ABOUT DIEQUA

ounded in 1980 by Dietmar Quaas, and now owned by his sons, DieQua Corporation has expanded from a single product line to become a leading manufacturer and supplier of an extensive line of high-quality power transmission and precision motion control products, including gearboxes, servo gearheads, screw jack systems, speed reducers, cycloidal reducers, and connecting components. The company also offers custom product modifications and complete design solutions for virtually any application. DieQua Corporation serves a wide range

of industries, including medical and health care, marine engineering, renewable energy, mining, transportation, steel, forestry and lumber, water and wastewater, automotive, and factory automation, to name a few.

An experienced and knowledgeable technical sales, customer service, and engineering support staff, as well as local distributors, ensure that DieQua customers in North America, Mexico and South America select the optimum components, systems, and best design solutions for their specific requirements.



The DieQua family of products



Spiral Bevel Gearboxes





Speed Reducers





Cycloidal Reducers & Positioners

and Line Shafts







The DieQua Advantage

Engineering Support

DieQua Corporation has several decades of combined experience specifying power transmission and motion control components. This assures proper selection of components and systems to suit your unique requirements.

Warehousing

Speed Modulating

Gearboxes

We pride ourselves for our extensive in-stock inventory. For fast product turnaround, DieQua Corporation stocks many components of various ratios and sizes, ready to ship fast.

Manufacturing and Assembly

DieQua Corporation now manufactures or assembles most of the products, for on-time delivery of standard orders as well as prototypes. We are ISO 9001 certified and are constantly improving our quality systems to ensure our customers receive the best products.



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Zero Backlash

ISO 9409 Output Flange

Size ranges from \emptyset 50 mm through Ø335 mm

Solid Flange Output

Hollow-bore Flange Output

HIGH PRECISION CYCLOIDAL REDUCTION GEARHEADS AND ROTARY ACTUATORS

SOLUTION OVERVIEW



TwinSpin Series

The TwinSpin[®] TS Series of high precision reduction gears are based on a new reduction mechanism and design which incorporates the radialaxial output bearings into an integrated unit. As a result, they represent a new generation of power transmission systems. The notion TwinSpin[®], indicates the full integration of highprecision trochoidal reduction wheels and radial-axial bearings in a single unit. This new transmission concept allows the use of the reduction gears directly in robot joints, rotary tables, and wheel drives in various transport systems. The TwinSpin[®] high-precision reduction gears are designed for applications requiring a high reduction ratio, high kinematic accuracy, low lost motion, high moment capacity, and high stiffness of a compact design within limited installation space and low mass.

G / GH Series



Advantages

- High tilting stiffness, high torque density
- Lower friction and hysteresis
- High precision output bearing
- New reducer sizes

A new generation of high precision reduction gears with a new design of the main bearing and improved performance for the most demanding applications. G Series introduced the increase in torque to weight ratio in comparison to the previous generation. Innovative design of main bearing resulted in the unprecedented tilting stiffness, high precision of the output bearing, and modularity of design which allows for customized solutions.

GH Series hollow bore option: Four sizes, 85, 115, 125 and 155, with Ø21 mm thru Ø55 mm hollow bores.

E Series

Advantages

- · Zero-backlash reduction gear
- High moment capacity and stiffness
- Excellent positioning accuracy and repeatability
- Small dimensions and low weight
- High reduction ratios, efficiency, long lifetime Easy assembly

The E Series represents a wide range of TwinSpin[®] high-precision reduction gears with a flange-shaped case. The gears comprise an accurate reduction mechanism and highcapacity radial and axial cylindrical bearings. This design of reduction gears allows the mounting of the load directly on the output flange or the case, without the need for additional bearings. The high-precision reduction gears allow the mounting of a motor to the reduction gear by means of a connection flange. The reduction gears are not completely sealed; an inlet flange and gasket kit have to be used for the sealing. We can supply a completely sealed reduction gear with a flange according to your motor.

T Series



Advantages

- Zero-backlash reduction gear
- High moment capacity and reduction ratios
- Excellent positioning accuracy and repeatability
- High torsional and tilting stiffness
- Small dimensions, low weight, long lifetime
- Easy assembly

The T Series represents a wide range of TwinSpin[®] high-precision reduction gears with a cylinder-shaped case. Featuring accurate reduction mechanisms and high-capacity radial and axial cylindrical roller bearings allows the mounting of the load directly on the output flange or case, without additional bearings. The modular design allows the mounting of motor type to the reduction gear by means of a motor connection flange. The T Series includes TwinSpin[®] high-precision reduction gears that are not completely sealed; an inlet flange and a gasket kit have to be used for the sealing. We can supply a completely sealed reduction gear with a flange according to your motor.



