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Automatic Tool Changers for Machining Centers

deta
International



deta GROUP

- deta** **Taiwan** Vertical and Horizontal ATC
- deta** **India** Sales and Service
- deta** **China** Vertical and Horizontal ATC
- dera** **Taiwan** Drum and Umbrella Type ATC
- detron** **Taiwan** 4th & 5th Axis Rotary Tables and APC
- Spinder** **Taiwan** All Types of Spindles
- dejo** **China** All Types of Spindles



deta
International

BRIEF INTRODUCTION

Established October 1994 focusing on the design and manufacture of Automatic Tool Changers (ATC).

deta International - The largest ATC manufacturer in Taiwan with 50% market share.

Extensive product range, develops approximately 10 new models annually.

Welcomes custom OEM orders.

deta International - Annual turnover 2012 US\$55 million.

deta International - 180 employees; 15 members R&D (10%).

deta International - Numerous patented technology in Taiwan, China, USA and Japan.

www.deta.com.tw

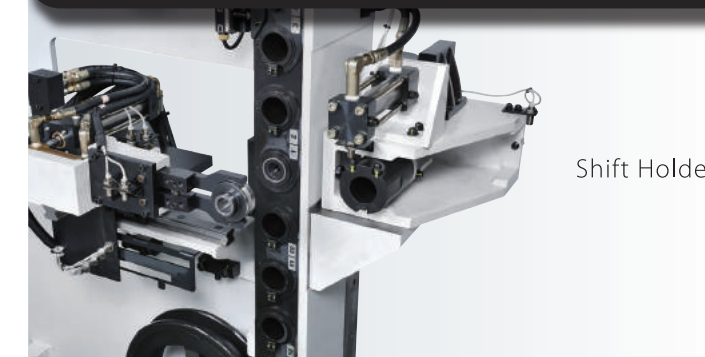
HORIZONTAL

- P2 **Horizontal Tool Magazine Specification Index**
- P3 Chain Type + Shift Holder + Cambox
- P4 Chain Type + Rail + Hydraulic Rack
- P5 Chain Type + Swing Arm + Hydraulic Rack
- P6 Separate Pocket Type + Pocket Tilt + Cambox
- P7 Separate Pocket Type + Pocket Sliding + Cambox
- P8 Disk Type + Pocket Tilt + Cambox
- P9 Chain Type + Pocket Tilt + Cambox
- P10 Special Horizontal Type

VERTICAL

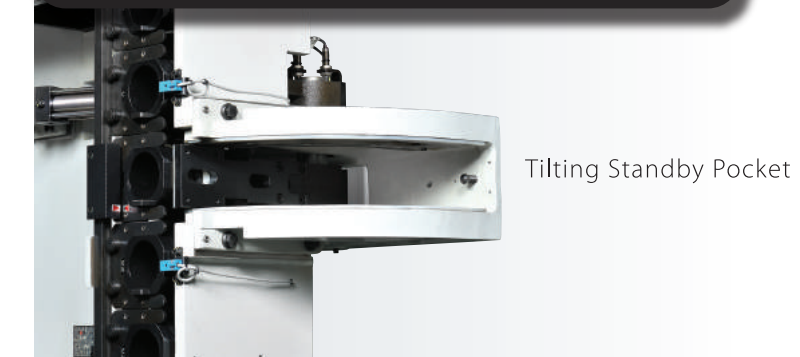
- P11 **Vertical Tool Magazine Specification Index**
- P12 #30 / #40 Disk Type
- P13 #50 Disk Type
- P14 #40 Chain Type
- P15 #50 Chain Type
- P16 Special Vertical Type

