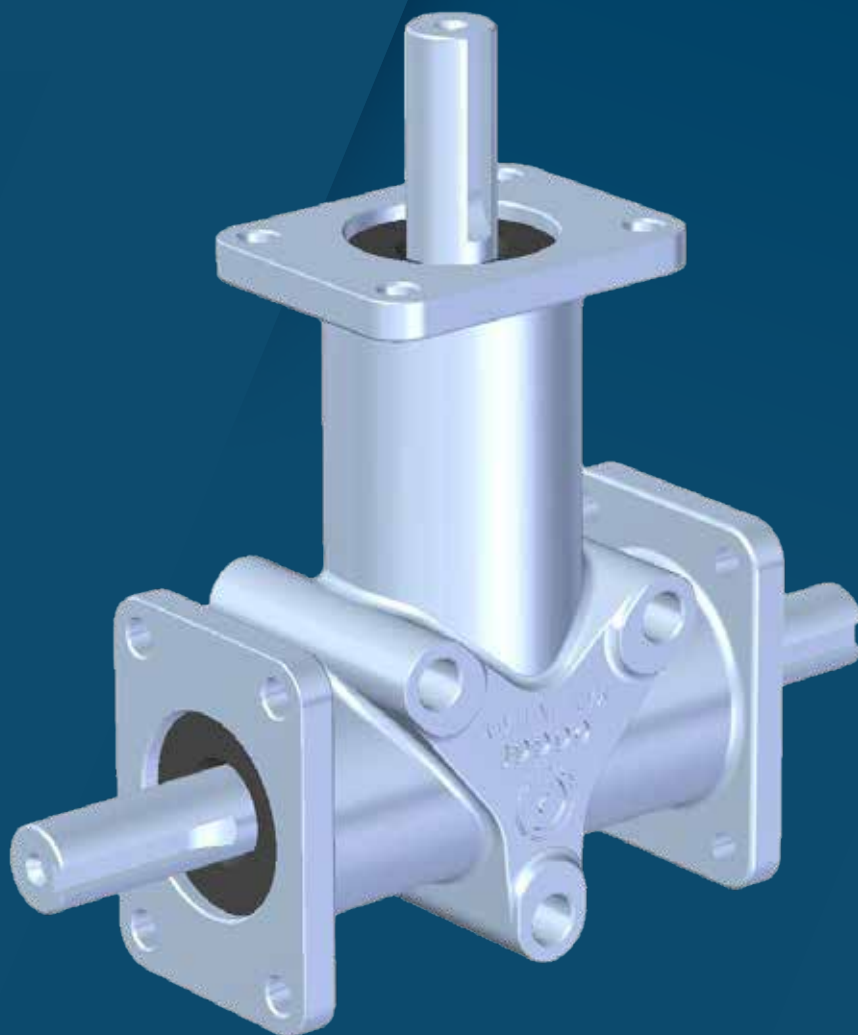


bj·gear

MADE IN ITALY REGISTERED DESIGN



Poggi

Right angle gearboxes

Series 5000 stainless steel

Customisation is our standard

BJ-Gear A/S

BJ-Gear A/S manufactures stainless steel worm gear-boxes of superior quality. The gearboxes are specifically developed for the food industry and other industries, that continuously make heavier demands to the resistance of material and to a design that is easy-to-clean.

The gearboxes are designed with a smooth, stainless steel gear housing and hollow shaft. The gearboxes are lubricated for life and can be supplied with a lubricant approved for the food industry. The oil sealings are made of nitrile rubber.

In order to reduce the risk of bacteria growth, the design is characterised by smooth surfaces without unnecessary flanges, recesses and mounting holes.

When a completely sanitary gear motor is required, the stainless steel worm gearbox can be fitted with a stainless AC motor or a servo motor.

Precision transmission solutions – powered by Poggi, delivered by BJ-Gear

At BJ-Gear A/S, we are proud to have maintained a strong and long-standing partnership with Poggi Trasmissioni Meccaniche – an Italian manufacturer renowned for precision and quality in mechanical power transmission components.

Since its founding by Pierluigi Poggi in 1958, Poggi has consistently combined deep Italian craftsmanship with a global perspective, delivering advanced solutions such as pulleys, right-angle gearboxes, and a wide range of specialized transmission components. Their continued investment in R&D, process optimization, and product testing has made Poggi a trusted name in more than 40 countries worldwide.

With over six decades of experience, Poggi stands out for their commitment to quality, flexibility, and innovation – values that perfectly align with our own. Their modular product design and ability to tailor solutions make them an ideal partner in meeting the demands of diverse industries.

Through our collaboration, BJ-Gear is able to offer our customers access to Poggi's high-performance products, combined with our own expertise in selecting and customizing the right transmission solutions. Together, we focus on delivering reliable, efficient, and application-specific components that support our customers' success.



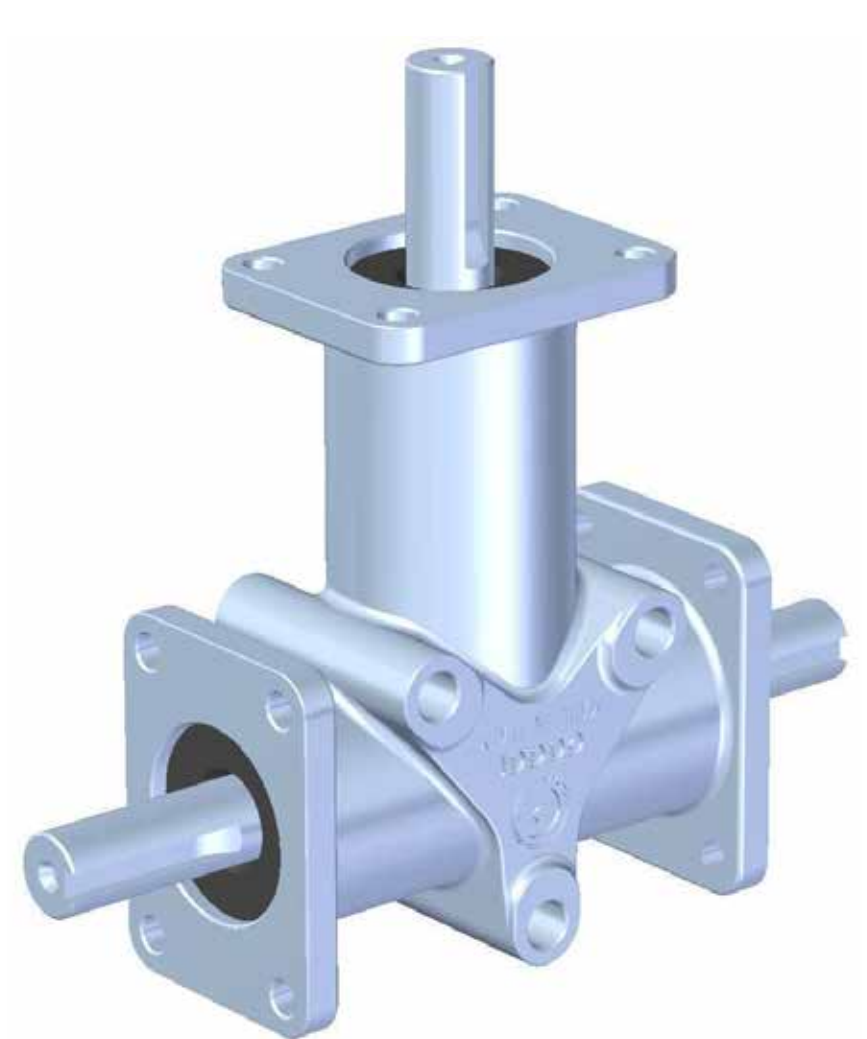
Rinvii angolari inox serie 5000

Series 5000 stainless steel right angle gearboxes

Edelstahl-Kegelradgetriebe Serie 5000

Renvois d'angle série 5000 en acier inoxydable

Reenvíos de ángulo serie 5000 de acero inoxidable





Introduzione ai rinvii angolari inox serie 5000

Introduction to series 5000 stainless steel right angle gearboxes

Einführung in die Edelstahl-Kegelradgetriebe Serie 5000

Introduction aux renvois d'angle série 5000 en acier inoxydable

Introducción a los reenvíos de ángulo serie 5000 de acero inoxidable

Al fine di soddisfare la crescente richiesta di applicazioni in ambienti particolari quali, ad esempio, il settore alimentare, farmaceutico, navale, chimico, tessile, cartario, fotografico, ecc., abbiamo progettato e realizzato una gamma standard di rinvii angolari inox con le dimensioni esterne, gli attacchi e gli alberi, intercambiabili con i nostri rinvii in alluminio serie 4000.

Per tutti i rapporti, il corpo esterno e gli alberi sia in entrata che in uscita, sono realizzati in acciaio AISI 316.

Utilizziamo l'AISI 316 per ottenere un risultato qualitativo superiore rispetto al più comune AISI 304.

Le caratteristiche migliorative principali dell'AISI 316 rispetto all'AISI 304 sono la migliore resistenza alla corrosione ed il più ampio spettro di utilizzo. In particolare l'AISI 316 ha un'ottima resistenza alla corrosione in atmosfera (normale e marina), e da parte di una grande varietà di sostanze anche alimentari, normalmente critiche per gli acciai comuni.

Il corpo esterno è ergonomicamente studiato per evitare anidamenti di liquidi o polvere. La superficie è micropallinata ed elettrolucidata e gli alberi sono rettificati.

Su richiesta, in base ai minimi quantitativi, possono essere prodotti con la parte sporgente degli alberi a disegno cliente per tutti i rapporti.

In order to meet the demand for specific environments, such as for the following sectors: food, pharmaceuticals, shipbuilding, chemical, textile, paper, photographic, etc., we have designed and engineered our stainless steel right angle gearboxes. These right angle gearboxes possess the external dimensions, the flanges, the connections and the shafts, which are interchangeable with our aluminium right angle gearboxes of series 4000. In all ratios, the housings and both input and output shafts are manufactured from stainless steel AISI 316.

We use the AISI 316 steel, i.e. a higher quality than the AISI 304 steel. The main advantages of AISI 316 steel compared to AISI 304 steel are the best corrosion resistance and the wider range of applications.

