



# Machine tooling technology

Motor spindles

System Accessories

**THE KNOW-HOW FACTORY**

**THE KNOW-HOW FACTORY**

# ZIMMER GROUP COMMITTED TO OUR CUSTOMERS

**WE HAVE SUCCEEDED FOR YEARS BY OFFERING OUR CUSTOMERS INNOVATIVE AND INDIVIDUALIZED SOLUTIONS. ZIMMER HAS GROWN CONTINUOUSLY AND TODAY WE HAVE REACHED A NEW MILESTONE: THE ESTABLISHMENT OF THE KNOW-HOW FACTORY. IS THERE A SECRET TO OUR SUCCESS?**

**Foundation.** Excellent products and services have always been the foundation of our company's growth. Zimmer is a source of ingenious solutions and important technical innovations. This is why customers with high expectations for technology frequently find their way to us. When things get tricky, Zimmer Group is in its best form.

**Style.** We have an interdisciplinary approach to everything we do, resulting in refined process solutions in six technology fields. This applies not just to development but to production. Zimmer Group serves all industries and stands ready to resolve even the most unique and highly individualized problems. Worldwide.

**Motivation.** Customer orientation is perhaps the most important factor of our success. We are a service provider in the complete sense of the word. With Zimmer Group, our customers have a single, centralized contact for all of their needs. We approach each customer's situation with a high level of competence and a broad range of possible solutions.



# TECHNOLOGIES



## HANDLING TECHNOLOGY

MORE THAN 30 YEARS OF EXPERIENCE AND INDUSTRY KNOWLEDGE: OUR PNEUMATIC, HYDRAULIC AND ELECTRICAL HANDLING COMPONENTS AND SYSTEMS ARE GLOBAL LEADERS.

**Components.** More than 2,000 standardized grippers, swivel units, robotic accessories and much more. We offer a complete selection of technologically superior products that are ready for rapid delivery.

**Semi-standard.** Our modular approach to design enables custom configurations and high rates of innovation for process automation.



## DAMPING TECHNOLOGY

INDUSTRIAL DAMPING TECHNOLOGY AND SOFT CLOSE PRODUCTS EXEMPLIFY THE INNOVATION AND PIONEERING SPIRIT OF THE KNOW-HOW FACTORY.

### Industrial damping technology.

Whether standard or customized solutions, our products stand for the highest cycle rates and maximum energy absorption with minimal space requirements.

**Soft Close.** Development and mass production of pneumatic and fluid dampers with extraordinary quality and rapid delivery.

**OEM and direct.** Whether they need components, returning mechanisms or complete production lines – we are the trusted partner of many prestigious customers.



## LINEAR TECHNOLOGY

WE DEVELOP LINEAR COMPONENTS AND SYSTEMS THAT ARE INDIVIDUALLY ADAPTED TO OUR CUSTOMERS' NEEDS.

### Clamping and braking elements.

We offer you more than 4,000 types for profiled and round rails as well as for a variety of guide systems from all manufacturers. It makes no difference whether you prefer manual, pneumatic, electric or hydraulic drive.

**Flexibility.** Our clamping and braking elements ensure that movable components such as Z-axes or machining tables maintain a fixed position and that machines and systems come to a stop as quickly as possible in an emergency.



## PROCESS TECHNOLOGY

MAXIMUM EFFICIENCY IS ESSENTIAL FOR SYSTEMS AND COMPONENTS USED IN PROCESS TECHNOLOGY. HIGH-LEVEL CUSTOM SOLUTIONS ARE OUR TRADEMARK.

**A rich reservoir of experience.** Our know-how ranges from the development of materials, processes and tools through product design to production of series products.

**Deep production capabilities.** The Zimmer Group pairs these capabilities with flexibility, quality and precision, even when making custom products.

**Series production.** We manufacture demanding products out of metal (MIM), elastomers and plastics with flexibility and speed.



## MACHINE TECHNOLOGY

ZIMMER GROUP DEVELOPS INNOVATIVE METAL, WOOD AND COMPOSITE MATERIAL PROCESSING TOOL SYSTEMS FOR ALL INDUSTRIES. NUMEROUS CUSTOMERS CHOOSE US AS THEIR SYSTEMS AND INNOVATION PARTNER.

**Knowledge and experience.** Industry knowledge and a decades-long development partnership in exchangeable assemblies, tool interfaces and systems make us bound for new challenges around the world.

**Components.** We deliver numerous standard components from stock and develop innovative, customized systems for OEM and end customers – far beyond the metal and wood processing industries.

**Variety.** Whether you have machining centers, lathes or flexible production cells, the power tools, holders, assemblies and drilling heads of Zimmer Group are ready for action.



## SYSTEM TECHNOLOGY

ZIMMER GROUP IS ONE OF THE LEADING SPECIALISTS IN THE DEVELOPMENT OF CUSTOMIZED SYSTEM SOLUTIONS WORLDWIDE.

**Customized.** A team made up of more than 20 experienced designers and project engineers develop and produce customized solutions for special tasks in close collaboration with end customers and system integrators. It doesn't matter if it is a simple gripper and handling solution or a complex system solution.

**Solutions.** These system solutions are used in many industries, from mechanical engineering to the automotive and supplier industries to plastics engineering and consumer goods industries, all the way to foundries. The Know-how Factory helps countless companies to thrive competitively by increasing automation efficiency.

# MOTOR SPINDLES

## ORDER INFORMATION

### STRUCTURE OF THE ORDER NUMBER

Example:

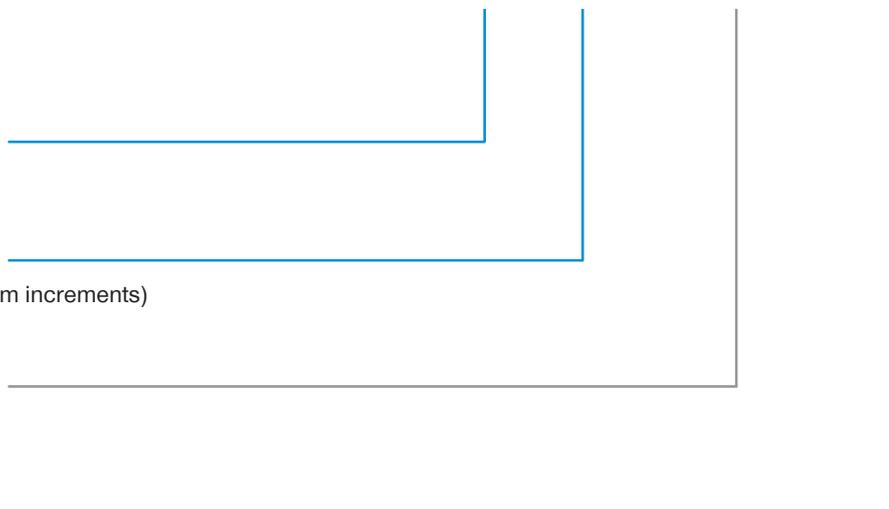
**HF** **145** - **001** - **001**

▶ **Motor spindle**  
HF high frequency

▶ **Size**  
in mm (rounded up in 5 mm increments)

▶ **Module/series**  
sequential numbering

▶ **Variant**  
sequential numbering



# MOTOR SPINDLES

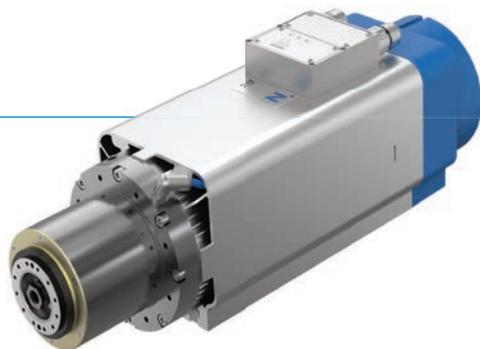
## OVERVIEW

Version	Rated power S1 [kW]	Rated torque S1 [Nm]	max. Speed [rpm]	Cooling	Motor technology	Version	Page
HF145-001-001	6	4,9	24.000	Electric fan	Asynchronous	Basic variant	<a href="#">8</a>
HF145-001-002	7,5	6,1	24.000	Electric fan	Asynchronous	Basic variant	<a href="#">10</a>
HF145-001-003	11,8	9,6	24.000	Electric fan	Asynchronous	Basic variant	<a href="#">12</a>
HF145-001-004	6	4,9	24.000	Electric fan	Asynchronous	Vector control	<a href="#">14</a>
HF145-001-005	7,5	6,1	24.000	Electric fan	Asynchronous	Vector control	<a href="#">16</a>
HF145-001-006	11,8	9,6	24.000	Electric fan	Asynchronous	Vector control	<a href="#">18</a>
HF125-002-001	9	7,3	24.000	Water	Asynchronous	Basic variant	<a href="#">20</a>
HF125-002-002	12	9	24.000	Water	Asynchronous	Basic variant	<a href="#">22</a>
HF125-002-004	9	7,3	24.000	Water	Asynchronous	Vector control	<a href="#">24</a>
HF125-002-005	12	9	24.000	Water	Asynchronous	Vector control	<a href="#">26</a>
HF150-003-001	14,5	14,7	26.000	Water	Asynchronous	Vector control	<a href="#">28</a>
HF150-003-003	14,5	14,7	26.000	Water	Asynchronous	Basic variant	<a href="#">30</a>
HF150-005-001	20	18,5	24.000	Water	Synchronous	Vector control	<a href="#">32</a>
HF150-005-002	20	14,3	24.000	Water	Asynchronous	Vector control	<a href="#">34</a>
HF205-006-001	34	83,7	14.000	Water	Asynchronous	Vector control	<a href="#">36</a>
HF205-006-002	48	153	6.000	Water	Synchronous	Vector control	<a href="#">38</a>
SYSTEM ACCESSORIES							<a href="#">41</a>

# MOTOR SPINDLES

## HF145-001-001

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 6 kW**  
**Rated torque S1: 4.9 Nm**  
**Max. speed: 24,000 rpm**
- ▶ Air cooling via electric fan
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites

### ▶ EQUIPMENT FEATURES



Conus cleaning of tool fixation



IO-Link



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change

### ▶ OPTIONS



C-axis interface



Acceleration sensor



Vector controlled / feedback



Manual tool release pushbutton



Aggregate interface



Robot change unit

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Power lines

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Signal lines

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Robot change unit

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## ▶ TECHNICAL DATA

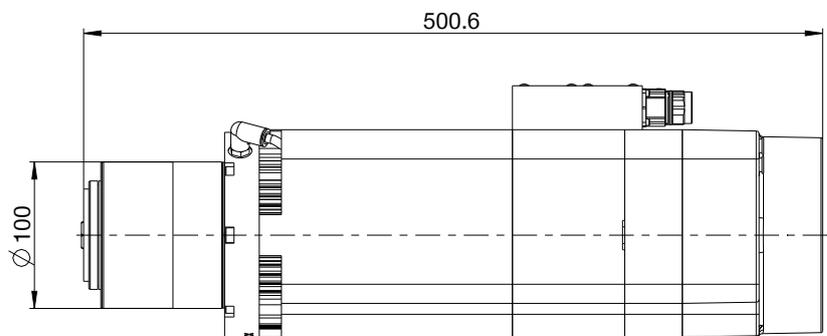
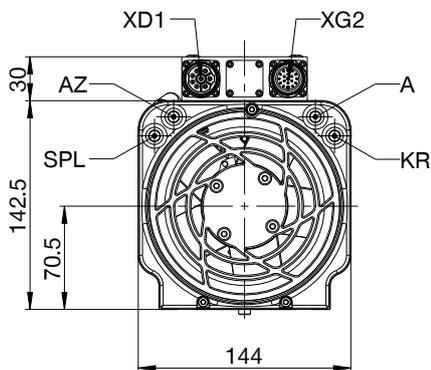
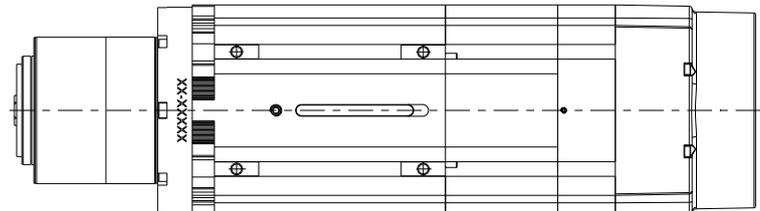
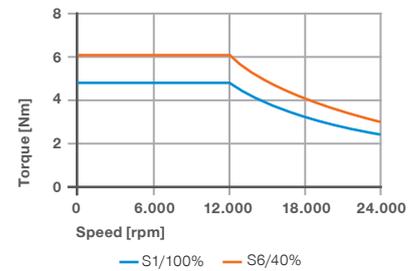
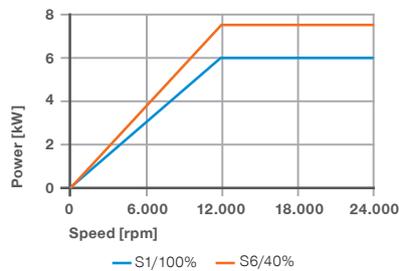
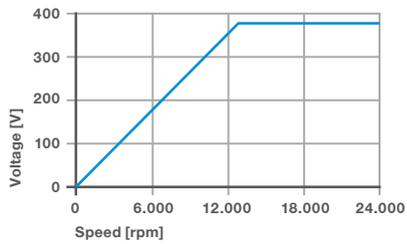
### ▶ HF145-001-001