Chain Type

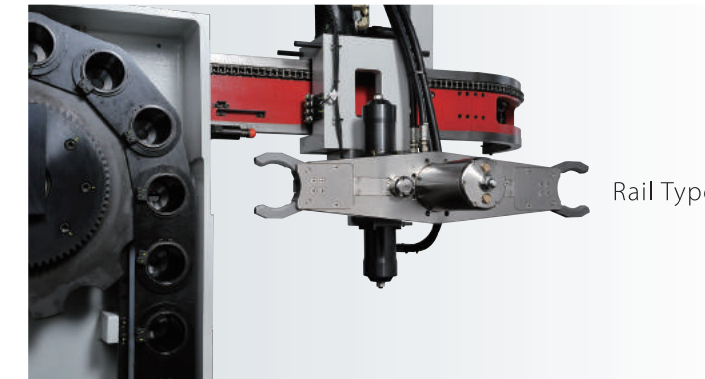


Shift Holder

Separate Pocket



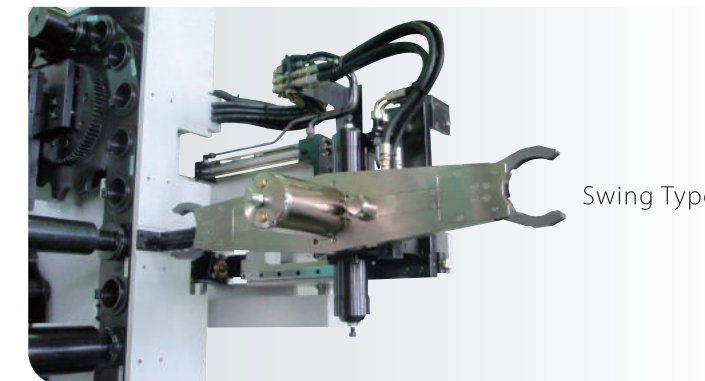
Tilting Standby Pocket



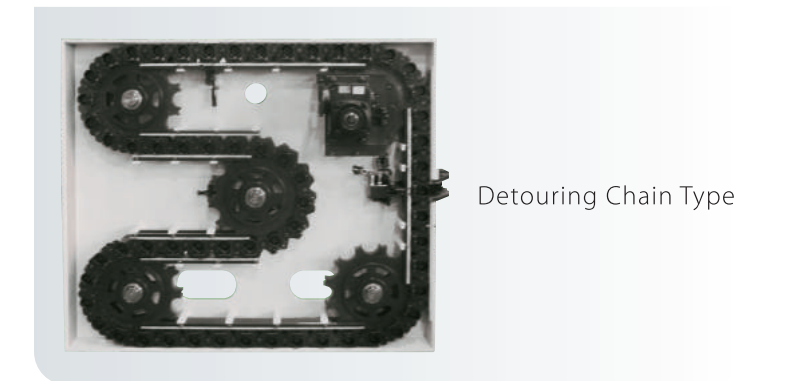
Rail Type



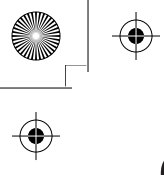
Sliding Standby Pocket



Swing Type

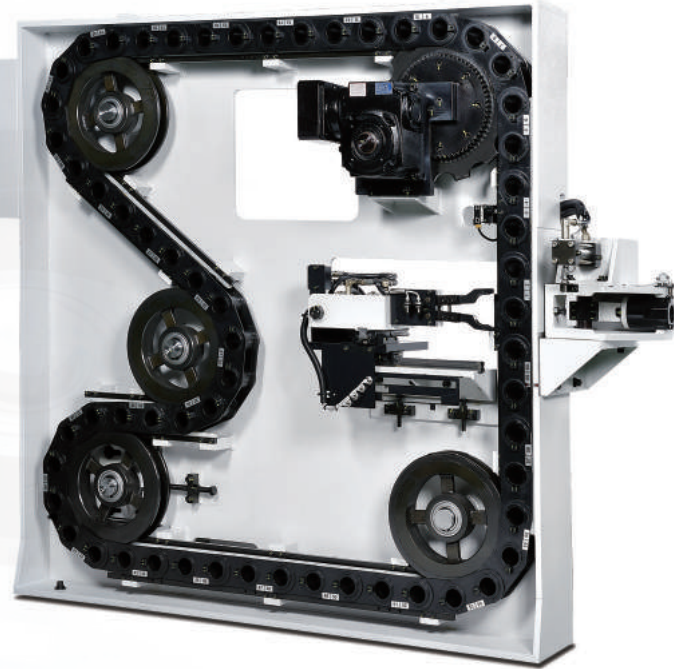


Detouring Chain Type

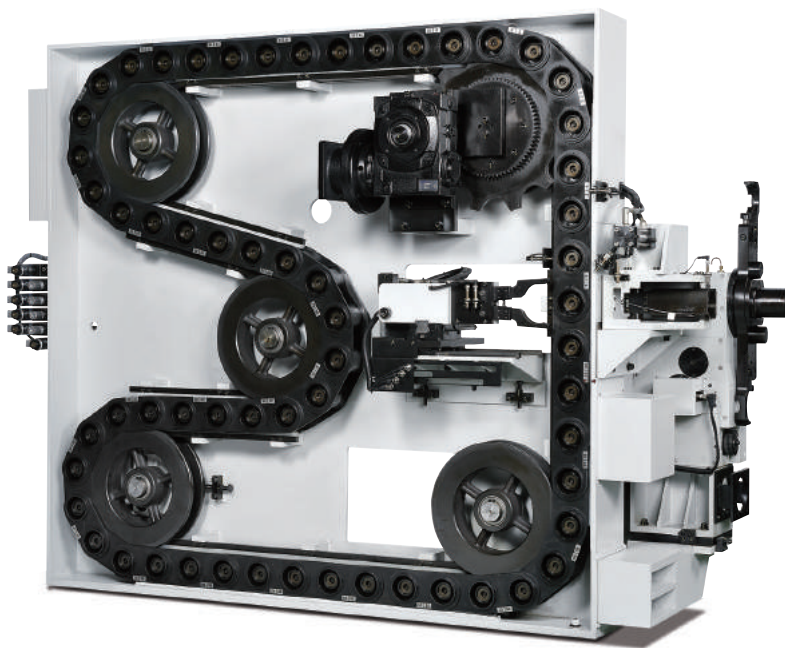


Chain Type + Shift Holder + Cambox

		Chain Type Pocket / Shift Holder / Standby Pocket	
Pocket Spec.		#40 BT / CAT / DIN / HSK63	#50 BT / CAT / DIN / HSK100
Tool Capacity		40T / 60T / 80T / 90T / 100T / 120T	40T / 60T / 80T / 90T / 100T / 120T
Max. Tool Diameter With Adjacent Pocket Full / Empty	mm	95 / 190	125 / 250
Max. Tool Weight	kg	8 (10)	20 (25)
Tool Change Time	sec/60hz	1.6 (2.0)	2.9 (3.5)
Magazine Speed	sec/tool	0.3	0.3
Tool Management Model		Fixed Address	Fixed Address
Tool Changing Selection		Roller Gear Cam	Roller Gear Cam



H4ATT (#40 x 60T)



H5BBF (HSK100A x 60T)



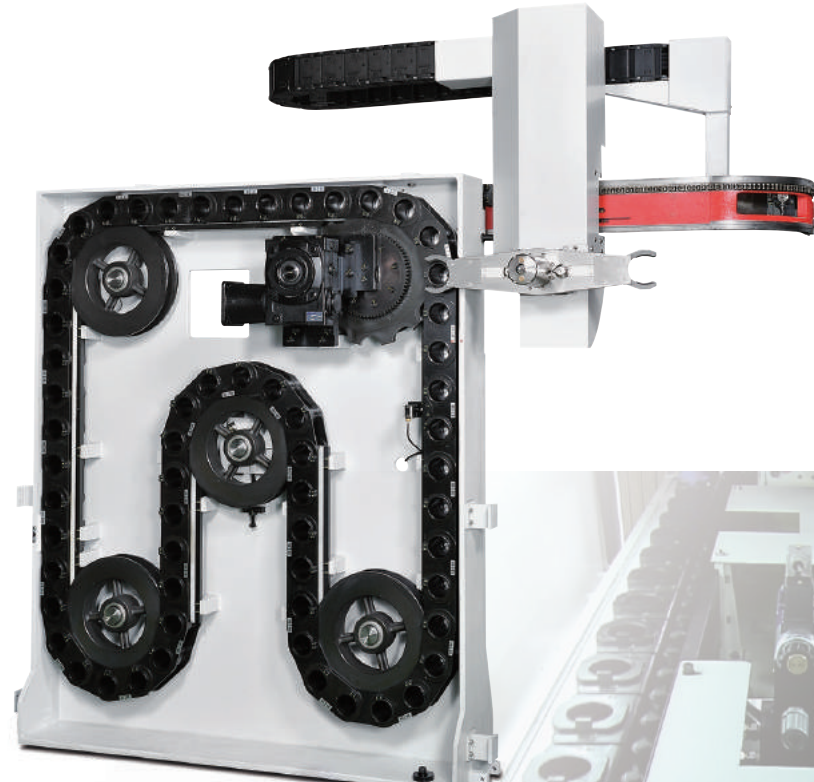
H5BGO (#50 x 40T)



H5HTO (#50 x 60T)



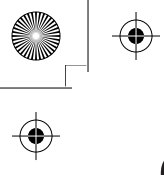
H5FCU (HSK100A x 72T)



H5CDF (#50 x 60T)