In particular, AISI 316 performs an excellent corrosion resistance in the atmosphere (normal atmosphere and sea atmosphere), and an excellent corrosion resistance against a variety of substances, including food, which are usually critical for steels.

The outer housing is ergonomically designed to prevent interlocking of liquid or powder. The surface is electropolished and bead blasted, and the shafts are ground.

Upon request, according to minimum amounts, our stainless steel right angle gearboxes can be produced with the external parts of shafts according to customer's drawing for all ratios.

Um den Bedarf bei bestimmten Umgebungen, wie z.B.: Nahrungsmittel-, Pharma-, Schiff-, Chemie-, Textil-, Papier-, Fotobereich, usw., zu befriedigen, haben wir eine Reihe Standard-Edelstahl-Kegelradgetriebe ausgelegt und ausgeführt. Die Außenabmessungen, Flanschen und Wellen der Edelstahl-Kegelradgetriebe sind mit unseren Alu-Kegelradgetrieben Serie 4000 austauschbar.

Bei allen Übersetzungen werden die Gehäuse sowie die Eingangs- und die Ausgangswellen aus Edelstahl AISI 316 gefertigt. Wir verwenden das AISI 316 Stahl, d.h. eine höhere Qualität als das AISI 304 Stahl. Die wichtigsten Merkmale der AISI 316 im Vergleich zu AISI 304 sind die bessere Korrosionsbeständigkeit und die breiteren Anwendungsbereiche.

Insbesondere hat das AISI 316 ausgezeichnete Korrosionsbeständigkeit in der Atmosphäre (die normale und die See-Atmosphäre), und in einer Vielzahl von Stoffen, einschließlich Nahrung, in der Regel entscheidend für Stähle.

Das äußere Gehäuse ist ergonomisch gestaltet, um eine Verschachtelung von Flüssigkeiten oder von Pulver zu vermeiden. Die Oberfläche ist elektropoliert und glasperlgestrahlt und die Wellen sind geschliffen.

Auf Anfrage, gemäß bestimmten Mindestmengen, können die Edelstahl-Kegelradgetriebe mit den Außenteilen der Wellen auf Kundenzeichnung für alle Verhältnisse hergestellt werden.

Pour pouvoir satisfaire la croissante demande d'applications dans les milieux particuliers comme, par exemple, le secteur alimentaire, pharmaceutique, naval, chimique, textile, papeterie, photographique etc., nous avons projeté et réalisé une gamme standard de renvois d'angle en acier inoxydable ayant les dimensions extérieures, les attaches et les arbres interchangeables avec nos renvois en aluminium, série 4000.

Pour tous les rapports, le corps extérieur et les arbres d'entrée et de sortie sont réalisés en acier AISI 316.

Nous utilisons l'acier AISI 316 pour obtenir un résultat qualitativement supérieur par rapport à l'acier plus courant AISI 304.

Les caractéristiques d'amélioration principales de l'AISI 316 par rapport à l'AISI 304 sont la meilleure résistance à la corrosion et un domaine d'utilisation plus large.

En particulier, l'AISI 316 offre une très bonne résistance à la corrosion dans l'atmosphère (normale et marine) et au milieu d'une grande variété de substances, même alimentaires, qui sont normalement critiques pour les aciers communs.

Le corps extérieur est ergonomiquement projeté pour éviter toute nidation de liquides ou de poussière. La surface est micro-grenailée et électro polie, et les arbres sont rectifiés.

Sur demande, sur la base des quantités minimum, on peut les fabriquer avec les saillies des arbres suivant plan du client, pour tous les rapports.

Para poder satisfacer la cada vez mayor exigencia de aplicaciones en los ambientes particulares tales como, por ejemplo, el sector alimentario, farmacéutico, naval, químico, textil, papelería, fotográfico etc., hemos proyectado y realizado una gama estándar de reenvíos de ángulo de acero inoxidable que tienen las dimensiones exteriores, los enganches y los ejes intercambiables con nuestros reenvíos de aluminio, serie 4000.

Para todas las relaciones, el cárter exterior y los ejes de entrada y de salida son contruidos en acero inoxidable AISI 316.

Utilizamos el AISI 316 para obtener un resultado de calidad superior con respecto del más usual AISI 304.

Las principales características mejorativas del AISI 316 con respecto del AISI 304 son una mejor resistencia a la corrosión y un más amplio espectro de utilización.

En particular, el AISI 316 tiene una excelente resistencia a la corrosión en la atmósfera (normal y marina), y en una amplia variedad de sustancias, también alimenticias, generalmente críticas para los aceros comunes. El cárter exterior es diseñado ergonómicamente para evitar los anidamientos de líquidos o de polvo. La superficie es micro-grenallada y electropoliada y los ejes son rectificados.

Bajo consulta, y en base a las cantidades mínimas, podemos fabricarlos con las proyecciones de los ejes según plano del cliente, para todas las relaciones.

Corrispondenza indicativa acciaio INOX AISI 316

Indicative match with AISI 316 stainless steel

Bezeichnende Übereinstimmung mit Edelstahl AISI 316

Correspondance indicative acier INOX AISI 316

Correspondencia indicativa acero INOX AISI 316

Europa Europe EN	USA USA AISI	Italia Italy UNI	Francia France AFNOR	UK UK BSI	Germania Germany DIN	Giappone Japan JIS	Svezia Sweden SS (SIS)
X 5 CrNiMo 17-12-2	316	X 5 CrNiMo 17 12	Z 7 CND 17-11-02	316 S 31	1.4401	SUS 316	23 47



Caratteristiche generali dei rinvii angolari inox serie 5000

General features of stainless steel right angle gearboxes, series 5000

Produktbeschreibung der Edelstahl-Kegelradgetriebe Serie 5000

Caractéristiques générales des renvois d'angle série 5000 en acier inoxydable

Características generales de los reenvíos de ángulo serie 5000 de acero inoxidable

Velocità di rotazione

I rinvii sono stati progettati per una velocità in entrata (albero A) di 1400 g/1'. E' possibile utilizzarli anche a velocità superiori fino a 3000 g/1' (vedere prestazioni a pag. 45).

Speed of rotation

The gearboxes are engineered for an input speed (shaft A) of 1400 rpm. They can even be used at speeds up to 3000 rpm (see performances on page 45).

Drehgeschwindigkeit

Die Kegelradgetriebe sind für eine Eingangsgeschwindigkeit (Welle A) von 1400 U/min ausgelegt. Man kann sie auch bei Geschwindigkeiten bis zu 3000 U/min (siehe Leistungen auf Seite 45) verwenden.

Vitesse de rotation

Les renvois ont été projetés pour une vitesse en entrée (arbre A) de 1400 tr/min. Il est possible de les utiliser même à des vitesses supérieures jusqu'à 3000 tr/min. (voir les performances à la page 45).

Velocidad de rotación

Se han proyectado los reenvíos para una velocidad en entrada (eje A) de 1400 r.p.m. Es posible utilizarlos también con velocidades hasta 3000 r.p.m. (véanse las prestaciones a la página 45).

Temperatura di esercizio

Le temperature ammissibili per un buon funzionamento dei rinvii sono comprese fra i -18°C e i +80°C (0°F e 170°F). Con opportuni accorgimenti è possibile raggiungere temperature fra i -40°C e i +150°C. Per condizioni particolari di temperatura prego consultare il nostro ufficio tecnico.

Operating temperature

The permissible temperatures for trouble-free running of gearboxes should be kept within -18°C and +80°C (0°F and 170°F). With suitable devices it is possible to reach temperatures between -40°C and +150°C. In particular conditions of temperature, please consult our technical department.

Betriebstemperaturen

Die Getriebe sind ausgelegt für Betriebstemperaturen von: -18°C bis +80°C (0°F bis 170°F). Durch bestimmte Hilfsmittel ist es möglich, Temperaturen zwischen -40°C und +150°C zu erreichen. Bei Sondertemperaturbedingungen bitten wir um vorherige Rückfrage mit unserer technischen Abteilung.

Température de fonctionnement

Les températures admissibles pour un bon fonctionnement des renvois oscillent entre -18°C et +80°C (0°F et 170°F). Par des mesures adéquates il est possible d'atteindre des températures comprises entre -40°C et +150°C. Pour des conditions particulières de température, nous vous prions de vouloir consulter notre Service Technique.

Temperatura de funcionamiento

Las temperaturas admisibles para un buen funcionamiento de los reenvíos oscilan entre -18°C y +80°C (0°F y 170°F). Por medio de medidas adecuadas es posible alcanzar temperaturas incluidas entre -40°C y +150°C. Para condiciones de temperatura particulares, les rogamos consultar nuestro Dpto Técnico.

Durata

I rinvii, se utilizzati rispettando le velocità di rotazione e le temperature di esercizio indicate, sono progettati per una durata media di 10000 ore.

Service life

Right angle gearboxes, if used by respecting the recommended rotation speeds and operating temperatures, are designed for an average operating life of approx. 10000 hours.

Lebensdauer

Die Kegelradgetriebe, bei Beachtung der empfohlenen Drehzahlen und Betriebstemperaturen, sind für eine durchschnittliche Lebensdauer von ca. 10000 Stunden gestaltet.

Durée

Les renvois d'angle, s'ils sont utilisés en respectant les vitesses de rotation et les températures de fonctionnement indiquées, sont projetés pour une durée moyenne de 10000 heures.

Duración

Los reenvíos de ángulo, si se utilizan respetando las velocidades de rotación y las temperaturas de funcionamiento indicadas, son proyectados para una duración media de 10000 horas.

Rumorosità

Le lavorazioni, il montaggio ed il controllo accurato ci permettono di contenere la rumorosità dei rinvii angolari anche alle massime velocità.

Noise level

The processes, the accurate mounting and the accurate checks allow us to keep a low operating noise level, even at high rotation speeds.

Laufruhe

Durch sehr sorgfältige Bearbeitungen, Montage und Prüfung wird auch bei den höchsten Drehzahlen unserer Kegelradgetriebe ein geräuscharmer Lauf erreicht.

Bruit

Les usinages, le montage et le contrôle soignés nous permettent de limiter le bruit des renvois d'angle même aux vitesses maximum.

Rumorosità

Le mecanizados, el montaje y el control esmerado nos permiten contener la rumorosidad de los reenvíos de ángulo, hasta a las máximas velocidades.

