

FISCHER MILLING HEADS

PRECISION. SPEED. POWER.



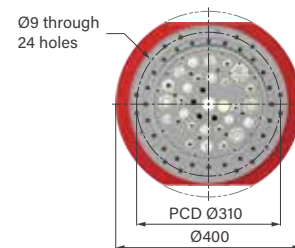
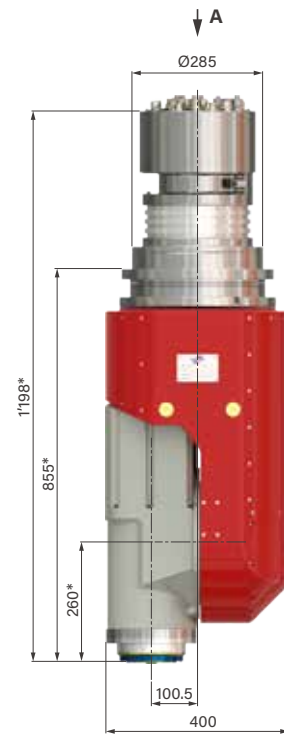


MILLING HEAD S19i

FISCHER milling heads are designed and produced to maximize the performance of our renowned FISCHER spindles. S19i is a single-armed head with an integrated spindle to reach the maximum milling performance in a smallest-possible size. It is the optimum solution for 3+2 axis applications.

All structures in S19i are well designed and calculated and casted with high grade cast-iron to ensure the highest stiffness in a very compact size. Supported by two YRT bearings and equipped with high-torque clamps, this robust S19i maximizes the milling performance of our powerful FISCHER spindle to its limits.

Several FISCHER spindles are carefully selected to pair with S19i for different milling applications. Premium FISCHER spindle options like shaft-cooling, coolant through, as well as special sensors are all available to fit your needs.



View A

Head Specifications	Unit	Value
C-axis range of motion	degree	±360
C-axis motor nominal torque	Nm	163
C-axis motor peak torque	Nm	318
C-axis clamping torque	Nm	1'900
Measuring system		Absolute / Optical
Interface		EnDat 2.2
A-axis range of motion	degree	±110
A-axis motor nominal torque	Nm	110
A-axis motor peak torque	Nm	404
A-axis clamping torque	Nm	1'900
Measuring system		Absolute / Optical
Interface		EnDat 2.2
Spindle gauge line to the middle of the A-axis/pivot point	mm	260*
Spindle gauge line to C-axis mounting surface	mm	855*
Total length (without connectors)	mm	1198*
Distance from the center of the C-axis to both sides	mm	200
Total width (diameter)	mm	400
Distance from the center of the C-axis to the center of spindle	mm	100.5
C-Axis mounting hole of the Z-axis column	mm	Ø285
Pitch Circle Diameter (PCD) of mounting screw holes	mm	Ø310

* Values subject to change with different spindle.

Matching Spindles

Applications	Tool interface	Motor	Lubrication	Max. Speed	Torque	Power
Light Milling	HSK-A63	ASYN	Grease	18'000	34 Nm	20 kW
Mold & Die (CSC high precision optional)	HSK-A63	ASYN	Oil-Air	26'000	34 Nm	20 kW



FISCHER

Head Type: _____
Art. No.: _____
Serial No.: _____



MILLING HEAD D20 FAMILY

Our D20 milling head family is specially designed to provide a stable foundation to reach the best performance of our spindles up to bodysize 210 mm.

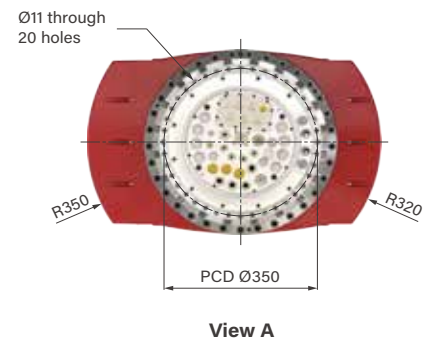
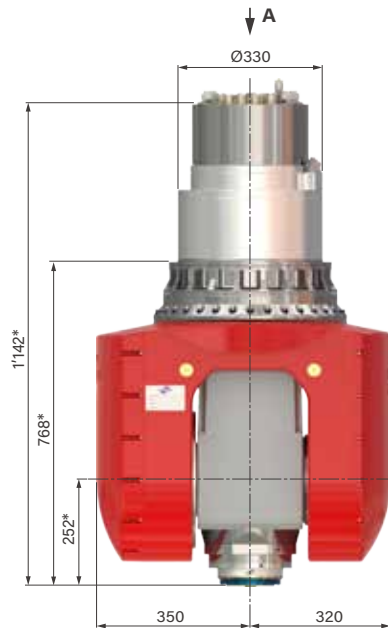
Its compact size allows for best utilization of working space vs work piece envelope for machines requiring precise and powerful simultaneous 5-axis milling applications. High stiffness mono-block fork structure made of high-grade cast iron paired with cross-roller bearings on the A-axis provide the highest load capacity to handle the cutting forces across mold and die as well as aerospace applications.

