation, preparation, diagnostic and maintenance of the machine

F150 Compact solution for small batch production in middle class and training sector

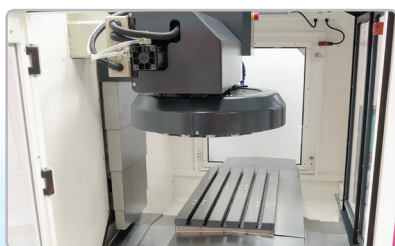
- 2 Models (Carousel and Arm ATC)
- Main spindle drive with servo motor
- Tool changer carousel and arm type - 16 tool stations
- Spindle motor as standard with 10,000 rpm
- All linear guides with stainless steel covers
- Automatic central lubrication of the machine
- Integrated machine lamp
- Integrated coolant equipment with coolant tank with a capacity of 210 litres
- Access doors very generously designed to reduce cleaning time and maintenance time to a minimum
- Servo drive in all axes
- Siemens Sinumerik 808D on PC for free (computer workstation)
- Including 2-year Siemens warranty



Control Panel: Siemens 808D CNC



Tool Changer: for 16 Tools (carousel type)



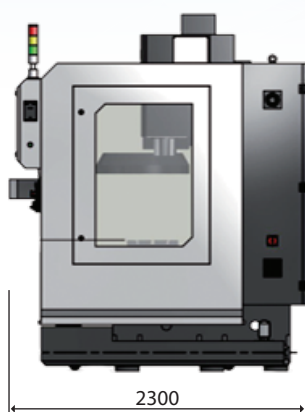
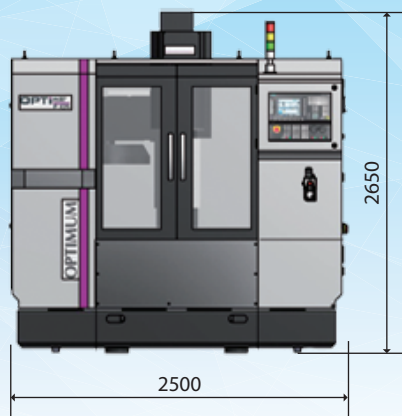
Left Side Door Open: Access to inside



Siemens control:
SINUMERIK 808D

CNC Milling Range

OPTImill®



Type	F210
Stock code (Carousel type ATC)	M909
Electrical Connection	
Electrical connection	415 V / 3 Ph ~50 Hz
Milling Spindle	
Spindle motor	11 kW / 15hp
Torque spindle motor	71 Nm
Spindle taper	BT40
Size of Milling Cutter	
Positioning accuracy	± 0.025 mm
Repeating accuracy	± 0.015 mm
Tool Changer	
Number of tool stations	16 tools
Tool diameter max.	89 mm
Tool length max.	300 mm
Tool weight max.	8 kg
Time - tool changing	7 seconds
Travels	
X axis	850 mm
Y axis	500 mm
Z axis	600 mm
Feed Drive Axes	
Rapid feed X / Y / Z axis	24,000 mm/min.
Torques Servo Motors	
X axis	15 Nm
Y axis	15 Nm
Z axis	15 Nm
Speed Range	
Speeds	10 - 8,000 rpm
Pneumatic	
Air pressure	7 bars
Milling Table	
Distance spindle	100 - 610 mm
Table length x width	900 x 450 mm
T-slot size / number / distance	14 mm / 3 / 100 mm
Load (max.)	500 kg
Dimensions	
Length x width x height	2500 x 2300 x 2650 mm
Coolant tank capacity	300 litres
Total weight	4,300 kg

"CNC Training"

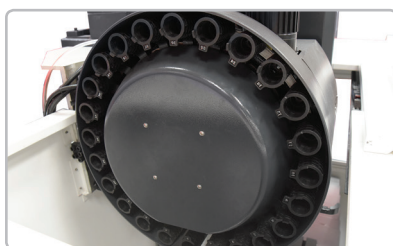
Realistic workpiece simulation with integrated virtual machine control panels