Advantages

- Large input shaft hole diameter
- High moment capacity and stiffness

The H Series represents TwinSpin® highprecision reduction gears with through-holes in the shafts, also known as the hollow-shaft version. Cables, tubes with compressed air, drive shafts etc. can be led through the hole in the shaft of the gear. The H Series is completely sealed and filled with grease for lifetime. The H Series high precision reduction gears comprise an accurate reduction mechanism and highcapacity radial and axial cylindrical bearings. This design of the reduction gears allows the load mounting directly on the output flange or case, without the need for additional bearings.

DS Series



• High capacity of the

output bearings

New reducer sizes

integrated radial-axial

• High dynamic performance

Advantages

- Low lost motion
- Low moment of inertia
- High reduction ratio
- High kinematic accuracy High moment overload
- capacity

The DS electric rotary actuators provide rotary motion and transfer output torque with high radial-axial load capacity, and are the most accurate and precise solution in their category. They feature high dynamics and flexible drive solutions, guaranteed by an AC servomotor, high robustness, and overload capacity of TwinSpin[®] reduction gears. Rated output torgue range of the DS is from 18 Nm - 460 Nm.

DSH Series



Advantages

- · Low lost motion Low moment of inertia
- High reduction ratio
- High kinematic accuracy
- High moment overload
 - capacity
- integrated radial-axial

- High capacity of the output bearings
- High dynamic performance

The DSH electric actuators feature a short axial length and ability to use a through-hole for routing cables, pipes, and drive shafts. Fully sealed compact actuators, equipped with zero-backlash reduction gears, have high power density and large hole inner diameter, from 8 to 40mm. Excellent positioning accuracy and positioning repeatability. Features voltage and feedback variability. Rated output torgue is within 18 Nm - 420 Nm.



• High capacity of the

output bearings

integrated radial-axial

DSM Series

Advantages

- Low lost motion
- Low moment of inertia
- High reduction ratio
- High kinematic accuracy • High dynamic performance High moment overload
- capacity

The DSM modular rotary positioning modules provide for controlled rotary motion and transfer of torque with a high positioning accuracy and precision. The output flange of the module allows capturing both radial and axial forces, and features a special design which allows versatile connections, also without additional devices. These actuators are used in applications that require high torgue density, precision and dynamics. Rated output torque is within 18 Nm - 122 Nm.



Advantages

- Low mass Compact design
- Extremely short axial length
- High torgue density

The DSF "Flat" Series of electric actuators is characterized by the extremely short axial length with focus on maintaining the key features of the DriveSpin®. Designed to be the most compact solution with very low mass and small dimensions. The DS "Flat" Series consists of TwinSpin® reduction gear, servomotor, and various feedback systems aimed at ensuring full compatibility with customer requirements. Rated torque range of the DSF Series varies within 12Nm - 85 Nm.



H Series



• Fully sealed, zero-backlash reduction gears • Excellent positioning accuracy, repeatability · Small dimensions, low weight, long lifetime • High reduction ratios, high efficiency

🗘 SPINEA

M Series



Advantages

- Small, compact design, simple installation
- · Zero-backlash reduction gear
- Very low mass, high power density
- Output deep groove ball bearings
- High precision, torsional stiffness
- Very low friction and high efficiency

The M Series represents TwinSpin[®] highprecision reduction gears of mini sizes. The M Series is filled with grease for lifetime. The sealing of the M series reduction gears is secured by sealed (2RS) ball bearings, which are used as output bearings of the reduction gear, and also as the housing of the input shaft of the reduction gear (slight leakage of lubricant is allowed). Upon customer's request, SPINEA® is able to supply a completely sealed reduction gear. This design of the reduction gears allows the load to be mounted directly on the output flange or the case without the need for additional bearings.

DSF Series



• High dynamic performance High moment overload capacity

DriveSpin Series

The DriveSpin[®] DS Series electric rotary actuators provide rotary motion and the transfer of output torque, with high radial-axial load capacity and high accuracy and precise motion. The DS actuators are characterized by high dynamics and highly flexible drive solutions, integrated with a BLDC servomotor, and high robustness and overload capacity of TwinSpin[®] reduction gears. DriveSpin® high variability of voltage, brake, feedback, and electrical connections, will satisfy customer requirements in many cases.

We're here to help. Call 630-980-1133

