

CNC
Compact, 6 axes
IndraMotion MTX micro



CNC

Compact, 6 axes ■ IndraMotion MTX micro**Documentation**

- Brochures
- Easy startup
- Software
- Hardware

**IndraMotion MTX micro efficiency with a full scope of functions**

IndraMotion MTX micro is the compact, powerful, and cost-effective CNC solution from Rexroth for standard turning and milling machines. All of the functions required in small CNC machines are available. Up to 6 axes can be controlled in 2 CNC channels with minimum startup effort.

Technical data

		MTX micro
Machining Technologies		
Turning		●
Milling		●
Drilling		●
Grinding		●
Nibbling, shape cutting		●
Axis control		
Default number of axes		3/4 ●
Max. number of axes		6 ○
Max. number of spindles thereof		2 ●
Default number of independent channels		2 ●
Max. number of independent channels		2 ●
Default number of interpolating axes per channel		4 ●
Max. number of interpolating axes per channel		4 ●
Linear axes		●
Circular axes		●
Endlessly turning rotary axis		●
Hirth axes		●
Spindel/C axis change-over		●
Max. number of gantry groups per channel		1
Cross-channel axis transfer		●
Cam		●

CNC

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Spindle coupling over electr. gears		●
Software limit switch		●
Master axis synchronisation		●
Axis-specific jerk limitation		●
Interpolation functions		
Linear interpolation		●
Linear interpolation with/without exact halt before NC block transition		●
Circular interpolation with radius and center-point programming, helical interpolation		●
Circular interpolation with tangential entrance		●
Threading drill without compensating chuck		●
Threading cutter		●
Cylinder surface transformation		●
C-axis transformation		●
NC block preview, look-ahead		Max. 1000 blocks ●
Spline interpolation, C1 + C2, continuous cubic splines, B-splines, NURBS		●
Nanometer resolution		●
Feed function		
Feed in mm/min or inch/min		●
Time programming		●
Feed per rotation		●
Constant cutting speed		●
Travel to dead stop		●
Torque reduction		●
Shifts and Corrections		
Mirroring, scaling, turning		●
Zero shift		●
Corrections and zero shift programmable using CPL		●
Placements (Frames)		●
2D compensation		●
Course correction with level switch		●
Tangential tool guidance		●
Tool maintenance		
Integrated, flexible tool management		●
Configurable tool database		●
Freely definable tool compensation (length, radius, cutting position compensation, user data)		●
Additive tool compensations (D compensations)		●
Access to tool data from the PLC		●
Access to tool data from the CNC		●
CNC programming		
Creation of parts program (DIN ISO 66025, RS 274)		●
High level language programming, CPL (Customer Programming Language)		●
CNC user memory	MB	64
Static memory	MB	4

CNC

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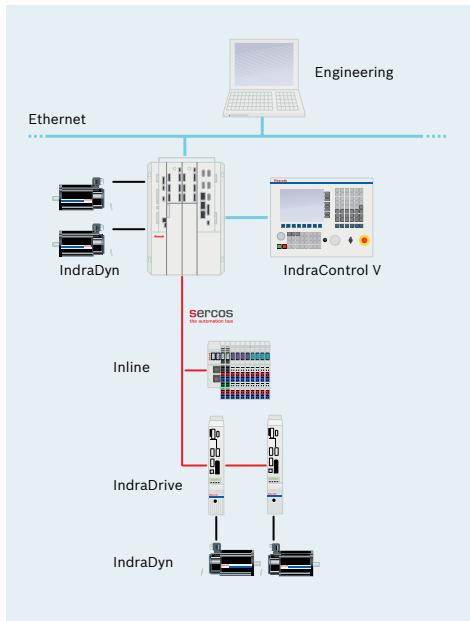
Max. size of parts program	MB	8
Max. size of parts program		Default
CompactFlash data memory		●
Technology cycles		
Turning		●
Milling		●
Drilling		●
Functions		
Dwell time in seconds		●
Excelleration programming, KV-programming		●
Homing via NC-program		●
Absolute dimation, relative dimation		●
Change-over inch/mm		●
Sensor input, static/flying measurement		●
Read process and drive data through sercos		●
Rounding and milling		●
Corner rounding with splines		●
Laser power controler		●
Digitalisation		●
NC-block specification from PLC		●
Support for control elements		
Block lead/block search run		●
Dry run		●
Departure and NC-block restart on the contour		●
Retrace function: Reversing over the contour		●
PLC programming		
Integrated PLC: IndraLogic		●
Programming languages according to IEC 61131-3 (IL, ID, CFC, ST, SFC, FBD)		●
PLC program memory	MB	2
Number of local/on-board I/Os		32 / 16 ●
Max. number of local/on-board I/Os		96 I / 48 O ○
Number of high-speed inputs/outputs		8/8 ●
Number of field bus inputs/outputs in bytes		8,192 / 8,192
Multitasking		●
Max. number of PLC tasks		2
Diagnosis and start-up tool		
Integrated, cross-system IndraWorks engineering framework		○
Indication and error message in clear text		●
Integrated project planning for drives		●
Drive oszilloscope		○
Integrated PLC project planning		○
Logic analyser		○
Circle form test		○
Cycle tima analyzer IndraMotion MTX cta		○

CNC

Compact, 6 axes ■ IndraMotion MTX micro

Energy analyzer IndraMotion MTX ega		○
IndraMotion MTX micro Trainer		○

- Default
- Optional
- Optional in connection with a PC

Components**Engineering and operating**

Description	Page
Engineering and operating	Software tools

Servo Drives

Description	Page	Details
Motors	Synchronous servo motors	IndraDyn S
Motors	Asynchronous servo motors	IndraDyn A

