

High performance
High accuracy
Short cycle times



- **Multi-Axis Direct Drive System**
MDDS-054

MDDS-054

Features, benefits, applications, drawing

Features

- Compact, high-precision X/Y stage
- System base made of mineral casting
- Linear motors L1C and L2D with excellent force to volume ratio
- Repeat accuracy of 3 μm (two axes)

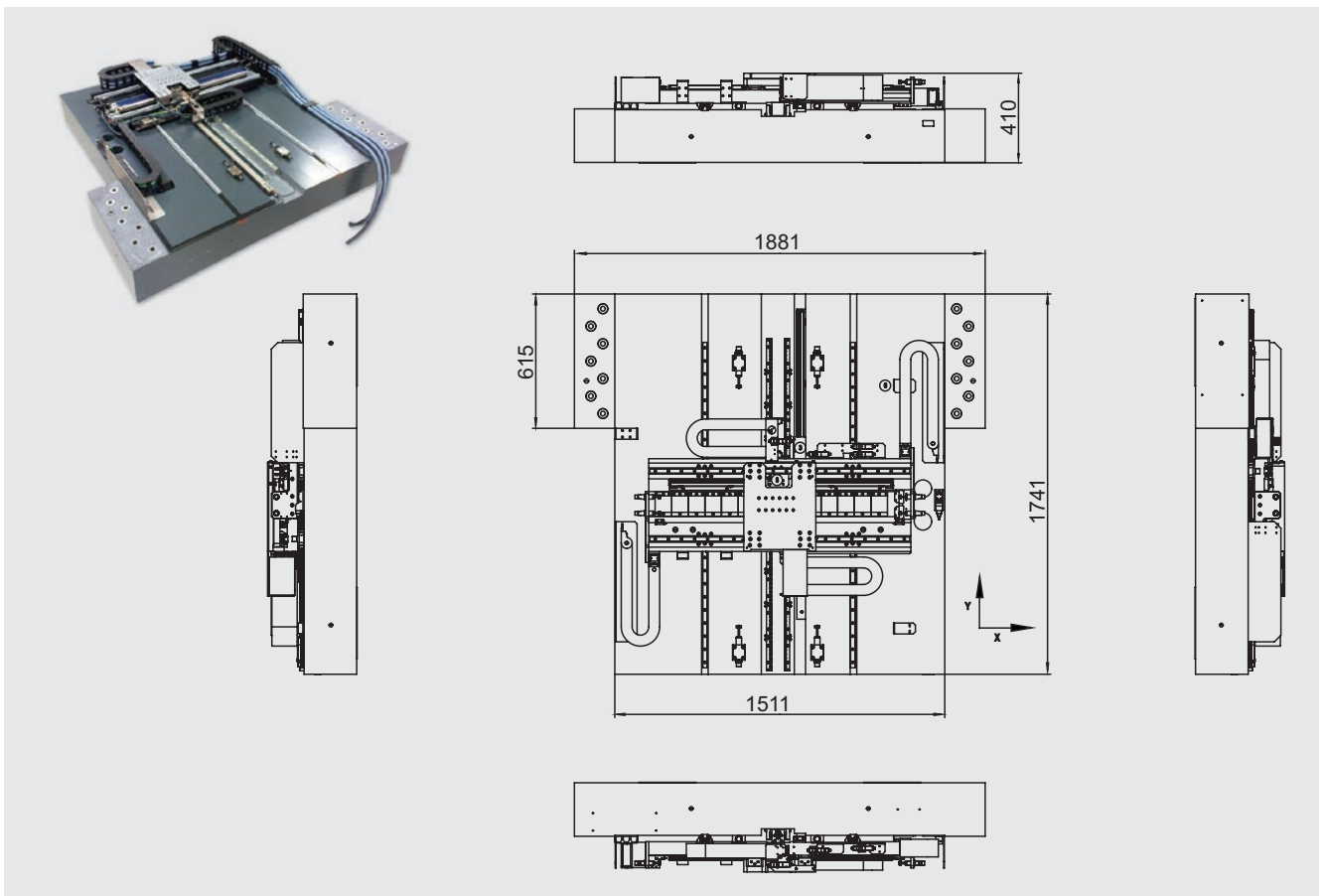
Benefits

- High performance
- High accuracy
- Short cycle times
- Mineral casting for high stiffness and vibration damping
- Precise, controlled motion and positioning

Applications

- Productronics
- Measuring technology
- Laser machining
- Production machinery
- OLED printing
- PCB production

Drawing



MDDS-054

System data, system components, motor data

System data	Symbol	Unit	MDDS-054	
Dimensions	L x W x H	mm	1881 x 1741 x 410	
Total mass	m_{total}	kg	1800	
Moving net mass, X-axis	m	kg	31	
Moving net mass, Y-axis	m	kg	142	
Payload, X-axis	m	kg	35	
Payload, Y-axis	m	kg	35	
Stroke	s	mm	995 x 800	
Maximum acceleration	a_{max}	m/s^2	5.0	
Maximum speed	v_{max}	m/s	2.0 (limited by the measuring system)	
Flatness of system		μm	50	
Repeat accuracy		μm	± 3	
System components	Symbol	Unit	MDDS-054	
Guidance system			Ball monorail guidance system	
Measuring system			Enclosed, incremental measuring system MSA 731.03	
			· Output signal sin/cos $1 V_{pp}$	
			· Grating period 20 μm	
Motor data	Symbol	Unit	MDDS-054	
			X-axis:	Y-axis:
			L1C-3P-200x75-HD1	L2D-3P-400x30-LD2
Peak force	F_p	N	1078	2282
Nominal force, not cooled	F_c	N	383	469
Peak current	I_p	A_{rms}	12.8	28.0
Nominal current, not cooled	I_c	A_{rms}	3.9	4.5
DC link voltage	U_{DCL}	V	600	600



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