Giochi angolari

Il gioco angolare riscontrabile tra i denti degli ingranaggi è compreso fra i 15' ed i 30'. Su richiesta tutti i rinvii possono essere forniti con giochi angolari ridotti.

Backlash

The measurable backlash between the gear teeth ranges from 15' to 30' for all stock gearboxes. On request we can supply all right angle gearboxes with reduced backlash.

Winkelspiel

Das normale Winkelspiel zwischen den Getriebebezähnen liegt zwischen 15' und 30'. Auf Anfrage können wir alle Kegelradgetriebe mit reduziertem Winkelspiel liefern.

Jeux angulaires

Le jeu angulaire vérifiable entre les engrenages est compris entre 15' y 30'. On peut livrer sur demande tous les renvois avec un jeu angulaire réduit.

Juegos angulares

El juego angular cotejable está comprendido entre los 15' y 30'. Bajo consulta se entregan todos los reenvíos con juegos angulares reducidos.

Lubrificazione

I rinvii vengono forniti già equipaggiati di lubrificante. I rinvii serie 5000 sono lubrificati con olio di tipo sintetico. Trattandosi di lubrificazione a vita, non sono necessari rabbocchi o sostituzioni. Per particolari applicazioni, in base a minimi quantitativi, è possibile produrre i rinvii con tipi di oli a richiesta.

Lubrication

All units are factory filled with lubricant. The series 5000 gearboxes are lubricated with synthetic oil. Being lubricated for life, they do not require any periodical oil filling up nor any oil change. For particular applications, according to minimum quantities, it is possible to produce these right angle gearboxes with oil types as requested by customer.

Schmierung

Alle Kegelradgetriebe werden mit Schmiermittel schon geliefert. Alle Kegelradgetriebe der Serie 5000 sind mit Synthetiköl als Lebensdauerschmierung versehen. Da es sich um lebenslange Schmierdauerschmierung handelt, sind Nachfüllungen oder Ölwechsel nicht notwendig. Bei bestimmten Anwendungen, gemäß den Mindestliefermengen, kann man diese Kegelradgetriebe mit Öl-Typen nach Wunsch des Kunden fertigen.

Lubrification

Les renvois sont livrés déjà équipés de lubrifiant. Les renvois série 5000 sont lubrifiés par huile synthétique. Comme il s'agit d'une lubrification à vie, il n'est pas nécessaire de faire des remplissages ou de remplacer l'huile. Pour les applications spéciales, sur la base de quantités minimum, on peut livrer les renvois remplis avec d'huiles sur demande.

Lubricación

Los reenvíos se suministran ya equipados de lubricante. Los reenvíos serie 5000 son lubricados con aceite sintético. Ya que se trata de una lubricación de por vida, no es necesario rellenar o reemplazar el aceite. Para las aplicaciones especiales, en base a cantidades mínimas, es posible fabricar los reenvíos con tipos de aceites bajo consulta.

Installazione

Per la particolare forma costruttiva, i rinvii possono essere montati in qualsiasi posizione. L'unica precauzione richiesta è di interpellare il nostro ufficio tecnico nel caso di montaggio con un albero in posizione verticale al fine di verificarne l'opportuna lubrificazione.

Installation

Thanks to the construction shape, the mounting of gearboxes is allowed in any position. The only requested caution is to advise a possible mounting with a shaft in vertical position, in order to provide the proper lubrication.

Installation

Aufgrund ihrer Bauform können die Kegelradgetriebe in jeder Position montiert werden. Es ist jedoch darauf zu achten, dass Sie uns mitteilen, wenn die Welle in vertikaler Position montiert wird, um die passende Schmierung bereit zu stellen.

Installation

Grâce à la particulière forme de construction, les renvois peuvent être montés dans n'importe quelle position. La seule précaution demandée est de signaler un éventuel montage ayant un arbre en position verticale, à fin de vérifier l'adéquate lubrification.

Instalación

Gracias a la forma peculiar de construcción, se pueden montar los reenvíos en cualquier posición. La única precaución necesaria es de señalar un montaje eventual que tenga un eje en posición vertical, a fin de comprobar la adecuada lubricación.



Componenti dei rinvii angolari inox serie 5000

Components of series 5000 stainless steel right angle gearboxes

Bestandteile der Edelstahl-Kegelradgetriebe Serie 5000

Composants des renvois d'angle série 5000 en acier inoxydable

Componentes de los reenvíos de ángulo serie 5000 de acero inoxidable

Corpo

Il corpo esterno del rinvio è di tipo monoblocco compatto ed è costruito in acciaio inossidabile AISI 316, la cui caratteristica principale è l'alta resistenza alla corrosione.

Le mostrine, la basetta con i fori passanti ed i centraggi di guida ne permettono il montaggio in qualsiasi posizione.

Coppie coniche

Gli ingranaggi sono a dentatura conica spiroidale GLEASON costruiti in acciaio legato, cementato e temprato.

Alberi

Gli alberi sono costruiti in acciaio inossidabile AISI 316. Gli alberi hanno un particolare trattamento, in corrispondenza degli anelli di tenuta, che garantisce assenza di usura. Per particolari applicazioni, in base a minimi quantitativi, siamo in grado di produrre rinvii con alberi speciali per tutti i rapporti di trasmissione e tutte le dimensioni standard dei corpi.

Cuscinetti

La rotazione degli alberi avviene su cuscinetti a sfere largamente dimensionati. I cuscinetti utilizzati nei rinvii sono di prima scelta e delle migliori marche.

Anelli di tenuta

Gli anelli di tenuta standard sono in NBR. Per particolari applicazioni in base a minimi quantitativi, sono fornibili a richiesta rinvii con anelli di tenuta speciali.

Housing

The gearbox housing is compact and made of stainless steel AISI 316, whose main feature is an excellent corrosion resistance. The fixing flanges with threaded holes, and other guides allow the mounting in any position.

Bevel gears

The GLEASON spiral bevel gears are made of alloy, carburized, hardened steel.

Shafts

Shafts are made of stainless steel AISI 316. Shafts have a particular treatment, in correspondence of the oil seals, which prevents wearing. For particular applications, according to minimum quantities, we can produce right angle gearboxes with special shafts with all the standard dimensions of the housings.

Bearings

All shafts are rotating on generously sized and high quality ball bearings of first class brands.

Oil seals

Standard oil seals are made in NBR. For special applications, on request we can supply right angle gearboxes with special oil seals.

Gehäuse

Das allseitig bearbeitete Einzelblockgehäuse besteht aus Edelstahl AISI 316, dessen Haupteigenschaft die ausgezeichnete Korrosionsbeständigkeit ist. Seine Befestigungs- und Gewindebohrungen gewährleisten einen problemlosen An- und Einbau in jeder beliebigen Lage.

Kegelräder

Die GLEASON-spiralverzahnten Kegelräder bestehen aus legiertem, aufgekohltem, gehärtetem Stahl.

Wellen

Die Wellen bestehen aus Edelstahl AISI 316. An den Öldichtungen verfügen die Wellen auf eine besondere Behandlung, die den Verschleiß verhindert. Bei bestimmten Anwendungen gemäß den Mindestliefermengen können wir Kegelradgetriebe mit Sonderwellen für alle Übersetzungen bei allen Standardabmessungen der Gehäuse liefern.

Kugellager

Die verwendeten Kugellager sind sehr reichlich dimensioniert. Zur Wellenlagerung werden Qualitäts-Kugellager eingesetzt.

Wellendichtringe

Die Standard-Wellendichtringe bestehen aus NBR. Für besondere Anwendungen können, auf Anfrage, Kegelradgetriebe mit Sonderdichtungsringen geliefert werden.

Corps

Le corps du renvoi est en une seule pièce compacte et fabriquée en acier inoxydable AISI 316, dont la caractéristique principale est la résistance élevée à la corrosion. Les brides, la petite base avec les trous débouchants et les centrages de guide permettent le montage dans n'importe quelle position.

Couples coniques

Les engrenages ont la denture hélicoïdale GLEASON et ils sont fabriqués en alliage d'acier, cimenté et trempé.

Arbres

Les arbres sont fabriqués en acier inoxydable AISI 316. Les arbres ont un traitement spécial, en correspondance des bagues d'étanchéité, qui garantit l'absence d'usure. Pour des applications particulières, sur la base de quantités minimum, nous sommes à même de fabriquer les renvois avec des arbres spéciaux pour tous les rapports de transmission et pour toutes les dimensions standard des corps.

Roulements

La rotation des arbres se fait sur des roulements à billes largement dimensionnés. Les roulements utilisés dans les renvois sont de la meilleure qualité et des marques les plus connues.

Bagues d'étanchéité

Les bagues standard sont en NBR. Pour des applications particulières, sur demande nous pouvons livrer des renvois d'angle avec des bagues d'étanchéité spéciales.

Cárter

El cárter del reenvío es de tipo monobloque compacto y fabricado en acero inoxidable AISI 316, cuya característica más importante es la elevada resistencia a la corrosión.

Las bridas, la patilla con orificios pasantes y los centros de guía permiten el montaje en cualquier posición.

Pares cónicos

Los engranajes son de dentado cónico helicoidal GLEASON fabricados en acero aleado, cementado y templado.