Three phase asynchron motor, 4-poles

<b>Nominal output S1 [kW]</b>	6.0
<b>Rated torque S1 [Nm]</b>	4.9
<b>Nominal current S1 [A]</b>	13
<b>Nominal speed [rpm]</b>	11.780
<b>Max. speed [rpm]</b>	24.000
<b>Tool interface</b>	HSK-F63
<b>Motor technology</b>	Asynchronous
<b>Number of poles</b>	4
<b>Release unit</b>	Pneumatic
<b>Cooling</b>	Electric fan
<b>Weight [kg]</b>	29

### ▶ Interface Diagram

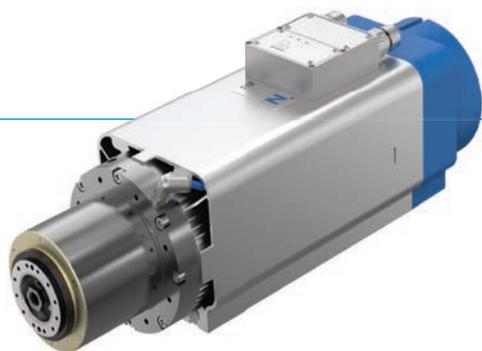
	Interface
<b>A</b>	Tool unlocked
<b>AZ</b>	Tool clamping
<b>KR</b>	Conus cleaning
<b>SPL</b>	Sealing air
<b>XD1</b>	Power and signal connector
<b>XG2</b>	Signal connector



# MOTOR SPINDLES

## HF145-001-002

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 7.5 kW**  
**Rated torque S1: 6.1 Nm**  
**Max. speed: 24,000 rpm**
- ▶ Air cooling via electric fan
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites

### ▶ EQUIPMENT FEATURES



Conus cleaning of tool fixation



IO-Link



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change

### ▶ OPTIONS



C-axis interface



Acceleration sensor



Vector controlled / feedback



Manual tool release pushbutton



Aggregate interface



Robot change unit

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Power lines

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Signal lines

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Robot change unit

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## ▶ TECHNICAL DATA

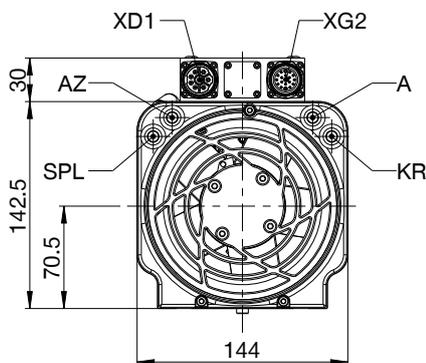
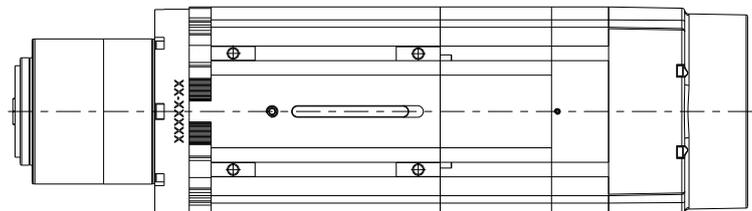
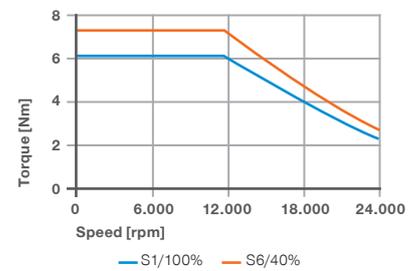
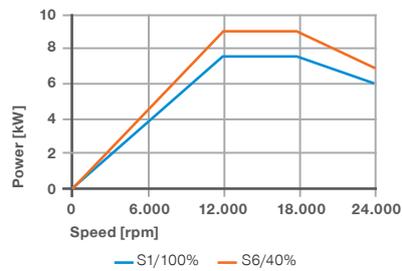
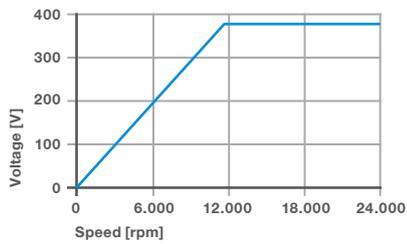
### ▶ HF145-001-002

Three phase asynchron motor, 4-poles

Nominal output S1 [kW]	7.5
Rated torque S1 [Nm]	6.1
Nominal current S1 [A]	15
Nominal speed [rpm]	11.770
Max. speed [rpm]	24.000
Tool interface	HSK-F63
Motor technology	Asynchronous
Number of poles	4
Release unit	Pneumatic
Cooling	Electric fan
Weight [kg]	30

### ▶ Interface Diagram

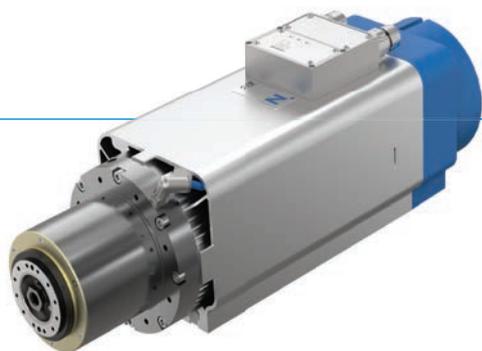
	Interface
A	Tool unlocked
AZ	Tool clamping
KR	Conus cleaning
SPL	Sealing air
XD1	Power and signal connector
XG2	Signal connector



# MOTOR SPINDLES

## HF145-001-003

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 11.8 kW**  
**Rated torque S1: 9.6 Nm**  
**Max. speed: 24,000 rpm**
- ▶ Air cooling via electric fan
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites

### ▶ EQUIPMENT FEATURES



Conus cleanig of tool fixation



IO-Link



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change

### ▶ OPTIONS



C-axis interface



Acceleration sensor



Vector controlled / feedback



Manual tool release pushbutton



Aggregate interface



Robot change unit

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Power lines

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Signal lines

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## ▶ TECHNICAL DATA

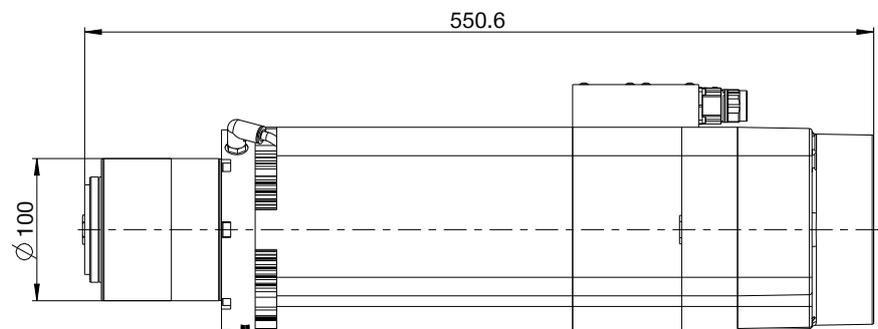
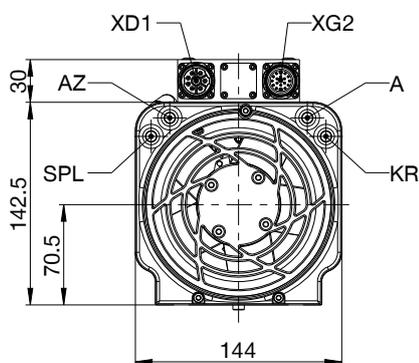
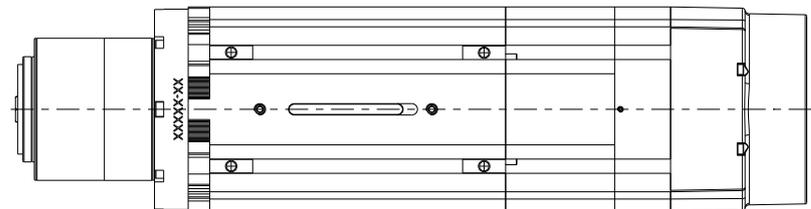
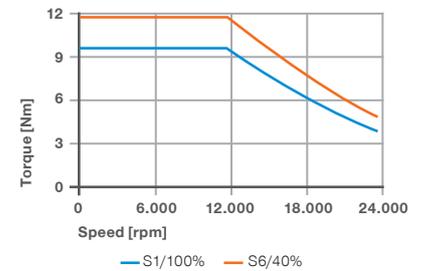
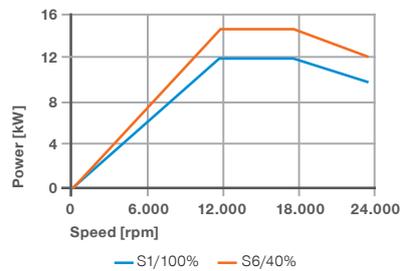
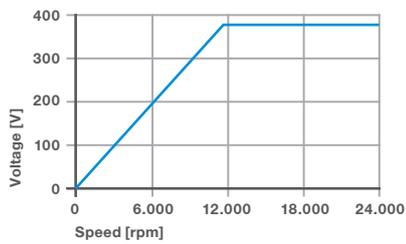
### ▶ HF145-001-003

Three phase asynchron motor, 4-poles

Nominal output S1 [kW]	11.8
Rated torque S1 [Nm]	9.6
Nominal current S1 [A]	25
Nominal speed [rpm]	11.780
Max. speed [rpm]	24.000
Tool interface	HSK-F63
Motor technology	Asynchronous
Number of poles	4
Release unit	Pneumatic
Cooling	Electric fan
Weight [kg]	35

### ▶ Interface Diagram

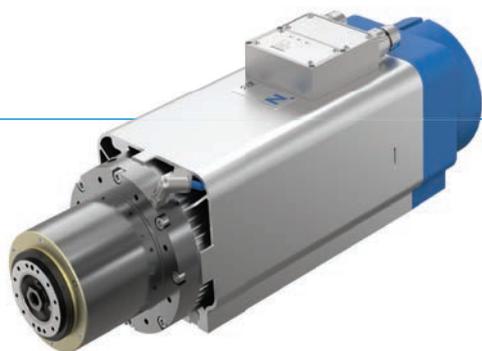
	Interface
A	Tool unlocked
AZ	Tool clamping
KR	Conus cleaning
SPL	Sealing air
XD1	Power and signal connector
XG2	Signal connector



# MOTOR SPINDLES

## HF145-001-004

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 6 kW**  
**Rated torque S1: 4.9 Nm**  
**Max. speed: 24,000 rpm**
- ▶ Air cooling via electric fan
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites
- ▶ Vector controlled

### ▶ EQUIPMENT FEATURES



Conus cleaning of tool fixation



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change



IO-Link



Vector controlled / feedback



C-axis interface



Acceleration sensor



Manual tool release pushbutton



Aggregate interface



Robot change unit

### ▶ OPTIONS

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Power lines

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Signal lines

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Encoder lines

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Robot change unit

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## ▶ TECHNICAL DATA

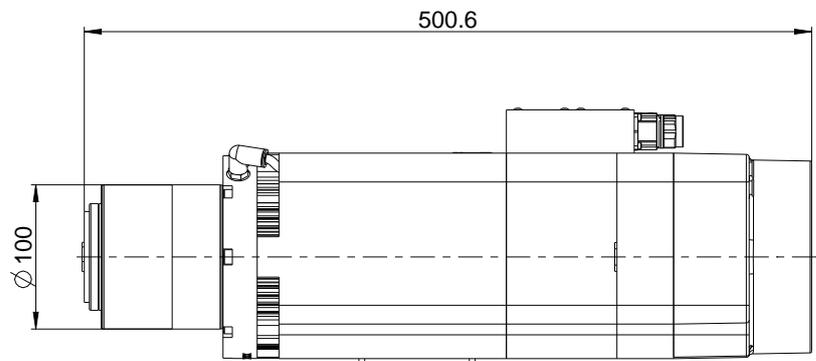
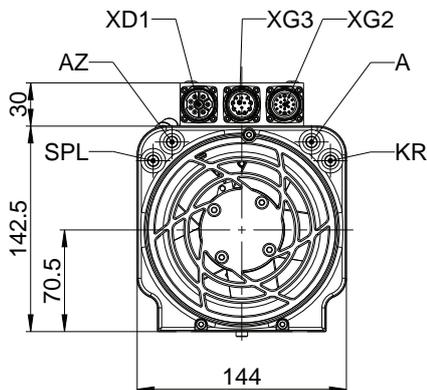
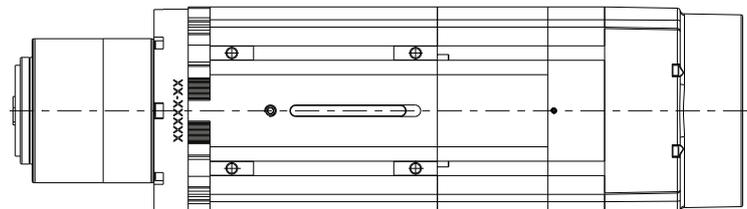
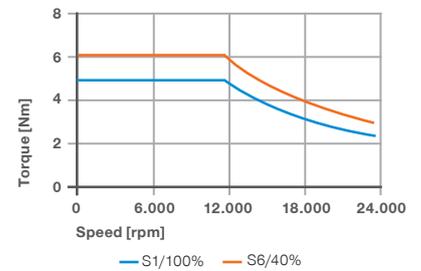
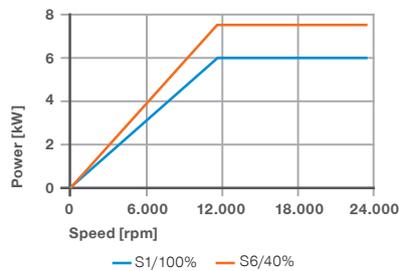
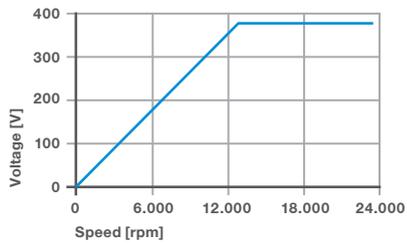
### ▶ HF145-001-004

