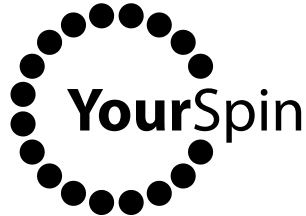






9. YourSpin - General information



CUSTOMIZED / SPECIAL SOLUTIONS

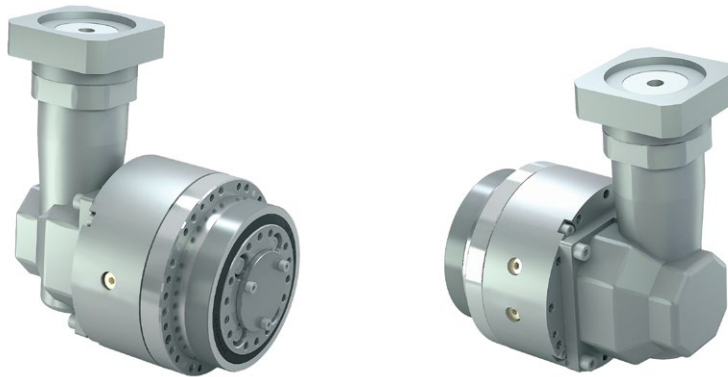
Customer requirements often call for special solutions. Thanks to many years of experience in technical support and engineering, we have implemented highly professional solutions according to customer requirements. We make various design modifications of standard products and solutions of higher assembled units TwinSpin® series G, T, E, H and M, DriveSpin® in series DS, DSH, DSM, DSF and RotoSpin modules. Our technical support is based on professional recommendations for various applications of TwinSpin®, DriveSpin® and RotoSpin in industrial segments such as robotics, automation, metalworking, medicine, camera systems, security and others. The advantages of these special solutions are their compact and modular design, easy connection to the supporting structure and technically applied sealing elements

Advantages

- **compact design**
- **modular design**
- **easy connection with the support structure**
- **technically applied sealing elements**

9.1 Customized / Special reduction gears

TwinSpin® reduction gear with right angle gearbox



Advantages

- possibility of right-angle motor connection
- higher input speeds
- smaller servomotor dimensions
- low lost motion and hysteresis on output
- compact solution

High precision reduction gear with the possibility of right-angle motor connection also allows the total reduction ratio increase by using an input right-angle reduction gear. This allows the use of servomotor with lower torque and higher speed, i.e. a smaller motor. This solution is available for the whole line of E series reduction gears.

Note: For more information please contact the SPINEA® sales department.

TwinSpin® hollow shaft reduction gear with a pre-stage



Advantages

- high-precision reduction gear
- possibility to have a motor in an offset position
- high reduction ratio in two stages
- coupling and motor flange provide easy motor mounting
- pre-greased and fully sealed solution

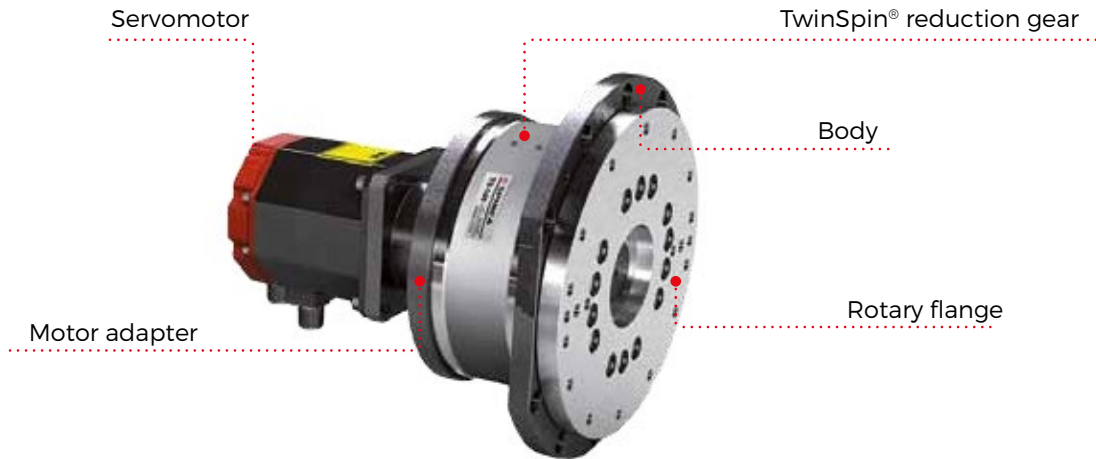
A TwinSpin® hollow shaft reduction gear with a pre-stage and offset motor position - a solution for applications that require completely sealed node with a large through hole for passing cables, tubing or additional shafts.

