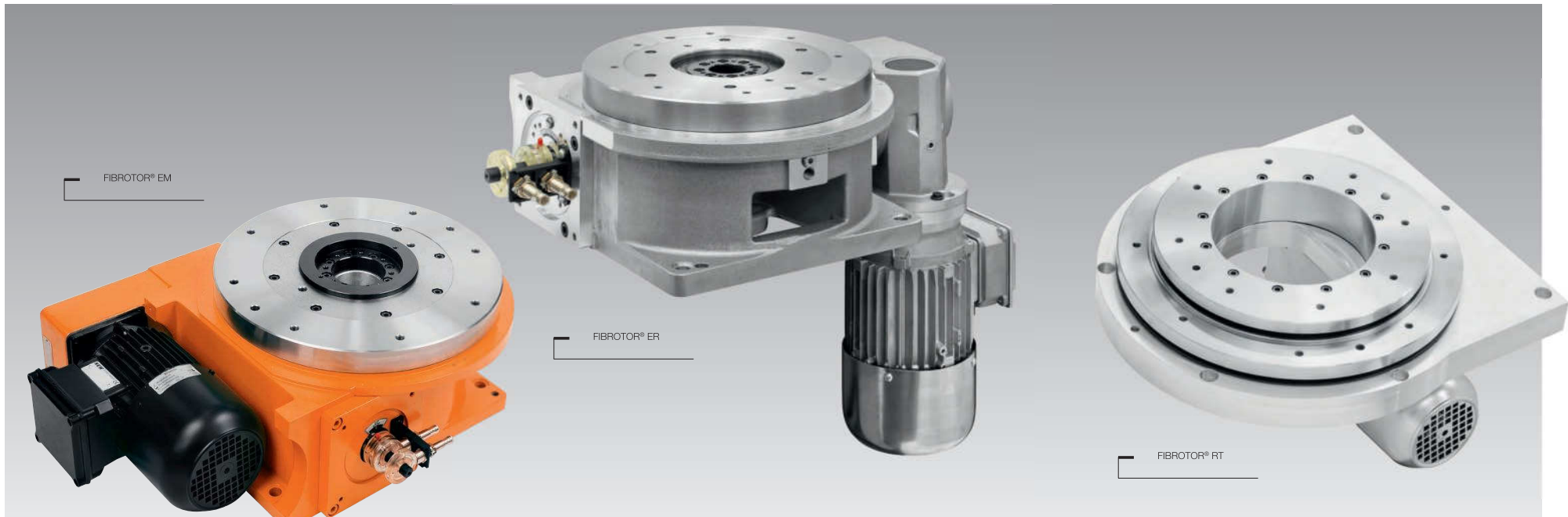


ELECTROMECHANICAL UNIVERSAL ROTARY TABLES

FIBRO

TOR





FIBROTOR®

THREE STANDARD MODELS TO SUIT ANY JOB!

A vast range of products

FIBRO can offer you the suitable rotary table type for the application at hand, with the FIBROTOR® product range. FIBRO provides highly accurate solutions, specifically made to satisfy each customer's demands, from the FIBROTOR® EM line, or an attractively priced universal rotary table

from the FIBROTOR® ER line, which serves as a great basic model and which can be supplied in short term thanks to a maximum degree of standardisation. The rotary indexing ring FIBROTOR® RT is perfect for any application which requires a centre hole. All FIBROTOR® rotary tables can be used horizontally and vertically.



FIBROTOR® EM AND EM.NC PROPERTIES

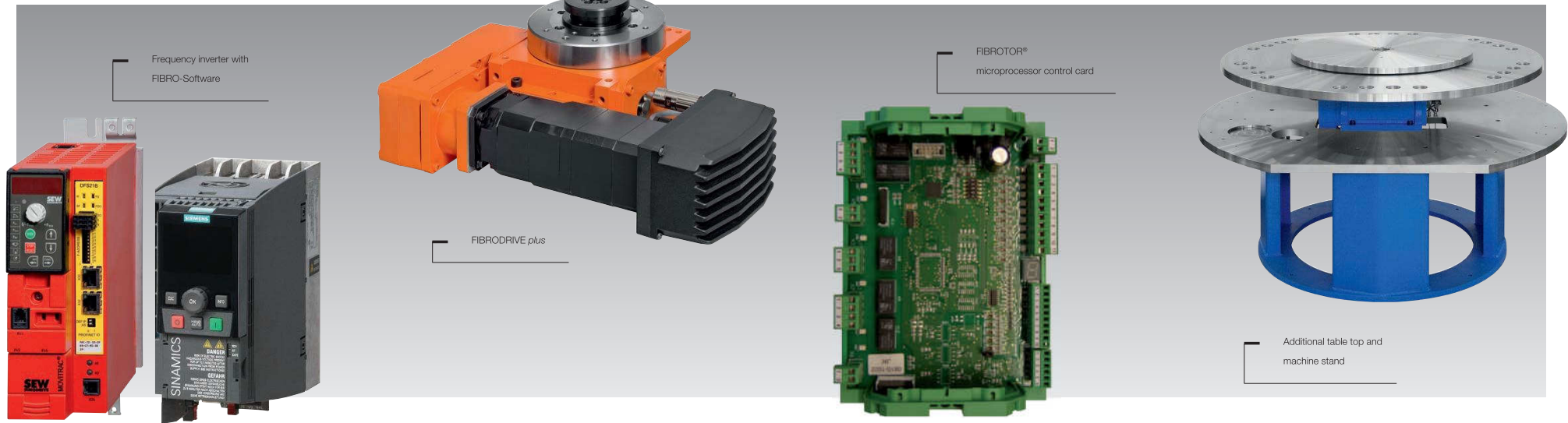
- Premium model of the FIBROTOR® universal rotary table with fixed division or for flexible positioning
- Custom manufacturing according to your individual application requirements
- Higher accuracies and shorter indexing times

