

Machining centres

HELLER



Technical data

THE HF SERIES

HELLER solutions:
Knowing how it's done.

HFseries

5-axis machining centres 5th axis provided by the workpiece

HF series - Technical data		H 2000		HF 3500	
Positioning range	Longitudinal stroke (X-axis)	mm	630	710	
	Vertical stroke (Y-axis)	mm	630	750	
	Transverse stroke (Z-axis)	mm	630	710	
Feed forces	X-, Y-, Z-axis at S3 40%	N	10,000 / 10,000 / 15,000	8,000	
Speed	Rapid traverse in X, Y and Z-axis: standard (Speed)	m/min	65 (90)	65 (90/90/80)	
	Acceleration in X-, Y- and Z-axis: standard (Speed)	m/s ²	8 (10)	8 (10/10/8)	
Direct absolute linear measuring scales	Direct, absolute linear measuring scales with highest resolution in X-, Y- and Z-axis. Positioning tolerance T _p (acc. to VDI/DGQ 3441)	mm	0.007	0.007	
Tool management	Tool shank HSK-A / SK / BT		63 / □ / □	HSK-A 63	HSK-A 100
	Chip-to-chip time ²⁾ standard (Speed) acc. to VDI 2852	s	2.8 (2.3)	2.7 (2.4)	3.3 (3.0)
	Tool dimension: diameter x length	mm	160 x 410	160 x 500	280 x 500
	Tool weight (observe the overall load capacity)	kg	12	12	25
Workpiece management	Clamping surface (clamping plate)	mm	400 x 500	Pallet 400 x 500	Table Ø 630 (Ø 710)
	Workpiece dimension: diameter x height	mm	Ø 720 x 850	Ø 710 ³⁾ x 630	Ø 710 x 690
	Clamping dimensions: standard (Speed)	kg	800 (500)	550 (400)	550 (400)
Control	Siemens SINUMERIK 840D sl / Fanuc 31i-B		■ / ■	■ / –	

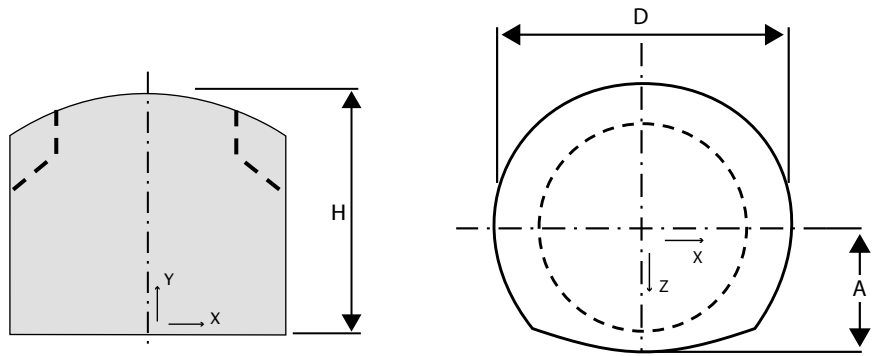
1) With 900 mm tilting units

2) t2, t3 closest tool | HSK-A 63 ≤ 3 kg | HF series HSK-A100 ≤ 5 kg | H / F series HSK-A100 ≤ 12 kg

3) Workpiece collision path constricted on one side

■ Standard □ Option () Optional values – Not available

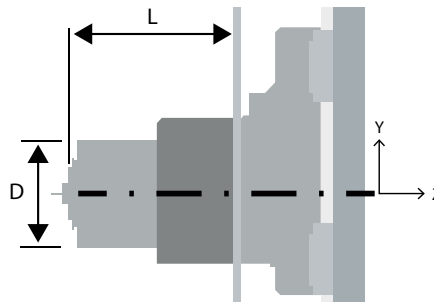
H 4000	FP 4000	H 4500	H 5000	HF 5500		H 6000	FP 6000
800	800	800	800	900		1,000	1,000
800	800 ¹⁾	800	800	950		1,000	1,000
800	1,045	800	800	900		1,000	1,300
10,000 / 10,000 / 15,000	10,000 / 10,000 / 15,000	10,000 / 10,000 / 15,000	15,000 / 15,000 / 20,000	10,000		15,000 / 15,000 / 20,000	15,000
65 (90)	65	65	50 (65)	65 (90/90/80)		50 (65)	65
8	6	6	5 (7)	8 (10/10/8)		5 (7)	4
0.007	0.007	0.007	0.007	0.007		0.009	0.009
63 / □ / □	63 / □ / □	100 / □ / □	100 / □ / □	HSK-A 63	HSK-A 100	100 / □ / □	100 / □ / □
3.0 (2.5)	3.7	4.0	4.0 (3.8)	2.9 (2.6)	3.5 (3.2)	4.2 (4.0)	5.9
160 x 450	160 x 450	280 x 600	280 x 600	160 x 550	280 x 550	280 x 600	280 x 600
12	12	25 (35)	25 (35)	12	25	25 (35)	25 (35)
500 x 630	500 x 630	500 x 630	630 x 630	Pallet 500 x 630	Table Ø 800 (Ø 900)	630 x 630	630 x 630
Ø 900 x 1,000	Ø 900 x 1,000	Ø 900 x 1,000	Ø 900 x 1,000	Ø 900 ³⁾ x 800	Ø 900 x 860	Ø 1,000 x 1,200	Ø 1,000 x 1,200
1,400 (800)	1,400	1,400	1,400 (1,000)	750 (500)	750 (500)	1,400 (1,000)	1,400
■ / ■	■ / -	■ / ■	■ / ■	■ / -		■ / ■	■ / -