Ejes

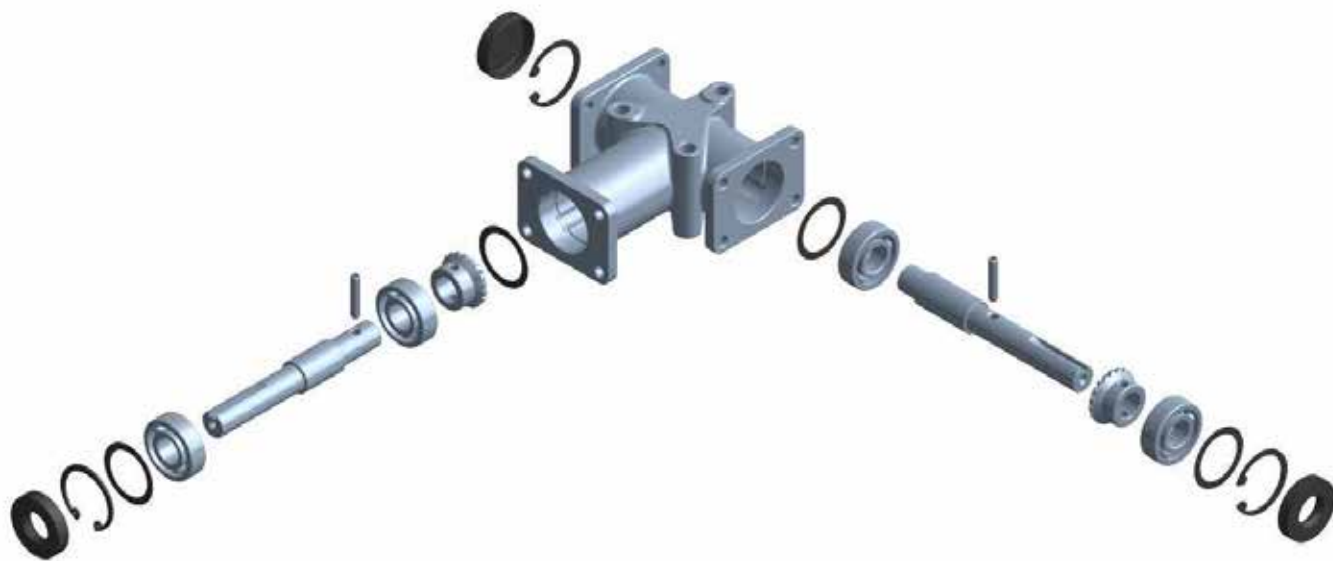
Los ejes son construidos en acero inoxidable AISI 316. Los ejes tienen un tratamiento especial en correspondencia de los retenes, que asegura la ausencia de desgaste. Para aplicaciones particulares, en base a cantidades mínimas, estamos en condición de fabricar los reenvíos con ejes especiales para todas las relaciones de transmisión y para todas las dimensiones estándar de los cárteres.

Rodamientos

La rotación de los ejes se efectúa sobre rodamientos de bolas muy dimensionados. Los rodamientos utilizados en los reenvíos son de primera calidad y de las mejores marcas.

Retenes de aceite

Los retenes estándar son en NBR. Para aplicaciones especiales, bajo consulta se entregan reenvíos de ángulo con retenes especiales.





Prestazioni dei rinvii angolari inox serie 5000

Performances of series 5000 stainless steel right angle gearboxes

Leistungen der Edelstahl-Kegelradgetriebe Serie 5000

Performances des renvois d'angle série 5000 en acier inoxydable

Prestaciones de los reenvíos de ángulo serie 5000 de acero inoxidable

Velocità albero d'uscita g/1' ** Speed of the output shaft rpm ** Geschwindigkeit der Ausgangswelle U/min ** Vitesse de l'arbre en sortie tr/min. ** Velocidad eje de salida r.p.m. **	Rapporto Ratio Übersetzung Rapport Relación	Articolo - Article - Typ - Article - Artículo							
		5000 - 5002		5008 - 5011		5030 - 5031		5032 - 5033	
		Potenza max in entrata	Coppia max in uscita	Potenza max in entrata	Coppia max in uscita	Potenza max in entrata	Coppia max in uscita	Potenza max in entrata	Coppia max in uscita
		Maximum input power	Maximum output torque	Maximum input power	Maximum output torque	Maximum input power	Maximum output torque	Maximum input power	Maximum output torque
		höchste Eingangsantriebskraft	höchstes Abtriebsdrehmoment am Ausgang	höchste Eingangsantriebskraft	höchstes Abtriebsdrehmoment am Ausgang	höchste Eingangsantriebskraft	höchstes Abtriebsdrehmoment am Ausgang	höchste Eingangsantriebskraft	höchstes Abtriebsdrehmoment am Ausgang
		Puissance maxi. en entrée	Couple maxi. en sortie	Puissance maxi. en entrée	Couple maxi. en sortie	Puissance maxi. en entrée	Couple maxi. en sortie	Puissance maxi. en entrée	Couple maxi. en sortie
		Potencia max. en entrada	Par máximo de salida	Potencia max. en entrada	Par máximo de salida	Potencia max. en entrada	Par máximo de salida	Potencia max. en entrada	Par máximo de salida
		kW	Nm	kW	Nm	kW	Nm	kW	Nm
50	1 : 1	0,01	2,20	0,04	7,20	0,11	21,00	0,22	42,00
100	1 : 1	0,02	2,00	0,07	6,70	0,22	20,50	0,42	40,00
200	1 : 1	0,04	1,75	0,14	6,50	0,42	20,00	0,80	38,00
400	1 : 1	0,07	1,75	0,27	6,50	0,82	19,50	1,51	36,00
700	1 : 1	0,13	1,70	0,44	6,00	1,39	19,00	2,49	34,00
1400	1 : 1	0,24	1,60	0,88	6,00	2,79	19,00	4,55	31,00
1700	1 : 1	0,25	1,40	0,91	5,11	3,07	17,25	4,89	27,47
2000	1 : 1	0,27	1,30	0,94	4,50	3,35	16,00	5,24	25,00
3000	1 : 1	0,35	1,10	1,26	4,00	4,40	14,00	6,91	22,00
50	1 : 2	0,01	1,60	0,03	5,70	0,10	19,00	0,20	39,00
100	1 : 2	0,02	1,50	0,06	5,50	0,19	18,00	0,39	37,00
200	1 : 2	0,03	1,50	0,11	5,00	0,36	17,00	0,73	35,00
400	1 : 2	0,06	1,40	0,21	5,00	0,67	16,00	1,38	33,00
700	1 : 2	0,10	1,40	0,35	4,75	1,03	14,00	2,13	29,00
850	1 : 2	0,11	1,24	0,40	4,49	1,19	13,37	2,40	26,96
1400	1 : 2	0,16	1,10	0,59	4,00	1,76	12,00	3,37	23,00

1 kgm = 9,8 Nm

Per i rinvii angolari con più di 2 vie, la coppia indicata va distribuita in uguale misura tra gli alberi in uscita.

For gearboxes having more than 2 ways, the torque must be equally distributed on the output shafts.

Bei den Kegelradgetrieben mit mehr als zwei Wegen soll das Drehmoment gleichermaßen an den Abtriebswellen verteilt werden.

Pour les renvois d'angle ayant plus de 2 voies, le couple indiqué doit être distribué de la même mesure sur les arbres en sortie.

Para los reenvíos con más de 2 vías, el par indicado tiene que ser distribuido de la misma manera sobre los ejes de salida.

I rinvii con rapporto di riduzione possono essere usati anche in moltiplica, non superando in entrata i 750 g/1'.

The right angle gearboxes with reduction ratio can also be used as speed-up units, provided that 750 rpm are not exceeded.

Die Untersetzungsgetriebe können auch als Übersetzungsgetriebe verwendet werden, hierzu soll man aber die Eingangsrehzahl 750 U/min nicht überschreiten.

Les renvois avec rapport de réduction peuvent être utilisés en multiplication aussi, mais sans dépasser les 750 tr/min. en entrée.

Es posible utilizar los reenvíos con relación de reducción también como multiplicadores de velocidad, puesto que no se excedan las 750 r.p.m. en entrada.

**** Le velocità in entrata (albero A) oltre i 1700 g/1' sono permesse solo per brevi periodi. Per lavoro continuativo prego consultare l'ufficio tecnico.**

** Input speeds (shaft A) above 1700 rpm are allowed for short times only. In case of continuous duty please consult us.

** Eingangsrehzahlen über 1700 U/min sind nur kurzzeitig zulässig. Bei Dauerbetrieb bitte rückfragen.

** Les vitesses en entrée (arbre A) qui dépassent 1700 tr/min. ne sont permises que pour des courtes périodes. Pour un fonctionnement continu veuillez nous consulter.

** Las velocidades en entrada (eje A) superiores a 1700 r.p.m. sólo se permiten para breves períodos. Para un funcionamiento duradero les rogamos consulten.



Lubrificazione dei rinvii angolari inox serie 5000

Lubrication of series 5000 stainless steel right angle gearboxes

Schmierung der Edelstahl-Kegelradgetriebe Serie 5000

Lubrification des renvois d'angle série 5000 en acier inoxydable

Lubricación de los reenvíos de ángulo serie 5000 de acero inoxidable

Quantità di lubrificante contenuta nei rinvii angolari serie 5000

Lubricant contents of series 5000 right angle gearboxes

Ölmenge in den Kegelradgetrieben Serie 5000

Quantité de lubrifiant contenue dans les renvois d'angle série 5000

Cantidad de lubricante contenida en los reenvíos de ángulo serie 5000

Articolo - Article - Typ - Article - Artículo	g
5000	20
5002	20
5008	60
5011	60

Articolo - Article - Typ - Article - Artículo	g
5030	180
5031	200
5032	300
5033	300

L'olio contenuto nei rinvii è di tipo AGIP BLASIA S150 ma può essere utilizzato uno di quelli riportati nella tabella sottostante.

La lubrificazione dei rinvii è a vita, ma qualora si dovesse aggiungere o cambiare l'olio contenuto nel rinvio, si raccomanda di sostituirlo totalmente.

The oil contained in our right angle gearboxes is type AGIP BLASIA S150 but it can be replaced by one of those as listed in the table below.

The lubrication of our stainless steel right angle gearboxes is for life, but in case of need to add or change the oil, we recommend to replace it completely.

In den Kegelradgetrieben befindet sich AGIP BLASIA S 150 Öl; alternativ können auch die in der unten stehenden Tabelle genannten Öle verwendet werden. Die Schmierung unserer Edelstahl-Kegelradgetriebe ist lebenslang, aber falls ein Schmierstoffwechsel notwendig sein sollte, empfehlen wir einen gesamten Austausch.

L'huile contenue dans les renvois d'angle est le type AGIP BLASIA S150 mais elle peut être remplacée par l'une des huiles indiquées dans le tableau ci-dessous.

La lubrification des renvois est à vie, mais s'il est nécessaire d'ajouter ou de remplacer l'huile contenue dans le renvoi, nous recommandons de la remplacer complètement.

El aceite contenido en los reenvíos es el tipo AGIP BLASIA S150 pero es posible utilizar uno de los aceites indicados en la tabla abajo.

La lubricación de los reenvíos es de por vida, pero en caso sea preciso añadir o reemplazar el aceite contenido en el reenvío, recomendamos reemplazarlo totalmente.