To ensure accuracy and repeatability, we have chosen to incorporate direct optical encoders, dual motors on the A-axis and proprietary axis clamps on one, or both sides of the A-axis. Different applications need different head + spindle combinations which are not only able to push the spindle limits, but also provide better accessibility. FISCHER is proud to present our wide selection of our spindle+head combos to fit different applications. Apart from the wide spindle+head selection, we also provide the option of adapter rings to extend the spindle nose for special applications where reaching into deeper pockets is required.

Whether you need the light-weighted head for the 5-axis finishing/trimming; or a robust head with high precision and stiffness for mold and die applications; or a head to deal with heavy loads and full power millings for aerospace, our D20 family can cover all applications you need.

MILLING HEAD D20LITE

- Light weight
- Optimum structure for finishing/trimming
- Single drive and clamp for A-axis
- Cost-optimized solution for 5-axis simultaneous milling applications



Head Specifications	Unit	Value
C-axis range of motion	degree	±360
C-axis motor nominal torque	Nm	543
C-axis motor peak torque	Nm	1'030
C-axis clamping torque (Hyd./Pne.)	Nm	3'000 / 2'000
Measuring system		Absolute / Optical
Interface		EnDat 2.2
A-axis range of motion	degree	±120
A-axis motor nominal torque	Nm	543
A-axis motor peak torque	Nm	1'030
A-axis clamping torque (Hyd./Pne.)	Nm	2'000 / 2'000
Measuring system		Absolute / Optical
Interface		EnDat 2.2
Spindle gauge line to the middle of the A-axis/pivot point	mm	252*
Spindle Nose Extension (option)	mm	40/80/120
Spindle gauge line to C-axis mounting surface	mm	768*
Total length (without connectors)	mm	1'142*
Distance from the center of the C-axis to both sides	mm	350/320
Total width (diameter)	mm	670
C-axis mounting hole of the Z-axis column	mm	Ø330
Pitch Circle Diameter (PCD) of mounting screw holes	mm	Ø350

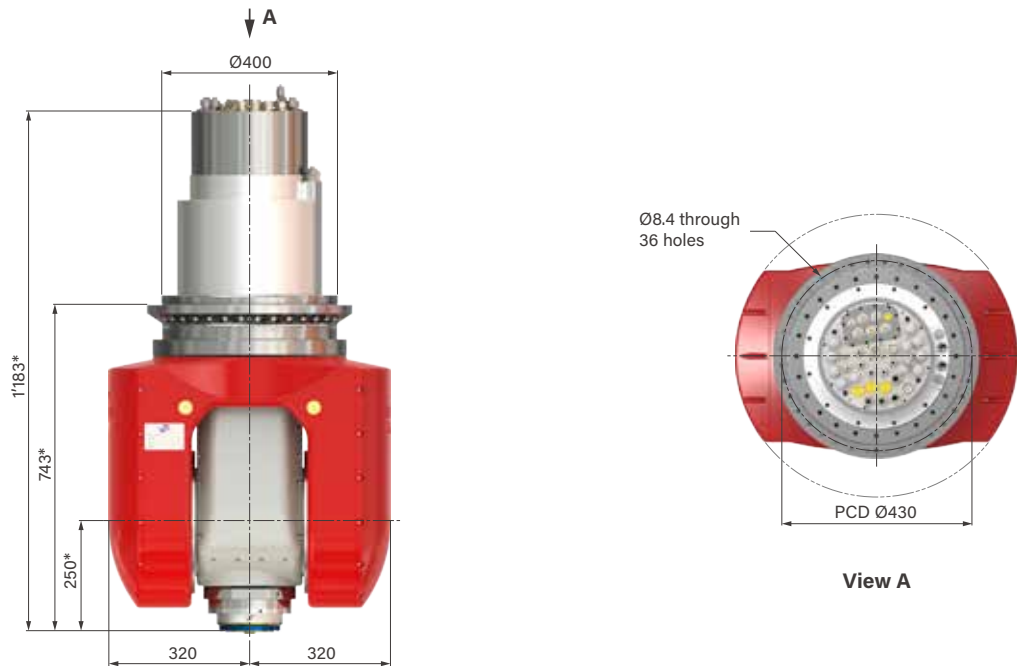
* Values subject to change with different spindle.