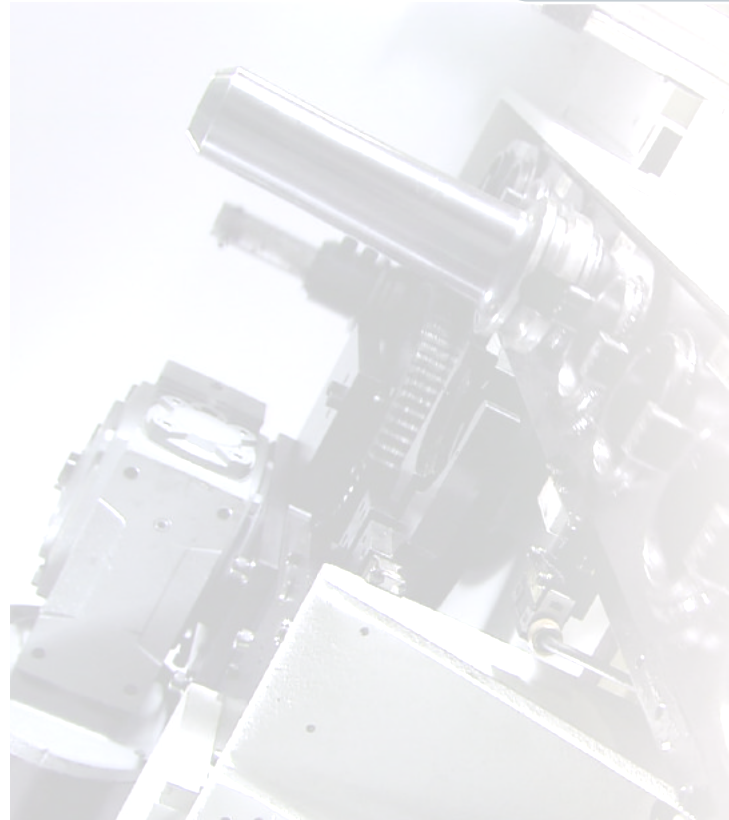
Chain Type + Rail + Hydraulic Rock

		Chain Type Pocket / Rail Type Tool Shifter Mechanism	
Pocket Spec.		#50 BT / CAT / DIN / HSK100	
Tool Capacity		40T / 60T / 80T / 90T / 100T / 120T	
Max. Tool Diameter With Adjacent Pocket Full / Empty	mm	125 / 250	
Max. Tool Weight	kg	25 (30)	
Tool Change Time	sec/60hz	3 (4)	
Magazine Speed	sec/tool	0.3	
Tool Management Model		Fixed Address	
Tool Changing Selection		Hydraulic Rack and Gear Mechanism	

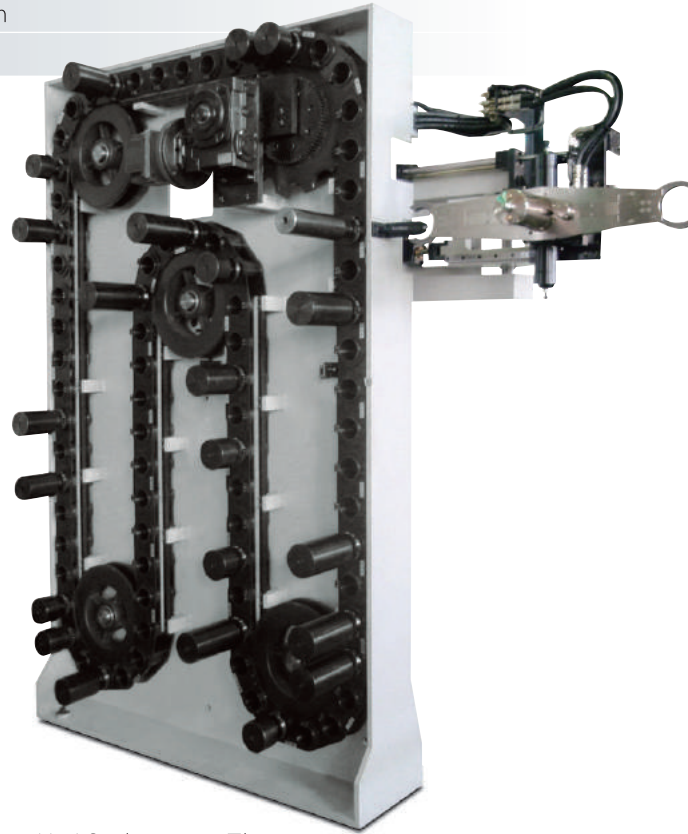


Chain Type + Swing Arm + Hydraulic Rock

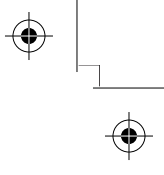
		Chain Type Pocket / Arm Type Tool Shifter Mechanism
Pocket Spec.		#50 BT / CAT / DIN / HSK100
Tool Capacity		40T / 60T / 80T / 90T / 100T / 120T
Max. Tool Diameter With Adjacent Pocket Full / Empty	mm	125 / 250
Max. Tool Weight	kg	25
Tool Change Time	sec/60hz	3
Magazine Speed	sec/tool	0.3
Tool Management Model		Fixed Address
Tool Changing Selection		Hydraulic Rack and Gear Mechanism



H5CPA (#50 x 40T)



H5AS8 (#50 x 80T)

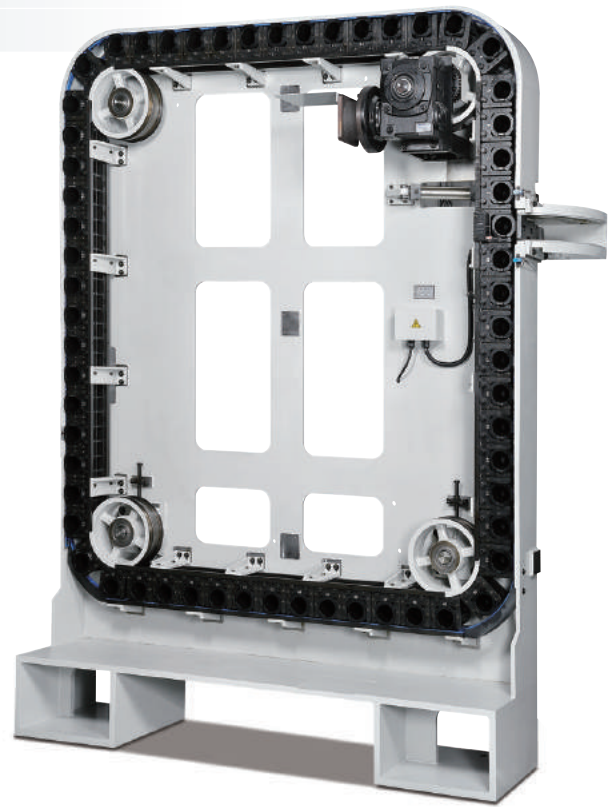


Separate Pocket Type + Pocket Tilt + Cambox

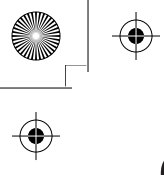
		Separate Pocket Type / Pocket Rotate 90° Mechanism
Pocket Spec.		#40 BT / CAT / DIN / HSK40 / HSK50 / HSK63 #50 BT / CAT / DIN / HSK100
Tool Capacity		40T / 60T 40T / 60T
Max. Tool Diameter With Adjacent Pocket Full / Empty	mm	95 / 150 (40T) 125 / 250 95 / 190 (60T)
Max. Tool Weight	kg	8 20
Tool Change Time	sec/60hz	1.5 2.9
Magazine Speed	sec/tool	0.3 (Servo) 0.3 (Servo)
Tool Management Model		Fixed Address Fixed Address
Tool Changing Selection		Roller Gear Cam Roller Gear Cam



H4FHF (#40 x 60T)