Three phase asynchron motor, 4-poles

Nominal output S1 [kW]	6
Rated torque S1 [Nm]	4.9
Nominal current S1 [A]	14
Nominal speed [rpm]	11.780
Max. speed [rpm]	24.000
Tool interface	HSK-F63
Motor technology	Asynchronous
Number of poles	4
Release unit	Pneumatic
Cooling	Electric fan
Weight [kg]	29

### ▶ Interface Diagram

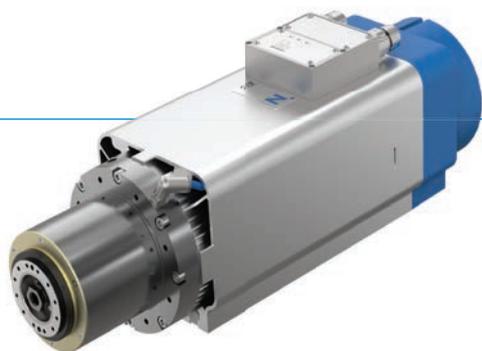
	Interface
A	Tool unlocked
AZ	Tool clamping
KR	Conus cleaning
SPL	Sealing air
XD1	Power and signal connector
XG2	Signal connector
XG3	Position and speed sensor



# MOTOR SPINDLES

## HF145-001-005

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 7.5 kW**
- ▶ **Rated torque S1: 6.1 Nm**
- ▶ **Max. speed: 24,000 rpm**
- ▶ Air cooling via electric fan
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites
- ▶ Vector controlled

### ▶ EQUIPMENT FEATURES



Conus cleaning of tool fixation



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change



IO-Link



Vector controlled / feedback

### ▶ OPTIONS



C-axis interface



Acceleration sensor



Manual tool release pushbutton



Aggregate interface



Robot change unit

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Power lines

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Signal lines

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Encoder lines

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Robot change unit

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## ▶ TECHNICAL DATA

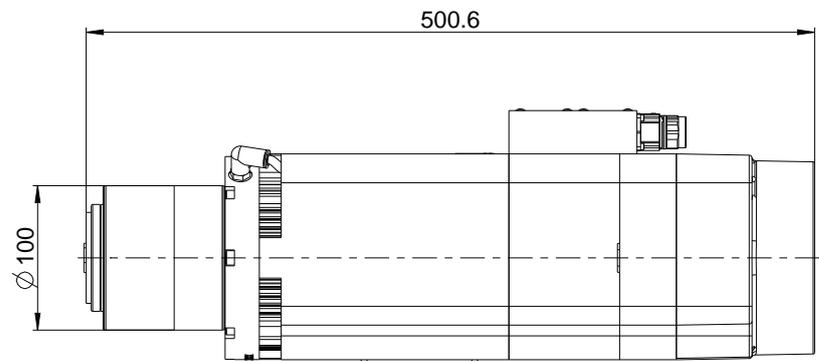
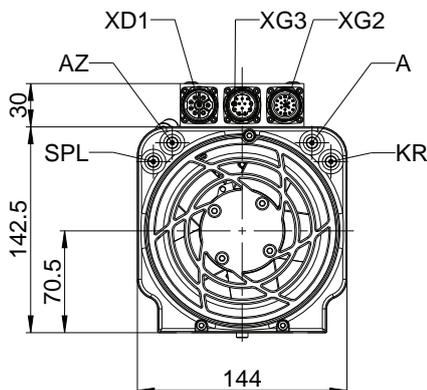
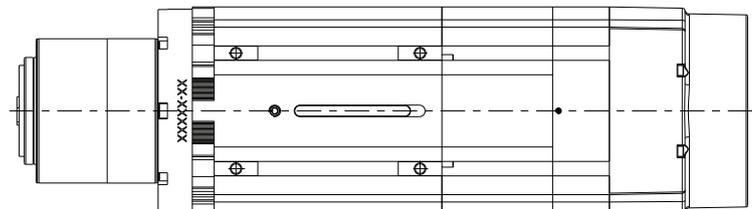
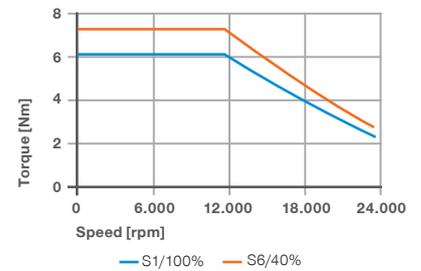
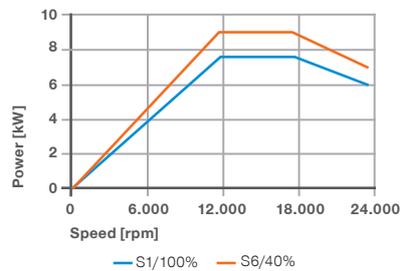
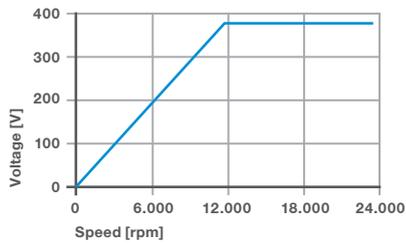
### ▶ HF145-001-005

Three phase asynchron motor, 4-poles

Nominal output S1 [kW]	7.5
Rated torque S1 [Nm]	6.1
Nominal current S1 [A]	15
Nominal speed [rpm]	11.770
Max. speed [rpm]	24.000
Tool interface	HSK-F63
Motor technology	Asynchronous
Number of poles	4
Release unit	Pneumatic
Cooling	Electric fan
Weight [kg]	30

### ▶ Interface Diagram

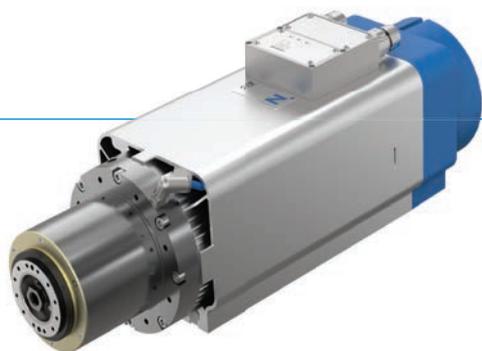
	Interface
A	Tool unlocked
AZ	Tool clamping
KR	Conus cleaning
SPL	Sealing air
XD1	Power and signal connector
XG2	Signal connector
XG3	Position and speed sensor



# MOTOR SPINDLES

## HF145-001-006

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 11.8 kW**
- ▶ **Rated torque S1: 9.6 Nm**
- ▶ **Max. speed: 24,000 rpm**
- ▶ Air cooling via electric fan
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites
- ▶ Vector controlled

### ▶ EQUIPMENT FEATURES



Conus cleaning of tool fixation



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change



IO-Link



Vector controlled / feedback

### ▶ OPTIONS



C-axis interface



Acceleration sensor



Manual tool release pushbutton



Aggregate interface



Robot change unit

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Power lines

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Signal lines

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Encoder lines

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## ▶ TECHNICAL DATA

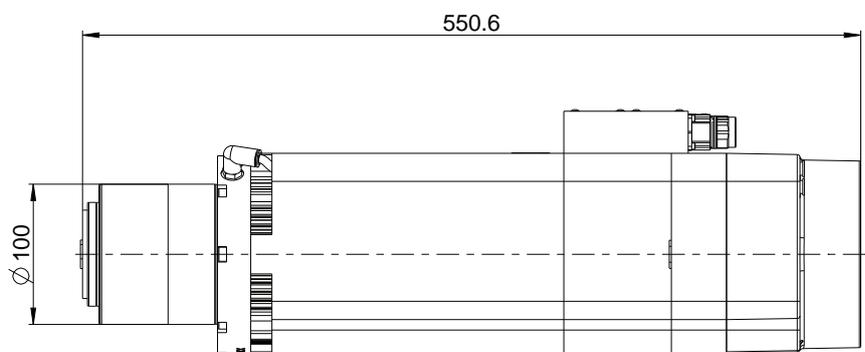
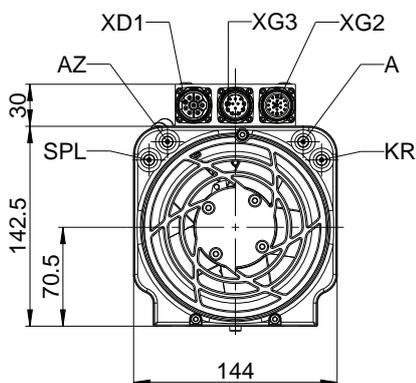
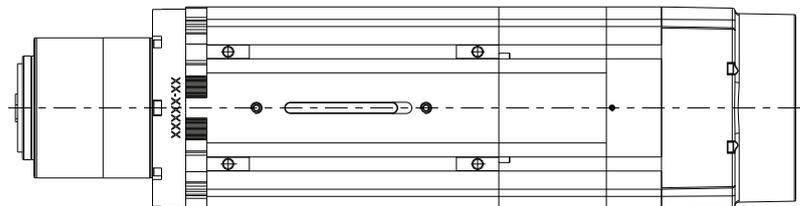
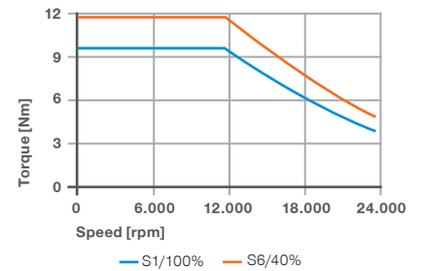
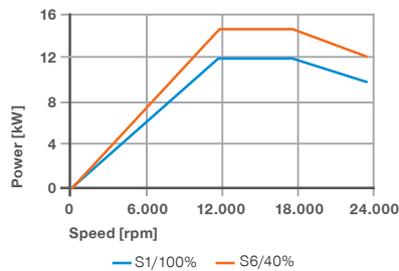
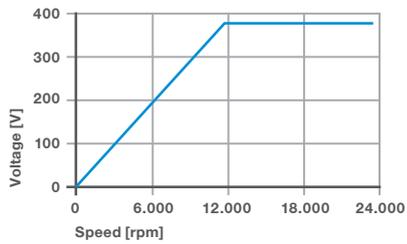
### ▶ HF145-001-006

Three phase asynchron motor, 4-poles

Nominal output S1 [kW]	11.8
Rated torque S1 [Nm]	9.6
Nominal current S1 [A]	25
Nominal speed [rpm]	11.780
Max. speed [rpm]	24.000
Tool interface	HSK-F63
Motor technology	Asynchronous
Number of poles	4
Release unit	Pneumatic
Cooling	Electric fan
Weight [kg]	35

### ▶ Interface Diagram

	Interface
A	Tool unlocked
AZ	Tool clamping
KR	Conus cleaning
SPL	Sealing air
XD1	Power and signal connector
XG2	Signal connector
XG3	Position and speed sensor



# MOTOR SPINDLES

## HF125-002-001

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 9 kW**  
**Rated torque S1: 7.3 Nm**  
**Max. speed: 24,000 rpm**
- ▶ Water cooling
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Adapted for use in an angle head, for example
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites

### ▶ EQUIPMENT FEATURES



Conus cleanig of tool fixation



IO-Link



Labyrinth seal



Controllable air connectors



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change

### ▶ OPTIONS



Acceleration sensor



Vector controlled / feedback



Aggregate interface



Robot change unit

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Cooling units/  
connector set

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Power lines

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Signal lines

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Robot change unit

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## ▶ TECHNICAL DATA

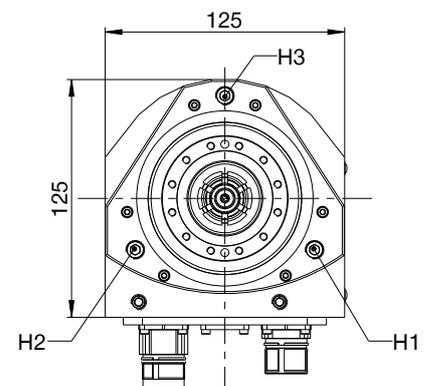
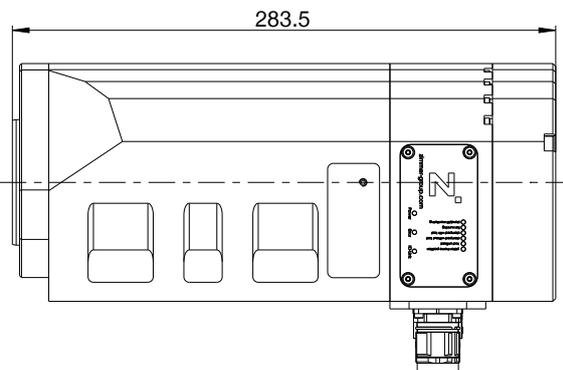
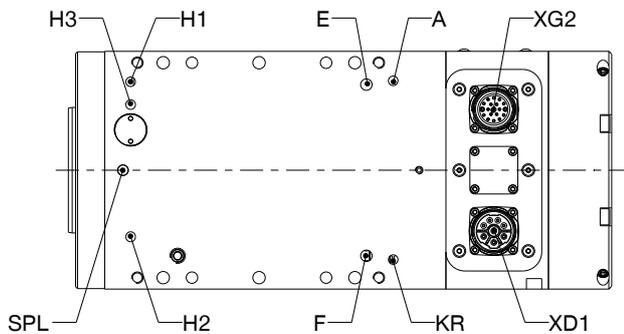
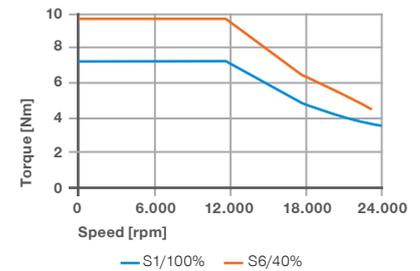
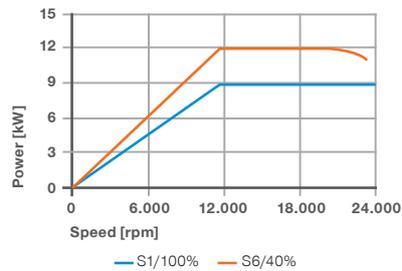
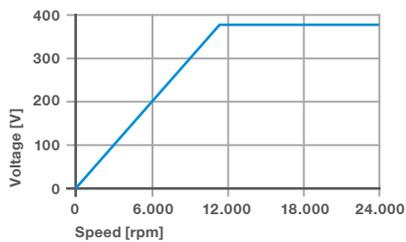
### ▶ HF125-002-001