F210 Compact solution for small batch production in middle class and training sector

- Main spindle drive with servo motor
- Tool changer arm type - 16 tool stations
- Spindle motor as standard with 8,000 rpm
- All linear guides with stainless steel covers
- Automatic central lubrication of the machine
- Integrated machine lamp
- Integrated coolant equipment with coolant tank with a capacity of 300 litres
- Access doors very generously designed to reduce cleaning time and maintenance time to a minimum
- Servo drive in all axes
- Siemens Sinumerik 808D on PC for free (computer workstation)
- Including 2-year Siemens warranty



Control Panel: Siemens 808D CNC



Tool Changer: for 16 Tools (arm type)



Heavy Duty BT40 Spindle



Siemens control:
SINUMERIK 808D

Starter Tooling Kits

Starter Tooling Kits packaged to suit your Optimum Milling or Turning Machines

A Starter Tooling Kit packaged to suit your new Optimum Milling or Turning machine are the perfect start to your machining future.

The package consist of the basic elements you will need to use your machine from delivery.

Select your kit from the table:

Machine Model	Starter Kit Code
Optimum L33HS	L770T
Optimum L40	L771T
Optimum F80TC	M905T
Optimum F105	M907T
Optimum F150	M907T
Optimum F210	M907T

Lathe Tooling Kits



L770T Starter Kit

- 1 x 8mm ID boring bar sleeve
- 1 x 10mm ID boring bar sleeve
- 1 x 12mm ID boring bar sleeve
- 1 x live centre 3MT extended point
- 1 x ER16 collet set (1mm ~ 10mm 9 pcs)
- 2 x ER16 collet chuck straight shank
- 1 x ER16 wrench suit collet chuck
- 1 x turning tool holder 16 x 16 R/H
- 10 x inserts turning
- 1 x 4 piece boring bar kit
- 1 x 16mm parting kit
- 10 x inserts parting

L771T Starter Kit

- 1 x 16mm ID boring bar sleeve
- 1 x 20mm ID boring bar sleeve
- 1 x 25mm ID boring bar sleeve
- 1 x live centre 4MT extended point
- 1 x ER32 collet set (18 pcs)
- 2 x ER32 collet chuck straight shank
- 1 x ER32 wrench suit collet chuck
- 1 x turning tool holder 20 x 20 R/H
- 10 x inserts turning
- 1 x 4 piece boring bar kit
- 1 x 20mm parting kit
- 10 x inserts parting

Milling Tooling Kits



M905T (BT30) Starter Kit

- 3 x ER32 collet chucks
- 2 x 16mm side lock holder
- 1 x 20mm side lock holders
- 1 x face mill arbour with 22mm spigot
- 1 x quick action drill chuck 13mm
- 8 x pull studs
- 1 x ER32 18pcs collet set 3-20mm
- 1 x ER32 collet chuck spanner
- 1 x BT30 tool setting stand

M907T (BT40) Starter Kit

- 3 x ER32 collet chucks
- 2 x 16mm side lock holder
- 1 x 20mm side lock holders
- 1 x face mill arbour with 27mm spigot
- 1 x quick action drill chuck 13mm
- 8 x pull studs
- 1 x ER32 18pcs collet set 3-20mm
- 1 x ER32 collet chuck spanner
- 1 x BT40 tool setting stand

SIEMENS SINUMERIK 808D

Offers intelligent CNC features such as full servo-controlled tapping without compensation chuck or switch over between flying spindle and C axis which allow precise and rapid turning operations.

- Standard machines with up to 4 axis/ spindles in one processing channel
- 1 processing channel
- Pulse / Direction interface
- 7.5" LCD colour display
- Sinumerik MDynamics



**Outstanding performance.
Simply intelligent.**

Compact and robust

Due to a panel-based CNC design with a few interfaces and an operating panel of the protection class IP65 the SINUMERIK 808D is perfectly prepared to be used under rough conditions. The little dimensions allow the use in compact machines. At the same time the SINUMERIK 808D offers comfortable operation with short-stroke keys and the familiar SINUMERIK softkeys.