Matching Spindles

Applications	Tool interface	Motor	Lubrication	Max. Speed	Torque	Power
Light Milling	HSK-A63	ASYN	Grease	18'000	40 Nm	25 kW
Mold & Die (CSC high precision optional)	HSK-A63	ASYN	Oil-Air	28'000	40 Nm	25 kW
Mold & Die	HSK-A63	SYN	Grease	18'000	67 Nm	42 kW
Mold & Die (CSC high precision optional)	HSK-A63	SYN	Oil-Air	24'000	67 Nm	42 kW

MILLING HEAD D20STD

- FEM simulation for compact size
- Symmetric design for even stress and heat
- Dual drives and bearings for A-axis, single/dual clamps optional
- Robust structure for high performance 5-axis milling applications



Head Specifications	Unit	Value
C-axis range of motion	degree	±360
C-axis motor nominal torque	Nm	782
C-axis motor peak torque	Nm	1'540
C-axis clamping torque	Nm	7'000
Measuring system		Absolute / Optical
Interface		EnDat 2.2
A-axis range of motion	degree	±120
A-axis motor nominal torque (dual driving motors)	Nm	363x2=726
A-axis motor peak torque	Nm	1'370
A-axis clamping torque (option)	Nm	2'000 (4'000)
Measuring system		Absolute / Optical
Interface		EnDat 2.2
Spindle gauge line to the middle of the A-axis/pivot point	mm	250*
Spindle Nose Extension (option)	mm	40/80/120
Spindle gauge line to C-axis mounting surface	mm	743*
Total length (without connectors)	mm	1'183*
Distance from the center of the C-axis to both sides	mm	320
Total width (diameter)	mm	640
C-axis mounting hole of the Z-axis column	mm	Ø400
Pitch Circle Diameter (PCD) of mounting screw holes	mm	Ø430

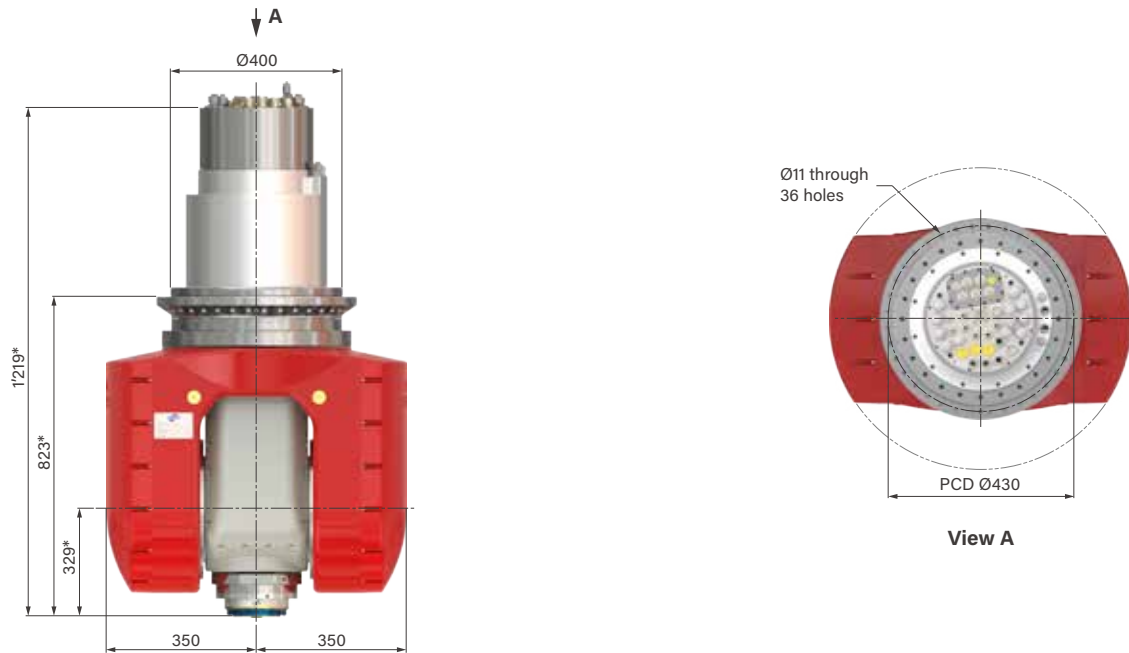
* Values subject to change with different spindle.

