

MOTORSPINDLES FOR MANUAL TOOL CHANGE

PRECISION. SPEED. POWER.





Precision



Speed.



Power.

IN THE WORLD MARKET

AN INDEPENDENT LEADER

The FISCHER Spindle Group is synonymous with high-quality rotary systems. This family firm can look back on over 80 years' experience. Highly-qualified specialists develop and produce both standardised and customer-specific components, as well as complete systems involving rotation – spindles, milling heads and compressors. Rotary systems from FISCHER are characterised by their superb reliability, long service life and best possible performance. In addition, FISCHER can offer a complete installation and commissioning package, as well as servicing and repairs.

Specialised technical experts support users in the selection, project planning, installation and commissioning of optimal individual solutions. All over the world: The FISCHER Spindle Group, with its headquarters in Switzerland and its subsidiaries, distributors and representatives in Germany, USA, China, Taiwan and Russia, is present close to its customers around the globe.

MFM PRECISION GRINDING SPINDLES FOR MAXIMUM PRODUCTIVITY

Spindles with manual tool change offer high speeds and excellent concentricity. They are universally suitable for grinding, milling, drilling and engraving with low to high machining forces. Robust hybrid bearings ensure a long service life. Your Tool interface is prepared for manual tool change.

- Compact and robust design
- Highest speed
- Excellent stability and concentricity for maximum dimensional and form tolerances
- Designed for high radial and axial forces
- Air barrier assisted sealing system
- Various manual tool interfaces available

MFM-models

MODEL		MFM-650	MFM-660	MFM-825	MFM-850	MFM-850
Outer diameter	D [mm]	60	60	80	80	80
Tool interface		HSK-C25	Collet SRP6	HSK-C32	Collet SRP20	HSK-C25
Max. speed	nmax [rpm]	50'000	60'000	25'000	50'000	50'000
Lubrication		Grease	Grease	Grease	DLS	Grease
Direction of rotation		left and right	left and right	left and right	right	left and right

Power S1 / S6 40%	P [kW]	1.2 / 1.8	1.2 / 1.8	7.0 / 10.5	3.0 / 3.4	3.4 / 5.1
Torque S1 / S6 40%	M [Nm]	0.29 / 0.43	0.19 / 0.29	4.0 / 5.57	0.7 / 0.8	0.81 / 1.22
Nominal speed	nN [rpm]	40'000	60'000	18'000	50'000	40'000
Motor frequency	[Hz]	834	1'000	833	1'667	1'667
Motor technology		ASYN	ASYN	SYN	ASYN	ASYN
Voltage	[V]	220	200	380	350	380
Current S1	[A]	5.5	5.0	17.0	7.0	10.0

Length without CTU	L [mm]	228	234	289.6	288	364
Weight	[kg]	3.8	3.5	10.0	8.0	10.0

Static stiffness	Axial	[N/μm]	50	27	75	48	48
	Radial	[N/μm]	78	18	124	97	97

Options						
Coolant Through Unit		-	-	Yes	-	Yes
Encoder		-	-	Yes	-	-
Standstill monitoring		Yes	Yes	Yes	-	-

ASYN = asynchronous motor
SYN = synchronous motor
DLS = Direct Lubrication System
HJND = Thread Interface



MFM-850	MFM-860	MFM-890	MFM-8120	MFM-1032	MODEL	
80	80	80	80	100	D [mm]	Outer diameter
HSK-C25	Arbor, HJND-42 HSK-C25	Arbor, HJND-50	Arbor, HJND-70	HSK-C40		Tool interface
50'000	60'000	90'000	120'000	32'000	nmax [rpm]	Max. speed
Grease	DLS	DLS	DLS	Grease		Lubrication
left and right	right / left and right	right	right	left and right		Direction of rotation
6.0 / 9.0	3.0 / 3.8	3.0 / 4.0	1.5 / 2.1	9.0 / 13.5	P [kW]	Power S1 / S6 40%
1.59 / 2.15	0.62 / 0.78	0.43 / 0.53	0.17 / 0.22	3.0 / 4.3	M [Nm]	Torque S1 / S6 40%
40'000	60'000	90'000	120'000	30'000	nN [rpm]	Nominal speed
1'667	1'000	1'500	2'000	1'067	[Hz]	Motor frequency
SYN	ASYN	ASYN	ASYN	ASYN		Motor technology
380	350	350	350	350	[V]	Voltage
15.0	6.4	7.5	3.7	28.0	[A]	Current S1
364	263	237	206	433	L [mm]	Length without CTU
10.0	6.5	6.25	5.5	15.0	[kg]	Weight
48	70	57	49	71	[N/μm]	Axial
97	87	77	60	143	[N/μm]	Radial
						Static stiffness
						Options
Yes	-	-	-	Yes		Coolant Through Unit
Yes	-	-	-	Yes		Encoder
-	Yes	Yes	Yes	Yes		Standstill monitoring