Three phase asynchron motor, 4-poles

<b>Nominal output S1 [kW]</b>	9.0
<b>Rated torque S1 [Nm]</b>	7.3
<b>Nominal current S1 [A]</b>	20
<b>Nominal speed [rpm]</b>	11.750
<b>Max. speed [rpm]</b>	24.000
<b>Tool interface</b>	HSK-F63
<b>Motor technology</b>	Asynchronous
<b>Number of poles</b>	4
<b>Release unit</b>	Pneumatic
<b>Cooling</b>	Water
<b>Weight [kg]</b>	16

### ▶ Interface Diagram

	Interface
<b>A</b>	Tool unlocked
<b>E, F</b>	Cooling system inlet and outlet
<b>Hx</b>	Controllable connection
<b>KR</b>	Conus cleaning
<b>SPL</b>	Sealing air
<b>XD1</b>	Power and signal connector
<b>XG2</b>	Signal connector



# MOTOR SPINDLES

## HF125-002-002

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 12 kW**  
**Rated torque S1: 9 Nm**  
**Max. speed: 24,000 rpm**
- ▶ Water cooling
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Adapted for use in an angle head, for example
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites

### ▶ EQUIPMENT FEATURES



Conus cleanig of tool fixation



IO-Link



Labyrinth seal



Controllable air connectors



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change

### ▶ OPTIONS



Acceleration sensor



Vector controlled / feedback



Aggregate interface



Robot change unit

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Cooling units/  
connector set

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Power lines

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Signal lines

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## ▶ TECHNICAL DATA

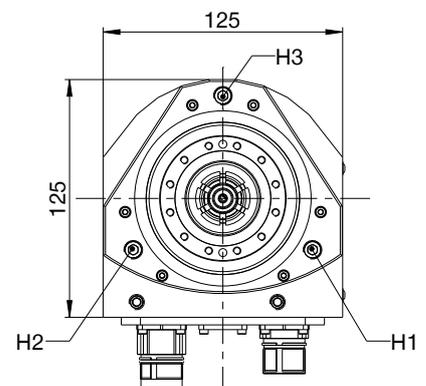
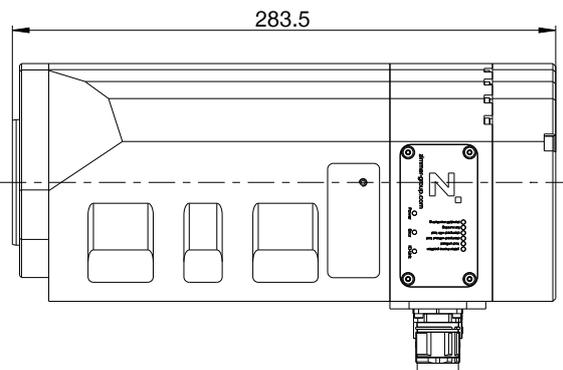
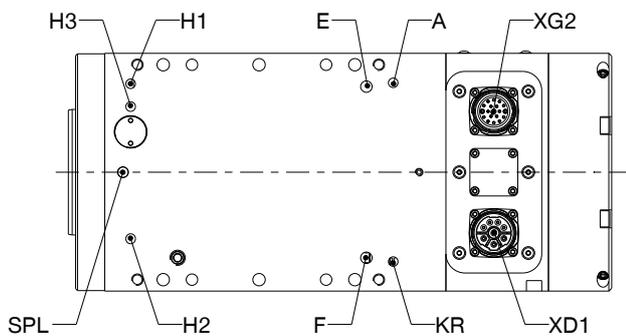
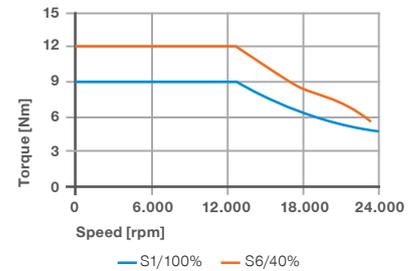
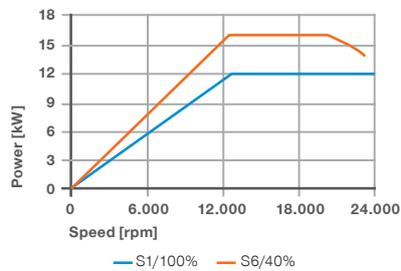
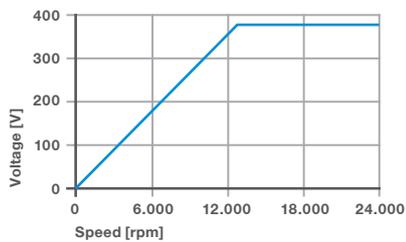
### ▶ HF125-002-002

Three phase asynchron motor, 4-poles

<b>Nominal output S1 [kW]</b>	12.0
<b>Rated torque S1 [Nm]</b>	9.0
<b>Nominal current S1 [A]</b>	25
<b>Nominal speed [rpm]</b>	12.730
<b>Max. speed [rpm]</b>	24.000
<b>Tool interface</b>	HSK-F63
<b>Motor technology</b>	Asynchronous
<b>Number of poles</b>	4
<b>Release unit</b>	Pneumatic
<b>Cooling</b>	Water
<b>Weight [kg]</b>	16

### ▶ Interface Diagram

	Interface
<b>A</b>	Tool unlocked
<b>E, F</b>	Cooling system inlet and outlet
<b>Hx</b>	Controllable connection
<b>KR</b>	Conus cleaning
<b>SPL</b>	Sealing air
<b>XD1</b>	Power and signal connector
<b>XG2</b>	Signal connector



# MOTOR SPINDLES

## HF125-002-004

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 9 kW**
- ▶ **Rated torque S1: 7.3 Nm**
- ▶ **Max. speed: 24,000 rpm**
- ▶ Water cooling
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Adapted for use in an angle head, for example
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites
- ▶ Vector controlled

### ▶ EQUIPMENT FEATURES



Conus cleanig of tool fixation



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change



IO-Link



Controllable air connectors



Vector controlled / feedback

### ▶ OPTIONS



Acceleration sensor



Aggregate interface



Robot change unit

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Cooling units/  
connector set

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Power lines

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Signal lines

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Encoder lines

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Robot change unit

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## ▶ TECHNICAL DATA

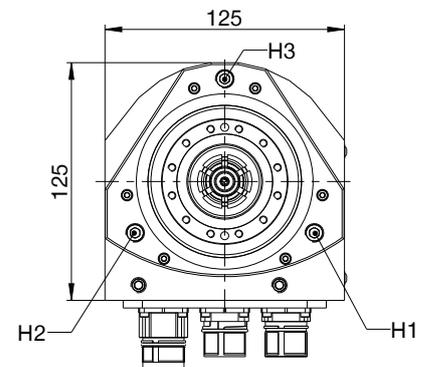
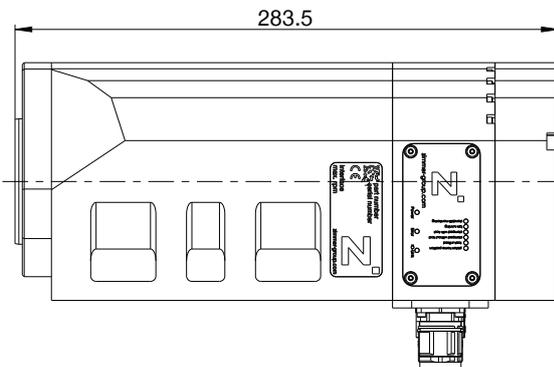
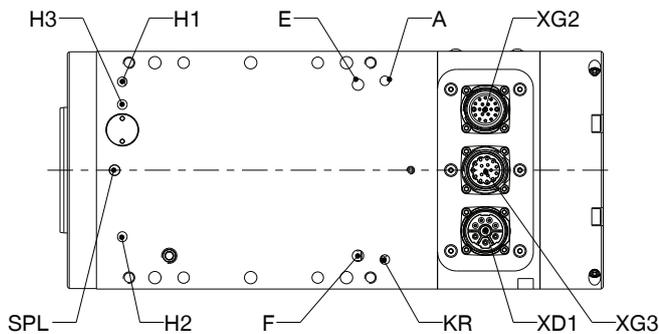
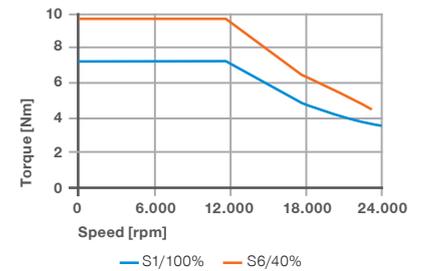
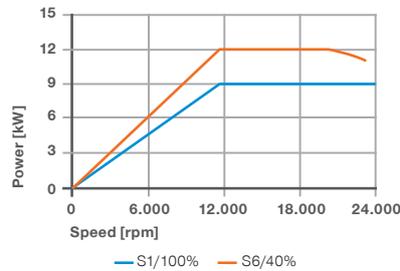
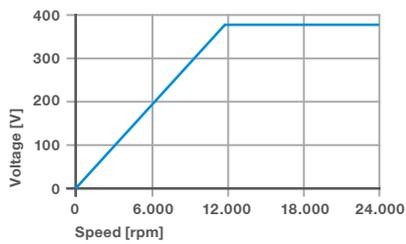
### ▶ HF125-002-004

Three phase asynchron motor, 4-poles

Nominal output S1 [kW]	9
Rated torque S1 [Nm]	7.3
Nominal current S1 [A]	20
Nominal speed [rpm]	11.750
Max. speed [rpm]	24.000
Tool interface	HSK-F63
Motor technology	Asynchronous
Number of poles	4
Release unit	Pneumatic
Cooling	Water
Weight [kg]	16

### ▶ Interface Diagram

	Interface
A	Tool unlocked
E, F	Cooling system inlet and outlet
Hx	Controllable connection
KR	Conus cleaning
SPL	Sealing air
XD1	Power and signal connector
XG2	Signal connector
XG3	Position and speed sensor



# MOTOR SPINDLES

## HF125-002-005

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 12 kW**
- ▶ **Rated torque S1: 9 Nm**
- ▶ **Max. speed: 24,000 rpm**
- ▶ Water cooling
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Adapted for use in an angle head, for example
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites
- ▶ Vector controlled

### ▶ EQUIPMENT FEATURES



Conus cleanig of tool fixation



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change



IO-Link



Controllable air connectors



Vector controlled / feedback

### ▶ OPTIONS



Acceleration sensor



Aggregate interface



Robot change unit

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Cooling units/  
connector set

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Power lines

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Signal lines

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Encoder lines

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## ▶ TECHNICAL DATA

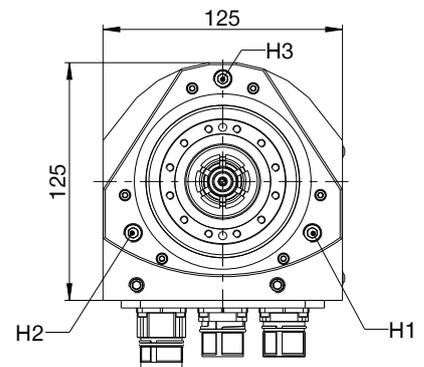
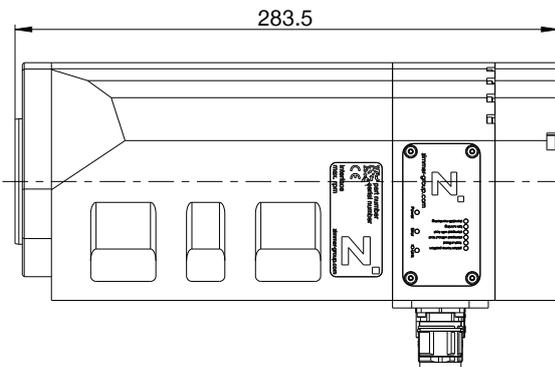
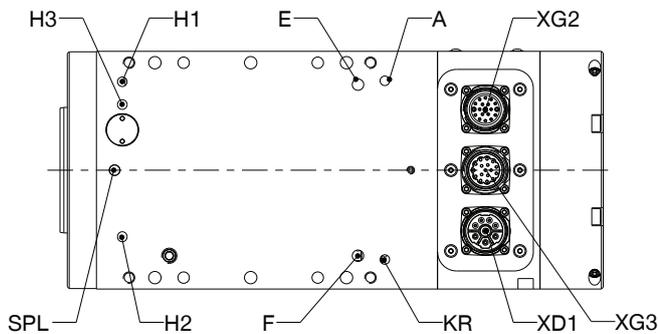
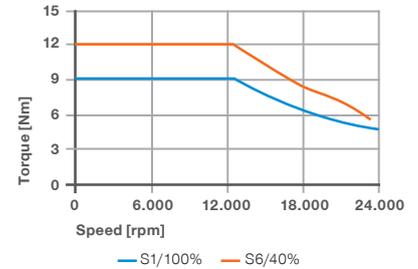
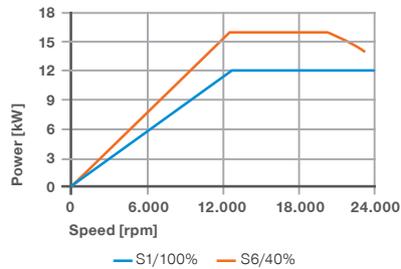
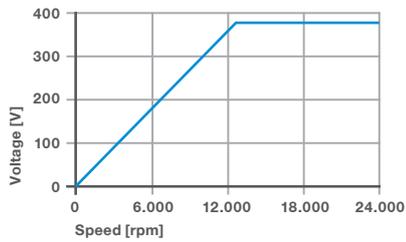
### ▶ HF125-002-005