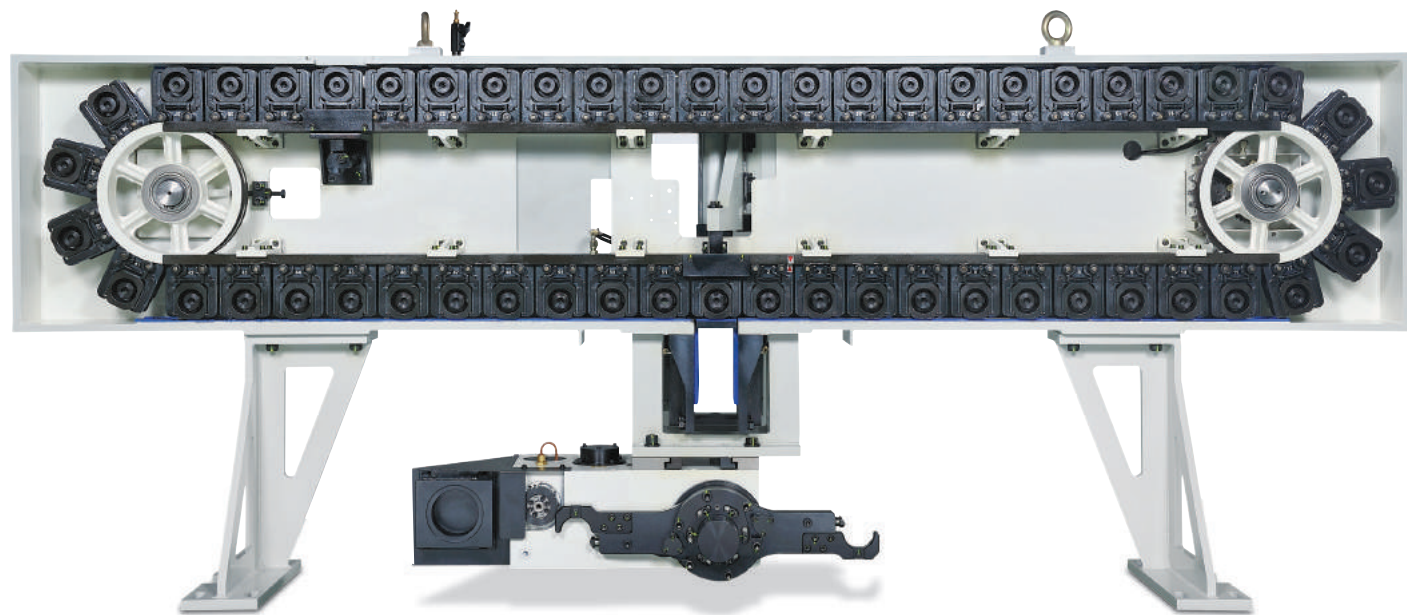


H5AQA (#50 x 60T)



Separate Pocket Type + Pocket Sliding + Cambox

		Separate Pocket Type / Pocket Sliding Mechanism	
Pocket Spec.		#40 BT / CAT / DIN / HSK40 / HSK50 / HSK63	#50 BT / CAT / DIN / HSK100
Tool Capacity		40T / 51T / 60T	40T / 51T / 60T
Max. Tool Diameter With Adjacent Pocket Full / Empty	mm	95 / 150 (40T) 95 / 190 (51T / 60T)	125 / 250
Max. Tool Weight	kg	8	20
Tool Change Time	sec/60hz	1.3~1.5	2.9
Magazine Speed	sec/tool	0.3 (Servo)	0.3 (Servo)
Tool Management Model		Fixed Address	Fixed Address
Tool Changing Selection		Roller Gear Cam	Roller Gear Cam



H4ECO (HSK63A x 51T)



H5AKO (#50 x 40T)

Disk Type + Pocket Tilt + Cambox

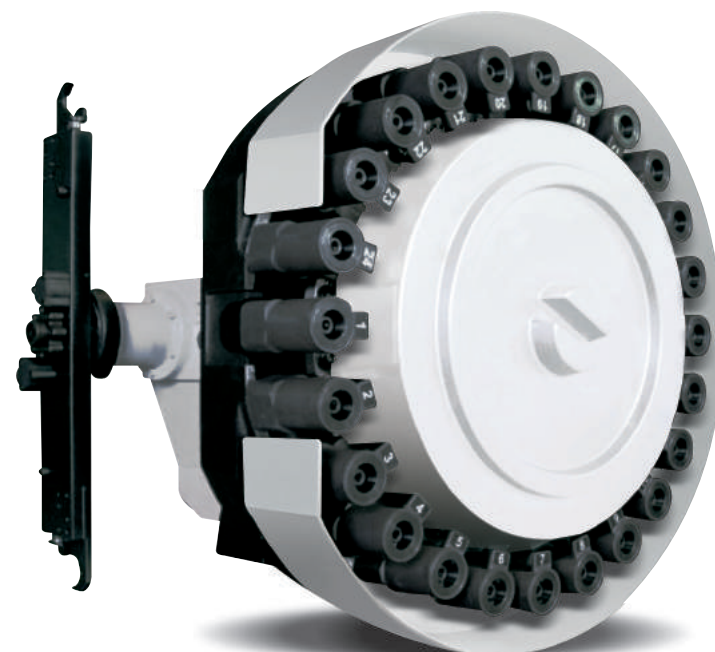
		Big Disk Type / Pocket Tilt 90° Mechanism		Disk Type / Pocket Tilt 90° Mechanism	
Pocket Spec.		#40 BT / CAT / DIN / HSK40 / HSK50 / HSK63	#50 BT / CAT / DIN / HSK100	#40 BT / CAT / DIN / HSK40 / HSK50 / HSK63	#50 BT / CAT / DIN / HSK100
Tool Capacity		40T / 60T	40T / 50T	24T / 30T	24T
Max. Tool Diameter With Adjacent Pocket Full / Empty	mm	76 / 150	110 / 220	75 / 150	105 / 210
Max. Tool Weight	kg	8	15	8	15
Tool Change Time	sec/60hz	1.5	2.9	1.5	2.9
Magazine Speed	sec/tool	0.15 (Servo) / 0.6	0.3 (Servo) / 0.8	0.6	0.8
Tool Management Model		Random	Random	Random	Random
Tool Changing Selection		Roller Gear Cam	Roller Gear Cam	Roller Gear Cam	Roller Gear Cam



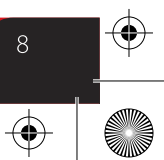
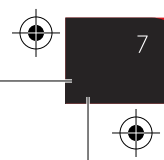
HMR4E (HSK63A x 40T)

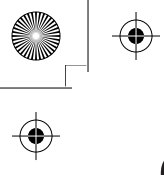


HMR5C (#50 x 40T)



HMR4AK (#40 x 24T)





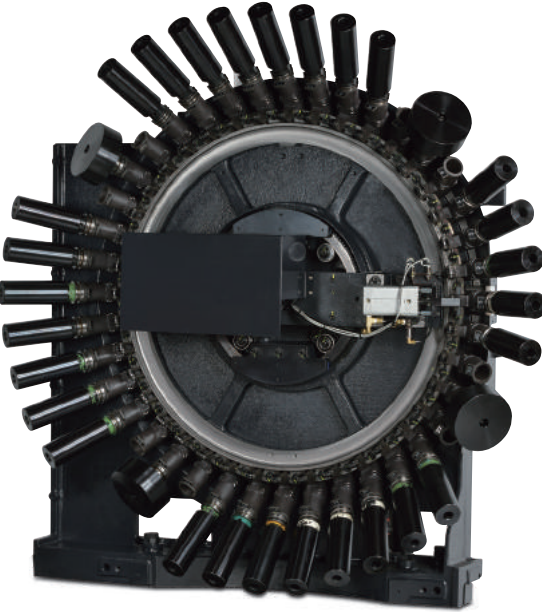
Chain Type + Pocket Tilt + Cambox

		Chain Type / Pocket Tilt 90° Mechanism	
Pocket Spec.		#40 BT / CAT / DIN / HSK40 / HSK50 / HSK63	#50 BT / CAT / DIN / HSK100
Tool Capacity		32T / 40T / 48T / 60T	30T / 40T / 60T
Max. Tool Diameter <i>With Adjacent Pocket Full / Empty</i>	mm	75 / 127	125 / 229
Max. Tool Weight	kg	8	15
Tool Change Time	sec/60hz	1.3~1.5	2.9
Magazine Speed	sec/tool	0.6	0.78
Tool Management Model		Random	Random
Tool Changing Selection		Roller Gear Cam	Roller Gear Cam