MFM-models

MODEL		MFM-1022/45	MFM-1032/60	MFM-1090	MFM-10120	MFM-1224/30	MFM-1224/42
Outer diameter	D [mm]	100	100	100	100	120	120
Tool interface		Arbor, HJND-21 HSK-C40	Arbor, HJND-28 HSK-C25	Arbor, HJND-50	Arbor, HJND-60	Arbor, HJND-21 HSK-C40	Arbor, HJND-21 HSK-C40
Max. speed	nmax [rpm]	45'000	60'000	90'000	120'000	30'000	42'000
Lubrication		DLS	DLS	DLS	DLS	Grease	DLS
Direction of rotation		right / left and right	right left and right	right	right	right left and right	right/ left and right

Power S1 / S6 40%	P [kW]	7.5 / 8.6	7.5 / 10.5	4.2 / 5.4	2.0 / 2.5	15.0 / 20.0	15.0 / 20.0
Torque S1 / S6 40%	M [Nm]	3.9 / 4.9	3.2 / 4.0	0.6 / 0.75	0.2 / 0.25	8.1 / 10.10	8.1 / 10.10
Nominal speed	nN [rpm]	22'000	32'000	90'000	120'000	24'000	24'000
Motor frequency	[Hz]	1'500	2'000	1'500	2'000	1'000	1'400
Motor technology		ASYN	ASYN	ASYN	ASYN	ASYN	ASYN
Voltage	[V]	350	350	380	380	380	380
Current S1	[A]	17.3	19	9.0	4.4	38	38

Length without CTU	L [mm]	298	260	215	207	336	336
Weight	[kg]	12.5	10.0	8.5	7.5	20.5	20.5

Static stiffness	Axial	[N/μm]	100	77	48	42	100	100
	Radial	[N/μm]	127	90	39	32	140	140

Options							
Coolant Through Unit		Yes	Yes	Yes	Yes	Yes	Yes
Encoder		-	-	-	-	Yes	Yes
Standstill monitoring		Yes	Yes	Yes	Yes	Yes	Yes

ASYN = asynchronous motor
 SYN = synchronous motor
 DLS = Direct Lubrication System
 HJND = Thread Interface

MFM-1236/45	MFM-1242/60	MFM-1240/60	MFM-1290	MFM-12120	MFM-1406/12	MODEL		
120	120	120	120	120	140	D [mm]	Outer diameter	
Arbor, HJND-28 HSK-C25	Arbor, HJND-28 HSK-C25	Arbor, HJND-42	Arbor, HJND-50	Arbor, HJND-60	Arbor, HJND-16 Outer cone HSK-C50"		Tool interface	
45'000	60'000	60'000	90'000	120'000	12'000	nmax [rpm]	Max. speed	
Grease	DLS	Grease	DLS	DLS	Grease		Lubrication	
right/ left & right	right/ left & right	right	right	right	right/ left & right		Direction of rotation	
12.0 / 16.0	10.0 / 13.0	7.0 / 9.3	4.2 / 5.4	2.0 / 2.5	10.0 / 12.0	P [kW]	Power S1 / S6 40%	
4.3 / 5.4	3.0 / 3.75	2.2 / 2.75	0.6 / 0.75	0.2 / 0.25	19.6 / 24.5	M [Nm]	Torque S1 / S6 40%	
36'000	42'000	42'000	90'000	120'000	6'000	nN [rpm]	Nominal speed	
1'500	2'000	2'000	1'500	2'000	600	[Hz]	Motor frequency	
ASYN	ASYN	ASYN	ASYN	ASYN	ASYN		Motor technology	
380	380	350	380	380	350	[V]	Voltage	
31	28	20	9	4.4	32	[A]	Current S1	
289	289	268	222	209	391	L [mm]	Length without CTU	
17.5	17.5	15.0	13.5	14.2	32.0	[kg]	Weight	
70	70	56	48	42	133	[N/μm]	Axial	Static stiffness
88	130	55	39	32	170	[N/μm]	Radial	
								Options
Yes	Yes	Yes	Yes	Yes	Yes			Coolant Through Unit
Yes	Yes	-	-	-	Yes			Encoder
Yes	Yes	Yes	Yes	Yes	Yes			Standstill monitoring