Matching Spindles

Applications	Tool interface	Motor	Lubrication	Max. Speed	Torque	Power
Mold & Die (CSC high precision optional)	HSK-A63	ASYN	Oil-Air	24'000	69 Nm	29 kW
High Speed Cutting	HSK-A63	ASYN	Oil-Air	30'000	30 Nm	63 kW
High Speed Cutting	HSK-A63	SYN	Oil-Air	30'000	36 Nm	80 kW

MILLING HEAD D20MAX

- FEM simulation for compact size
- Symmetric design for even stress and heat
- Dual drives, bearings and clamps for A-axis
- Robust structure designed for powerful heavy millings



Head Specifications	Unit	Value
C-axis range of motion	degree	±360
C-axis motor nominal torque	Nm	782
C-axis motor peak torque	Nm	1'540
C-axis clamping torque	Nm	7'000
Measuring system		Absolute / Optical
Interface		EnDat 2.2
A-axis range of motion	degree	±120
A-axis motor nominal torque	Nm	1'086
A-axis motor peak torque	Nm	2'060
A-axis clamping torque	Nm	4'000
Measuring system		Absolute / Optical
Interface		EnDat 2.2
Spindle gauge line to the middle of the A-axis/pivot point	mm	329*
Spindle Nose Extension (option)	mm	40/80/120
Spindle gauge line to C-axis mounting surface	mm	823*
Total length (without connectors)	mm	1'219*
Distance from the center of the C-axis to both sides	mm	350
Total width (diameter)	mm	700
C-axis mounting hole of the Z-axis column	mm	Ø400
Pitch Circle Diameter (PCD) of mounting screw holes	mm	Ø430

* Values subject to change with different spindle.

Matching Spindles

Applications	Tool interface	Motor	Lubrication	Max. Speed	Torque	Power
Power Milling	HSK-A63	ASYN	Oil-Air	20'000	54 Nm	86 kW
High Torque Milling	HSK-A63	SYN	Oil-Air	20'000	120 Nm	25 kW
High Speed Cutting	HSK-A63	SYN	Oil-Air	30'000	75 Nm	75 kW
High Power Milling	HSK-A63	SYN	Oil-Air	30'000	72 Nm	140 kW





MILLING HEAD D27 FAMILY

Our D27 milling head family is specifically designed for the most powerful, as well as long-tooled, 5-axis milling applications. Precisely-calculated mono-block structures made of high grade cast iron paired with two cross-roller bearings for A-axis and YRT for C-axis provide the highest load capacity to handle the cutting forces in all directions during power milling.