Tabella degli oli consigliati

Table of recommended oils

Tabelle der empfohlenen Schmiermittel

Tableau des huiles conseillées

Tabla de los aceites recomendados

Produttore Manufacturer Hersteller Producteur Fabricante	AGIP	BP	ESSO	GULF	MOBIL	SHELL
Sigla olio Oil type Öl Typ Type d'huile Tipo de aceite	BLASIA S150	ENERGOL SGR 150	SPARTAN SEP 150	SYNTHETIC GEAR LUBRICANT	GLYGOYLE 22	TIVELA WA

Per particolari applicazioni, in base a minimi quantitativi, sono fornibili a richiesta rinvii con tipologie diverse di lubrificante.

For specific applications and upon request, according to minimum requested quantities, right angle gearboxes with different lubricant types can be supplied.

Für spezielle Anwendungen und auf Anfrage, nach Mindestliefermengen, können Kegelradgetriebe mit verschiedenen Schmierstoffen geliefert werden.

Pour des applications spéciales, sur la base de quantités minimales, on livre sur demande des renvois équipés avec des types de lubrifiant différents.

Para aplicaciones especiales, en base a cantidades mínimas, se entregan bajo consulta los reenvíos equipados con diferentes tipos de lubricante.



Scelta dei rinvii angolari inox serie 5000

Selection of series 5000 stainless steel right angle gearboxes

Edelstahl-Kegelradgetriebeauswahl Serie 5000

Choix des renvois d'angle série 5000 en acier inoxydable

Selección de los reenvíos de ángulo serie 5000 de acero inoxidable

Parametri fondamentali per la scelta dei rinvii.

Per una corretta scelta dei rinvii angolari si dovranno considerare le condizioni di impiego in cui i rinvii verranno effettivamente utilizzati.

Basic parameters for gear-boxes selection.

All actual working conditions for each specific application must be determined for correct selection.

Grundparameter für die Getriebeauswahl.

Um die richtigen Getriebe auszuwählen, muss man die Betriebsanwendungsbedingungen bzw. folgende Grundparameter berücksichtigen.

Paramètres fondamentaux pour le choix des renvois.

Pour le choix correct des renvois d'angle il faudra prendre en considération les conditions d'emploi effectives.

Parámetros fundamentales para la selección de los reenvíos.

Para la selección correcta de los reenvíos de ángulo, es necesario determinar las condiciones efectivas de utilización.

Dati - Data - Angaben - Données - Datos			
P = Potenza motore	(kW)	n1 = Velocità di rotazione dell'albero d'entrata A	(g/1')
Motor power	(kW)	Speed of input shaft A	(Rpm)
Motorleistung	(kW)	Geschwindigkeit an der Eingangswelle A	(U/min)
Puissance moteur	(kW)	Vitesse arbre en entrée A	(Tr/min)
Potencia motor	(kW)	Velocidad eje en entrada A	(R.p.m.)
Pc = Potenza corretta	(kW)	n2 = Velocità di rotazione dell'albero d'uscita	(g/1')
Design power	(kW)	Speed of output shaft	(Rpm)
Berechnungsleistung	(kW)	Geschwindigkeit an der Ausgangswelle	(U/min)
Puissance corrigée	(kW)	Vitesse arbre en sortie	(Tr/min)
Potencia corregida	(kW)	Velocidad eje en salida	(R.p.m.)
Mt2 = Coppia in uscita	(Nm)	Fs = Fattore di servizio	
Output shaft torque	(Nm)	Service factor	
Antriebsdrehmoment an der Ausgangswelle	(Nm)	Belastungsfaktor	
Couple de sortie	(Nm)	Facteur de service	
Par en salida	(Nm)	Factor de servicio	

Fattore di servizio Fs

Service factors Fs
Belastungsfaktor Fs
Facteurs de service Fs
Factores de servicio Fs

Tipo di carico Load type Belastungsart Type de charge Tipo de carga	Ore giornaliere di funzionamento Hours per day duty - Betriebsstunden pro Tag - Heures de fonctionnement par jour - Horas diarias de funcionamiento			
	< 3	> 3 ÷ 8	> 8 ÷ 12	> 12 ÷ 24
Uniforme Uniform Gleichmäßige Belastung Régulière Uniforme	0,70	0,90	1,00	1,30
Con urti deboli Light shocks Mit leichten Stoßbelastungen À-coups modérés Con choques débiles	0,90	1,00	1,30	1,80
Con urti forti Heavy shocks Mit schweren Stoßbelastung À-coups importants Con choques fuertes	1,30	1,60	1,80	2,30

Esempio

P = 2,21 kW
n1 = 1400 g/1'
n2 = 1400 g/1'
Fs = 1,6 (5 ore al giorno con grossi carichi pulsanti)

Example

P = 2,21 kW
n1 = 1400 rpm
n2 = 1400 rpm
Fs = 1,6 (5 hours per day duty, with heavy pulsating loads)

Beispiel

P = 2,21 kW
n1 = 1400 U/min
n2 = 1400 U/min
Fs = 1,6 (5 Stunden täglich mit schweren Stoßbelastungen)

Exemple

P = 2,21 kW
n1 = 1400 tr/min
n2 = 1400 tr/min
Fs = 1,6 (5 heures par jour avec charges lourdes intermittentes)

Ejemplo

P = 2,21 kW
n1 = 1400 r.p.m.
n2 = 1400 r.p.m.
Fs = 1,6 (5 horas diarias con cargas importantes y intermitentes)

Calcolare la potenza corretta con la seguente formula:

Calculation of design power by the following formula:

Die korrekte Leistung mit folgender Formel berechnen:

Calculer la puissance corrigée par la formule suivante:

Calcular la potencia corregida por medio de la fórmula siguiente:

$$P_c = P \cdot F_s = 2,21 \cdot 1,6 = 3,54 \text{ kW}$$



Scelta dei rinvii angolari inox serie 5000

Selection of series 5000 stainless steel right angle gearboxes

Edelstahl-Kegelradgetriebeauswahl Serie 5000

Choix des renvois d'angle série 5000 en acier inoxydable

Selección de los reenvíos de ángulo serie 5000 de acero inoxidable

Calcolare la coppia in uscita con la seguente formula:

Calculation of output shaft torque by the following formula:

Das Antriebsdrehmoment an der Ausgangswelle wird mit folgender Formel berechnet:

Calculer le couple de sortie par la formule suivante:

Calcular el par en salida por medio de la fórmula siguiente:

$$M_{t2} = 9550 \cdot \frac{P_c}{n_2} = 9550 \cdot \frac{3,54}{1400} = 24,1 \text{ Nm}$$

A questo punto, consultando la tabella delle prestazioni, occorre scegliere un rinvio che abbia la coppia max in uscita uguale o superiore alla coppia appena calcolata; nel nostro caso il rinvio più adatto è l'articolo 5032, che ha una coppia max in uscita di 31 Nm.

At this stage, consulting the performance table, the choice must be for a gearbox having a max. output shaft equal to or higher than the torque just calculated; in our case, the most suitable gearbox is type 5032, having a max. output torque of 31 Nm.

Anhand der Leistungsparameter sollte ein Kegelradgetriebe gewählt werden, dessen maximale Ausgangsleistung größer oder gleich der berechneten Leistung ist; in vorliegender Tabelle wäre das geeignete Modell der Typ 5032, das eine maximale Ausgangsleistung von 31 Nm hat.

Maintenant, en consultant le tableau des performances, il faut choisir un renvoi ayant le couple max. en sortie égal ou supérieur au couple que l'on vient de calculer; dans notre cas, le renvoi le plus approprié est l'article 5032, qui a un couple max. de sortie de 31 Nm.

Ahora, consultando la tabla de las prestaciones, es necesario seleccionar un reenvío con un par max. de salida igual o superior al par que acabamos de calcular; en nuestro caso el reenvío más idóneo es el artículo 5032, que tiene un par max. de salida de 31 Nm.

Carichi massimi applicabili agli alberi

Shaft loading capacity

Max. zulässige Belastungen an den Wellen

Charges max. applicables aux arbres

Cargas máx. aplicables a los ejes

Articolo Article Typ Article Artículo	Carico radiale (N) Overhung load (N) Radialbelastung (N) Charge radiale (N) Carga radial (N)	Carico assiale (N) Thrust load (N) Axialbelastung (N) Charge axiale (N) Carga axial (N)
5000 5002	60	20
5008 5011	140	50

Articolo Article Typ Article Artículo	Carico radiale (N) Overhung load (N) Radialbelastung (N) Charge radiale (N) Carga radial (N)	Carico assiale (N) Thrust load (N) Axialbelastung (N) Charge axiale (N) Carga axial (N)
5030 5031	300	80
5032 5033	400	80



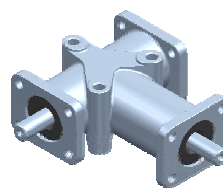
Rinvio angolare inox a 2 vie

2-way stainless steel right angle gearbox

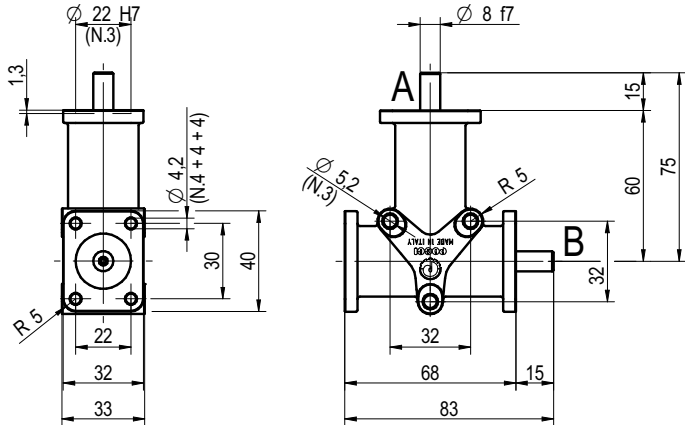
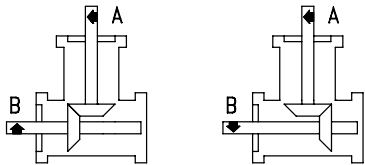
Zweiweg-Kegelradgetriebe aus Edelstahl

