



SPIDEX® – die elastische Kupplung
SPIDEX® – the elastic coupling

DENTEX®/DENTEX® FL – die flexible Kupplung
DENTEX®/DENTEX® FL – the flexible coupling

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SPIDEX® – die elastische Kupplung

SPIDEX® – the elastic coupling

- Drehelastisch
- Schwingungsdämpfend
- Axial steckbar
- Durchschlagsicher
- Wartungsfrei
- Nabenwerkstoffe:
Aluminium (Al), Aluminium Druckguss (ALU),
Grauguss (GG), Sphäroguss (GGG), Sinterstahl (Si),
Stahl (St)

- Torsional elasticity
- Damping
- Blind assembly
- Safe against breakdown
- No maintenance
- Hub material:
aluminium (Al), die-cast aluminium (ALU),
cast iron (GG), SG iron (GGG), sintered steel (Si),
steel (St)



SPIDEX® – die elastische Kupplung SPIDEX® – the elastic coupling

Funktionsweise Technical description

Elastische Kupplungen sind in der Lage, kurzzeitige Drehmomentstöße durch zeitweilige elastische Speicherung eines Teiles der Stoßenergie zu mildern. Der Ungleichförmigkeitsgrad der Bewegungs- und Drehmomentübertragung wird somit kleiner. Elastische Kupplungen dämpfen den Körperschall und tragen somit zur Geräuschminderung bei. Die elastische SPIDEX®-Kupplung überträgt das Drehmoment formschlüssig und durchschlagsicher. Der ballig profilierte Evolventenzahn (Abb. 1) gestattet den Ausgleich von Radial- und Winkelverlagerungen der zu verbindenden Wellen. Er besteht aus einem thermoplastischen Polyurethan-Elastomer, ist ausschließlich auf Druck belastet und zeichnet sich darüber hinaus durch hohe Verschleißfestigkeit und Elastizität, gute Dämpfungseigenschaften und gute Beständigkeit gegen Öle, Fette, viele Lösemittel, Witterungseinflüsse und Ozon aus. Hinzu kommt eine gute Hydrolyse- und Tropenbeständigkeit.

Die Einsatztemperaturen liegen zwischen -40 °C und $+100\text{ °C}$ in der Standardausführung. Kurzzeitige Temperaturspitzen bis $+120\text{ °C}$ sind zulässig. Für Einsatztemperaturen im Bereich deutlich über $+100\text{ °C}$ bis $+150\text{ °C}$ ist die Zahnkranz-Serie TPS entwickelt worden (Seite 12).

Die Standardhärte des Zahnkranzes beträgt 92° Shore A . Für höhere Drehmomente können auch Zahnkränze mit 95° und 98° Shore A und für hohe Drehmomente ein Zahnkranz mit 64° Shore D eingesetzt werden, dieser ist sehr hart und hat eine geringe Dämpfung. Durch die aus Abb. 1 und Abb. 2 zu ersehende Balligkeit nehmen die Zähne des Zahnkranzes mit zunehmender Verformung eine überproportional wachsende Verformungsenergie auf (Seite 5). Der Wert der Federsteife CT des Zahnkranzes nimmt mit Vergrößerung des relativen Drehwinkels φ zu. Folglich arbeitet die Kupplung bei geringer Drehmomentübertragung relativ weich und mit zunehmendem Drehmoment immer härter. Hieraus ergibt sich eine progressive Federkennlinie gemäß Abb. 3. Die dynamische Federkennlinie hat einen geringfügig steileren Verlauf.

Die in Abb. 3 dargestellte Dämpfungsarbeit bewirkt die in Abb. 4 ersichtliche Dämpfung von Drehmomentstößen.

Ein besonderer Vorteil der progressiven Federkennlinie liegt im Resonanzverhalten der SPIDEX®-Kupplung. Da die kritische Resonanzdrehzahl abhängig von der Federsteife CT ist, letztere sich jedoch mit Verschiebung des Arbeitspunktes ändert, ergibt sich eine Verstimmung des Systems gemäß Abb. 5, welche die Gefahr des Aufschaukelns verringert.