Three phase asynchron motor, 4-poles

<b>Nominal output S1 [kW]</b>	12
<b>Rated torque S1 [Nm]</b>	9
<b>Nominal current S1 [A]</b>	25
<b>Nominal speed [rpm]</b>	12.730
<b>Max. speed [rpm]</b>	24.000
<b>Tool interface</b>	HSK-F63
<b>Motor technology</b>	Asynchronous
<b>Number of poles</b>	4
<b>Release unit</b>	Pneumatic
<b>Cooling</b>	Water
<b>Weight [kg]</b>	16

### ▶ Interface Diagram

	Interface
<b>A</b>	Tool unlocked
<b>E, F</b>	Cooling system inlet and outlet
<b>Hx</b>	Controllable connection
<b>KR</b>	Conus cleaning
<b>SPL</b>	Sealing air
<b>XD1</b>	Power and signal connector
<b>XG2</b>	Signal connector
<b>XG3</b>	Position and speed sensor



# MOTOR SPINDLES

## HF150-003-001

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 14.5 kW**  
**Rated torque S1: 14.7 Nm**  
**Max. speed: 26,000 rpm**
- ▶ Water cooling
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites
- ▶ Vector controlled

### ▶ EQUIPMENT FEATURES



Conus cleanig of tool fixation



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change



Controllable air connectors



Vector controlled / feedback



IO-Link

### ▶ OPTIONS



Aggregate interface



Bearing temperature sensor

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Cooling units/  
connector set

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Power lines

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Signal lines

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Encoder lines

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## ▶ TECHNICAL DATA

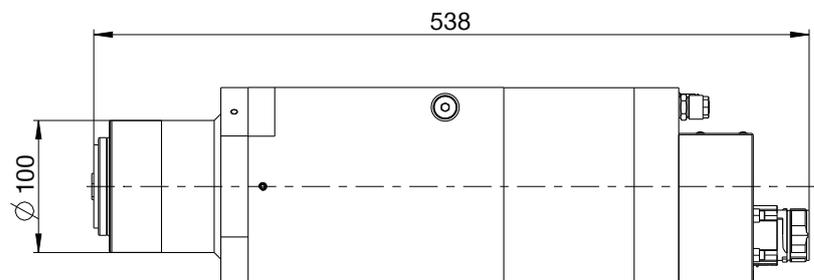
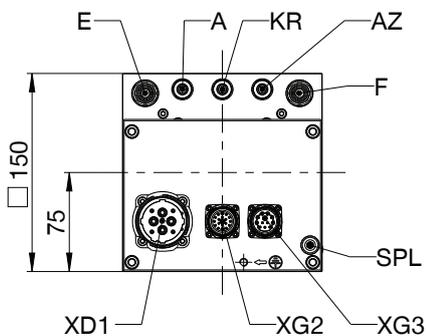
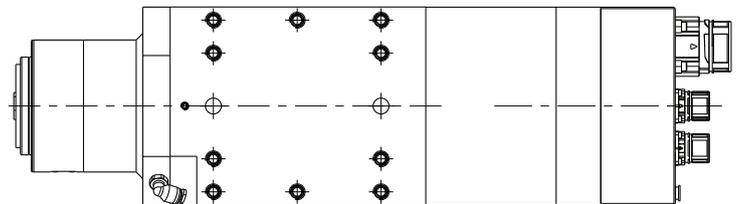
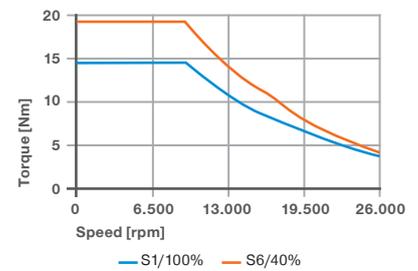
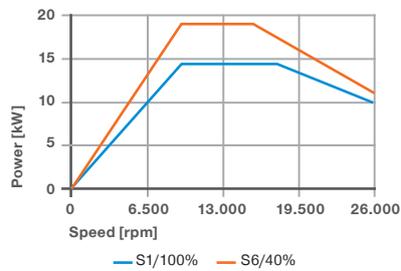
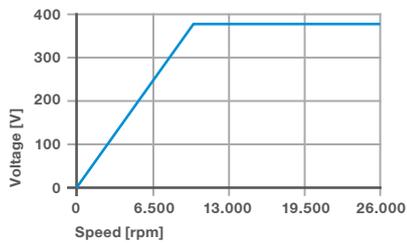
### ▶ HF150-003-001

Three phase asynchron motor, 4-poles

<b>Nominal output S1 [kW]</b>	14.5
<b>Rated torque S1 [Nm]</b>	14.7
<b>Nominal current S1 [A]</b>	30
<b>Nominal speed [rpm]</b>	9.450
<b>Max. speed [rpm]</b>	26.000
<b>Tool interface</b>	HSK-F63
<b>Motor technology</b>	Asynchronous
<b>Number of poles</b>	4
<b>Release unit</b>	Pneumatic
<b>Cooling</b>	Water
<b>Weight [kg]</b>	35

### ▶ Interface Diagram

	Interface
<b>A</b>	Tool unlocked
<b>AZ</b>	Tool clamping
<b>E, F</b>	Cooling system inlet and outlet
<b>KR</b>	Conus cleaning
<b>SPL</b>	Sealing air
<b>XD1</b>	Power and signal connector
<b>XG2</b>	Signal connector
<b>XG3</b>	Position and speed sensor



# MOTOR SPINDLES

## HF150-003-003

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 14.5 kW**  
**Rated torque S1: 14.7 Nm**  
**Max. speed: 26,000 rpm**
- ▶ Water cooling
- ▶ IO-Link communication
- ▶ Designed as unit carrier
- ▶ Hybrid bearings used for maximum performance
- ▶ Ideal for processing wood, plastics, lightweight metal and composites

### ▶ EQUIPMENT FEATURES



Conus cleanig of tool fixation



Controllable air connectors



Labyrinth seal



IO-Link



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change

### ▶ OPTIONS



Aggregate interface



Bearing temperature sensor



Vector controlled / feedback

### ▶ ACCESSORIES



Frequency inverter

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Control units

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Adapter  
Frequency inverter

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Cooling units/  
connector set

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Power lines

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Signal lines

Page 43



Encoder lines

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## ▶ TECHNICAL DATA

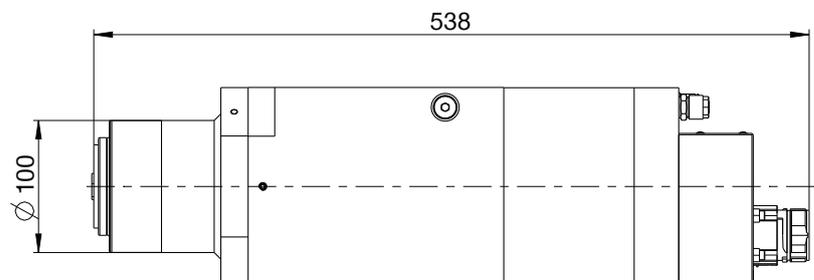
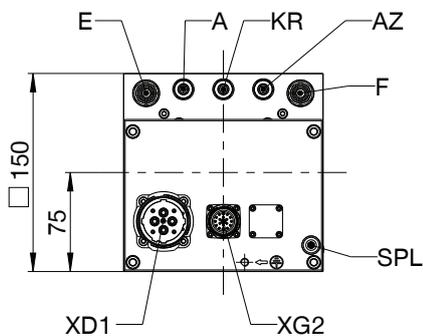
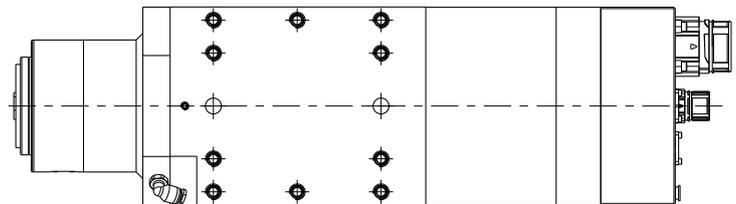
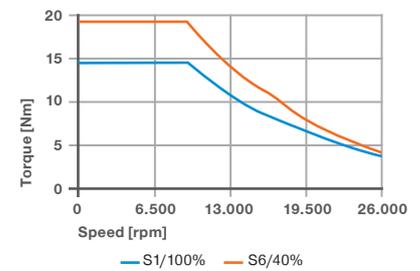
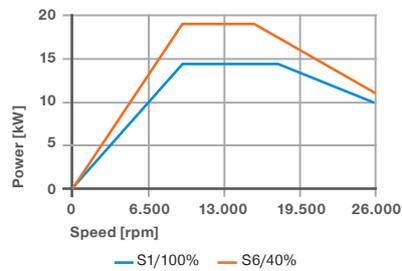
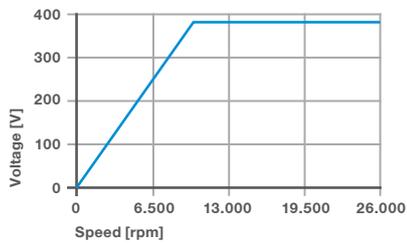
### ▶ HF150-003-003

Three phase asynchron motor, 4-poles

Nominal output S1 [kW]	14.5
Rated torque S1 [Nm]	14.7
Nominal current S1 [A]	30
Nominal speed [rpm]	9.450
Max. speed [rpm]	26.000
Tool interface	HSK-F63
Motor technology	Asynchronous
Number of poles	4
Release unit	Pneumatic
Cooling	Water
Weight [kg]	35

### ▶ Interface Diagram

	Interface
A	Tool unlocked
AZ	Tool clamping
E, F	Cooling system inlet and outlet
KR	Conus cleaning
SPL	Sealing air
XD1	Power and signal connector
XG2	Signal connector



# MOTOR SPINDLES

## HF150-005-001

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 20 kW**  
**Rated torque S1: 18.5 Nm**  
**Max. speed: 24,000 rpm**
- ▶ Water cooling
- ▶ Hybrid bearings used for maximum performance
- ▶ Very high power density (synchronous motor)
- ▶ Very high torque (synchronous motor)
- ▶ Adapted for use in an angle head
- ▶ Suitable for machining light metals, composites, wood and plastics

### ▶ EQUIPMENT FEATURES



Conus cleaning of tool fixation



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change



Controllable air connectors



Vector controlled / feedback



IO-Link

### ▶ OPTIONS



Aggregate interface



Bearing temperature sensor

### ▶ ACCESSORIES

We would be glad to help you select and configure the right accessories.

## ▶ TECHNICAL DATA

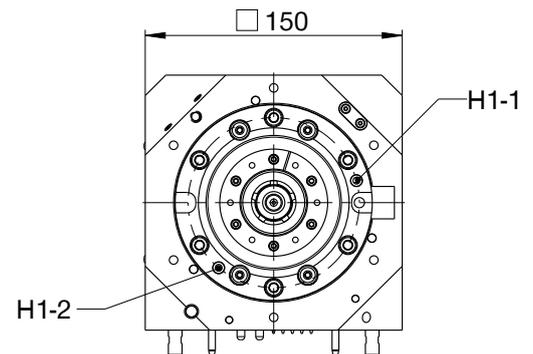
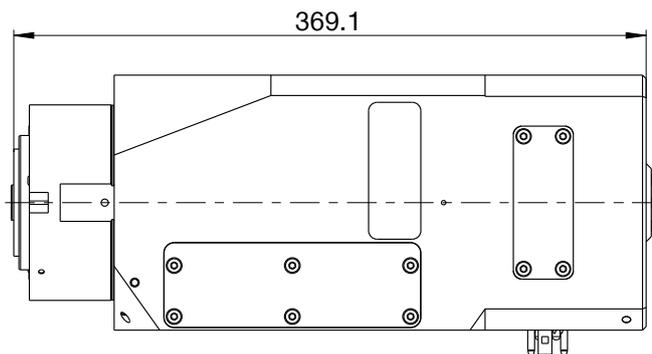
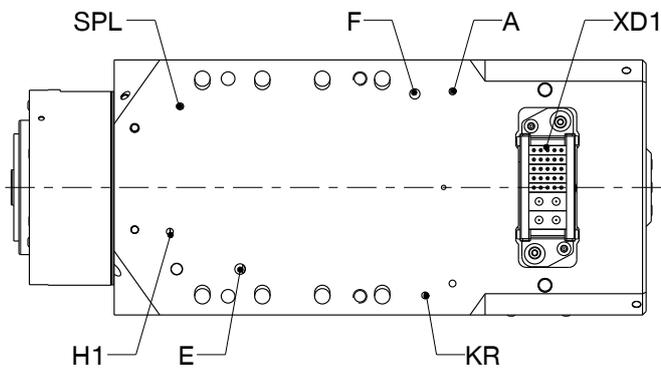
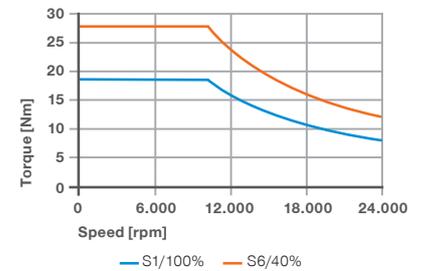
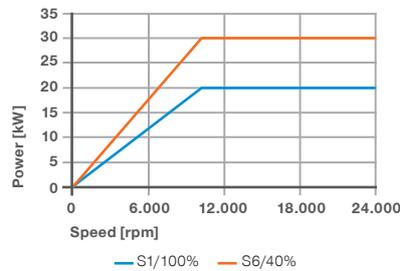
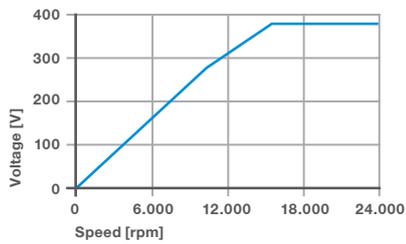
### ▶ HF150-005-001

