

# SMALL MOTOR SPINDLES

Ø 16mm - 45mm

## **HF/HT motor spindles for micro-milling application with synchronous motor technology.**

IBAG small motor spindles have been developed for use on turning centers and CNC automatic lathes. Resulting with dramatically improve cutting efficiency in medical and micro-manufacturing technologies.

IBAG spindles deliver the highest productivity and quality for all manufacturing processes, including finishing, grinding, micro-drilling, engraving and high speed cutting. Typical applications include tool and die production, mold making, optical components and nanotechnology parts. Models are available with maximum speeds to 160'000 RPM and power up to 1.3 kW (see details on the back side).

IBAG Small Spindle Systems are supplied as a complete package insuring the best high speed performance, installed on a new machine by the OEM, or as a retrofit on existing equipment. The complete system includes the HF/HT motor spindle, supply unit, frequency converter, and all necessary cables, tubes and connectors. All components have a two year warranty.



# SMALL MOTOR SPINDLES

## Technical Specification

Many IBAG spindles use high-frequency AC motors. If higher power and torque are required, IBAG small motor spindles are also available with DC synchronous motor technology, providing the highest productivity and quality possible for finishing, grinding, micro-drilling, engraving and high speed milling. The spindle housing dimensions are optimized to fit on most Swiss-type turning machines. The complete system provided by IBAG guarantees an easy, fast, „Plug & Go“ installation.

Type	Speed in RPM	Power S6 40% in W	Power S1 in W	Torque S1 in Ncm	Shaft Ø in mm	Ø / length in mm	Weight in kg
HT 16 S 100	100'000	210	160	1.9	0.5-3.175	16 (17) (18) / 110.3	0.150
HT 19 S 100	100'000	273	210	2.4	0.5-3.175	19 (20) / 108.0	0.150
HT 22 S 100	80'000	312	240	3.5	0.5-5.0	22 (22.8) / 126.5	0.200
HT (R) 25 S 60	120'000	182	140	1.6 / 2.3	0.5-5.0	25 (25.4) / 87.3	0.200
HT (R) 25 S 100	90'000	351	270	3.8 / 5.0	0.5-5.0	25 (25.4) / 118.0	0.300
HF 33 D/S 60	80'000	260	200	3.5	0.5-5.0	33 / 162.0	0.700
HT 33 D/S 60	80'000	520	400	4.8	0.5-5.0	33 / 162.0	0.700
HF 33 A 50	60'000	260	200	3.5	1.0-3.5	33 / 171.4	0.900
HF 33 A 60	60'000	260	200	3.5	1.0-3.5	33 / 205.5	0.900
HF 45 S 35	35'000	550	475	13.0	0.5-7.0	45 / 185.1	1.3
HF 45 S 60	60'000	975	750	11.9	0.5-7.0	45 / 185.1	1.3
HF 45 S 80	90'000	1'300	1'000	16.0	0.5-7.0	45 / 185.1	1.3
HF 45 A 50	80'000	975	750	8.9	3.0-6.35	45 / 235.5	2.3
HF 45 A 60	60'000	975	750	11.9	3.0-6.35	45 / 235.5	2.3
HT 45 S 140	160'000	936	720	4.3	0.45-4.05	45 / 127.5	1.1

# EQUIPMENT

- > Hybrid Ceramic Ball Bearings with Oil-Air Lubrication
- > 2, 3 or 4 Ball Bearings
- > Shaft with Spring-Preload for Higher Axial Stiffness
- > Advanced Protection using Double Labyrinth Air Seal
- > All Spindle Parts Hardened and Ground
- > All Rotating Parts Balanced < G1 at Maximum Speed
- > Tooling Interface with High Precision Collets, HF 33 A and HF 45 A with Automatic Tool Change (ATC)
- > Electrical Equipment: 230V/115V, 1 phase, 50/60Hz, Internally Fused, Power Transformer on Request
- > Supplied Documentation includes Operation Manual, Maintenance Instructions and Complete Troubleshooting Guide



## COMPLETE SYSTEM

The complete system consists of:

HF/HT Motor Spindle > Supply Unit > Frequency Converter



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