Type code**Firmware**

CNC

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Type code	Description	Part No.:
FWA-MICRO*-MTX-12VRS-NN	Firmware IndraMotion MTX micro	R911334597
CFM01.1-0128-N-LBA-NN-FW	Compact Flash Card 128MB	R911326773

Software

Type code	Description	Part No.:
SWA-IWORKS-MTX-12VRS-D0-DVD**	Software DVD, Engineering framework IndraWorks	R911327770
SWL-IWORKS-MTX-NNVRS-D0-MICRO	Single license, IndraWorks (Engineering MTX micro)	R911331698
SWL-IWORKS-MTX-NNVRS-D0-MICRO*M25	Multiple license (25), IndraWorks (Engineering MTX micro)	R911334478

Hardware

Type code	Description	Part No.:
HCQ02.1E-W0025-A-03-B-L8-1N-NN-NN-NN-FW	Basic device 4-axes, 32 I, 16 O	R911322825
HCQ02.1E-W0025-A-03-B-L8-1N-D1-NN-NN-FW	Basic device 4-axes, 64 I, 32 O	R911326229
HCQ02.1E-W0025-A-03-B-L8-1N-D1-D1-NN-FW	Basic device 4-axes, 96 I, 48 O	R911326230
HCT02.1E-W0025-A-03-B-L8-2S-NN-NN-NN-FW	Basic device 3-axes, 32 I, 16 O	R911329657
HCT02.1E-W0020-A-03-B-L8-2N-D1-NN-NN-FW	Basic device 3-axes, 64 I, 32 O	R911326232
HCT02.1E-W0020-A-03-B-L8-2N-D1-D1-NN-FW	Basic device 3-axes, 96 I, 48 O	R911326233
VDP80.1FGN-C1-NN-EN	Turning control panel, graphite gray	R911172168
VDP80.1FHN-C1-NN-EN	Milling control panel, graphite gray	R911172169
VDP80.1FKN-C1-NN-EN	Universal control panel, graphite gray	R911172321
VCH02.1	Handwheel box with cable and connector for control panels	R911328584
HNL01.1E-0400-N0051-A-480-NNNN	Line reactor 400 μ H, 51A	R911306580
HLR01.1N-0470-N11R7-A-007-NNNN	Breaking resistor 470 W	R911305932
HLR01.1N-02K0-N15R0-A-007-NNNN	Breaking resistor 2000 W	R911306870
HLR01.1N-05K0-N15R0-A-007-NNNN	Breaking resistor 5000 W	R911306881
GDS02.1-2048-14V-H12,0	Single Turn Absolute Encoder (e.g. Spindle Encoder)	R911323378
GDM02.1-2048-14V-H12,0	Multi Turn Absolute Encoder (e.g. Spindle Encoder)	R911323380
QSK061B-0300-NN-M5-UG0-NNNN	QSK servo motor 4Nm, 3000rpm, absolute encoder, no brake	R911325033
QSK061B-0300-NN-M5-UG1-NNNN	QSK servo motor 4Nm, 3000rpm, absolute encoder, brake	R911325035
QSK061C-0300-NN-M5-UG0-NNNN	QSK servo motor 8Nm, 3000rpm, absolute encoder, no brake	R911325037
QSK061C-0300-NN-M5-UG1-NNNN	QSK servo motor 8Nm, 3000rpm, absolute encoder, brake	R911325038
QSK075C-0300-NN-M5-UG0-NNNN	QSK servo motor 12Nm, 3000rpm, absolute encoder, no brake	R911325043
QSK075C-0300-NN-M5-UG1-NNNN	QSK servo motor 12Nm, 3000rpm, absolute encoder, brake	R911325044
QSK075D-0200-NN-M5-UG0-NNNN	QSK servo motor 17Nm, 2000rpm, absolute encoder, no brake	R911335231
QSK075D-0200-NN-M5-UG1-NNNN	QSK servo motor 17Nm, 2000rpm, absolute encoder, brake	R911335232
QSK075D-0300-NN-M5-UG0-NNNN	QSK servo motor 17Nm, 3000rpm, absolute encoder, no brake	R911325046
QSK075D-0300-NN-M5-UG1-NNNN	QSK servo motor 17Nm, 3000rpm, absolute encoder, brake	R911325047

CNC

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Type code	Description	Part No.:
QSK075E-0200-NN-M5-UG0-NNNN	QSK servo motor 21Nm, 2000rpm, absolute encoder, no brake	R911335233
QSK075E-0200-NN-M5-UG1-NNNN	QSK servo motor 21Nm, 2000rpm, absolute encoder, brake	R911335234
RKB0030/005,0	Basic device control panel connecting cable	R911327086
RKG4200/005,0	Motor encoder cable for QSK	R911310645
RKL0020/005,0	Power cable 1mm ² (QSK061)	R911325487
RKL0022/005,0	Power cable 1,5mm ² (QSK075)	R911325488
RKL0023/005,0	Power cable 2,5mm ² (QSK100)	R911326472
RKL0024/005,0	Power cable 1,5mm ² (MAD100B)	R911326473
RKL0025/005,0	Power cable 2,5mm ² (MAD100C)	R911326474
RKL0026/005,0	Power cable 4,0mm ² (MAD100D)	R911326475
RKL0031/005,0	Power cable 4,0mm ² (MAD130B-0100)	R911326479
RKL0032/005,0	Power cable 6,0mm ² (MAD130B-0150)	R911326480

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