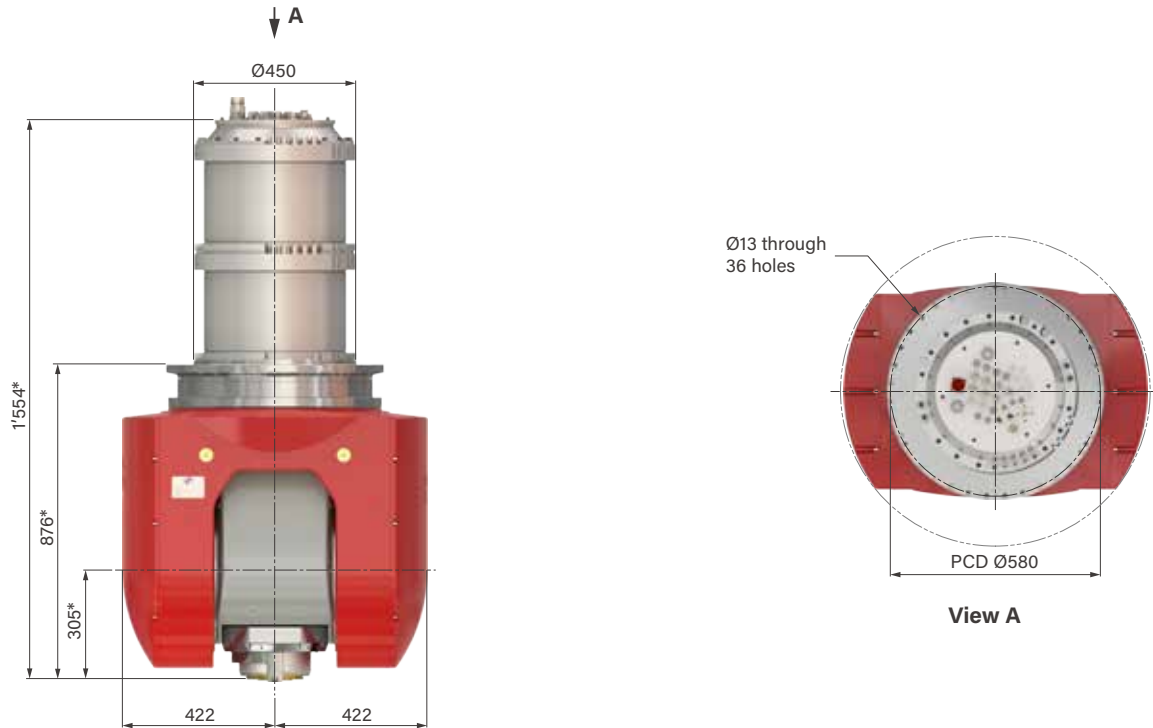
With the high power and torque output the D27 milling head family still maintains its sleek symmetric outline while being dynamic and robust. To ensure accuracy and repeatability we have chosen to incorporate direct optical encoders, dual motors and dual clamps on the A-axis.

Our customers are always looking for head + spindle combinations that not only push the limits, but allow for flexibility, for this reason we have the option of adapter rings to extend the spindle nose for special applications where reach in to deeper pockets is required.

The D27 milling head family is intentionally designed to utilize the maximum power and torque capacity of our FISCHER 275mm spindles for the highest chip removal rate or critical, high torque milling applications.

MILLING HEAD D27STD

- FEM simulation for compact size
- Symmetric design for even stress and heat
- Dual drives, bearings and clamps for A-axis
- Robust structure for high performance 5-axis milling applications



Head Specifications	Unit	Value
C-axis range of motion	degree	±360
C-axis motor nominal torque	Nm	3'000
C-axis motor peak torque	Nm	5'000
C-axis clamping torque	Nm	6'000
Measuring system		Absolute / Optical
Interface		EnDat 2.2
A-axis range of motion	degree	±120
A-axis motor nominal torque	Nm	3'000
A-axis motor peak torque	Nm	5'000
A-axis clamping torque	Nm	6'000
Measuring system		Absolute / Optical
Interface		EnDat 2.2
Spindle gauge line to the middle of the A-axis/pivot point	mm	305*
Spindle gauge line to C-axis mounting surface	mm	876*
Total length (without connectors)	mm	1'554*
Distance from the center of the C-axis to both sides	mm	422
Total width (diameter)	mm	844
C-axis mounting hole of the Z-axis column	mm	Ø450
Pitch Circle Diameter (PCD) of mounting screw holes	mm	Ø580