FIBROTOR® ER PROPERTIES

- Cost-optimised, standardised FIBROTOR® model
- Sizes FIBROTOR® ER.10 to ER.13 with a delivery time of 2 weeks, as of FIBROTOR® ER.15, the delivery time is 4 to 6 weeks

FIBROTOR® RT AND RT.NC PROPERTIES

- The rotary table with a large centre hole
- FIBROTOR® RT can also be supplied as a RT.NC model with flexible division



FIBROTOR®

ADDITIONAL OPTIONS FOR ALL FIBROTOR®

FREQUENCY INVERTER WITH FIBRO-SOFTWARE

- 5-year warranty!
- Pre-programmed sequences such as CW, CCW rotation or pendulum mode, soft start, specifically after emergency stop, rapid speed and creep speed
- Optimisation of the indexing times
- Less wiring effort
- Minimum brake wear
- Monitoring of the three-phase brake motor

FIBRODRIVE plus

- AC servomotor with integrated controller
- Autonomous operation - intelligent stand-alone solution including diagnosis function via LED
- Easy plug-in cable connection for logic and power supply
- No customer implementing required
- USB connection to the terminal block
- Teach-in function
- Simple handling, thanks to the intuitive program software FIBRO Servo-Link
- Balanced system with decentralised connection that requires no amplifier in the control cabinet
- Safety stop according to EN ISO 13849-1 Performance Level e

FIBROTOR® microprocessor control card

FIBROTOR® MICROPROCESSOR CONTROL CARD

- Microprocessor controlled and monitored functional sequence
- Autonomous functional sequence
- No time delay due to external cycles
- Fault monitoring
- Housing for mounting rail

ADDITIONAL TABLE TOPS AND MACHINE STANDS

- Rotating additional table tops, fix plates at top and bottom manufactured specifically to customer requirements
- Standard machine stands and individual solutions

In addition, we also supply centring rings as well as centring flanges for faster set up and more precise installation of your superstructures!



FIBROTOR®

ADDITIONAL OPTIONS FOR FIBROTOR® EM AND EM.NC

POSITION DETECTION

- Smart module for detection of the position of the table top
- Applicable as electrical over-travel protection
- Available for FIBROTOR EM and ER
- Protection class IP65 provides excellent protection against humidity and spray water
- Increases the process safety of your system

MEDIA FEEDTHROUGH, POSITION DETECTION AND OVER-TRAVEL PROTECTION

- Media feedthrough for liquid or gaseous media and electrical signals
- Position detection at table top
- Over-travel protection to avoid cable breaks during pendulum mode

STRENGTHENED TABLE TOP BEARING

- For partial loading or for rotary machining to absorb the highest tilting moments
- Higher tilting moments on the positioned table top (+200 %)
- Higher tilting moments on the rotating table top (+300 %)

HYDRAULIC TABLE TOP CLAMPING

- When machining workpieces for the highest tangential loads
- Unload of drive elements
- Higher tangential moments (+250 %)

FIBROTOR®

THE MOST IMPORTANT DATA AT A GLANCE.