Optimised for easy turning and milling applications

Due to the technology-specific characteristics the SINUMERIK 808D is perfectly preconfigured for turning and milling. At this, the application scope ranges from simple standardized milling machines or simple machining centres via cycle-controlled lathes up to simple full CNC lathes.

Perfect for beginners

Using the new integrated startGUIDE the SINUMERIK 808D is the perfect partner for beginners in the CNC world. At this, beside the CNC operation and programming the commissioning is described with interactive graphics. The uniform SINUMERIK operation and programming philosophy makes the SINUMERIK 808D ideal to start into the world of SINUMERIK applications.

OPTIMUM machines with Sinumerik 808D

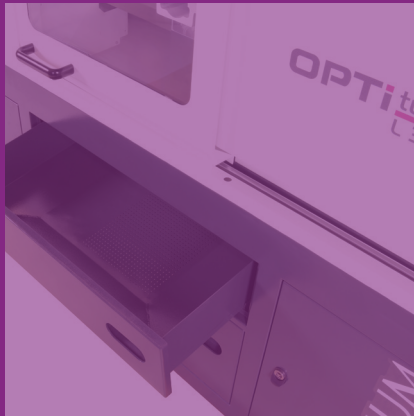
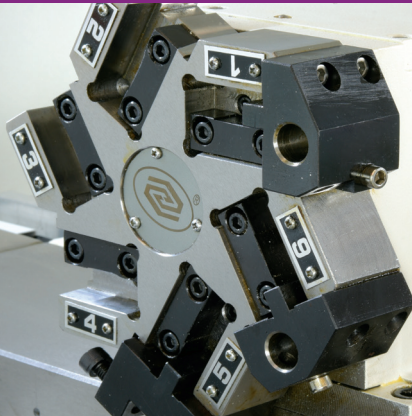
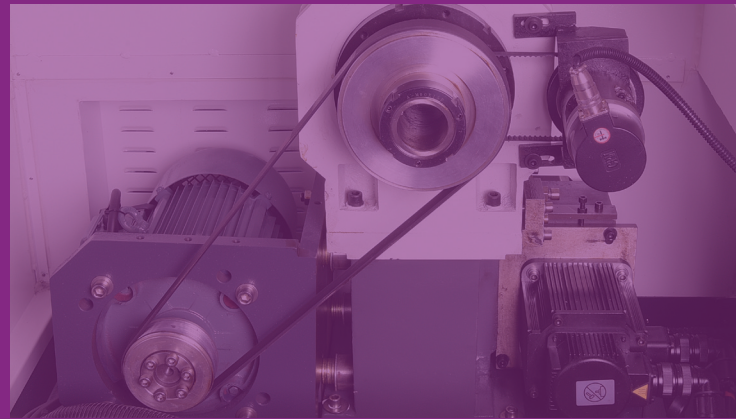


- **Easy, intuitive user guiding** by dialog-based operator support with SINUMERIK Operate BASIC
- **Comprehensive range of technology cycles** for turning and drilling using the graphic input mask of SINUMERIK programGUIDE BASIC
- **Control panel can be plugged in by USB per "Plug&Play"** with ergonomic override turn switches, exactly the same as high-end-CNCs
- **High performance and accuracy** due to modern CNC functions

OPTIMUM[®]

PRECISION • PRICE • PERFORMANCE

Designed and Engineered in Germany the OPTIMUM CNC range is a market leader in Europe and is now available in Australia through Hare and Forbes Machinery House. Offering exceptional value for money the OPTIMUM range can have you set up for in house CNC machining at a fraction of the financial outlay previously required



HARE & FORBES
MACHINERYHOUSE

For more information please contact us
1300 262 725
www.machineryhouse.com.au
Prices & Specifications are subject to change without notification.