

HALLERBS

DRILL & TAP CENTRES

**The cycle is won where the
cutter is not cutting.**

29 machines built around tool change and rapid traverse rather than torque — including a linear-motor series at 0.006 mm positioning and a 1.4 second tool change.



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What a drill & tap centre is for

On hole-and-thread work, most of the cycle is not cutting. It is tool change, rapid moves and acceleration. A machining centre sized for torque spends that time being heavy.

WHERE THE SECONDS GO

A housing with sixty holes and twenty threads may spend under a third of its cycle with a cutter in the metal. The rest is the magazine turning, the spindle accelerating and the table moving. That is why these machines carry a BT30 or BBT30 spindle on a light, stiff column instead of a BT40 on a heavy one — less mass to accelerate, and a tool change measured in single seconds.

WHAT THAT BUYS

- **1.4 second** tool-to-tool change across the range
- **Rapid traverse to 100 m/min** in X on the linear-motor series
- **36,000 rpm** available on the Ø120 mm power-spindle series
- **X travel to 2,500 mm** for long parts such as extruded profile

WHERE THEY ARE THE WRONG MACHINE

Heavy roughing in steel, large face milling, or anything that needs BT40 torque all cycle. For that work, our vertical machining centre catalogue is the right one — and we would rather tell you now.

0.006 / 0.003 mm

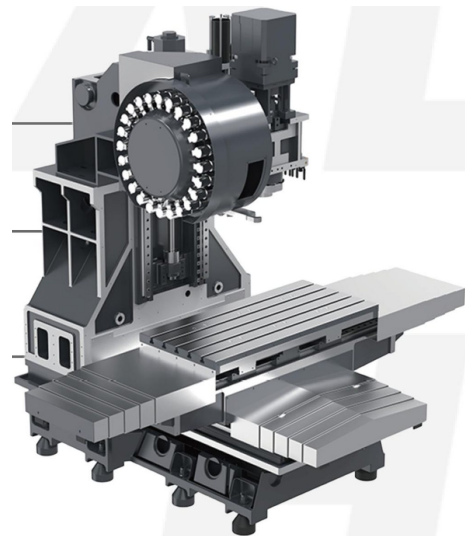
Positioning and repeatability, linear-motor zs series (VDI 3441)

1.4 sec

Tool-to-tool change, whole range

100 m/min

Rapid traverse in X, HL-900zs and HL-1200zs



Four ranges, one question: how much of your cycle is actually cutting?

Send a part drawing and the hole schedule. That number decides which series — and whether you need this machine at all.

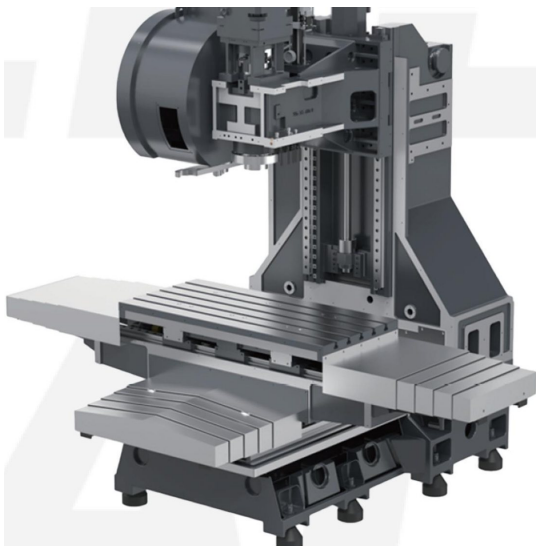
Ø120 mm power spindle

A BT30 taper on a 120 mm spindle with 113 N·m — the series for shops that want drill-tap cycle times without giving up the ability to mill.