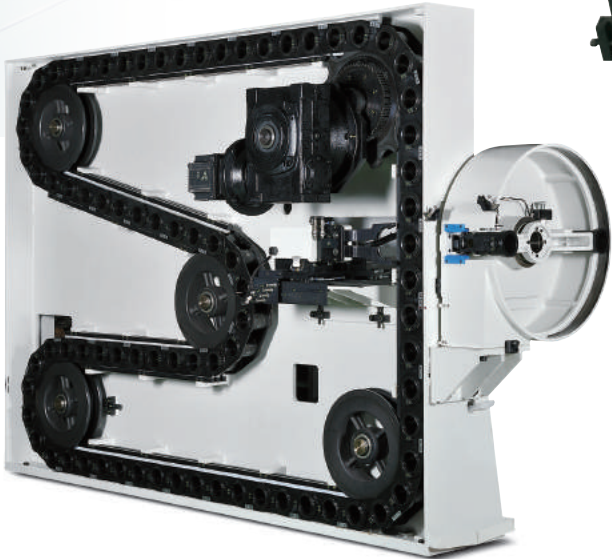
Special Horizontal Type



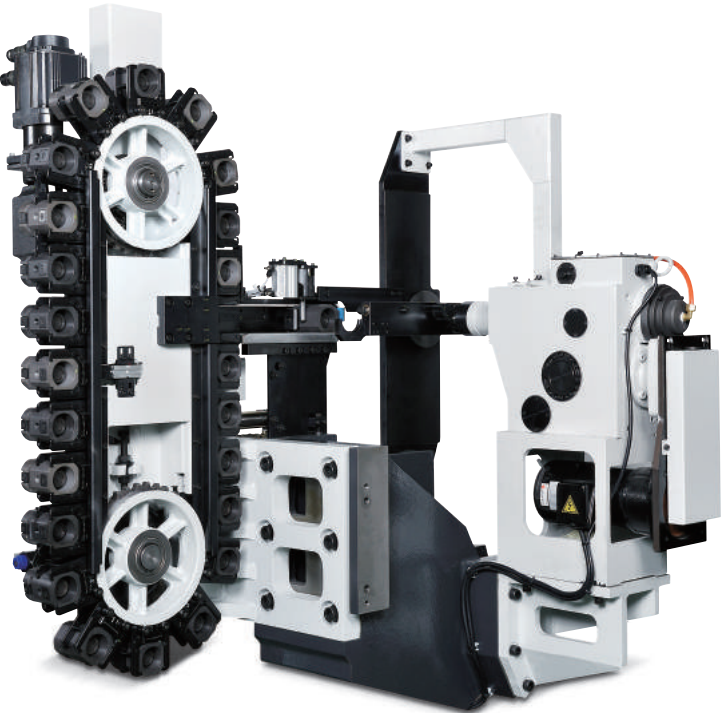
HR4EK (#40 x 12T)



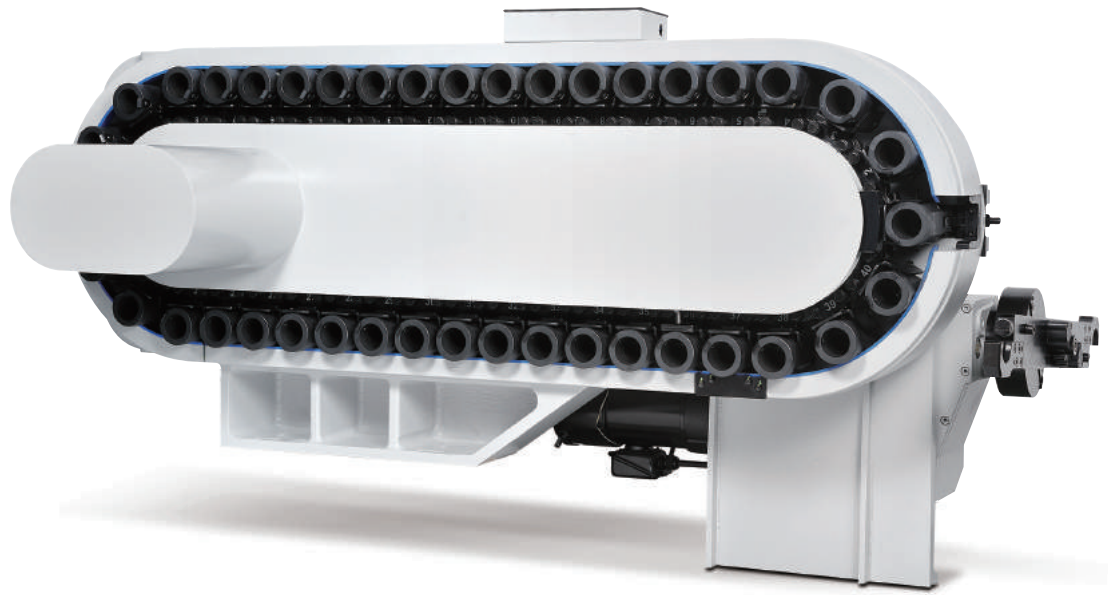
R4MKV (#40 x 40T)



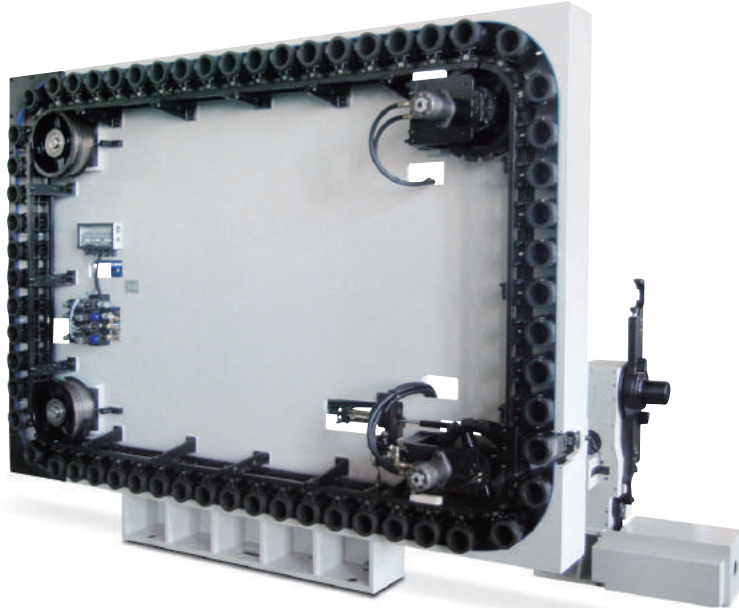
H5BCU (#50 x 60T)



