



## HFK 90, HFK 95 and HFK 135 Spindles

The IBAG HFK spindle systems provide fast and easy installation. The HFK spindles provide outstanding performance in fine detail milling, engraving and drilling. Especially in precision mold and die work, machining small parts of aluminum and plastics and milling graphite and copper electrodes, they give you exceptional economy in operation. The "Plug&Go"-Spindles can be quickly installed on most common machining centers. Due to the light weight on the HFK 95, these spindles can be used with ATC Automatic Tool Change (Option Q).

IBAG's "Plug&Go"-Spindles are delivered as complete systems including the necessary supply units with proven components, cables, connectors, hoses. Additionally all the necessary installation and service manuals, wiring schematics and operation manuals are provided. IBAG assumes responsibility for high quality and reliability of all the components - motor spindles and supply units - with a two years warranty.

.... IBAG of course



HFK 95.1 S 40 CP

## The Unique "Plug&Go"-System

High Speed on each and every Machining Center

Complete System HFK  
135 with supply unit 35



Complete System  
HFK 90 with supply  
unit 20

of course from  
of course from



HFK 135 S 30

HFK 90 S 40



## HFK Spindle Features

The HFK 90, HFK 95, and HFK 135 "Plug&Go" spindles allow mostly all plants to gain the advantages of high speed cutting. The complete systems are easily installed on vertical and horizontal machining centers.

Advantages of the HFK 95 spindles: They can be adapted through ATC Automatic Tool Change (Option Q). The HFK spindles are very affordable in price. At reasonable invest they give you the chance to profit from all the advantages of High Speed Cutting.

### New: HFK 95 - small, lightweight, powerful

The HFK 95 spindle "Plug&Go" provides highest flexibility in High Speed Cutting. The spindle can be adapted automatically from the tool magazine into the main spindle of the machining center. This is possible through the automatic coupling for electricity and pneumatics. IBAG delivers the fitting from the main spindle for nearly every common machining center. Thanks to air cooling and grease lubrication a small supply unit with integrated converter and a feed with pressurized air is sufficient for the HFK 95 spindle.

*Complete system HFK 95.1 with converter, same system fits HFK 90.1*



*HFK 95.1 Q with automatic coupling for ATC Automatic Tool Change*



*HFK 90*



*HFK 135*

### Equipment HFK 90 and HFK 135:

- ◆ Integrated monitoring: sensors for motor temperature prevent overheating
- ◆ Precision ceramic hybrid ball bearings with metered oil-air lubrication (type C) or with grease lubrication (type CP)
- ◆ Tooling system with collets, manual quick change system available for HFK 135
- ◆ Delivered systems include: 1 precision collet, tension nut, service wrenches, cables and hoses, standard adapter SK40 (option: SK50, CAT, BT oder HSK63) to fit into the main spindle, other adapters on request
- ◆ Warranty supports normal operation: 2 years, on worn parts 12 months or 2'000 hours of operation, including spindle bearings
- ◆ Electrical equipment :  
HFK 90 and HFK 135: 400 V, 3 phases, 50 Hz, internally fused  
HFK 90.1 and HFK 95.1: 230 V, 1 phase, 50 Hz, internally fused, transformers available on request

### Supply units 20 und 35:

- ◆ Optimized frequency converter
- ◆ Coolant tank, coolant pump, temperature sensor, low level and temperature alarm, average coolant temperature 24 - 26 °C, container with 1 litre concentrated coolant Greencool
- ◆ Air supply unit with regulator, filter, and pressure tank
- ◆ Spindle lubrication system, including high pressure pump, storage tank (1.5 l), sensors for level and pressure, container with 1 litre oil Mobil DTE

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Type HFK	speed n rpm	peak power kW	power kW	torque Nm	tool diameter mm	d / l mm	spindle weight kg
90 S 40 C	60'000	4,6	3,0	0,5	1 - 10	90 / 182	7
90 S 40 CP	42'000	3,2	2,1	0,5	1 - 10	90 / 182	7
90.1 S 40 C	60'000	2,7	1,4	0,4	1 - 10	90 / 182	7
90.1 S 40 CP	42'000	2,7	1,4	0,4	1 - 10	90 / 182	7
95.1 S 40 CP	42'000	2,2	1,0	0,3	1 - 10	99,5 / 141	4
135 S 30 C	40'000	23	10,4	4,7	1 - 16	135 / 245	19
135 S 30 CP	30'000	23	10,4	4,7	1 - 16	135 / 245	19

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