Three phase synchron motor, 4-poles

Nominal output S1 [kW]	20.0
Rated torque S1 [Nm]	18.5
Nominal current S1 [A]	50
Nominal speed [rpm]	10.300
Max. speed [rpm]	24.000
Tool interface	HSK-F63
Motor technology	Synchronous
Number of poles	4
Release unit	Pneumatic
Cooling	Water
Weight [kg]	36

### ▶ Interface Diagram

	Interface
A	Tool unlocked
E, F	Cooling system inlet and outlet
Hx	Controllable connection
KR	Conus cleaning
SPL	Sealing air
XD1	Power and signal connector



# MOTOR SPINDLES

## HF150-005-002

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 20 kW**  
**Rated torque S1: 14.3 Nm**  
**Max. speed: 24,000 rpm**
- ▶ Water cooling
- ▶ Hybrid bearings used for maximum performance
- ▶ Adapted for use in an angle head
- ▶ Suitable for machining light metals, composites, wood and plastics

### ▶ EQUIPMENT FEATURES



Conus cleaning of tool fixation



Labyrinth seal



Tool fixation monitoring



Sealing air



Speed monitoring



Automatic tool change



Controllable air connectors



Vector controlled / feedback

### ▶ OPTIONS



Aggregate interface



Bearing temperature sensor



IO-Link

### ▶ ACCESSORIES

We would be glad to help you select and configure the right accessories.

## ▶ TECHNICAL DATA

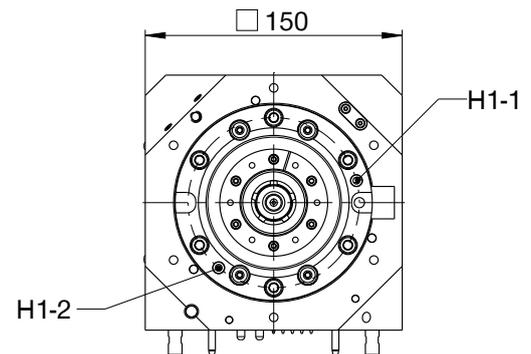
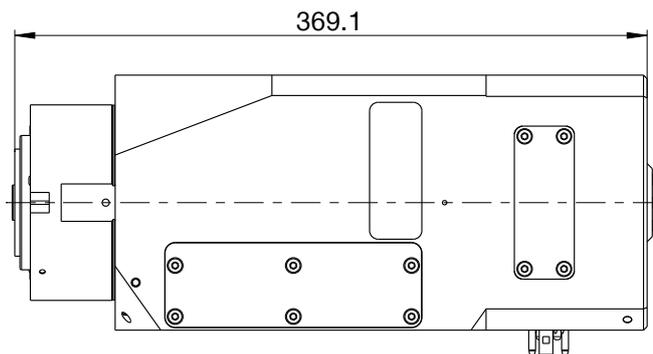
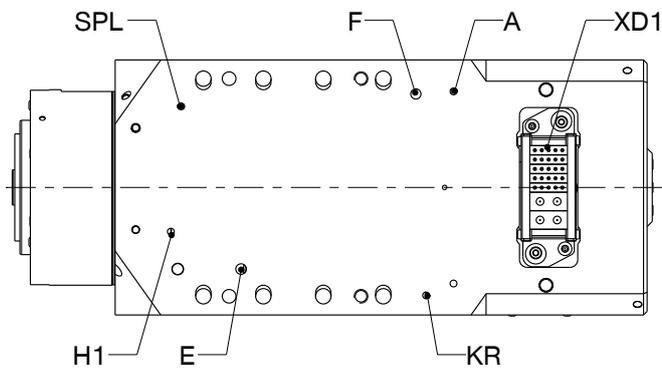
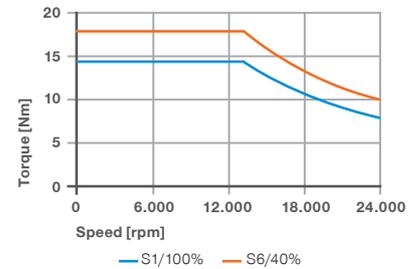
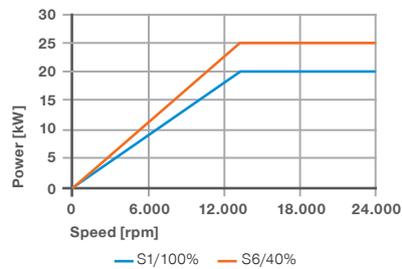
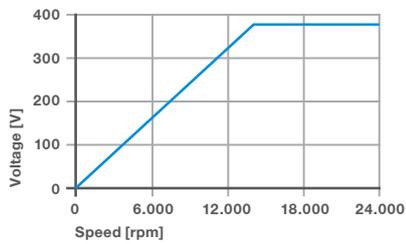
### ▶ HF150-005-002

Three phase asynchron motor, 4-poles

Nominal output S1 [kW]	20.0
Rated torque S1 [Nm]	14.3
Nominal current S1 [A]	43
Nominal speed [rpm]	13.360
Max. speed [rpm]	24.000
Tool interface	HSK-F63
Motor technology	Asynchronous
Number of poles	4
Release unit	Pneumatic
Cooling	Water
Weight [kg]	36

### ▶ Interface Diagram

	Interface
A	Tool unlocked
E, F	Cooling system inlet and outlet
Hx	Controllable connection
KR	Conus cleaning
SPL	Sealing air
XD1	Power and signal connector



# MOTOR SPINDLES

## HF205-006-001

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 34 kW**  
**Rated torque S1: 83.7 Nm**  
**Max. speed: 14,000 rpm**
- ▶ Water cooling
- ▶ Hybrid bearings used for maximum performance
- ▶ Adapted for use in tooling machines
- ▶ Ideal for processing brass, aluminum, steel and cast iron

### ▶ EQUIPMENT FEATURES



Conus cleaning of tool fixation



Coolant through shaft



Labyrinth seal



Tool fixation monitoring



Purged air-seal



Automatic tool change



Vector controlled / feedback

### ▶ OPTIONS



Acceleration sensor

### ▶ ACCESSORIES

We would be glad to help you select and configure the right accessories.

## ▶ TECHNICAL DATA

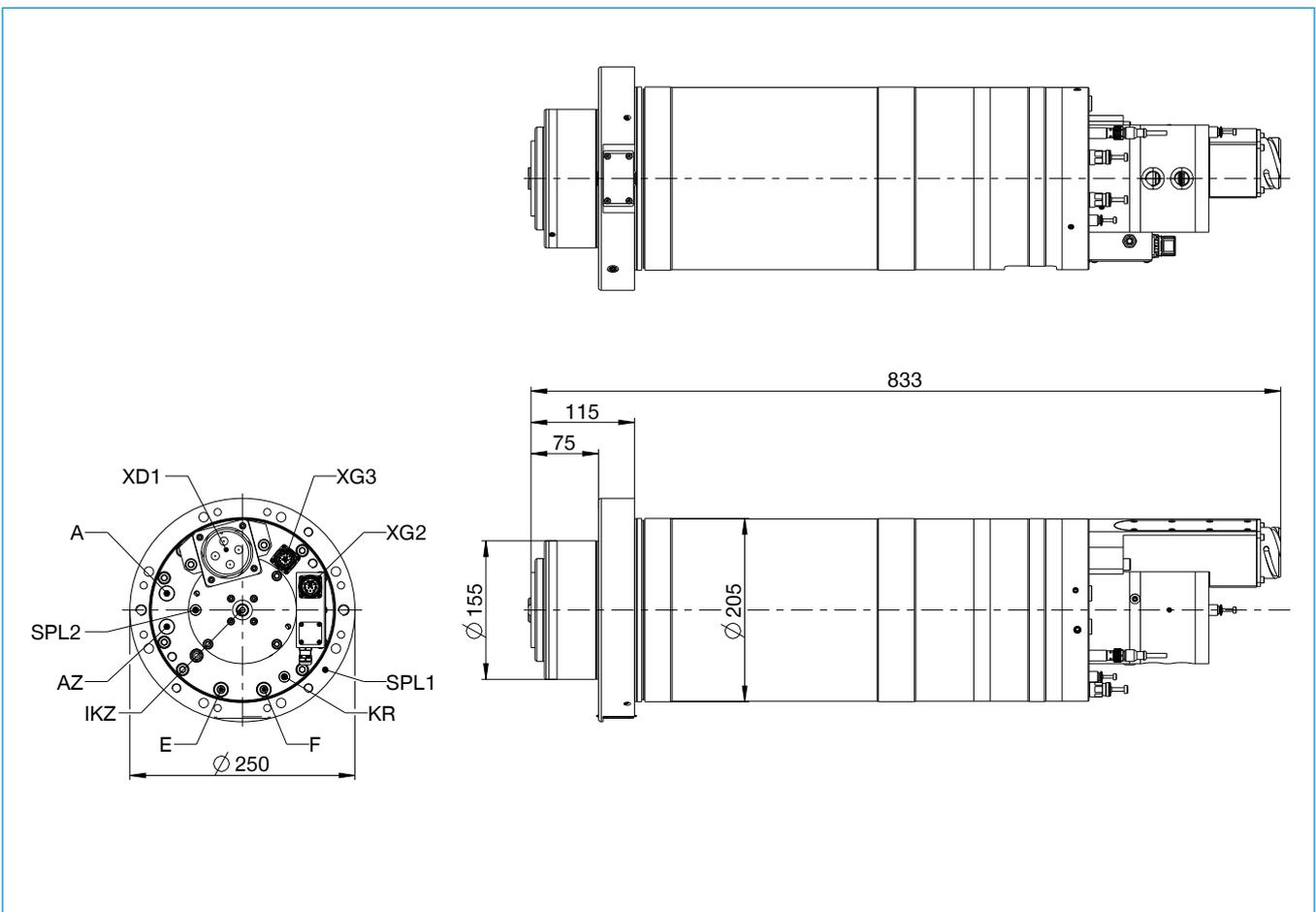
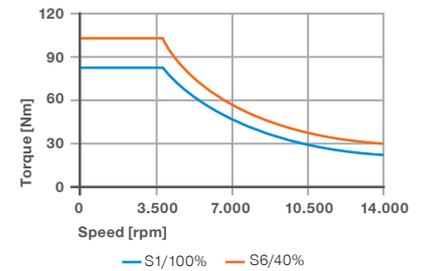
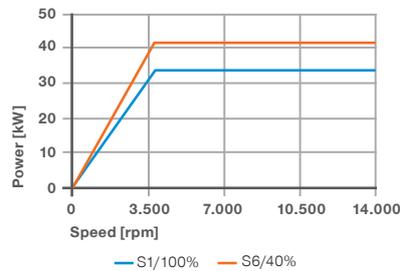
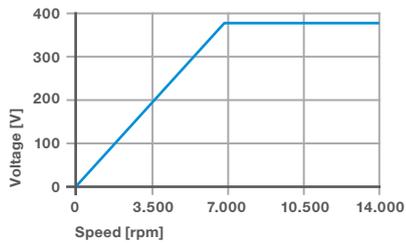
### ▶ HF205-006-001

Three phase asynchron motor, 6-poles

Nominal output S1 [kW]	34.0
Rated torque S1 [Nm]	83.7
Nominal current S1 [A]	130
Nominal speed [rpm]	3.880
Max. speed [rpm]	14.000
Tool interface	HSK-A63
Motor technology	Asynchronous
Number of poles	6
Release unit	Hydraulic
Cooling	Water
Weight [kg]	136

### ▶ Interface Diagram

	Interface
A	Tool unlocked
AZ	Tool clamping
E, F	Cooling system inlet and outlet
IKZ	Coolant through shaft
KR	Conus cleaning
SPL	Sealing air
XD1	Power and signal connector
XG2	Signal connector
XG3	Position and speed sensor



# MOTOR SPINDLES

## HF205-006-002

### ▶ PRODUCT ADVANTAGES



- ▶ **Rated power S1: 48 kW**  
**Rated torque S1: 153 Nm**  
**Max. speed: 6,000 rpm**
- ▶ Water cooling
- ▶ Hybrid bearings used for maximum performance
- ▶ Adapted for use in tooling machines
- ▶ Ideal for processing brass, aluminum, steel and cast iron
- ▶ Very high power density (synchronous motor)
- ▶ Very high torque (synchronous motor)

### ▶ EQUIPMENT FEATURES



Conus cleanig of tool fixation



Labyrinth seal



Tool fixation monitoring



Purged air-seal



Automatic tool change



Vector controlled / feedback



Coolant through shaft



Acceleration sensor

### ▶ OPTIONS

### ▶ ACCESSORIES

We would be glad to help you select and configure the right accessories.