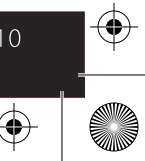
H4ACT (KM63 x 24T)

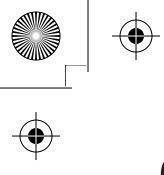


HC5BQ (#50 x 40T)



HC5RA (#50 x 60T)



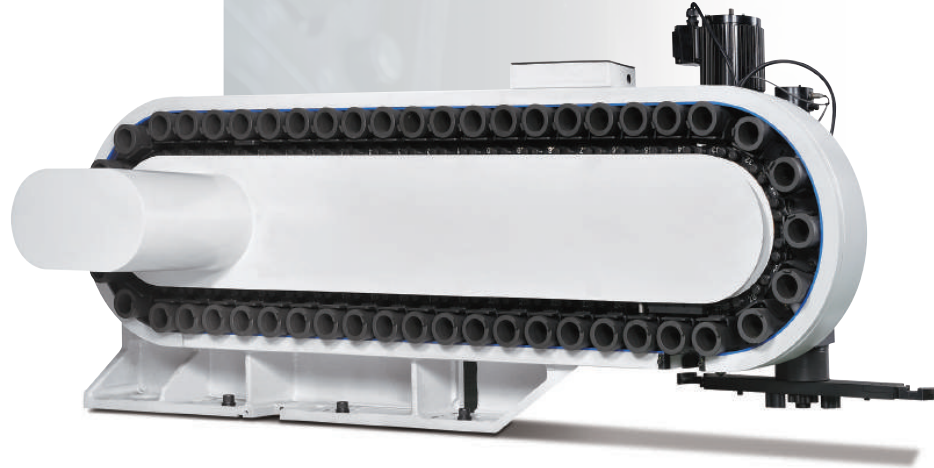


Disk Type



MR4AK (#40 x 24T)

Chain Type



MC4DQ (#40 x 48T)

Special Type



C4RBV (#40 x 54T)

#30 / #40 Disk Type

		R3GK4	R3DK4	Simultaneously R3DK4	R4DK4	MR4DK	MR4AK	MR4BK	MR4LK	MR4CK	MR4JK
Pocket Spec.		#30 BT / CAT / DIN			#40 BT / CAT / DIN / HSK40 / HSK50 / HSK63						
Tool Capacity		16T	20T	20T	20T	20T	24T	24T	28T	30T	36T
Pitch	mm	80	80	80	80	95	80	95	68	76	68
Max. Tool Diameter With Adjacent Pocket Full / Empty	mm	75 / 150	75 / 150	75 / 150	75 / 150	90 / 180	75 / 150	90 / 180	65 / 130	75 / 150	65 / 130
Max. Tool Weight	kg	4	4	4	8	8	8	8	8	8	8
Tool Change Time	sec/60hz	0.8	0.8	0.8	1.3~1.5	1.3~1.5	1.3~1.5	1.3~1.5	1.3~1.5	1.3~1.5	1.3~1.5
Magazine Speed	sec/tool	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.4
Tool Changing Selection		Roller Gear Cam			Roller Gear Cam						



R3DE4 (#30 x 20T)



MR4AK (#40 x 24T)

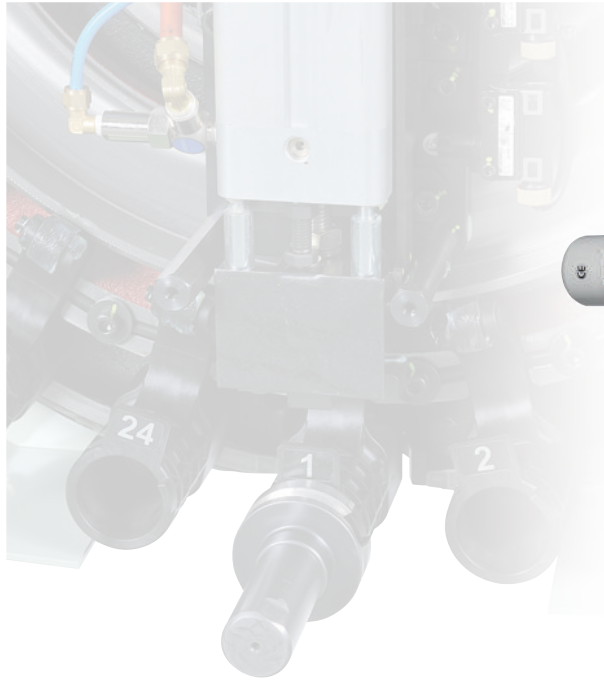


R4DKMA (#40 x 20T)



#50 Disk Type

		MR5C	R5EN	MR5D	MR5G	R5DKA
Pocket Spec.		#50 BT / CAT / DIN / HSK100				
Tool Capacity		20T	24T	24T	30T	24T
Pitch	mm	135	135	110	110	110
Max. Tool Diameter With Adjacent Pocket Full / Empty	mm	130 / 255	130 / 255	105 / 210	105 / 210	105 / 210
Max. Tool Weight	kg	15	15	15	15	15
Tool Change Time	sec/60hz	2.5	2.5	2.5	2.5	2.5
Magazine Speed	sec/tool	0.8	0.8	0.8	0.8	0.8
Tool Changing Selection		Roller Gear Cam				



MR5D (#50 x 24T)

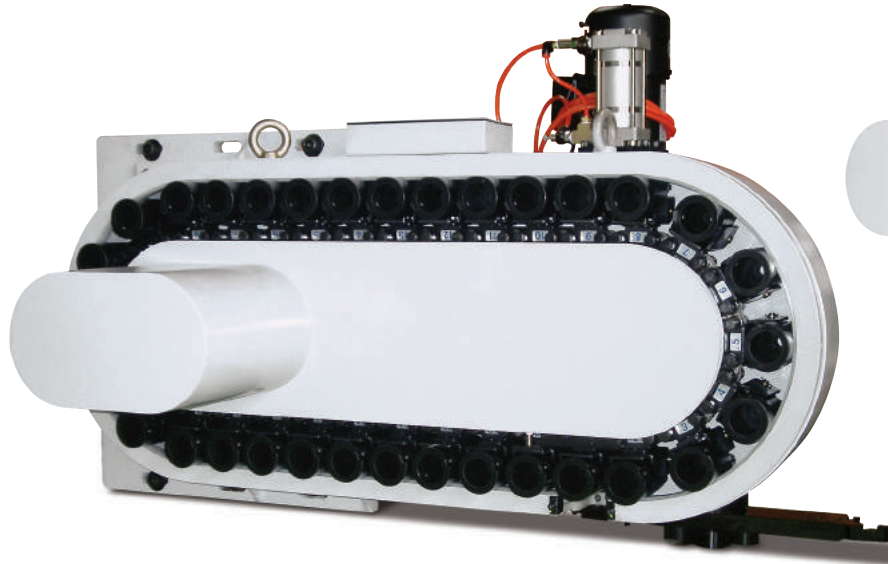


R5DKA (#50 x 24T)