Workpiece management			HF 3500		HF 5500	
			Pallet	Table	Pallet	Table
Capacity	Clamping surface	mm	400 x 500	Ø 630 (Ø 710 ¹⁾)	500 x 630	Ø 810 (Ø 880 ¹⁾)
	Workpiece dimension: diameter x height	mm	Ø 710 ²⁾ [285] x 630	Ø 710 [-] x 690	Ø 900 ²⁾ [360] x 800	Ø 900 [-] x 870
	Loading capacity standard (Speed)	kg	550 (400)	550 (400)	750 (500)	750 ¹⁾ (500 ¹⁾)
Pallet change	Pallet change time	s	12	-	13	-

1) Clamping plate () Optional values - Not available

2) Workpiece collision path constricted on one side

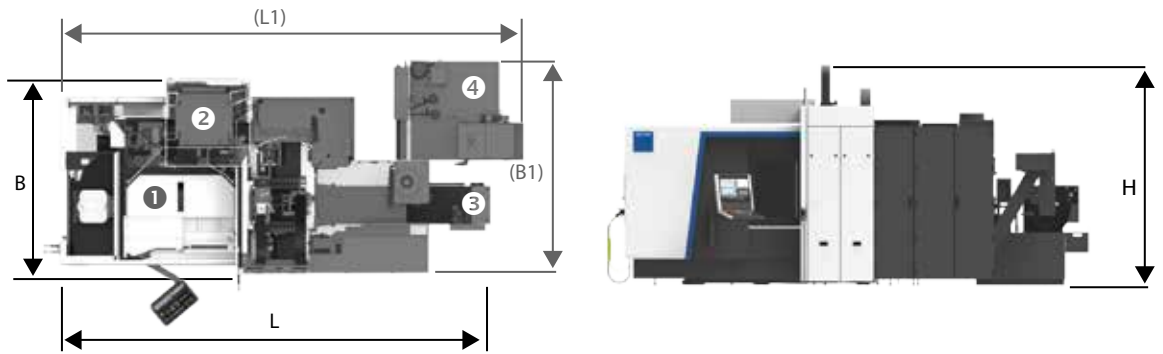


Spindle units		SC 63		PC 63		SC 100		PC 100	
		HSK-A 63				HSK-A 100			
Characteristics	Version		Speed Cutting	Power Cutting	Speed Cutting	Power Cutting	Speed Cutting	Power Cutting	
	Spindle diameter in front bearing	mm	Ø 70	Ø 80	Ø 110	Ø 110	Ø 110	Ø 110	
Dynamics & performance	Speed range min - max	rpm	5 - 18,000	5 - 12,000	5 - 12,000	5 - 10,000	5 - 12,000	5 - 10,000	
	Drive power S6 40% 10min duty cycle	kW	47	46	46	48	46	48	
	Torque S6 40% 10min duty cycle	Nm	100	201	201	354	201	354	
Availability	HF 3500 / HF 5500		■ / ■	□ / □	□ / □	□ / □	□ / □	□ / □	

■ Standard □ Option

Supply and disposal			PBF		VRF	
			Paperband filter		Vacuum rotation filter	
Coolant unit	Version		Paperband filter		Vacuum rotation filter	
	Coolant tank capacity	ltr	1,150		1,200	
Flushing capacity	IKZ ¹⁾ 50 (70) bar [high pressure]	l/min	30 (24)		30 (19)	
Availability	HF 3500 / HF 5500		□ / □		□ / □	

1) IKZ: Coolant supply through the spindle □ Option () Optional values - Not available



Footprint		HF 3500	HF 5500
Dimensions ¹⁾ Table loading	L (L1) x B (B1) x H	6,000 (6,300) x 3,000 (3,250) x 3,500	6,450 (6,750) x 3,200 (3,450) x 3,550
	[1] Basic machine [2] Chain-type magazine C54 [3] Chip conveyor [4] (Coolant unit: PBF)		
Dimensions ¹⁾ Pallet changer	L (L1) x B (B1) x H	6,500 (6,800) x 3,000 (3,250) x 3,500	6,950 (7,250) x 3,200 (3,450) x 3,550
	[1] Basic machine [2] Chain-type magazine C54 [3] Chip conveyor [4] (Coolant unit: PBF)		

1) Approximate values, for precise dimensions see general layout () Optional values

Linear axes		HF 3500	HF 5500
Positioning range	Longitudinal- (X) / Vertical- (Y) / Transverse stroke (Z) mm	710 / 750 / 710	900 / 950 / 900
Dynamics & performance	Rapid traverse speed: standard (Speed) m/min	65 (90 / 90 / 80)	65 (90 / 90 / 80)
	Acceleration: standard (Speed) m/s ²	8 (10 / 10 / 8)	8 (10 / 10 / 8)
	Feed forces at S3 40% N	8,000	10,000
Precision	Positioning tolerance Tp (acc. to VDI/DGQ 3441) mm	0.007	0.007
	Path measurement: Direct, absolute	■	■

■ Standard () Optional values

Rotary axes		HF 3500		HF 5500	
		A	B	A	B
Dynamics & performance	Max. speed positioning mode 3+2 (simultaneous 5-axis machining) rpm	26 (35)	80	26 (35)	60
Precision	Indexing degrees	0.001°	0.001°	0.001°	0.001°
	Indexing accuracy Tp (acc. to VDI/DGQ 3441) angular s	12	10	12	10
	Angle measuring system: direct, absolute	■	■	■	■

■ Standard () Optional values

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