HL-10 / 20 / 30 — Ø120 mm power spindle

Specification	Unit	HL-10	HL-20	HL-30
TRAVEL				
X	mm	600	800	1000
Y	mm	430	430	430
Z	mm	480	480	480
Spindle nose to table	mm	120–600 / 200–680	120–600 / 200–680	120–600 / 200–680
TABLE				
Working surface	mm	700 × 430	900 × 430	1100 × 430
Max load	kg	480	480	480
T-slots	mm	3 × 14 × 100	3 × 14 × 100	3 × 14 × 100
SPINDLE				
Taper		BT30, Ø120 mm	BT30, Ø120 mm	BT30, Ø120 mm
Max speed	rpm	36,000	36,000	36,000
Motor power	kW	10	10	10
Torque	N·m	113	113	113
AXES				
Rapid X / Y / Z	m/min	72 / 72 / 64	72 / 72 / 64	72 / 72 / 64
Axis motor power	kW	3.3 / 3.3 / 3.3	3.3 / 3.3 / 3.3	3.3 / 3.3 / 3.3
ACCURACY (VDI 3441)				
Positioning	mm	0.008	0.008	0.008
Repeatability	mm	0.004	0.004	0.004
TOOL CHANGER				
Capacity	tools	21 / 30	21 / 30	21 / 30
Max tool Ø (full / adjacent empty)	mm	60 / 100	60 / 100	60 / 100
Max tool length	mm	300	300	300
Max tool weight	kg	5.5	5.5	5.5
Tool-to-tool change	sec	1.4	1.4	1.4
MACHINE				
Weight	kg	5,000	5,200	5,500

Spindle 12,000 / 20,000 / 24,000 / 36,000 rpm. Minimum air supply 5 bar.



SPINDLE OPTIONS

12,000 / 20,000 / 24,000 / 36,000 rpm. The high-speed options are chosen against the smallest drill in the part, not the largest — that is usually where the cycle is decided.

MAGAZINE

21 or 30 tools, 300 mm tool length, 5.5 kg per tool, Ø60 mm with a full magazine or Ø100 mm with the adjacent pocket empty.

Linear motor series

No ballscrew in X, Y or Z. Nothing to wear, nothing to backlash, and the positioning figure to match — 0.006 mm to VDI 3441.

HL-900zs / 1200zs / 1500zs / 1750zs — linear motor

Specification	Unit	HL-900zs	HL-1200zs	HL-1500zs	HL-1750zs
TRAVEL					
X	mm	900	1200	1500	1750
Y	mm	530	530	530	530
Z	mm	530	530	530	530
Spindle nose to table	mm	200–730 (150)	200–730 (150)	200–730 (150)	200–730 (150)
TABLE					
Working surface	mm	1000 × 525	1500 × 525	1700 × 525	1700 × 525
Max load	kg	1,200	1,200	1,200	1,200
T-slots	mm	4 × 18 × 100	4 × 18 × 100	4 × 18 × 100	4 × 18 × 100
SPINDLE					
Taper		BBT30	BBT30	BBT30	BBT30
Max speed	rpm	12,000 / 15,000 / 20,000	12,000 / 15,000 / 20,000	12,000 / 15,000 / 20,000	12,000 / 15,000 / 20,000
Motor power	kW	10	10	10	10
AXES					
Rapid X / Y / Z	m/min	100 / 60 / 60	100 / 60 / 60	60 / 60 / 60	60 / 60 / 60
Axis drive	kW	linear 3.3 / 3.3	linear 3.3 / 3.3	linear 5.4 / 5.4	linear 5.4 / 5.4
ACCURACY (VDI 3441)					
Positioning	mm	0.006	0.006	0.006	0.006
Repeatability	mm	0.003	0.003	0.003	0.003
TOOL CHANGER					
Capacity	tools	36 / 40	36 / 40	36 / 40	36 / 40
Max tool Ø (full / adjacent empty)	mm	60 / 80	60 / 80	60 / 80	60 / 80
Max tool length	mm	250	250	250	250
Max tool weight	kg	3	3	3	3
Tool-to-tool change	sec	1.4	1.4	1.4	1.4
MACHINE					
Weight	kg	8,000	8,500	12,000	16,000

Linear motors on X / Y / Z. Through-spindle coolant. Minimum air supply 5 bar.

WHY LINEAR MOTORS HERE

A ballscrew heats up, and it is the screw temperature — not the control — that moves the axis through a long run. Removing the screw removes that drift, along with the backlash and the wear that a high-cycle-count machine puts into it.

Through-spindle coolant is standard on this series, because at 20,000 rpm in a deep hole the chip has to be pushed out, not flooded from outside.