FIBROTOR® Rotary tables		EM.10 EM.NC.10 ER.10	EM.11 EM.NC.11 ER.11	EM.12 EM.NC.12 ER.12	EM.13 EM.NC.13 ER.13	EM.15 EM.NC.15 ER.15
Transported load	kg	100	500	800	1.500	2.500
Main dimensions						
Table top diameter	mm	100	160	220	280	410
Overall height	mm	100	100/125*	150	175	220
Centre hole diameter	mm	10	22*	35	35/70**	70
Weight approx.	kg	10	20	30	70	100
Load data						
Permitted add-on diameter	mm	520	800	1.000	1.400	2.000
Permitted axial load	N	4.000	8.000	12.000	16.000	25.000
Permitted radial load	N	1.000	3.500	8.000	10.000	15.000
Permitted tilting moment in position	Nm	350	750	2.000	3.000	6.000
rotating	Nm	100	200	600	1.000	2.000
Permitted tangential moment - standard EM + ER	Nm	25	300	400	600	1.200
Permitted tangential moment EM.NC	Nm	25	125	200	250	320
Standard divisions FIBROTOR® EM + ER		2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 20 - 24				
EM Divisions up to		48	96	96	96	96
EM.NC.divisions		any position				
Accuracies FIBROTOR® EM + EM.NC						
EM indexing accuracy	Division 2 - 12 Division 16 - 24 above division 24	± 40" ± 50" ± 100"	± 25" ± 40" ± 80"	± 18" ± 25" ± 40"	± 18" ± 25" ± 35"	± 12" ± 20" ± 35"
EM.NC indexing accuracy	Direct measurement Indirect measurement Measurement on the motor	— ± 120" ± 300"	± 20" ± 60" ± 210"	± 10" ± 45" ± 150"	± 10" ± 45" ± 120"	± 10" ± 45" ± 80"
Axial runout	mm	0,02	0,01	0,01	0,01	0,015
Concentricity	mm	0,02	0,01	0,01	0,01	0,015
Plane-parallelism	mm	0,04	0,02	0,03	0,03	0,04
Accuracies FIBROTOR® ER						
ER indexing accuracy	Division 2 - 12 Division 16 - 24	± 60" ± 70"	± 40" ± 50"	± 35" ± 40"	± 30" ± 35"	± 20" ± 25"
Axial runout	mm	0,02	0,015	0,02	0,02	0,03
Concentricity	mm	0,02	0,015	0,02	0,02	0,03
Plane-parallelism	mm	0,04	0,03	0,04	0,04	0,06
Additional options FIBROTOR® EM + EM.NC						
Permitted tilting moment with strengthened table bearing in position	Nm	—	2.250	6.000	9.000	18.000
rotating	Nm	200	600	1.800	3.000	6.000
Permitted tangential moment with table top clamping	Nm	—	450	800	900	1.800

* for division 02, overall height 125 mm, eccentric centre hole

** division 02-05 ø 35 mm, from division 06 and EM.NC ø 70 mm

FIBROTOR® Rotary tables		EM.16 EM.NC.16 ER.16	EM.17 EM.NC.17 ER.17	EM.18 EM.NC.18	RT.12 RT.NC.12	RT.13 RT.NC.13
Transported load	kg	4.000	5.500	6.400	400	500
Main dimensions						
Table top diameter	mm	460	558	750	360	460
Overall height	mm	270	380	420	65	65
Centre hole diameter	mm	110	130	180	170	270
Weight approx.	kg	220	450	800	50	80
Load data						
Permitted add-on diameter	mm	2.400	2.800	3.500	2.000	2.200
Permitted axial load	N	32.000	70.000	100.000	12.000	15.000
Permitted radial load	N	20.000	25.000	36.000	8.000	10.000
Permitted tilting moment in position	Nm	9.000	12.000	18.000	2.000	2.200
rotating	Nm	3.000	4.000	6.000	600	660
Permitted tangential moment - standard EM + ER + RT	Nm	1.400	1.600	2.500	400	500
Permitted tangential moment EM.NC + RT.NC	Nm	500	700	800	200	250
Standard divisions FIBROTOR® EM + ER + RT		2 - 3 - 4 - 5 - 6 - 8 - 10 - 12 - 16 - 20 - 24***				
EM + RT divisions up to		96	130	130	36	36
EM.NC. and RT.NC divisions		any position				
Accuracies FIBROTOR® EM + EM.NC bzw. RT. + RT.NC						
EM indexing accuracy	Division 2 - 12 Division 16 - 24 above division 24	± 12" ± 18" ± 30"	± 10" ± 15" ± 25"	± 10" ± 15" ± 25"	± 12" (T 4-20) ± 18" (T 22-36) ± 30" (über T36)	± 12" (T 6-20) ± 18" (T 22-36) ± 30" (über T36)
EM.NC indexing accuracy	Direct measurement Indirect measurement Measurement on the motor	± 10" ± 30" ± 60"	± 10" ± 30" ± 50"	± 10" ± 30" ± 40"	± 30" ± 120"	± 30" ± 120"
Axial runout	mm	0,015	0,02	0,02	0,03	0,04
Concentricity	mm	0,015	0,02	0,02	0,03	0,04
Plane-parallelism	mm	0,04	0,04	0,04	0,06	0,08
Accuracies FIBROTOR® ER						
ER indexing accuracy	Division 2 - 12 Division 16 - 24	± 20" ± 25"	± 20" ± 25"			
Axial runout	mm	0,03	0,04			
Concentricity	mm	0,03	0,04			
Plane-parallelism	mm	0,06	0,08			
Additional options FIBROTOR® EM + EM.NC						
Permitted tilting moment with strengthened table bearing in position	Nm	27.000	36.000	54.000		
rotating	Nm	9.000	12.000	18.000		
Permitted tangential moment with table top clamping	Nm	1.900	2.500	4.000		

*** RT.12 small division 04 not available, RT.13 small division 06 not available