Note: For more information please contact the SPINEA® sales department.

9.2 Customized / Special solutions

RotoSpin - High precision rotary modules

The rotary positioning module, which is offered under the RotoSpin brand, is designed for the building of positioning devices and rotary tables used at automated and robotized workplaces. The RotoSpin module features a high reduction ratio, high kinematic precision, low backlash motion, high torque capacity, low weight, and a compact design.



RotoSpin - Rotary modules - series A



Advantages

- possibility to be built into circular holes
- low weigh and small dimensions
- wide area of use
- easy attachment

The RotoSpin A are called the flange ones. They feature a flange design, which allows the module's attachment and building into a structure with a circular hole. According to their size, RotoSpins A are manufactured in four size categories with load capacities of 60, 250, 500, and 1000 kg respectively. Due to their small dimensions and low weight, the RS-A modules are used mainly in moving parts of positioning devices. If the RS modules are loaded with higher than allowed moment or shock load, we use them in combination with a support bearing.

Note: For more information please contact the SPINEA® sales department.

RotoSpin - Rotary modules - series B



Advantages

- possibility to be attached to flat surfaces
- compact design
- wide area of use
- easy attachment

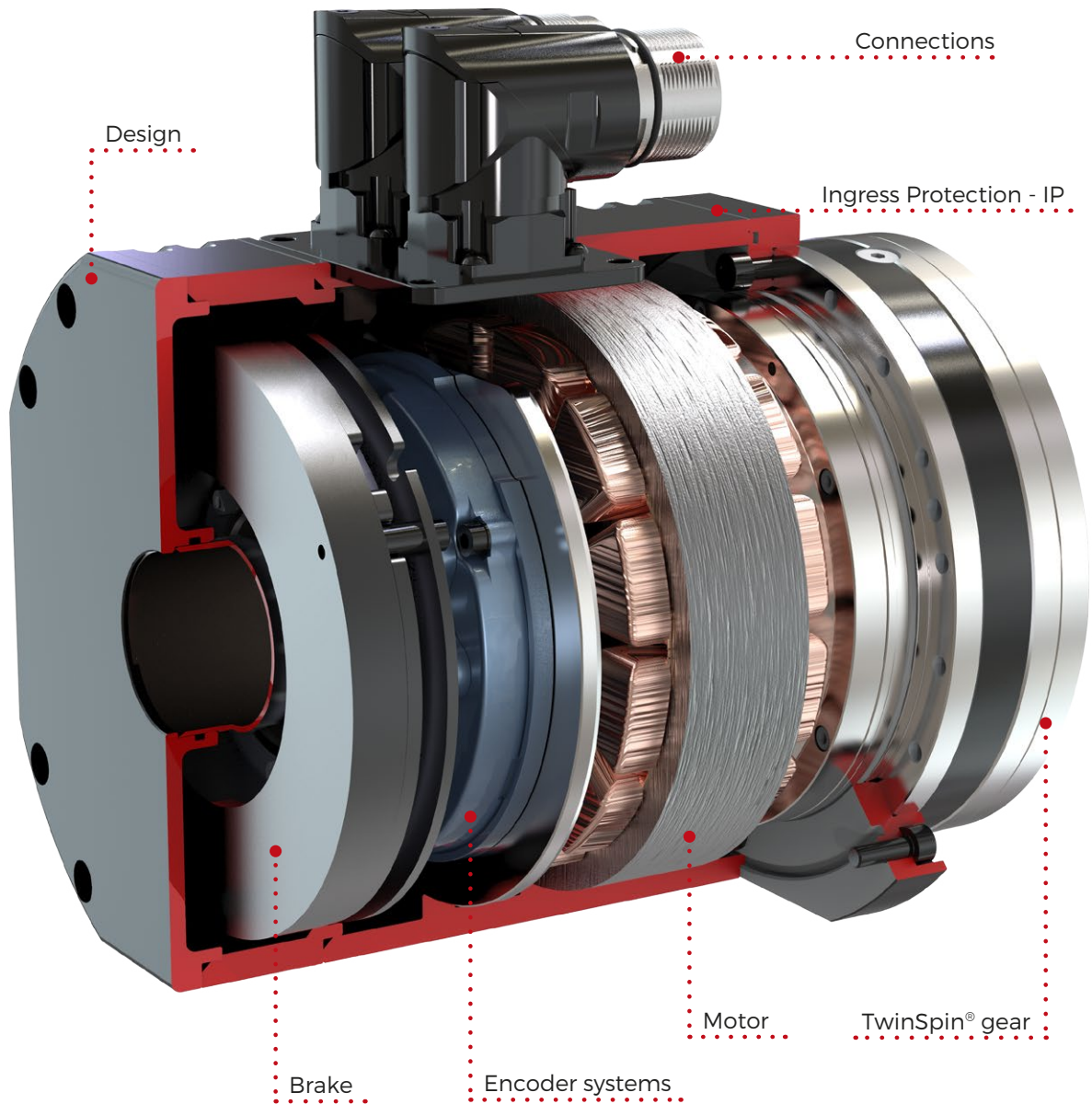
The RotoSpin B are called the box ones. They feature a box design, which allows the module easy attachment to a flat surface by means of feet. According to their size, RotoSpins B are manufactured in four size categories with load capacities of 60, 250, 500, and 1000 kg respectively. We supply the RS1000 module in two versions according to the foot width. The B version with narrow feet is used where it is necessary to support a long workpiece or welded piece by means of a support module. The module with wide feet is marked as RS 1000-BX and it is used for clamping of short workpieces without support modules.