Main range

HL-850S ... HL-2500S

Specification	Unit	HL-850S	HL-855S	HL-1050S	HL-1650S	HL-2000S	HL-2500S
TRAVEL							
X	mm	800	800	1000	1600	2000	2500
Y	mm	500	500	500	500	500	500
Z	mm	500	500	500	300	300	300
Spindle nose to table	mm	140–640	130–680	150–650	150–450	150–450	150–450
TABLE							
Working surface	mm	1000 × 500	1000 × 500	1100 × 500	1700 × 500	2100 × 525	2500 × 525
Max load	kg	800	800	800	800	800	800
T-slots	mm	5 × 18 × 100	5 × 18 × 100	5 × 18 × 100	5 × 18 × 100	4 × 18 × 10	4 × 18 × 10
SPINDLE							
Taper		BBT40	BBT30	BBT40	BT40	BT40	BT40
Max speed	rpm	20,000	20,000	20,000	20,000	20,000	20,000
Motor power	kW	10	10	10	10	10	10
AXES							
Rapid X / Y / Z	m/min	60 / 60 / 50	60 / 60 / 50	60 / 60 / 50	60 / 60 / 50	60 / 60 / 50	60 / 60 / 50
Axis motor power	kW	3.3 / 3.3 / 3.3	3.3 / 3.3 / 3.3	3.3 / 3.3 / 3.3	3.3 / 3.3 / 3.3	3.3 / 3.3 / 3.3	3.3 / 3.3 / 3.3
ACCURACY (VDI 3441)							
Positioning	mm	0.008	0.008	0.008	0.008	0.008	0.008
Repeatability	mm	0.004	0.004	0.004	0.004	0.004	0.004
TOOL CHANGER							
Capacity	tools	20	30	20	30	20	20
Max tool Ø (full / adjacent empty)	mm	60 / 80	60 / 80	60 / 80	60 / 80	60 / 80	60 / 80
Max tool length	mm	250	250	250	250	250	250
Max tool weight	kg	8	5.5	8	8	8	8
Tool-to-tool change	sec	1.4	1.4	1.4	1.4	1.4	1.4
MACHINE							
Weight	kg	4,300	4,300	5,900	6,900	7,300	7,900

Spindle 12,000 / 15,000 / 20,000 rpm (optional). Minimum air supply 5 bar.

HL-850F ... HL-2500F — FANUC series

Specification	Unit	HL-850F	HL-1050F	HL-1180F	HL-1650F	HL-2000F	HL-2500F
TRAVEL							
X	mm	800	1000	1100	1600	2000	2500
Y	mm	500	500	800	500	500	500
Z	mm	500	500	550	300	300	300
Spindle nose to table	mm	140–640	150–650	130–680	150–450	150–450	150–450
TABLE							
Working surface	mm	1000 × 500	1100 × 500	1200 × 800	1700 × 500	2100 × 525	2500 × 525
Max load	kg	800	800	800	800	800	800
T-slots	mm	5 × 18 × 100	5 × 18 × 100	5 × 18 × 100	5 × 18 × 100	4 × 18 × 10	4 × 18 × 10
SPINDLE							
Taper		BBT40	BBT40	BT30	BT40	BT40	BT40
Max speed	rpm	15,000	15,000	15,000	15,000	15,000	15,000
Motor power	kW	7.5 / 11	7.5 / 11	7.5 / 11	7.5 / 11	7.5 / 11	7.5 / 11
AXES							
Rapid X / Y / Z	m/min	56 / 56 / 56	56 / 56 / 56	56 / 56 / 56	56 / 56 / 56	56 / 56 / 56	56 / 56 / 56
Axis motor power	kW	1.8 / 1.8 / 3.0 (2.7 / 2.7 / 2.7)	1.8 / 1.8 / 3.0 (2.7 / 2.7 / 2.7)	1.8 / 1.8 / 3.0 (2.7 / 2.7 / 2.7)	1.8 / 1.8 / 3.0 (2.7 / 2.7 / 2.7)	1.8 / 1.8 / 3.0 (2.7 / 2.7 / 2.7)	1.8 / 1.8 / 3.0 (2.7 / 2.7 / 2.7)
ACCURACY (VDI 3441)							
Positioning	mm	0.008	0.008	0.008	0.008	0.008	0.008
Repeatability	mm	0.004	0.004	0.004	0.004	0.004	0.004

