

Drill⁺

ProArc[®]

Auto Drill Machine Intelligent Versatile & Powerful

ProArc Drill⁺ is an automatic, high efficiency and performance CNC drilling machine. Automatic drilling process is constituted by Z axis servo lifter, tool length detector and plate height measuring device. ProArc Drill⁺ makes drilling process easy and friendly.



Table type

We love metal arts.

Welding · Cutting · Drilling · · · · · Since 1966

Drill⁺

Description

ProArc *Drill⁺* is an automatic, high efficiency and performance CNC drilling machine. Automatic drilling process is constituted by Z axis servo lifter, tool length detector and plate height measuring device. It can increase the drilling efficiency and prevent mis-operation. ProArc *Drill⁺* makes drilling process easy and friendly. Drilling, slotting (slot milling) and tapping process are available.

Features

- **Automatic tool length detector- one touch**
Save manual measurement time and avoid inaccuracy tolerance
- **Automatic plate height measurement by hydraulic clamber (Gantry type for option)**
Save manual setting time and avoid inaccuracy tolerance
- **One button tool change**
Tool-less and quick change
- **IPC based CNC control system**
Unique and intuitive GUI with 19" touch panel for easy operation
- **Multi-task process**
Multi-home positions can execute different jobs in one process
- **Multi-application**
Available for drilling, slotting and tapping process
- **Fast marking**
Verify the first article inspection
- **Teach mode**
Define the drilling process by user
- **CAD/CAM system**
The system is used both for designing a product and for controlling manufacturing processes
- **Safety protection design**
Spindle is prohibited moving to working area during parts loading and unloading
- **Position check**
Simulate the drilling process to prevent interference of drills with bolster and supporting block
- **Linear brake and clamp to keep stable drilling**
- **Coolant Through Spindle (CTS) comes Standard in DS-060 and DS-080**
- **Edge alignment function**
- **Auto lubrication device**

Gantry only

- Longitudinal rail is extendable according to actual requirement
- Individual drilling table with hydraulic clamber (option)

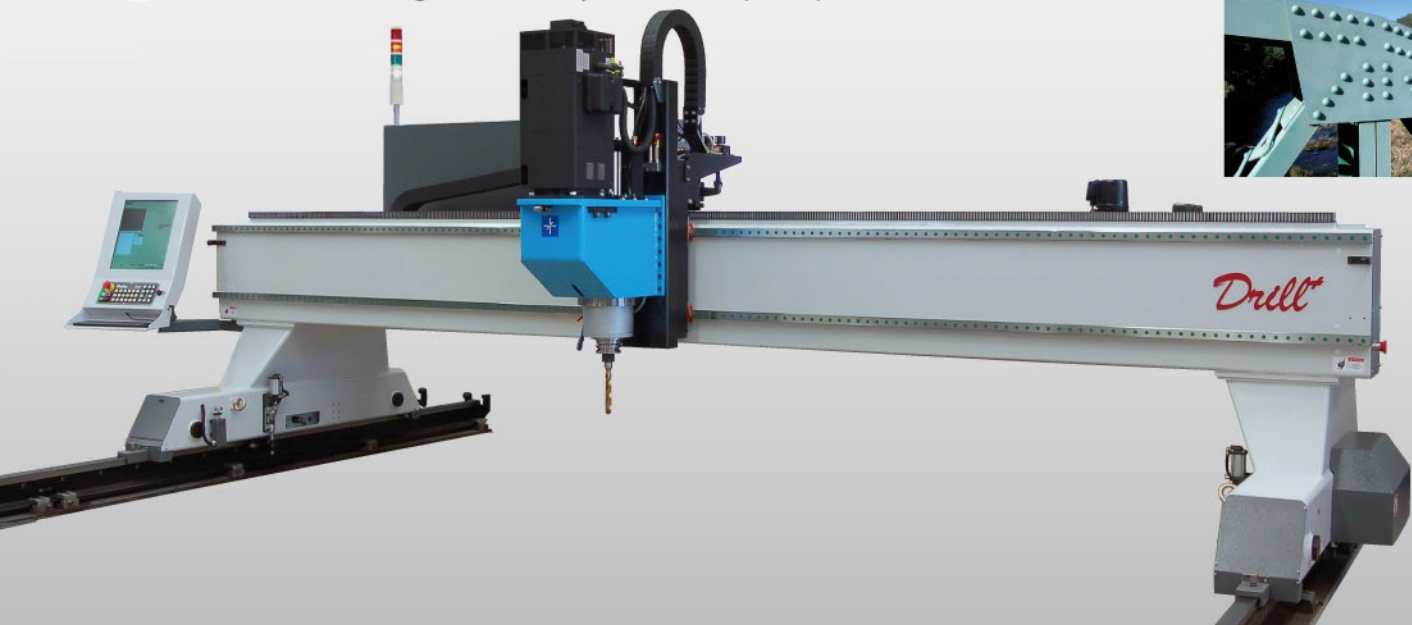
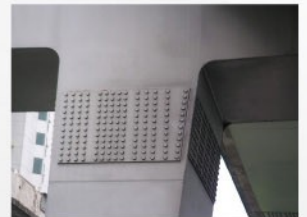
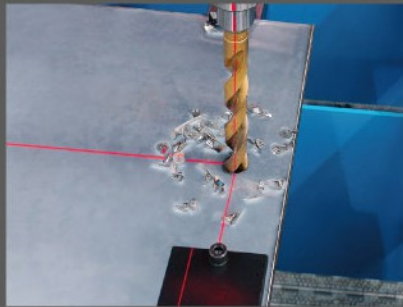