Note: For more information please contact the SPINEA® sales department.

9.3 Customized / Special actuators

DriveSpin® actuators - design "Your actuators"

The rotary electric actuator can be designed and manufactured according to your specific application requirements. Technical specification of the input and output can be designed and optimized for you



Advantages

- create your own design
- integrate unique mechatronics components (Servomotor, Encoder)
- make your own color design
- optimize input and output characteristics of the actuator according to your application

Motor

Motors are directly built-in the DriveSpin®, without any need for an additional coupling. This helps to reduce weight and dimensions of the whole solution. Main type of the motor is a synchronous motor with permanent magnets. 24V, 320V and 560V are standard versions of the motor built-in the DriveSpin®. Low voltage range can be modified to 36V 48V and 60V, and the high voltage range to 680V. These motors are a custom solution and they are modified to suit our customers. If there is a special requirement or our solution is not suitable for you we can implement any frameless motor and calculate final parameters of DriveSpin®.

Encoder systems

DriveSpin® actuators with cycloidal gearbox excel in terms of precision positioning however this would not be possible without the implementation of position feedback sensors. Our primary industries such as robotics, machine tool, dental machines, CNCs require different accuracy standards. Thus, requirements for motion control differ on application. Therefore, our company consults your needs and requirements. Our specialists will analyze your application and find the best solution in terms of accuracy, precision measurement, robustness as well as compatibility with your control system. Actuator series DS, DSH, DSM as well as DSF come with a wide variety of feedback systems. Our portfolio includes sensors from basic feedback systems used in most servo drives such as incremental encoders, up to next generation protocol encoders such as (EnDat 2.2, Hiperface DSL, BiSS-C). Technical parameters, e.g. like resolution, sensor protocol, single vs. multiturn are specified in the custom product development process. Supported encoder systems: HIPERFACE®, HIPERFACE® DSL, EnDat 2.2, Resolver, BiSS Interface, DRIVE-CLiQ, FANUC.

Brake

Brakes in our actuators are mostly used in static applications which statically hold the load in the absence of power. Usually electromagnetic brake is used, where the armature becomes engaged with brake disk in currentless state (without connected DC voltage) and magnetic field is neutralized and brake released to free rotation of actuator after the application of DC voltage to brake. Electromagnetic brakes are also used in dynamic applications where actuator use the brake for deceleration or as a safety brake, but this application requires different calculation and incorporation in the actuator. 24 VDC electromagnetic brake for static applications is a standard in our product range, but we can build in also 12 VDC electromagnetic brakes with handle release or any other brakes developed for servomotors.

Connections

Electrical as well as mechanical connections used for standard DS, DSH, DSM and DSF are available in this catalogue. However, our electrical and mechanical engineering team can adjust most of the connection possibilities according to the end customer requirements.

Design

Every piece of DriveSpin® series, either DS, DSM, DSH or DSF, has its own unique design. If you require specific design of the housing or mounting flange, or if you need to adjust design to your own application, our specialists are ready to prepare a solution according to your demands. It is also possible to place a special ID plate (e.g. QR code) to meet your production processes. Of course, the use of your specific coloring is also possible.

Ingress Protection - IP

Ingress Protection of our standard product range is IP 64. If your application requires higher IP, we can design all components of DriveSpin® actuators to reach IP 65, 66 or even 67.

Testing

All our products from the DS, DSH, DSM and DSF series are subjected to testing, they are standardly tested and comply with the European standards, CE. Our company dispose with various test benches, which can be used for simulation of various duty cycles according to the customer specification. We are able to provide for you independent testing of our products according to your requirements and our capabilities.

Note: For more information please contact the SPINEA® sales department.