Full model list

Further models

Specification	Unit	HL-600S/F	HL-645S/F	HL-745S/F	HL-800S/F	HL-842S/F	HL-853S/F
TRAVEL							
X / Y / Z	mm	600 / 400 / 300	600 / 450 / 300	700 / 455 / 300	800 / 500 / 330	800 / 500 / 420–450	800 / 500 / 530
TABLE							
Working surface	mm	700 × 450	700 × 450	800 × 450	1000 × 500	1000 × 500	1000 × 500
SPINDLE							
Taper		BBT30	BBT30	BBT30	BBT30	BT30 power	BT30
Max speed	rpm	12,000–20,000	12,000–20,000	12,000–20,000	12,000–20,000	12,000	12,000
TOOL CHANGER							
Capacity	tools	21	21	21	21 (26 / 30)	21 (30)	21 (30)
ACCURACY							
VDI pos. / rep.	mm	0.008 / 0.004	0.008 / 0.004	0.008 / 0.004	0.008 / 0.004	0.008 / 0.004	0.008 / 0.004

Positioning / repeatability to VDI 3441 as noted.

Further models (continued)

Specification	Unit	HL-860S/F	HL-1000S/F	HL-1065S/F	HL-1180S/F	HL-1365S/F	VF-510HS
TRAVEL							
X / Y / Z	mm	800 / 600 / 380	1000 / 500 / 330	1000 / 600 / 500	1100 / 800 / 550	1300 / 650 / 450	510 / 400 / 300
TABLE							
Working surface	mm	1000 × 550	1100 × 500	1100 × 600	1200 × 800	1400 × 600	650 × 400
SPINDLE							
Taper		BT30	BBT30	BT30	BT30	BBT30	BBT30
Max speed	rpm	12,000	12,000–20,000	12,000	12,000	12,000	12,000–20,000
TOOL CHANGER							
Capacity	tools	21 (30)	21 (26 / 30)	21 (30)	21 (30)	21 (26 / 30)	21
ACCURACY							
VDI pos. / rep.	mm	0.008 / 0.004	0.008 / 0.005	0.008 / 0.004	0.008 / 0.005	0.010 / 0.005	0.008 / 0.005

Gantry, twin spindle and five axis

Specification	Unit	HL-1050S/F gantry	HL-1355S/F gantry	HL600-2tool	HL5A-260 (S/X)
TRAVEL					
X / Y / Z	mm	1050 / 550 / 350	1350 / 550 / 350	600 / 450 / 330 (twin Z)	600 / 450 / 330
TABLE					
Working surface	mm	1500 × 550	1500 × 550	900 × 420	Ø260 direct-drive
SPINDLE					
Taper		BT30, Ø120	BT30	BT30	BT30
Max speed	rpm	12,000–20,000	12,000–20,000	12,000	12,000
TOOL CHANGER					
Capacity	tools	30 (36)	30 (36)	21	26
ACCURACY					
VDI pos. / rep.	mm	0.008 / 0.004	0.010 / 0.005	0.008 / 0.004	0.008 / 0.004

Service and support

WITH THE MACHINE

- On-site installation, levelling and commissioning to verified accuracy
- Hands-on training for operators and programmers on the chosen control
- Genuine spare parts from the manufacturer
- Remote diagnostics and technical support

BEYOND THE MACHINE

- Fixtures and tooling designed around your part
- Automated islands designed, built and commissioned
- Machine logic and automation interfaces adapted to your process

RECOGNITIONS

- CE certification
- National High-Tech Enterprise
- National Advanced Industrial Mother Machine Manufacturer
- Zhejiang Manufacturing "Pin" mark

BEFORE YOU COMMIT

Send a part drawing and we will machine that part on the actual machine, then ship you the part with its inspection report. On a drill-tap job we will also send the cycle time we measured, with the tool list we used to get it.

Customers are welcome to visit the plant and watch their machine run before it is shipped.

ON THE CONTROL

Siemens, FANUC or Mitsubishi. The control, drives and motors are then supported by that manufacturer's own service organisation in your country.



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Specifications are for general information and may change without notice. Photographs may differ from the delivered configuration. The final specification is confirmed against your part drawing at quotation stage.