Die progressive Kennlinie schützt somit vor allem die Kupplung gegen unzulässige Überbeanspruchung. Darüber hinaus kann die Federsteife CT durch eine entsprechende Wahl der Shorehärte beeinflusst werden. Eine größere Shorehärte verlagert die Resonanzdrehzahl in einen höheren, eine niedrigere Shorehärte in einen niedrigeren Bereich. Im Zweifelsfalle empfehlen wir eine Berechnung des



Elastic couplings reduce intermittent short-period torsional shocks by briefly storing part of this shock energy elastically. Any degree of uneven movement and torque transference is consequently reduced. Elastic couplings suppress body resonance and therefore contribute to noise reduction. The elastic SPIDEX® coupling transmits the torque without the risk of breakdown and backlash-free. The convex generated profiled tooth crown, see Fig. 1, allows compensation of radial and angular displacements of the two connected shafts. It consists of a thermoplastic polyurethane elastomer that is loaded exclusively under pressure, designed for high abrasion resistance and elasticity, has good damping characteristics, is resistant to oils, greases, many solvents, atmospheric effects and ozone, as well as having a good resistance to hydrolysis in tropical conditions.

The operating temperature range is between -40 °C and $+100\text{ °C}$. Short temperature peaks up to $+120\text{ °C}$ are admissible. The TPS spider series (see p. 12) was developed for operating temperatures that are constantly well above $+100\text{ °C}$ to $+150\text{ °C}$.

The standard hardness of the spider is 92° Shore A . For higher torques, a spider of 95° to 98° Shore A can be used, and for high torques a spider with 64° Shore D , which is extremely hard and has a low damping effect. As Figures 1 and 2 show, the convex rim of the tooth absorbs a higher proportion of deformation energy as deformation increases (see p. 5). The torsional rigidity value CT of the tooth crown increases with the torsional angle φ . Consequently, the coupling is relatively soft under small load conditions and becomes progressively harder as the torque increases. This causes a progressive torsion curve, as shown in Fig. 3. The dynamic torsion curve has an insignificantly steeper course.

The damping energy shown in Fig. 3 results in the damping of torque shocks as shown in Fig. 4.

The special advantage of the progressive torsion characteristic is the resonance suppression achieved by the SPIDEX® coupling, as the critical resonance speed depends on the torsional rigidity CT (see Fig. 5).

The progressive curve therefore mainly protects the coupling against inadmissible overstressing. Furthermore, the torsional rigidity CT of the spider can be influenced by the choice of an appropriate Shore hardness material. A larger Shore hardness moves the resonance speed higher, and a lower Shore hardness moves resonance speed into a lower range. If in doubt, we recommend a calculation of the systems dynamics by using the moments of inertia of the driving and driven sides.