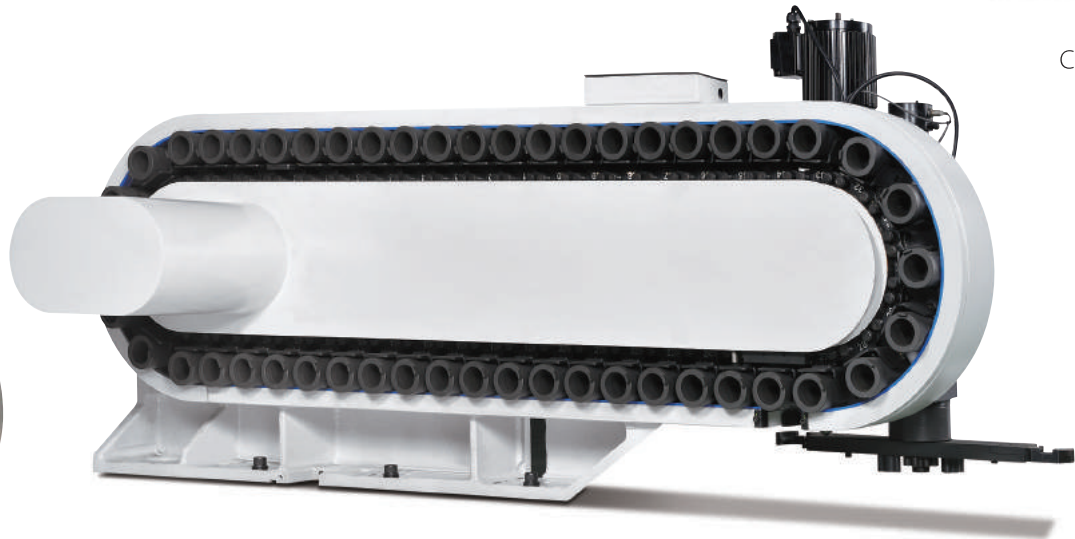


#40 Chain Type

		MC4A / MC4AQ	MC4B / MC4BQ	MC4DQ	MC4FQ	C4RBV
Pocket Spec.		#40 BT / CAT / DIN / HSK40 / HSK50 / HSK63				
Tool Capacity	mm	32T	40T	48T	60T	54T
Pitch	mm	76.2	76.2	76.2	76.2	76.2
Max. Tool Diameter With Adjacent Pocket Full / Empty	kg	75 / 127	75 / 127	75 / 127	75 / 127	75 / 127
Max. Tool Weight	sec/60hz	8	8	8	8	8
Tool Change Time	sec/tool	1.3~1.5	1.3~1.5	1.3~1.5	1.3~1.5	1.3~1.5
Magazine Speed		0.5	0.5	0.5	0.5	0.2 (Servo)
Tool Changing Selection		Roller Gear Cam				



MC4A (#40 x 32T Side Mounted)



MC4DQ (#40 x 48T Bottom Mounted)



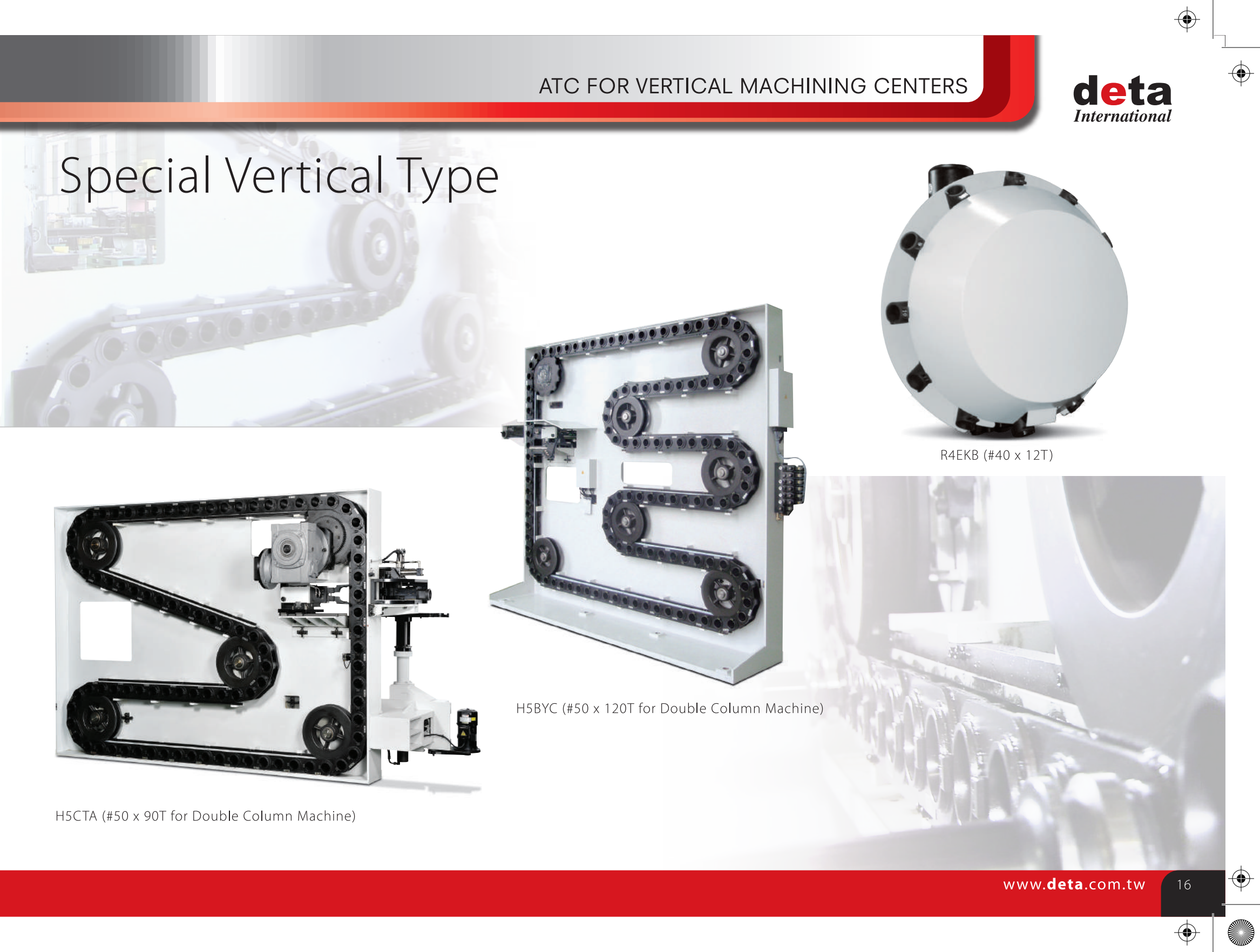
C4RBV (#40 x 54T)