Renvoi d'angle en acier inoxydable à 2 voies

Reenvío de ángulo de acero inoxidable con 2 vías



5000

																							
		<table><tr><td>D. 1</td><td>D. 2</td></tr></table>		D. 1	D. 2																		
D. 1	D. 2																						
		<table><tr><th>Rapporto Ratio Übersetzung Rapport Relación</th><th>Disp. Dreh. Disp. Disp.</th><th>Codice Item number Codierung Code Código</th><th>Descrizione Designation Bezeichnung Désignation Referencia</th></tr><tr><td>1 : 1</td><td>1</td><td>185000111</td><td>5000 R 1 : 1 D1</td></tr><tr><td>1 : 1</td><td>2</td><td>185000112</td><td>5000 R 1 : 1 D2</td></tr><tr><td>1 : 2</td><td>1</td><td>185000121</td><td>5000 R 1 : 2 D1</td></tr><tr><td>1 : 2</td><td>2</td><td>185000122</td><td>5000 R 1 : 2 D2</td></tr></table>		Rapporto Ratio Übersetzung Rapport Relación	Disp. Dreh. Disp. Disp.	Codice Item number Codierung Code Código	Descrizione Designation Bezeichnung Désignation Referencia	1 : 1	1	185000111	5000 R 1 : 1 D1	1 : 1	2	185000112	5000 R 1 : 1 D2	1 : 2	1	185000121	5000 R 1 : 2 D1	1 : 2	2	185000122	5000 R 1 : 2 D2
Rapporto Ratio Übersetzung Rapport Relación	Disp. Dreh. Disp. Disp.	Codice Item number Codierung Code Código	Descrizione Designation Bezeichnung Désignation Referencia																				
1 : 1	1	185000111	5000 R 1 : 1 D1																				
1 : 1	2	185000112	5000 R 1 : 1 D2																				
1 : 2	1	185000121	5000 R 1 : 2 D1																				
1 : 2	2	185000122	5000 R 1 : 2 D2																				

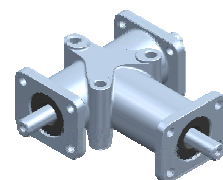
Rinvio angolare inox a 3 vie

3-way stainless steel right angle gearbox

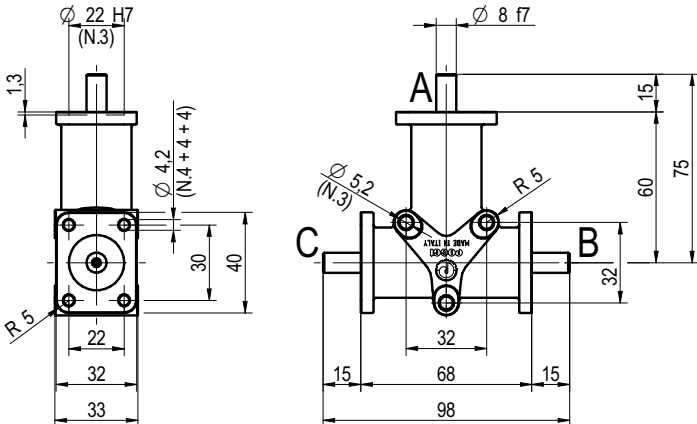
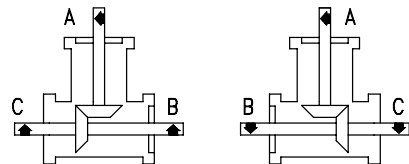
Dreiweg-Kegelradgetriebe aus Edelstahl

Renvoi d'angle en acier inoxydable à 3 voies

Reenvío de ángulo de acero inoxidable con 3 vías



5002

					
Peso Weight Gewicht Poids Peso kg 0,49		Rapporto Ratio Übersetzung Rapport Relación	Disp. Dreh. Disp. Disp.	Codice Item number Codierung Code Código	Descrizione Designation Bezeichnung Désignation Referencia
		1 : 1	1/2	185002111	5002 R 1 : 1 D1/2
		1 : 2	1/2	185002121	5002 R 1 : 2 D1/2



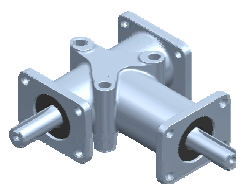
Rinvio angolare inox a 2 vie

2-way stainless steel right angle gearbox

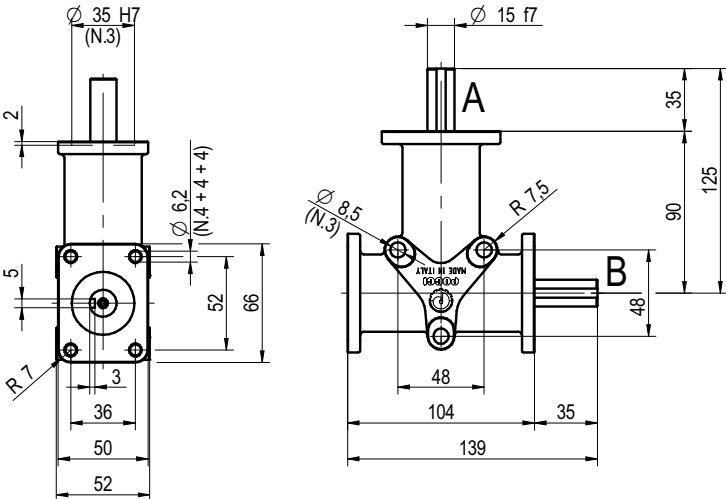
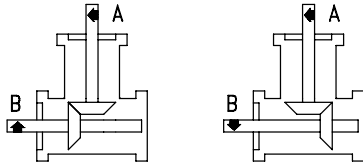
Zweiweg-Kegelradgetriebe aus Edelstahl

Renvoi d'angle en acier inoxydable à 2 voies

Reenvío de ángulo de acero inoxidable con 2 vías



5011

			
Peso Weight Gewicht Poids Peso kg 1,80		D. 1	D. 2
Rapporto Ratio Übersetzung Rapport Relación	Disp. Dreh. Disp. Disp.	Codice Item number Codierung Code Código	Descrizione Designation Bezeichnung Désignation Referencia
1 : 1	1	185011111	5011 R 1 : 1 D1
1 : 1	2	185011112	5011 R 1 : 1 D2
1 : 2	1	185011121	5011 R 1 : 2 D1
1 : 2	2	185011122	5011 R 1 : 2 D2

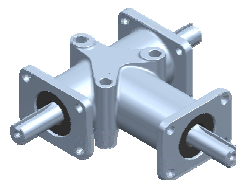
Rinvio angolare inox a 3 vie

3-way stainless steel right angle gearbox

Dreiweg-Kegelradgetriebe aus Edelstahl

Renvoi d'angle en acier inoxydable à 3 voies

Reenvío de ángulo de acero inoxidable con 3 vías



5008

Technical drawing of a 3-way gearbox. The front view (left) shows a square housing with a central circular input/output port. Dimensions include a top flange with a diameter of 35 H7 (N.3) and a height of 2. The main body has a width of 52 and a height of 66. The central port has a diameter of 6.2 (N.4 + 4 + 4) and a height of 5. The side view (right) shows the internal components, including a central shaft with a diameter of 15 f7 and a height of 35. The housing has a width of 174 and a height of 125. The central port has a diameter of 8.5 (N.3) and a height of 48. The side view also shows a height of 90 and a width of 48. The central port has a radius of R 7.5. The side view also shows a radius of R 7. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of 125 and a width of 174. The side view also shows a height of 35 and a width of 48. The side view also shows a height of 90 and a width of 48. The side view also shows a height of	
---	--



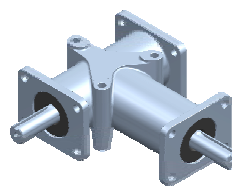
Rinvio angolare inox a 2 vie

2-way stainless steel right angle gearbox

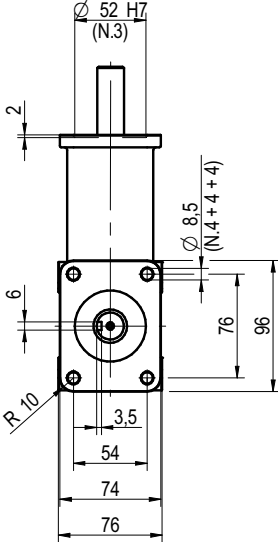
Zweiweg-Kegelradgetriebe aus Edelstahl

Renvoi d'angle en acier inoxydable à 2 voies

Reenvío de ángulo de acero inoxidable con 2 vías



5030

	
---	--

Peso Weight Gewicht Poids Peso	kg 5,39
---	----------------

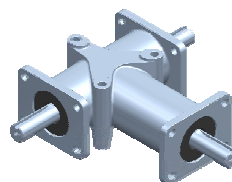
Rinvio angolare inox a 3 vie

3-way stainless steel right angle gearbox

Dreiweg-Kegelradgetriebe aus Edelstahl

Renvoi d'angle en acier inoxydable à 3 voies

Reenvío de ángulo de acero inoxidable con 3 vías



5031

	<table><tr><th>Rapporto Ratio Übersetzung Rapport Relación</th><th>Disp. Dreh. Disp. Disp.</th><th>Codice Item number Codierung Code Código</th><th>Descrizione Designation Bezeichnung Désignation Referencia</th></tr><tr><td>1 : 1</td><td>1/2</td><td>185031111</td><td>5031 R 1 : 1 D1/2</td></tr><tr><td>1 : 2</td><td>1/2</td><td>185031121</td><td>5031 R 1 : 2 D1/2</td></tr></table>	Rapporto Ratio Übersetzung Rapport Relación	Disp. Dreh. Disp. Disp.	Codice Item number Codierung Code Código	Descrizione Designation Bezeichnung Désignation Referencia	1 : 1	1/2	185031111	5031 R 1 : 1 D1/2	1 : 2	1/2	185031121	5031 R 1 : 2 D1/2
Rapporto Ratio Übersetzung Rapport Relación	Disp. Dreh. Disp. Disp.	Codice Item number Codierung Code Código	Descrizione Designation Bezeichnung Désignation Referencia										
1 : 1	1/2	185031111	5031 R 1 : 1 D1/2										
1 : 2	1/2	185031121	5031 R 1 : 2 D1/2										