Abb. 1
Unbelasteter Polyurethan-Zahn

Fig. 1
Unloaded polyurethane tooth

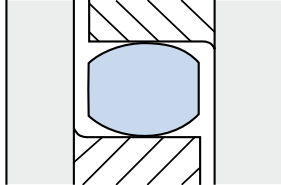


Abb. 2
Belasteter Polyurethan-Zahn

Fig. 2
Loaded polyurethane tooth

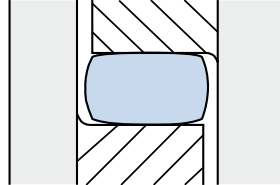


Abb. 3
Progressive Drehfederkennlinie mit Hystereseschleife

Fig. 3
Progressive torsion spring curve with hysteresis loop

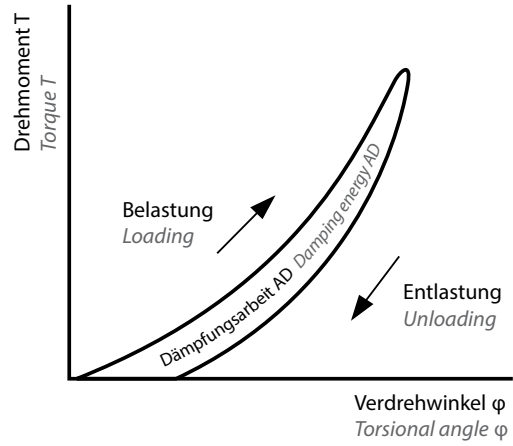


Abb. 4
Vergleich Drehmomentstoß mit und ohne Dämpfung

Fig. 4
Comparison of torque peak with and without damping

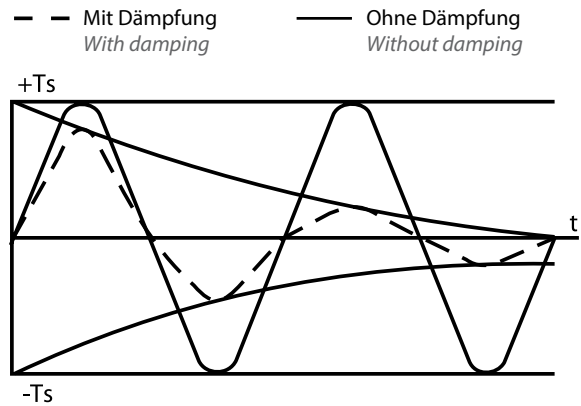
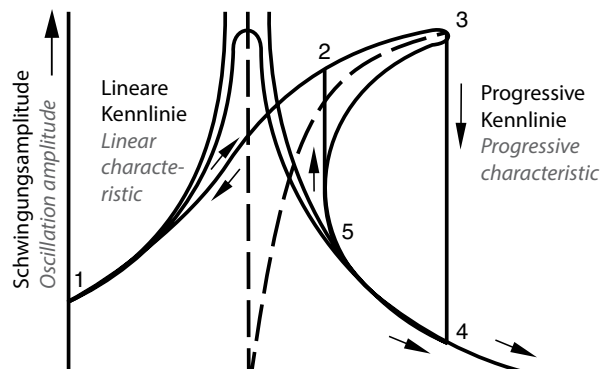


Abb. 5
Resonanzverhalten elastischer Kupplungen mit linear und progressiv ansteigender Drehfederkennlinie

Fig. 5
Resonance suppression of elastic couplings with linear and progressively increasing torsional characteristic



Auswahlprozess zur Größenbestimmung Selection process for sizing determination

Schritt 1: Bestimmung des Nenndrehmoments Ihrer Anwendung:

$$T_N \text{ [Nm]} = \frac{P \text{ [kW]} \times 9550}{U \text{ /min [1/min]}}$$

Schritt 2: Berechnung des Betriebsfaktors Ihrer Anwendung mit der Tabelle auf Seite 7.
Der Gesamtbetriebsfaktor (K) ergibt sich aus:

$$K = K1 \times K2 \times K3$$

Schritt 3: Berechnung des konstruktiven Drehmoments (T_{NK}) Ihrer Anwendung:
Konstruktives Drehmoment (T_{NK}) =
Nenndrehmoment (T_N) x Betriebsfaktor (K).

Schritt 4: Unter Verwendung der Elastomer-Leistungsdatentabellen auf der Seite 11 den Urethan-Shore-Härtegrad auswählen, der am besten den relativen Dämpfungsanforderungen Ihrer Anwendung entspricht.

Schritt 5: Finden Sie als nächstes die Spalten, in denen die Werte T_{KN} und T_{Kmax} in Nm gelistet sind und vergleichen Sie diese mit dem Wert T_{NK} für Ihre Anwendung. Stellen Sie sicher, dass die Werte des Zahnkranzes größer als die Anwendungswerte sind.

$$T_{KN} \& T_{Kmax} > T_{NK}$$

Schritt 6: Nachdem die Größe unter Verwendung der Drehmomentwerte ausgewählt ist, stellen Sie mit Hilfe der Tabelle auf Seite 9 sicher, dass der erforderliche Bohrungsdurchmesser in die Kupplung passt.