**THE KNOW-HOW FACTORY**

# SYSTEM ACCESSORIES

## FREQUENCY INVERTER

### ▶ PRODUCT ADVANTAGES



- ▶ In combination with the motor spindle, the frequency inverter creates a perfect complete package for precise positioning tasks with integrated safety technology (STO) and operations at low speeds as well as for high speeds. The pluggable fieldbus operators (Interbus, CANopen, Ethernet, DeviceNet, EtherCAT, etc.) for all common protocol standards, including the new Ethernet-based solutions, provide the connections to the control level required in the application. The necessary accessory ranges with EMC assemblies for environments C1 and C2, brake resistors, power chokes and harmonic filters round off the complete solution.

### ▶ INFORMATION ON THE PRODUCTS

#### APPLICATION SCENARIOS

The only way to achieve an optimum performance and power output is to ensure that the motor spindle and frequency inverter match each other perfectly. We cooperate with leading converter and machine manufacturers early on during development and also during field testing. The goal is always to achieve the highest possible benefit for the customer. When the motor and frequency converter match each other perfectly, this noticeably improves not only the service life, but also the running smoothness, heat balance and, of course, the power density. Zimmer Group's goal is to provide a system that integrates seamlessly and enables customers to get the most out of their motor spindles.

#### ▶ Frequency inverter

Motor spindle	Frequency inverter	Control unit Interface Operator	Control unit EtherCAT Operator	Control unit CANopen Operator	Control unit PROFINET Operator	Connecting cable
HF145-001-001	HFZ121092	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF145-001-002	HFZ121092	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF145-001-003	HFZ121094	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF145-001-004	HFZ121092	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF145-001-005	HFZ121092	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF145-001-006	HFZ121094	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF125-002-001	HFZ121093	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF125-002-002	HFZ121094	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF125-002-004	HFZ121093	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF125-002-005	HFZ121094	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF150-003-001	HFZ121095	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF150-003-003	HFZ121095	CREG00092	CREG00152	CREG00153	CREG00154	HFZ121356
HF150-005-001	on request	on request	on request	on request	on request	on request
HF150-005-002	on request	on request	on request	on request	on request	on request
HF205-006-001	on request	on request	on request	on request	on request	on request
HF205-006-002	on request	on request	on request	on request	on request	on request

# SYSTEM ACCESSORIES

## COOLING UNITS

### ▶ PRODUCT ADVANTAGES



- ▶ For our water-cooled motor spindles we offer cooling units designed to match, including connector sets. The reliability of the required amount of coolant and its temperature reduce heat generation during operation and ensure maximum spindle performance.

### ▶ INFORMATION ON THE PRODUCTS

#### APPLICATION SCENARIOS

By working with renowned cooling unit manufacturers, we are able to precisely regulate the temperature and dosage of the cooling medium, which consistently keeps the operating temperatures low. Accurate dosage and control is important for eliminating inaccuracies on the spindle that can be caused by temperature fluctuations. We provide you with components that match each other well, so you can be sure they will work together reliably.

#### ▶ Cooling units

Motor spindle	Cooling units	Connector set
HF125-002-001	HFZ121046	HFZ121047
HF125-002-002	HFZ121046	HFZ121047
HF125-002-004	HFZ121046	HFZ121047
HF125-002-005	HFZ121046	HFZ121047
HF150-003-001	HFZ121046	HFZ121047
HF150-003-003	on request	on request
HF150-005-001	on request	on request
HF150-005-002	on request	on request
HF205-006-001	on request	on request
HF205-006-002	on request	on request

# SYSTEM ACCESSORIES

## CABLES

### ▶ PRODUCT ADVANTAGES



### ▶ Cables, lines

The Zimmer Group is a system supplier and reliable partner that offers you the complete package. Our support helps you cut costs when you implement your system. We offer customized special solutions for any application. For all our motor spindles and accessories, we offer fully configurable connector sets and cables.

Your benefits:

- Customized solutions for your application
- Low effort – we handle the design for you
- Ready to connect and assembled precisely
- Already installed and tested for proper function

### ▶ INFORMATION ON THE PRODUCTS

	Order no.	Characteristics	Length [m]	HF145-001-001	HF145-001-002	HF145-001-003	HF145-001-004	HF145-001-005	HF145-001-006	HF125-002-001	HF125-002-002	HF125-002-004	HF125-002-005	HF150-003-001	HF150-003-003	HF150-005-001	HF150-005-002	HF205-006-001	HF205-006-002	
Power line	CSTE01289	Robot, socket + open ends	5	●	●		●	●						*	*	*	*	*	*	
	CSTE01290	Robot, socket + open ends	10	●	●		●	●						*	*	*	*	*	*	
	CSTE01291	Robot, socket + plug	5	●	●		●	●						*	*	*	*	*	*	
	CSTE01292	Robot, socket + plug	10	●	●		●	●						*	*	*	*	*	*	
	CSTE01301	Drag chain, socket + open ends	5	●	●		●	●						*	*	*	*	*	*	
	CSTE01302	Drag chain, socket + open ends	10	●	●		●	●						*	*	*	*	*	*	
	CSTE01303	Drag chain, socket + plug	5	●	●		●	●						*	*	*	*	*	*	
	CSTE01304	Drag chain, socket + plug	10	●	●		●	●						*	*	*	*	*	*	
	CSTE01293	Robot, socket + open ends	5			●			●	●	●	●	●	*	*	*	*	*	*	
	CSTE01294	Robot, socket + open ends	10			●			●	●	●	●	●	*	*	*	*	*	*	
	CSTE01295	Robot, socket + plug	5			●			●	●	●	●	●	*	*	*	*	*	*	
	CSTE01296	Robot, socket + plug	10			●			●	●	●	●	●	*	*	*	*	*	*	
	CSTE01305	Drag chain, socket + open ends	5			●			●	●	●	●	●	*	*	*	*	*	*	
	CSTE01306	Drag chain, socket + open ends	10			●			●	●	●	●	●	*	*	*	*	*	*	
	CSTE01307	Drag chain, socket + plug	5			●			●	●	●	●	●	*	*	*	*	*	*	
	CSTE01308	Drag chain, socket + plug	10			●			●	●	●	●	●	*	*	*	*	*	*	
	Signal line	CSTE01297	Robot, socket + open ends	5	●	●	●	●	●	●	●	●	●	●	*	*	*	*	*	*
		CSTE01298	Robot, socket + open ends	10	●	●	●	●	●	●	●	●	●	●	*	*	*	*	*	*
CSTE01299		Robot, socket + plug	5	●	●	●	●	●	●	●	●	●	●	*	*	*	*	*	*	
CSTE01300		Robot, socket + plug	10	●	●	●	●	●	●	●	●	●	●	*	*	*	*	*	*	
CSTE01309		Drag chain, socket + open ends	5	●	●	●	●	●	●	●	●	●	●	*	*	*	*	*	*	
CSTE01310		Drag chain, socket + open ends	10	●	●	●	●	●	●	●	●	●	●	*	*	*	*	*	*	
CSTE01311		Drag chain, socket + plug	5	●	●	●	●	●	●	●	●	●	●	*	*	*	*	*	*	
CSTE01312		Drag chain, socket + plug	10	●	●	●	●	●	●	●	●	●	●	*	*	*	*	*	*	
Encoder line	CSTE01467	Robot, socket + open ends	5				●	●	●				●	*	*	*	*	*	*	
	CSTE01468	Robot, socket + open ends	10				●	●	●				●	*	*	*	*	*	*	
	CSTE01471	Robot, socket + plug	5				●	●	●				●	*	*	*	*	*	*	
	CSTE01472	Robot, socket + plug	10				●	●	●				●	*	*	*	*	*	*	
	CSTE01469	Drag chain, socket + open ends	5				●	●	●				●	*	*	*	*	*	*	
	CSTE01470	Drag chain, socket + open ends	10				●	●	●				●	*	*	*	*	*	*	
	CSTE01473	Drag chain, socket + plug	5				●	●	●				●	*	*	*	*	*	*	
	CSTE01474	Drag chain, socket + plug	10				●	●	●				●	*	*	*	*	*	*	

\* on request

# SYSTEM ACCESSORIES

## ROBOT CHANGE UNIT

### ▶ PRODUCT ADVANTAGES



▶ Specially designed robot change units are available for motor spindles that are designed for use with robots. The robot change units provide a reliable interface between the robot and motor spindle. The loose part is attached to the motor spindle, while the fixed part is mounted at the end of the robot arm. A storage station is supplied to set the motor spindle aside when it is not being used.

- Automated coupling mechanism
- Extremely flat design
- Mechanical self-locking mechanism
- Transfer of compressed air
- Transmission of power and signals for operating the motor spindle

Pos.	Product	Order no.
1	Storage station	ALSR13100
2	Tool Changer Fix Part	WWS100F-001
3	Tool Changer Loose Part	WWS100L-001
4	Motor spindle	HF145-001-001/HF145-001-002

Also available for motor spindles with vector control on request

### ▶ EQUIPMENT FEATURES



Automatic tool change



Media transmission, load current



Aggregate interface



Media transmission, signal current



Piston position sensing



Loose part present sensing

### ▶ OPTIONS

### ▶ RECOMMENDED ACCESSORY



Piston position sensing

ZUB088924



Inductive Proximity Switch  
Cable 0,3 m - Connector M8

NJR04-E2SK



Base module for storage station

ALSR13100



Inductive proximity switch  
- Cable 5 m

NJ8-E2



Inductive proximity switch  
- Connector M8

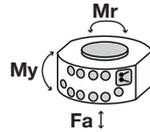
NJ8-E2S

## ▶ PRODUCT SPECIFICATIONS



### ▶ Forces and moments

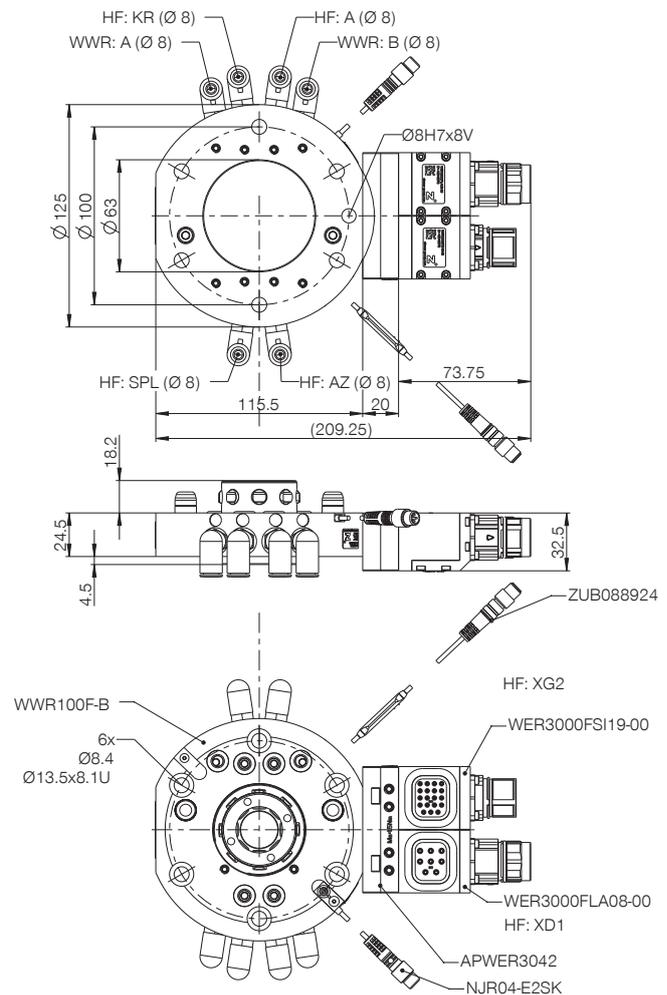
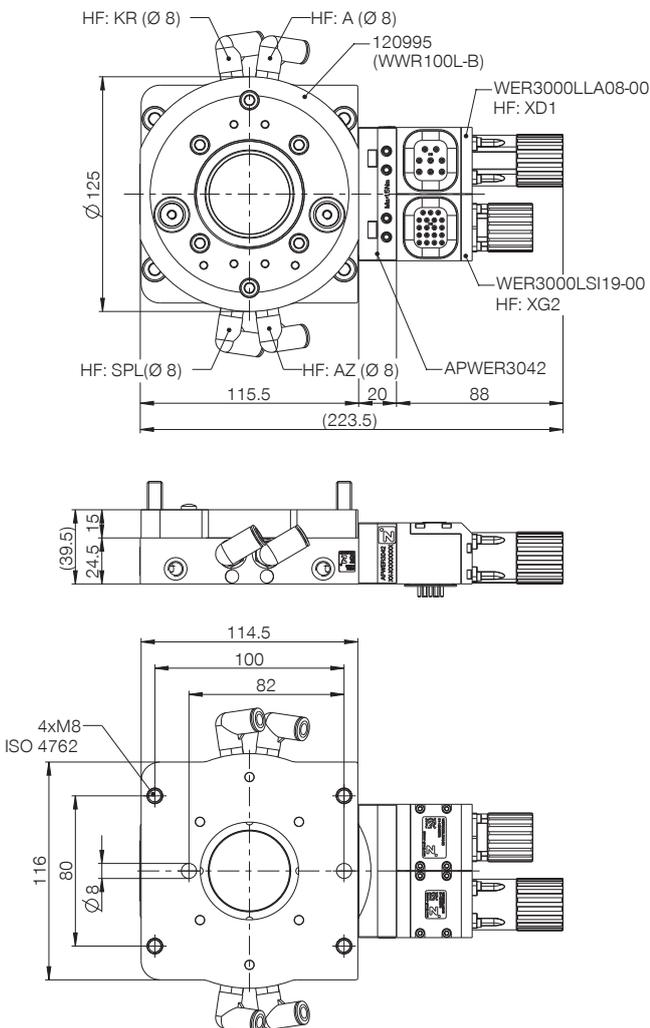
Shows static forces and moments which may impact on the tool changer.