Peso Weight Gewicht Poids Peso	kg 5,54
---	----------------



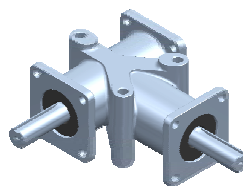
Rinvio angolare inox a 2 vie

2-way stainless steel right angle gearbox

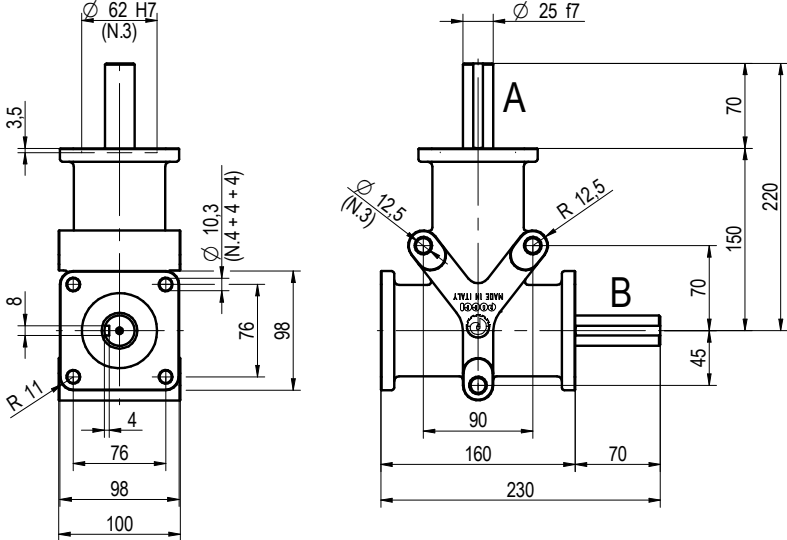
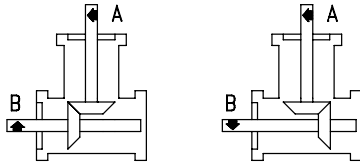
Zweiweg-Kegelradgetriebe aus Edelstahl

Renvoi d'angle en acier inoxydable à 2 voies

Reenvío de ángulo de acero inoxidable con 2 vías



5032

																					
Peso Weight Gewicht Poids Peso kg 9,14	<table><tr><th>Rapporto Ratio Übersetzung Rapport Relación</th><th>Disp. Dreh. Disp. Disp.</th><th>Codice Item number Codierung Code Código</th><th>Descrizione Designation Bezeichnung Désignation Referencia</th></tr><tr><td>1 : 1</td><td>1</td><td>185032111</td><td>5032 R 1 : 1 D1</td></tr><tr><td>1 : 1</td><td>2</td><td>185032112</td><td>5032 R 1 : 1 D2</td></tr><tr><td>1 : 2</td><td>1</td><td>185032121</td><td>5032 R 1 : 2 D1</td></tr><tr><td>1 : 2</td><td>2</td><td>185032122</td><td>5032 R 1 : 2 D2</td></tr></table>	Rapporto Ratio Übersetzung Rapport Relación	Disp. Dreh. Disp. Disp.	Codice Item number Codierung Code Código	Descrizione Designation Bezeichnung Désignation Referencia	1 : 1	1	185032111	5032 R 1 : 1 D1	1 : 1	2	185032112	5032 R 1 : 1 D2	1 : 2	1	185032121	5032 R 1 : 2 D1	1 : 2	2	185032122	5032 R 1 : 2 D2
Rapporto Ratio Übersetzung Rapport Relación	Disp. Dreh. Disp. Disp.	Codice Item number Codierung Code Código	Descrizione Designation Bezeichnung Désignation Referencia																		
1 : 1	1	185032111	5032 R 1 : 1 D1																		
1 : 1	2	185032112	5032 R 1 : 1 D2																		
1 : 2	1	185032121	5032 R 1 : 2 D1																		
1 : 2	2	185032122	5032 R 1 : 2 D2																		

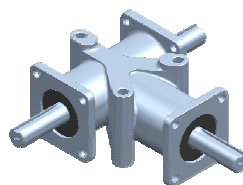
Rinvio angolare inox a 3 vie

3-way stainless steel right angle gearbox

Dreiweg-Kegelradgetriebe aus Edelstahl

Renvoi d'angle en acier inoxydable à 3 voies

Reenvío de ángulo de acero inoxidable con 3 vías



5033

Technical drawing of the 3-way gearbox showing front and side views with dimensions. Front View Dimensions: - Top shaft diameter: $\varnothing 62\ H7\ (N.3)$ - Top shaft height: 3.5 - Mounting flange diameter: $\varnothing 10.3\ (N.4 + 4 + 4)$ - Mounting flange thickness: 8 - Bottom flange diameter: 98 - Bottom flange width: 76 - Bottom flange hole diameter: 4 - Bottom flange hole position: $R\ 11$ - Bottom flange hole diameter: 100 Side View Dimensions: - Input shaft diameter: $\varnothing 25\ f7$ - Input shaft height: 70 - Output shaft diameter: $\varnothing 12.5\ (N.3)$ - Output shaft height: 150 - Output shaft width: 70 - Output shaft hole diameter: 45 - Output shaft hole position: $R\ 12.5$ - Output shaft hole diameter: 90 - Output shaft hole position: 160 - Output shaft hole diameter: 300		Schematic diagrams D. 1/2 showing the 3-way gearbox configuration with input A and outputs B and C.															
<table><tr><td>Peso Weight Gewicht Poids Peso</td><td>kg 9,45</td></tr></table>		Peso Weight Gewicht Poids Peso	kg 9,45	<table><tr><th>Rapporto Ratio Übersetzung Rapport Relación</th><th>Disp. Dreh. Disp. Disp.</th><th>Codice Item number Codierung Code Código</th><th>Descrizione Designation Bezeichnung Désignation Referencia</th></tr><tr><td>1 : 1</td><td>1/2</td><td>185033111</td><td>5033 R 1 : 1 D1/2</td></tr><tr><td>1 : 2</td><td>1/2</td><td>185033121</td><td>5033 R 1 : 2 D1/2</td></tr></table>		Rapporto Ratio Übersetzung Rapport Relación	Disp. Dreh. Disp. Disp.	Codice Item number Codierung Code Código	Descrizione Designation Bezeichnung Désignation Referencia	1 : 1	1/2	185033111	5033 R 1 : 1 D1/2	1 : 2	1/2	185033121	5033 R 1 : 2 D1/2
Peso Weight Gewicht Poids Peso	kg 9,45																
Rapporto Ratio Übersetzung Rapport Relación	Disp. Dreh. Disp. Disp.	Codice Item number Codierung Code Código	Descrizione Designation Bezeichnung Désignation Referencia														
1 : 1	1/2	185033111	5033 R 1 : 1 D1/2														
1 : 2	1/2	185033121	5033 R 1 : 2 D1/2														



Progetto di calcolo

Drive design
Antriebsberechnung
Projet de calcul
Proyecto de cálculo

Ragione sociale - Company name - Firmenname - Raison sociale - Razón social:	
Sig. - Mr - Herr - M. - Sr.:	Data - Date - Datum - Date - Fecha:
Tel. - Tel. - Tel. - Tél. - Tel.:	E-mail:
Reperto - Department - Abteilung - Dépt. - Departamento:	
Applicazione - Application - Anwendung - Application - Aplicación:	

Dati - Data - Angaben - Données - Datos					
ALBERO D'ENTRATA	INPUT SHAFT	EINGANGSWELLE	ARBRE EN ENTRÉE	EJE DE ENTRADA	
Tipo motore	Motor type	Motor-Typ	Type de moteur	Tipo de motor	
Potenza nominale	Nominal power	Nennleistung	Puissance nominale	Potencia nominal	kW
N. giri/1' (n1)	Rpm (n1)	U/min (n1)	Tr/min (n1)	R.p.m. (n1)	
N. giri/1' minimo	Minimum rpm	Minimum U/min	Tr/min minimum	R.p.m. min	
Potenza a n. giri/1' min	Power at rpm minimum	Leistung bei U/Min-Minimal	Puissance à tr/min. min	Potencia con r.p.m. min.	kW
N. giri/1' massimo	Maximum rpm	Maximum U/min	Tr/min maximum	R.p.m. max	
Potenza a n. giri/1' max	Power at rpm maximum	Leistung bei U/Min-Maximal	Puissance à tr/min. max	Potencia con r.p.m. max.	kW
Coppia max	Max. torque	Max. Abtriebsdrehmoment	Couple max	Par max	Nm
ALBERO D'USCITA	OUTPUT SHAFT	AUSGANGSWELLE	ARBRE EN SORTIE	EJE DE SALIDA	
Potenza assorbita	Absorbed power	Leistungsaufnahme	Puissance absorbée	Potencia absorbida	kW
N. giri/1' uscita (n2)	Rpm (n2)	U/min (n2)	Tr/min (n2)	R.p.m. (n2)	
Coppia max assorbita	Maximum absorbed torque	Abtriebsdrehmoment Maximalverbrauch	Couple max absorbé	Par max absorbido	Nm
TIPO DI CARICO	LOAD TYPE	BELASTUNGSART	TYPE DE CHARGE	TIPO DE CARGA	
Uniforme	Uniform	Gleichmäßige Belastung	Régulière	Uniforme	☐
Con urti deboli	Light shocks	Mit leichten Stoßbelastungen	À-coups modérés	Con choques débiles	☐
Con urti forti	Heavy shocks	Mit schweren Stoßbelastungen	À-coups importants	Con choques fuertes	☐
Carichi radiali	Overhung load	Radialbelastung	Charge radiale	Carga radial	N
Carichi assiali	Thrust load	Axialbelastung	Charge axiale	Carga axial	N
LAVORO	OPERATION	BETRIEB	FUNCTIONNEMENT	FUNCIONAMIENTO	
Temperatura di esercizio	Operating temperatures	Betriebstemperatur	Temp. de fonctionnement	Temp. de funcionamiento	C°
Presenza di olio	Presence of oil	Anwesenheit von Öl	Présence d'huile	Presencia de aceite	
Presenza di acqua	Presence of water	Anwesenheit von Wasser	Présence d'eau	Presencia de agua	
Presenza di sporco	Presence of dirt	Anwesenheit von Schmutz	Présence de saleté	Presencia de suciedad	
Agenti atmosferici	Weathering	Bewitterung	Agents atmosphériques	Agentes atmosféricos	
N. avviamenti al giorno	Nr. of daily startings	Tagesanlassnummer	N.bre de démarrages/jour	Nro de arranques diarios	
Inversione di moto	Motion reversal	Bewegungsumkehr	Inversion de rotation	Inversión de dirección	
Ore di lavoro al giorno	Working hours per day	Arbeitsstunden pro Tag	Heures de fonct. par jour	Horas de servicio diarias	3 ÷ 8 ☐ > 8 ÷ 12 ☐ >12 ÷ 24 ☐