Schritt 7: Überprüfen Sie sorgfältig das Gesamtmaß der Kupplung, um zu gewährleisten, dass die Kupplung in den Einbauraum passt.

Step 1: Determine the nominal torque of your application:

$$T_N \text{ [Nm]} = \frac{P \text{ [kW]} \times 9550}{U \text{ /min [1/min]}}$$

Step 2: Calculate your application service factor using the charts on page 7.
The total service factor (K) will be:

$$K = K1 \times K2 \times K3$$

Step 3: Calculate the design torque (T_{NK}) of your application:
Design torque (T_{NK}) = nominal torque (T_N) x service factor (K).

Step 4: Using the Elastomer performance data charts on page 11, select the urethane shore hardness which best corresponds to your relative damping needs in the application.

Step 5: Next find the columns listing T_{KN} and T_{Kmax} values listed in Nm and compare them against the T_{NK} figure for your application. Make sure that the spider/coupling size values are larger than the application values.

$$T_{KN} \& T_{Kmax} > T_{NK}$$

Step 6: Once the size has been selected using the torque values, check the table on page 9 to make sure the bore size needed will fit in the coupling.

Step 7: Double check the overall dimensions of the coupling to ensure that it will fit in the space allowed for the coupling in the application.

Bei dem vorliegenden Auswahlprozess handelt es sich um ein vereinfachtes Verfahren zur Größenbestimmung unserer SPIDEX® Kupplung. Für eine genauere Auswahl ist die DIN 704 T2 anzuwenden. Die Welle-Nabe-Verbindung ist kundenseitig zu prüfen.

This process is a simplified procedure for determining the correct size when selecting one of our SPIDEX® couplings. Use DIN 704 T2 when making a precise selection. The shaft-hub connection has to be checked by the customer.

Definition der Begriffe Definition of terms

| | |
|-----------------|--|
| T_N [Nm] | Nenndrehmoment der Anwendung <i>Nominal torque of the application</i> |
| T_{Kmax} [Nm] | Maximales Drehmoment der Kupplung <i>Maximum torque of the coupling</i> |
| P [kW] | Leistung in Kilowatt <i>Power in kilowatts</i> |
| U/min [1/min] | Umdrehungen pro Minute <i>Revolutions per minute</i> |
| Nm | Newtonmeter <i>Newton meters</i> |
| T_{NK} [Nm] | Konstruktives Drehmoment der Anwendung <i>Constructional torque of the application</i> |
| T_{KW} [Nm] | Wechseldrehmoment <i>Alternating torque</i> |

Anwendungs-Betriebsfaktoren

Application service factors

K1

| | Betriebsfaktor K1 Application service factor K1 |
|---|--|
| <p>Gleichmäßiger Betrieb mit kleinen Beschleunigungsmassen. Hydraulik- und Zentrifugalpumpen, kleine Generatoren, Gebläse, Lüfter, Ventilatoren, Band/Schraubenförderer. <i>Uniform operation with small masses to be accelerated. Hydraulic and centrifugal pumps, light generators, blowers, fans, ventilators, belt/screw conveyors.</i></p> | 1.0 |
| <p>Gleichmäßiger Betrieb mit mittleren Beschleunigungsmassen. Blechbiegemaschinen, Holzbearbeitungsmaschinen, Walzwerke, Textilmaschinen, Mischer. <i>Uniform operation with medium masses to be accelerated. Sheet metal bending machines, wood working machines, mills, textile machines, mixers.</i></p> | 1.2 |
| <p>Ungleichmäßiger Betrieb mit mittleren Beschleunigungsmassen. Rotierende Öfen, Druckpressen, Generatoren, Schredder, Wickelmaschinen, Spinnmaschinen, Pumpen für dickflüssige Fluide. <i>Irregular operation with medium masses to be accelerated. Rotating ovens, printing presses, generators, shredders, winders, spinning machines, pumps for viscous fluids.</i></p> | 1.3 |
| <p>Ungleichmäßiger Betrieb und Stoßbelastungen mit mittleren Beschleunigungsmassen. Betonmischer, Fallhämmer, Seilbahnen, Papiermühlen, Kompressionspumpen, Propellerpumpen, Seilwinden, Zentrifugen. <i>Irregular operation and shocks, with medium masses to be accelerated. Concrete mixers, drop hammers, cable cars, paper mills, compression pumps, propeller pumps, rope winders, centrifuges.</i></p> | 1.4 |
| <p>Ungleichmäßiger Betrieb und starke Stoßbelastungen mit großen Beschleunigungsmassen. Bagger, Hammermühlen, Kolbenpumpen, Pressen, Erdbohrmaschinen, Scheren, Schmiedepressen, Steinbrecher. <i>Irregular operation and heavy shocks, with large masses to be accelerated. Excavators, hammer mills, piston pumps, presses, rotary boring machines, shears, forge presses, stone crushers.</i></p> | 1.6 |
| <p>Ungleichmäßiger Betrieb und sehr starke Stoßbelastungen mit sehr großen Beschleunigungsmassen. Kolbenkompressoren und Pumpen ohne Drehzahlregelung, schwere Walzensätze, Schweißmaschinen, Ziegelpressen, Steinbrecher. <i>Irregular operation and very heavy shocks, with very large masses to be accelerated. Piston-type compressors and pumps without speed variations, heavy roller sets, welding machines, brick presses, stone crushers.</i></p> | 1.8 |