Table type

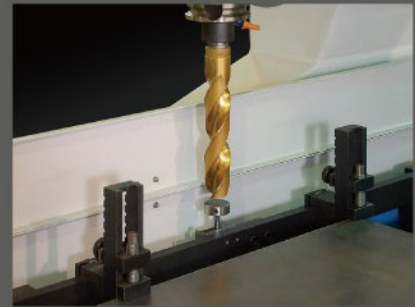
Specification			
Model	Unit	<i>Drill</i> 1020	<i>Drill</i> 1640
Table size	mm	1,000 x 2,000	1,600 x 4,000
Z lifter effective stroke	mm	350	
Plate thickness	mm	100	
Positioning accuracy	mm	± 0.1	
Positioning speed	m/min	12	
Number of spindle		1	1~2



Laser pointer



Supporting block, hydraulic clamber,
automatic plate height measuring device
(optional in gantry type)



Automatic drills length detector

Gantry type

Specification								
Model	Unit	<i>Drill</i> 25	<i>Drill</i> 30	<i>Drill</i> 35	<i>Drill</i> 40	<i>Drill</i> 50	<i>Drill</i> 60	<i>Drill</i> 80
Table size	mm	1,700 x L	2,200 x L	2,700 x L	3,200 x L	4,200 x L	5,200 x L	7,200 x L
Parking space	mm	1,500			2,000			
Z lifter effective stroke	mm	350						
Track length (section)	mm	3,000						
Plate thickness	mm	100						
Positioning accuracy	mm	± 0.1						
Positioning speed	m/min	12						
Number of spindle		1 ~ 2						

Drill Spindle

Model	Unit	MS-232	MS-432	DS-040	DS-050	DS-060	DS-080
Drills number		2	4	1			
Drive motor	hp	5	7.5	5	7.5	20	30
Drilling capacity	mm	Ø14 ~ 32*2	Ø14 ~ 32*2	Ø14 ~ 40	Ø14 ~ 50	Ø6 ~ 60	Ø6 ~ 85
Speed	rpm	32 ~ 320		55 ~ 570		40 ~ 1150	
Effective length*1	mm	230 ~ 390					
Shank-standard		Adaptor Ø35-MT3		BT40-MT4		BT50-MT4	
Shank-milling (option)				BT40-CTH32-150*3		BT50-CTH32-150*3	
Shank-tapping (option)				BT40-WF33*4		BT50-WF33*4	
				TC1433B-030B 01~15*5		TC-1433B-030B 01~15*5	
Shank-indexible drills (option)						BT50-SL-OD*6	
						BT50-SL-40*6	

*1 Effective length: From spindle nose-end to drills end

*2 Max. Ø40 mm for "one" drill

*3 Shank w/ holder for end-mill

*4 Shank w/ tapping chuck

*5 Quick change tapping collets

*6 Shank w/ side lock holder

Drill⁺



AC servo Z axis lifter

Adopt ball screw feeding on Z axis with traveling speed of 3,000 mm/min with 350 mm stroke. Precise sequence control for primary and extremity drilling and pecking at highest efficiency. It can provide drilling, tapping (M14 ~ M32) and slot milling (Ø14 ~ Ø32).

Drilling spindle - Inverter and servo motor drive selection DS spindle

From DS-040 to DS-080, drilling capacity from Ø6 ~ 80 mm. Standard BT shank designed for tools quick change by one touch and automatic tool change.

MS Spindle

"MS-232 (2 drills) and MS-432 (4 drills)

There are multi drills on a drill head. Drilling capacity from Ø14 ~ 32 mm. It can drill multi holes at one drilling process. The distance between drills are adjustable from 60 to 120 mm to fit different needs."



DS Spindle

MS Spindle

Options

Automatic Tool Change ATC

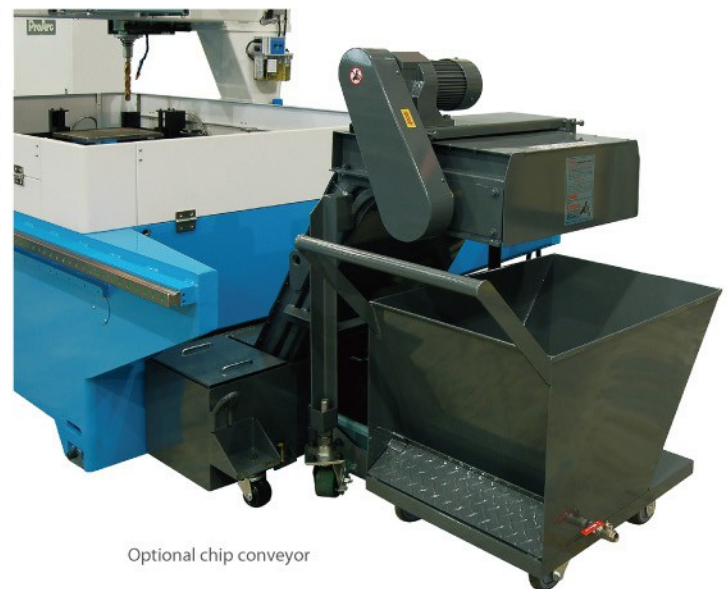
Automatic tool change to fit different application and replace the dull tools.

Electric chip conveyor

Chips are separated automatically and drilling coolant is recyclable

Drill grinder

Drill grinder	
Drill size	Ø14 ~ 32 mm
Grinding shape	160°
Drill shank	MT4
Grind wheel rotating speed	3,300 rpm
Dimension LxWxH	710 x 620 x 350 mm
Weight	55 kgs



Optional chip conveyor

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