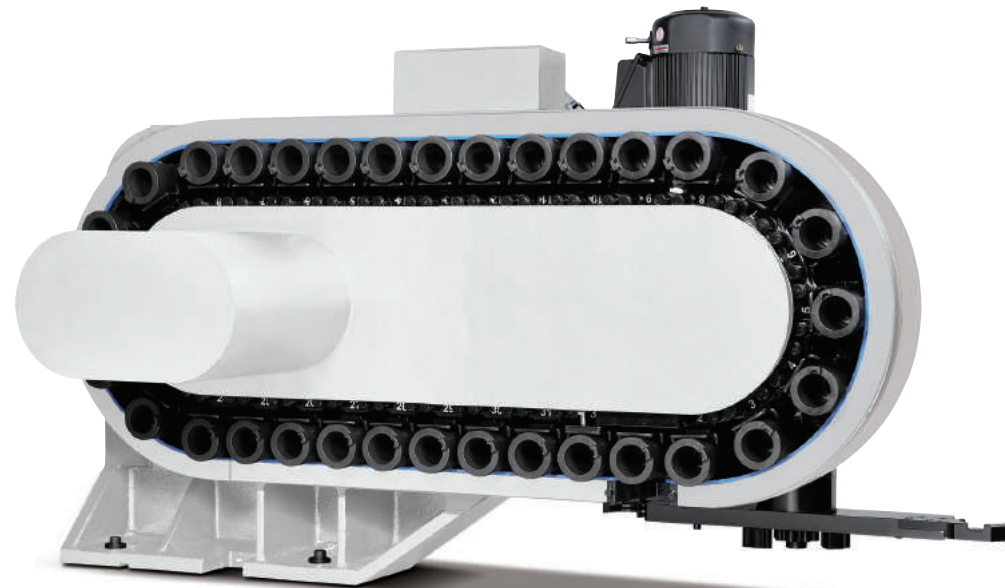


#50 Chain Type

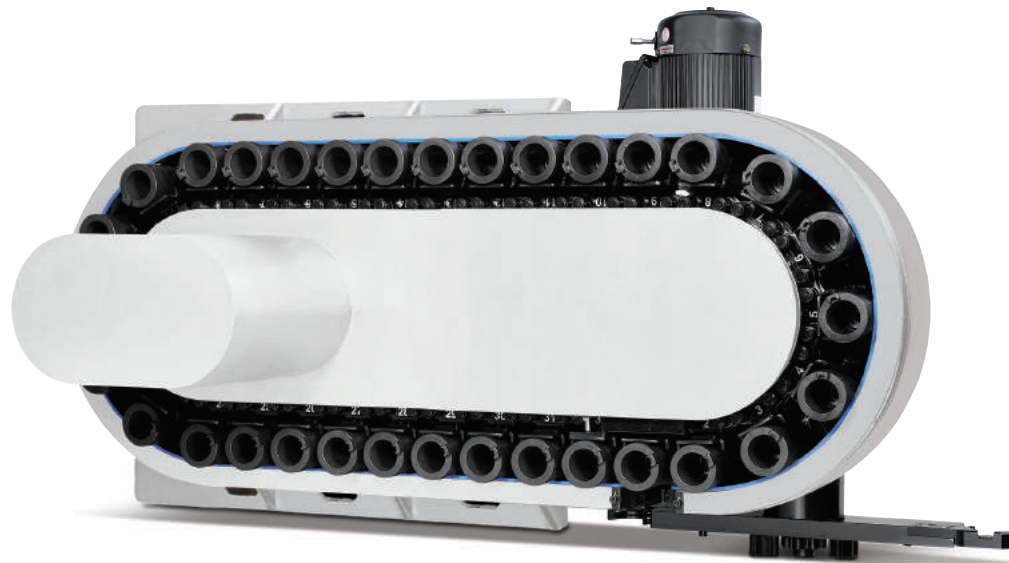
		MC5CQ	MC5A	MC5B / MC5BQ	Hydraulic MC5FQ	Hydraulic MC5RA
Pocket Spec.		#50 BT / CAT / DIN / HSK100				
Tool Capacity		30T	32T	40T	60T	60T
Pitch	mm	127	127	127	127	127
Max. Tool Diameter With Adjacent Pocket Full / Empty	mm	125 / 229	125 / 229	125 / 229	125 / 229	125 / 229
Max. Tool Weight	kg	15	15	15	15	15
Tool Change Time	sec/60hz	2.5	2.5	2.5	2.5	2.5
Magazine Speed	sec/tool	0.78	0.78	0.78	0.78	0.6
Tool Changing Selection		Roller Gear Cam				



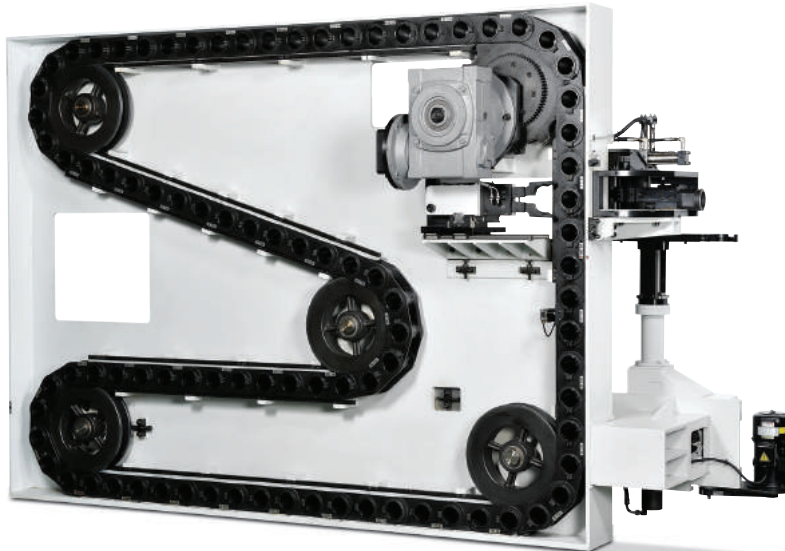
Special Vertical Type



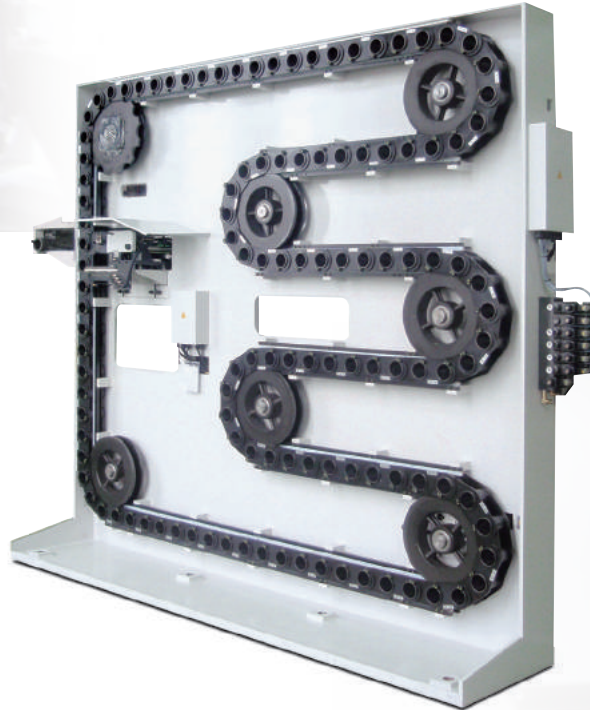
MC5CQ (#50 x 30T)



MC5A (#50 x 32T)



H5CTA (#50 x 90T for Double Column Machine)



H5BYC (#50 x 120T for Double Column Machine)



R4EKB (#40 x 12T)