K2 – für Anläufe pro Stunde

K2 – for starts per hour

| | | | | |
|--|-----|-----|-----|-----|
| Anläufe pro Stunde Starts per hour | 100 | 200 | 400 | 800 |
| Betriebsfaktor K2 Service factor K2 | 1.0 | 1.2 | 1.4 | 1.6 |

K3 – für Umgebungstemperaturen

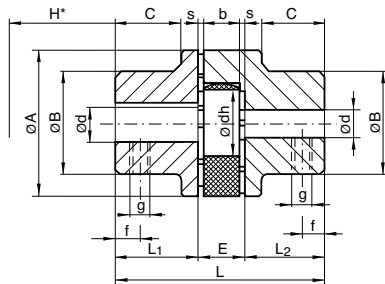
K3 – for ambient temperature

| | | | | | | | | | | | |
|------------------------------|--------|-------------------------------|--------|--------|--------|--------|--------|--------|---------|---------|---------------------------------|
| Zahnkranz Typ Insert type | -50 °C | -30 °C bis/up to +30 °C | +40 °C | +50 °C | +60 °C | +70 °C | +80 °C | +90 °C | +100 °C | +110 °C | +120 °C bis/up to +150 °C |
|------------------------------|--------|-------------------------------|--------|--------|--------|--------|--------|--------|---------|---------|---------------------------------|

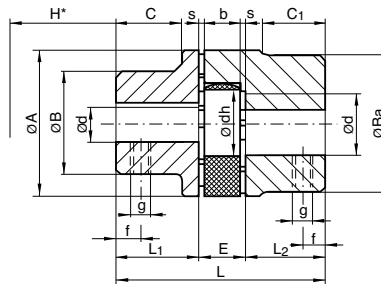
SPIDEX®-Kupplungen für IEC-Normmotoren, Zahnkranz 92° Shore A
SPIDEX® couplings for IEC-standard motors, spider 92° Shore A