Mr [Nm]	600
My [Nm]	850
Fa [N]	16000

### ▶ Technical data

Order no.	WWS100F-001	WWS100L-001
Connecting flange according EN ISO 9409-1	TK 100	TK 100
Energy transfer	Suitable for HF145-001-001   HF145-001-002	Suitable for HF145-001-001   HF145-001-002
Locking stroke [mm]	1.2	
Self locking mechanism when locking	mechanical	mechanical
Repetition accuracy in X, Y [mm]	0.02	0.02
Repetition accuracy in Z [mm]	0.01	0.01
Operating pressure [bar]	4 ... 10	4 ... 10
Operating temperature [°C]	+5 ... +80	+5 ... +80
Air volume per cycle [cm³]	25	
Weight [kg]	1.8	2.2



# SYSTEM ACCESSORIES

## ROBOT CHANGE UNIT

### ▶ PRODUCT ADVANTAGES



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- Automated coupling mechanism
- Extremely flat design
- Mechanical self-locking mechanism
- Transfer of compressed air and cooling medium
- Transmission of power and signals for operating the motor spindle

Pos.	Product	Order no.
1	Storage station	ALSR13100
2	Tool Changer Fix Part	WWS100F-002
3	Tool Changer Loose Part	WWS100L-002
4	Motor spindle	HF125-002-001

Also available for motor spindles with vector control on request

### ▶ EQUIPMENT FEATURES



Automatic tool change



Aggregate interface



Coolant transfer



Media transfer air/vacuum



Media transmission, load current



Media transmission, signal current

### ▶ OPTIONS



Piston position sensing



Loose part present sensing

### ▶ RECOMMENDED ACCESSORY



Piston position sensing

ZUB088924



Inductive Proximity Switch  
Cable 0,3 m - Connector M8

NJR04-E2SK



Base module for storage station

ALSR13100



Inductive proximity switch  
- Cable 5 m

NJ8-E2



Inductive proximity switch  
- Connector M8

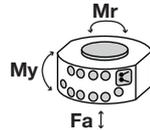
NJ8-E2S

## ▶ PRODUCT SPECIFICATIONS



### ▶ Forces and moments

Shows static forces and moments which may impact on the tool changer.



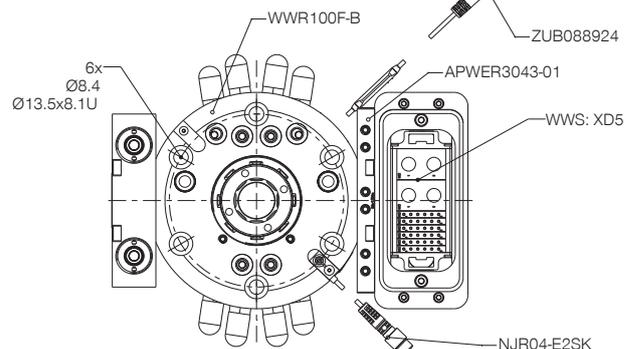
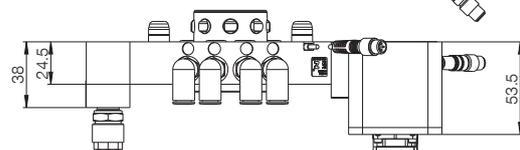
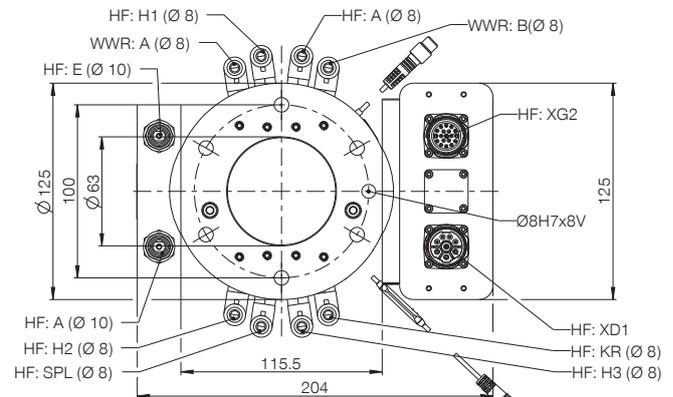
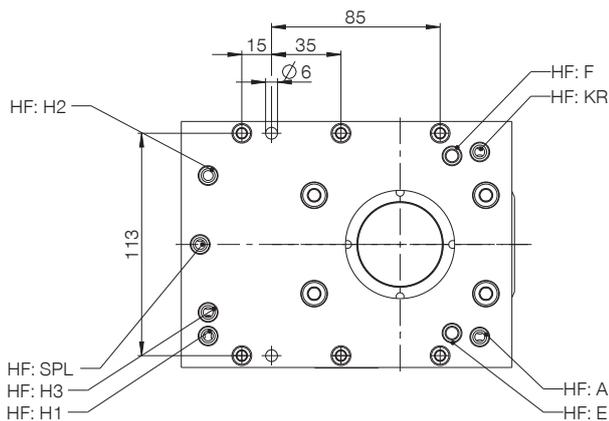
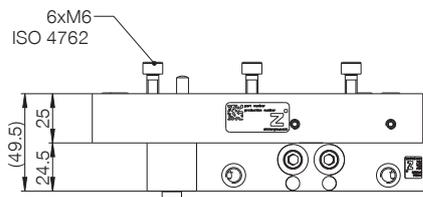
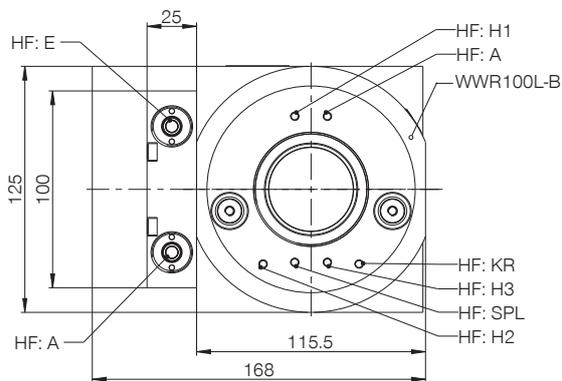
Mr [Nm] 600

My [Nm] 850

Fa [N] 16000

### ▶ Technical data

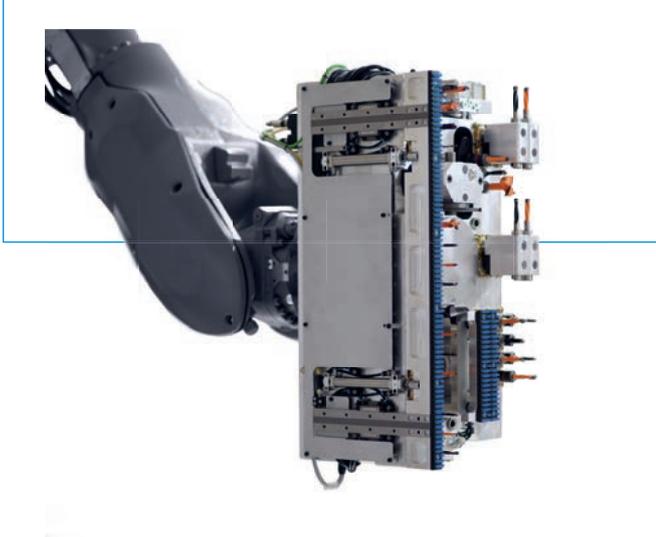
Order no.	WWS100F-002	WWS100L-002
Connecting flange according EN ISO 9409-1	TK 100	TK 100
Energy transfer	Suitable for HF125-002-001	Suitable for HF125-002-001
Locking stroke [mm]	1.2	
Self locking mechanism when locking	mechanical	mechanical
Repetition accuracy in X, Y [mm]	0.02	0.02
Repetition accuracy in Z [mm]	0.01	0.01
Operating pressure [bar]	4 ... 10	4 ... 10
Operating temperature [°C]	+5 ... +80	+5 ... +80
Air volume per cycle [cm³]	25	
Weight [kg]	2.4	2.4



# SYSTEM ACCESSORIES

## MULTIFUNCTION UNITS

### ▶ PRODUCT ADVANTAGES



- ▶ **Automation of your system**
- ▶ **Customer-specific motor connection**
- ▶ **Variable number and arrangement of spindles**
- ▶ **Numerous attachment options:**
  - Gripper and handling unit
  - Metal fitting unit
  - Setting module for base feet
  - Cutting unit
  - All types of drilling units
  - Buffer setting unit
  - Screwing unit

### ▶ INFORMATION ON THE PRODUCTS

#### APPLICATION SCENARIOS

#### ▶ **Maximum flexibility**

Using industrial robots is a decisive factor for productivity. Zimmer Group offers innovative, application-optimized end-of-arm products for the increasing use of robotics. The multi-function head is just one example.

Our multi-functional heads are equipped with many various spindle arrangements and units and can be assembled individually according to customer requirements, so you get the solutions customized for your application. With a multi-function head, you take your machine to the next level. Now you can perform handling operations and automation instead of just conventional machining jobs.

Take advantage of the modular system we provide to enhance the function of your machine.

#### ▶ **Machining**

- Wood/surfaces similar to wood
- Plasterboard
- Composite materials
- Plastics

#### FURTHER INFORMATION

#### ▶ **Special customer-specific solutions**

Multi-functional heads, motor connections and control systems often have different requirements for their tasks. Zimmer Group works with you to develop the most technically advanced solutions.

# SERVICE

## MOTOR SPINDLES

### ▶ INFORMATION ABOUT OUR SERVICE

#### SERVICE HOTLINE

Not every concern requires an immediate repair or replacement. Our highly qualified staff are happy to provide you advice and support by phone whenever you need it.

Phone +49 7243 727-2316  
service@zimmer-group.com

#### ▶ Consultation and design

As the heart of a machine, the motor spindle needs to be integrated into the machine concept with expertise. When it comes to selecting the spindle, this goes far beyond the dimensions and performance data. We are glad to help you deal with all the aspects that arise, such as power supply, control and cooling. These are foundational parameters for ensuring that your application performs to your expectations. Are you already using a spindle in your machine but looking for an alternative or upgrade? We would be happy to advise you!

#### ▶ Express repair service

In the event of an accident, it is essential to be able to resume your core duties quickly. In the case of spindle damage, it is therefore a question of how quickly and at what cost your machine can be returned to production at a reasonable expense. Spindle damage starts with the steps of disassembly, then the spindle repair or spindle replacement, then the final recommissioning the machine. As a rule, it therefore makes sense to have the functional spare spindle on site so that disassembly and recommissioning can be carried out at minimum cost during a service call. That is why we deliver you a refurbished or new replacement spindle quickly and without red tape and then service your defective motor spindle carefully.

#### ▶ Service contracts

Are you looking for reliability and support during the lifecycle of your equipment to ensure that you can make long-term plans for your products and production capabilities? We offer the service agreements you need to guarantee that your production capacity is maintained.

#### ▶ On-site service

At your request, our experienced service personnel are happy to visit you on-site to carry out service operations, assist in commissioning or offer professional consultation.

#### ▶ Spare parts service

Manufacturer quality at fair prices, discussed and delivered with the appropriate level of skill. That is what we offer.

# USAGE NOTE

## GENERAL

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The contents of this catalog are not legally binding and are intended solely for informational purposes. Any final agreement will be in the form of a written order confirmation from Zimmer GmbH, which occurs only subject to the respective current General Terms and Conditions of Sale and Delivery of Zimmer GmbH. These can be found online at [www.zimmer-group.com](http://www.zimmer-group.com).

All of the products listed in this catalog are designed for their intended use, e.g. machines for automation. The recognized technical regulations for safety and professional work must be followed for use and installation.

Furthermore, the respective laws, guidelines from TÜV, guidelines from the respective trade association and VDE stipulations shall apply.

The technical data listed in this catalog must be observed by the user. The conditions of use may not fall below or exceed the specified data. If information is missing, it cannot be assumed that there are no upper or lower limits or no limitations for specific use cases. Consultation is required in these cases.

Disposal is not included in the price, which would have to be taken into account accordingly in the event of return to or disposal by Zimmer GmbH.

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The technical data and figures have been compiled with great care and to the best of our knowledge. We cannot guarantee that the information is up to date, correct or complete.

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### STANDARDS

Zimmer Group has a quality management system certified in accordance with ISO 9001:2008. Zimmer Group has an environmental management system certified in accordance with ISO 14001:2004.

# USAGE NOTE

## INDIVIDUAL

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### **DECLARATION OF INCORPORATION IN TERMS OF THE EC DIRECTIVE 2006/42/EC ON MACHINERY (ANNEX II 1 B)**

We hereby declare that our elements meet the following basic requirements of the Machinery Directive 2006/42/EC as an incomplete machine

No.1.1.2., No.1.1.3., No.1.1.5., No.1.3.2, No. 1.3.4, No. 1.3.7, No.1.5.3, No.1.5.4, No.1.5.8., No.1.6.4, No.1.7.1, No.1.7.3, No.1.7.4.

We also declare that the specific technical documents were produced in accordance with Annex VII Part B of this Directive. We undertake to provide the market supervisory bodies with electronic versions of the incomplete machine's special documents via our documentation department should they have reason to request them.

The incomplete machine may only be commissioned if the machine or system in which the incomplete machine is to be installed has been determined to satisfy the conditions of the Machinery Directive 2006/42/EC and the EC Declaration of Conformity has been produced in accordance with Annex II A.