Modulo di richiesta per rinvii angolari ed invertitori meccanici speciali

Application form for special right angle gearboxes and reversing gearboxes

Antragsformular für Sonderkegelradgetriebe und-Laufwendegetriebe

Formulaire de demande pour renvois d'angle et inverseurs mécaniques spéciaux

Hoja de solicitud para reenvíos de ángulo e inversores mecánicos por encargo

Data Date - Datum - Date - Fecha		Cliente Customer - Kunde - Client - Cliente	
Quantità Quantity - Menge Quantité - Cantidad		Richiesta N. Request Nr. - Anfrage-Nr. Demande Nr. - Solicitud de oferta Nro	

Articolo richiesto

Requested item - Angefragter Artikel - Article demandé - Artículo requerido

Codice cliente Customer item nr. - Kundecodierung Code client - Código cliente	
---	--

Differenze da articolo standard

Differences from the standard item

Unterschiede zum Standardartikel

Différences par rapport à l'article standard

Diferencias con respecto al artículo estándar

Articolo standard Standard item - Standardartikel Article standard - Artículo estándar								
Forma costruttiva Design feature - Konstruktionsmerkmal Caractéristique - Característica								
Albero Shaft - Welle - Arbre - Eje	d	L	t	X	K	Y	K1	Y1
A							-	-
B							-	-
C							-	-
D							-	-
E		-	-	-	-	-		

Materiale degli alberi Material of shafts - Wellenmaterial Matière des arbres - Material de los ejes	
Trattamento superficiale degli alberi Surface treatment of shafts - Oberflächenbehandlung der Wellen Traitement de surface des arbres - Tratamiento superficial de los ejes	
Materiale degli anelli di tenuta Oil seal material - Öldichtungsmaterial Matière des bagues d'étanchéité - Material de los retenes	
Lubrificazione Lubrication - Schmierung - Lubrification - Lubricación	
Cuscinetti Bearings - Kugellager - Roulements - Rodamientos	



Forme costruttive

Design features - Konstruktionsmerkmale - Caractéristiques - Características

1 Serie-Series-Serie-Série-Serie 2000	2 Serie-Series-Serie-Série-Serie 2000
3 Serie-Series-Serie-Série-Serie 2000	
4 Serie-Series-Serie-Série-Serie 4000	5 Serie-Series-Serie-Série-Serie 5000

Stainless steel products

BJ-Gear A/S manufactures a wide range of stainless steel gearboxes, actuators and worm gear screw jacks. The stainless steel products are developed specifically for the food industry and industries where the requirements for material resistance and an easy-to-clean design are continuously stringent. The gearboxes are life lubricated and can be supplied with lubricants approved for the food industry. The products of stainless steel can be customised according to your needs.

Worm gearboxes

Features and advantages

Hygienic design

- Sturdy and reliable
- Compact design
- High quality
- Can be equipped with stainless AC motors, servo motors, encoders & brakes
- High efficiency or self locking
- Custom design



**Premium stainless steel
worm gearbox**



**Standard stainless steel
worm gearbox**



**Stainless worm gearbox with a
special motor flange for DC motor
and a stainless motor shield**



**Integrated stainless steel worm gearbox
with enhanced bearings and special
output shaft**



**Standard stainless steel
worm gearbox**

Brake, module system

The brake meets the strict requirements for products to be used directly in a process line. The brake is designed to be mounted between a flanged motor and a gearbox, and is available in three sizes with torques from 5-20 Nm.



Helical and helical bevel gearboxes

The helical bevel gearboxes are characterised by high power density and an efficiency of up to 96%. The compact and modular design makes the gearbox easy to incorporate in numerous applications.

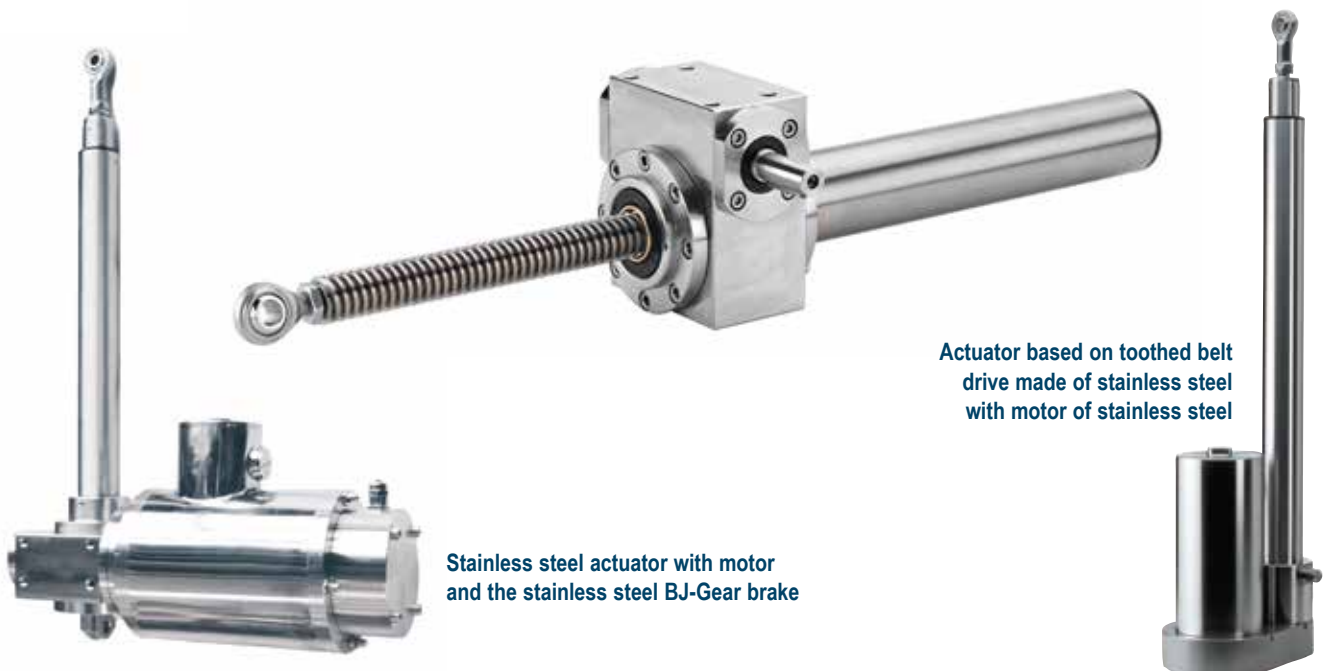
Features and advantages

Reliable performance

- Compact design. Available in hygienic design
- Quiet, reliable and efficient operation
- High quality
- Can be equipped with AC, DC or servo motors, encoders and brakes
- Custom design



Actuators & worm gear screw jacks



Actuator based on toothed belt drive made of stainless steel with motor of stainless steel

Stainless steel actuator with motor and the stainless steel BJ-Gear brake

Stainless steel motors

The stainless steel AC motors are of acid-resistant steel and in protection classes from IP66 to IP69K. They are available as TENV (Totally Enclosed Non-Ventilated) up to effects of 0.75 kW or as TEFC (Totally Enclosed Fan Cooled).

The motors are equipped with thermistors as standard. The completely smooth surface makes them ideal for use within the food industry or where an easy-to-clean design is important.



Flange bearings

NG bearing units are of high material resistance and a design, that is easy-to-clean. To reduce the risk of bacteria growth the design is characterised by a smooth surface and rounded corners. The bearings are maintenance free and resistant to all cleaning products and to most chemicals.

We also offer bearing units of stainless steel.

Features and advantages

- Solid housings
- Easy assembly
- IP66 & IP67 (IP68 and IP69K on request).
- Maintenance free bearings
- USDA accepted
- Food grade acc. to reg. (EC) No. 1935/2004
- FDA food grade acc. to CFR 175.300
- NSF H1 registered grease



Levelling feet

The stainless steel levelling feet are available with and without fixing plate to prevent movement. The embedded rubber has rounded and hygienic design making the feet easy to clean. Furthermore, the levelling feet can cope with a maximum of 10° slope on floors and equipment.

Features and advantages

- Stainless steel AISI 304 (A2)
- Application temperature max. 250 °C
- Rubber temperature range from -15 °C to +95 °C.
- High chemical and corrosion resistance
- Rubber with food grade
- Rubber with shore A hardness 70-75



Accessories for complete solutions

In addition to our manufactured gearboxes and actuators, we supply transmission components of recognised brands, which makes it possible to supply complete transmission solutions at short notice.

When choosing BJ-Gear A/S as a total supplier, you are guaranteed correct assembly of all components with a functional test subsequently. All components are stocked or manufactured for prompt delivery.

Gear wheels and racks

BJ-Gear A/S manufactures gear wheels, gear racks, worms, worm wheels, splines etc. of high quality.

BJ-Gear A/S is certified according to DS/EN ISO 9001 and we use advanced CNC machining and measuring machines ensuring high precision and flexibility in our production.



Gear wheels and racks

Gearboxes - right angle and planetary

BJ-Gear A/S cooperates with manufacturers of right angle gearboxes and planetary gearboxes.

Right angle gearboxes are compact with housings of light alloy and can be mounted in any position.

The planetary gearboxes are typically applied for servo solutions and positioning tasks and are available as straight or angle planetary gearboxes.



Right angle gearboxes



Planetary gearboxes



Customisation is our standard



BJ-Gear A/S
Niels Bohrs Vej 47
DK-8660 Skanderborg, Denmark
VAT No. DK 10166470

Phone +45 87 40 80 80
Email bj@bj-gear.com
Website www.bj-gear.com

Copyright © 2025 BJ-Gear A/S. All product rights reserved. All data, illustrations, photos, drawings and statements are for general information only and subject to change without notice and should not be considered as a warranty or legal obligation of any kind.

ATC 106 | 2025 | UK