| Motorbau- größe Motor size | Welle Shaft D x l [mm] | | n = 750 [1/min] Leistung P Power P | | Kupp- lungs- größe Size of coupling | T _K max [Nm] | n = 1000 [1/min] Leistung P Power P | | Kupp- lungs- größe Size of coupling | T _K max [Nm] | n = 1500 [1/min] Leistung P Power P | | Kupp- lungs- größe Size of coupling | T _K max [Nm] | n = 3000 [1/min] Leistung P Power P | | Kupp- lungs- größe Size of coupling | T _K max [Nm] |
|----------------------------------|---------------------------|-------------------|--|-------------------------|---|-------------------------------|---|-------------------------|---|-------------------------------|---|-------------------------|---|-------------------------------|---|-------------------------|---|-------------------------------|
| | = 1500 [1/min] | = 3000 [1/min] | [kW] | T _{AN} [Nm] | | | [kW] | T _{AN} [Nm] | | | [kW] | T _{AN} [Nm] | | | [kW] | T _{AN} [Nm] | | |
| 56 | 9 x 20 | | - | - | 14/16 | 15 | 0.037 | 0.43 | 14/16 | 15 | 0.06 | 0.4 | 14/16 | 15 | 0.09 | 0.3 | 14/16 | 15 |
| | | | | | 15 | | 0.045 | 0.52 | 15 | | 0.09 | 0.6 | 15 | | | | | |
| 63 | 11 x 23 | | - | - | 15 | 15 | 0.060 | 0.70 | 15 | 15 | 0.12 | 0.9 | 15 | 15 | 0.18 | 0.6 | 15 | 15 |
| | | | | | | | 0.090 | 1.10 | | | 0.18 | 1.2 | | | 0.25 | 0.9 | | |
| 71 | 14 x 30 | | 0.09 | 1.4 | 15 | 15 | 0.180 | 2.00 | 15 | 15 | 0.25 | 1.8 | 15 | 15 | 0.37 | 1.3 | 15 | 15 |
| | | | 0.12 | 1.8 | | | 0.250 | 2.80 | | | 0.37 | 2.5 | | | 0.55 | 1.9 | | |
| 80 | 19 x 40 | | 0.18 | 2.5 | 19/24 | 20 | 0.370 | 3.70 | 19/24 | 20 | 0.55 | 3.7 | 19/24 | 20 | 0.75 | 2.5 | 19/24 | 20 |
| | | | 0.25 | 3.5 | | | 0.550 | 5.50 | | | 0.75 | 5.0 | | | 1.10 | 3.7 | | |
| 90 S | 24 x 50 | | 0.37 | 5.3 | 19/24 | 20 | 0.750 | 7.90 | 19/24 | 20 | 1.10 | 7.5 | 19/24 | 20 | 1.50 | 4.9 | 19/24 | 20 |
| 90 L | | | 0.55 | 7.9 | | | 1.100 | 11.00 | | | 1.50 | 10.0 | | | 2.20 | 7.4 | | |
| 100 L | 28 x 60 | | 0.75 | 11.0 | 24/32 | 70 | 1.500 | 15.00 | 24/32 | 70 | 2.20 | 15.0 | 24/32 | 70 | 3.00 | 9.8 | 24/32 | 70 |
| | | | 1.10 | 16.0 | | | 3.00 | 20.0 | | | 3.00 | 9.8 | | | | | | |
| 112 M | 28 x 60 | | 1.50 | 21.0 | 24/32 | 70 | 2.200 | 22.00 | 24/32 | | 4.00 | 27.0 | 24/32 | 70 | 4.00 | 13.0 | 24/32 | 70 |
| 132 S | 38 x 80 | | 2.20 | 29.0 | 28/38 | 190 | 3.000 | 30.00 | 28/38 | 190 | 5.50 | 36.0 | 28/38 | 190 | 5.50 | 18.0 | 28/38 | 190 |
| 132 M | | | 3.00 | 40.0 | | | 4.000 | 39.00 | | | 7.50 | 49.0 | | | 7.50 | 25.0 | | |