MFM-models

MODEL		MFM-1406/18	MFM-1418/36	MFM-1418/42	MFM-1524/45	MFM-1709/15	MFM-1709/30	
Outer diameter	D [mm]	140	140	140	150	170	170	
Tool interface		Arbor, HJND-16 HSK-C50	Arbor, HJND-16 HSK-C50	HSK-C40	Arbor, HJND-21 HSK-C40	HSK-C63	HSK-C63	
Max. speed	nmax [rpm]	18'000	36'000	42'000	45'000	15'000	30'000	
Lubrication		DLS	DLS	DLS	DLS	Grease	DLS	
Direction of rotation		right/ left and right	right/ left and right	left and right	right/ left and right	left and right	left and right	
Power S1 / S6 40%	P [kW]	10.0 / 12.0	18.0 / 22.0	18.0 / 22.0	22.0 / 30.0	20.0 / 26.0	20.0 / 26.0	
Torque S1 / S6 40%	M [Nm]	19.6 / 24.5	11.9 / 14.9	11.9 / 14.9	13.8 / 17.3	28.0 / 35.0	28.0 / 35.0	
Nominal speed	nN [rpm]	6'000	18'000	18'000	24'000	9'000	9'000	
Motor frequency	[Hz]	900	1'200	1'400	1'500	500	1'000	
Motor technology		ASYN	ASYN	ASYN	ASYN	ASYN	ASYN	
Voltage	[V]	350	350	350	350	350	350	
Current S1	[A]	28.4	38	38	57	56	56	
Length without CTU	L [mm]	391	391	381	354	407	407	
Weight	[kg]	32.0	32.0	32.0	28.5	48.0	48.0	
Static stiffness	Axial	[N/μm]	162	162	110	115	184	249
	Radial	[N/μm]	194	194	180	210	214	287
Options								
Coolant Through Unit		Yes	Yes	Yes	Yes	Yes	Yes	
Encoder		Yes	Yes	Yes	Yes	Yes	Yes	
Standstill monitoring		Yes	Yes	Yes	Yes	Yes	Yes	

ASYN = asynchronous motor
 SYN = synchronous motor
 DLS = Direct Lubrication System
 HJND = Thread Interface





Corporate Headquarters in Switzerland and branches

FISCHER Spindle Group Ltd.
+41 62 956 22 22
info-fsg@fischerspindle.com

Switzerland

FISCHER Ltd. PRECISION SPINDLES
+41 62 956 22 22
info-fch@fischerspindle.com

Germany

FISCHER GERMANY GmbH
+49 2173 20535 0
info-fde@fischerspindle.com

USA

FISCHER USA Inc.
+1 262 632 6173
info-fusa@fischerspindle.com

China

FISCHER SHANGHAI Spindle Technologies, Inc.
+86 21 643 481 50
info-fsh@fischerspindle.cn

Taiwan

FISCHER TAIWAN Inc.
+886 4 2620 2200
info-ftw@fischerspindle.com

Russia

FISCHER Spindle Technology
+7 383 302 22 11
info-fstr@fischerspindle.ru

Authorised partners

France


PRECISE France
+33 4 50 36 90 15
www.reparation-electrobroche.com
precise@precise.fr

Japan


CAPTAIN INDUSTRIES, Inc.
+81 3 5674 1162
www.capind.co.jp
info@capind.co.jp




Your Partner for the precise, fast and powerful rotation.


 **FISCHER SPINDLE GROUP Ltd.**
Herzogenbuchsee, Switzerland

 **FISCHER GERMANY GmbH**
Langenfeld, Germany

 **FISCHER Spindle Technology**
Novosibirsk, Russia

 **FISCHER USA Inc.**
Racine, USA

 **FISCHER TAIWAN Inc.**
Taichung City, Taiwan

 **FISCHER Ltd. Precision Spindles**
Herzogenbuchsee, Switzerland

 **FISCHER SHANGHAI Spindle Technologies Inc.**
Shanghai, China

www.fischerspindle.com



The Perfect Rotation.



Precision



Speed



Power

www.fischerspindle.com