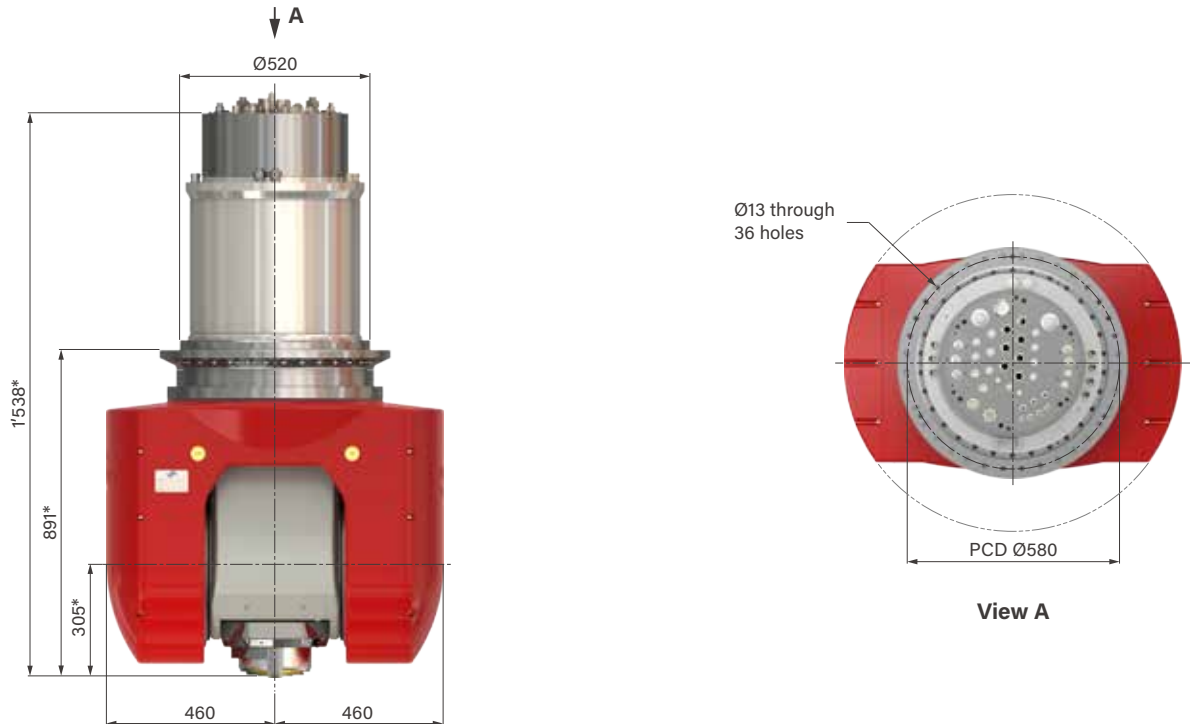
* Values subject to change with different spindle.

Matching Spindles

Applications	Tool interface	Motor	Lubrication	Max. Speed	Torque	Power
High Torque Milling	HSK-A100	SYN	Oil-Air	8'000	445 Nm	93 kW
High Performance Milling	HSK-A100	ASYN	Oil-Air	15'000	300 Nm	82 kW
High Speed Cutting	HSK-A100	SYN	Oil-Air	20'000	96 Nm	150 kW
High Precision CSC	HSK-A100	ASYN	Oil-Air	20'000	251 Nm	50 kW

MILLING HEAD D27MAX

- FEM simulation for compact size
- Symmetric design for even stress and heat
- Dual drives, bearings and clamps for A-axis
- Robust structure designed for powerful heavy millings
- Highest performance for powerful heavy millings



Head Specifications	Unit	Value
C-axis range of motion	degree	±360
C-axis motor nominal torque	Nm	4'300
C-axis motor peak torque	Nm	8'200
C-axis clamping torque	Nm	8'000
Measuring system		Absolute / Optical
Interface		EnDat 2.2
A-axis range of motion	degree	±120
A-axis motor nominal torque	Nm	3'900
A-axis motor peak torque	Nm	7'300
A-axis clamping torque	Nm	8'000
Measuring system		Absolute / Optical
Interface		EnDat 2.2
Spindle gauge line to the middle of the A-axis/pivot point	mm	305*
Spindle gauge line to C-axis mounting surface	mm	891*
Total length (without connectors)	mm	1'538*
Distance from the center of the C-axis to both sides	mm	460
Total width (diameter)	mm	920
C-axis mounting hole of the Z-axis column	mm	Ø520
Pitch Circle Diameter (PCD) of mounting screw holes	mm	Ø580

* Values subject to change with different spindle.

Matching Spindles

Applications	Tool interface	Motor	Lubrication	Max. Speed	Torque	Power
High Torque Milling	HSK-A100	SYN	Oil-Air	8'000	445 Nm	93 kW
High Performance Milling	HSK-A100	ASYN	Oil-Air	15'000	300 Nm	82 kW
High Power Milling	HSK-A100	SYN	Oil-Air	20'000	140 Nm	250 kW
Hight Precision CSC	HSK-A100	ASYN	Oil-Air	20'000	251 Nm	50 kW



FISCHER

Head Type _____
Art. No. _____
Serial No. _____



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