| | | | | | | | 5.500 | 55.00 | | | | | | | | | | |
| 160 M | 42 x 110 | | 4.00 | 54.0 | 38/45 | 380 | 7.500 | 74.00 | 38/45 | 380 | 11.00 | 72.0 | 38/45 | 380 | 11.00 | 35.0 | 38/45 | 380 |
| 160 L | | | 5.50 | 74.0 | | | 11.000 | 108.00 | | | 15.00 | 98.0 | | | 18.50 | 60.0 | | |
| | | | | | | | | | | | | | | | | | | |
| 180 M | 48 x 110 | | - | - | 42/55 | 530 | - | - | 42/55 | 530 | 18.50 | 121.0 | 42/55 | 530 | 22.00 | 72.0 | 42/55 | 530 |
| 180 L | | | 11.00 | 147.0 | | | 15.000 | 147.00 | | | 22.00 | 144.0 | | | | | | |
| 200 L | 55 x 110 | | 15.00 | 196.0 | 42/55 | 530 | 18.500 | 185.00 | 42/55 | 530 | 30.00 | 195.0 | 42/55 | 530 | 30.00 | 97.0 | 42/55 | 530 |
| | | | | | | | 22.000 | 215.00 | | | 37.00 | 117.0 | | | | | | |
| 225 S | 60 x 140 | 55 x 110 | 18.50 | 245.0 | 48/60 | 620 | - | - | 48/60 | 620 | 37.00 | 245.0 | 48/60 | 620 | 37.00 | 117.0 | 42/55 | 530 |
| 225 M | | | 22.00 | 294.0 | | | 30.000 | 292.00 | | | 45.00 | 294.0 | | | 45.00 | 146.0 | | |
| 250 M | 65 x 140 | 60 x 140 | 30.00 | 390.0 | 65/75 | 1250 | 37.000 | 361.00 | 55/70 | 820 | 55.00 | 357.0 | 55/70 | 820 | 55.00 | 176.0 | 48/60 | 620 |
| 280 S | 75 x 140 | 65 x 140 | 37.00 | 490.0 | 65/75 | 1250 | 45.000 | 440.00 | 65/75 | 1250 | 75.00 | 487.0 | 65/75 | 1250 | 75.00 | 245.0 | 55/70 | 820 |
| 280 M | | | 45.00 | 585.0 | | | 55.000 | 536.00 | | | 90.00 | 584.0 | | | 90.00 | 294.0 | | |
| 315 S | 80 x 170 | 65 x 140 | 55.00 | 715.0 | 75/90 | 2560 | 75.000 | 730.00 | 75/90 | 2560 | 110.00 | 714.0 | 75/90 | 2560 | 110.00 | 350.0 | 55/70 | 820 |
| 315 M | | | 75.00 | 970.0 | | | 90.000 | 876.00 | | | 132.00 | 857.0 | | | 132.00 | 420.0 | | |
| | | | 90.00 | 1170.0 | | | 110.000 | 1070.00 | | | 160.00 | 1030.0 | | | 160.00 | 513.0 | | |
| 315 L | | | 110.00 | 1420.0 | | | 132.000 | 1280.00 | | | 200.00 | 1290.0 | | | 200.00 | 641.0 | | |
| 355 L | 95 x 170 | 75 x 140 | 132.00 | 1710.0 | 90/100 | 4800 | 160.000 | 1550.00 | 90/100 | 4800 | 250.00 | 1610.0 | 90/100 | 4800 | 250.00 | 801.0 | 75/90 | 2560 |
| | | | 160.00 | 2070.0 | | | 200.000 | 1930.00 | | | 315.00 | 2020.0 | | | 315.00 | 1010.0 | | |
| | | | 200.00 | 2580.0 | | | 250.000 | 2420.00 | | | | | | | | | | |
| 400 L | 100 x 210 | 80 x 170 | 250.00 | 3230.0 | 110/125 | 9600 | 315.000 | 3040.00 | 100/110 | 6600 | 355.00 | 2280.0 | 100/110 | 6600 | 355.00 | 1140.0 | 90/100 | 4800 |
| | | | | | | | | | | | 400.00 | 2560.0 | | | 400.00 | 1280.0 | | |

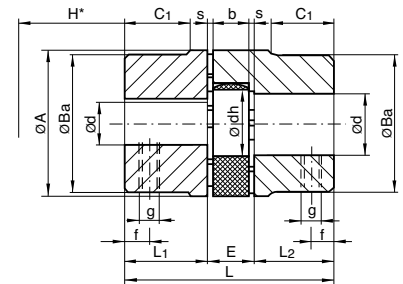
Abmessungen SPIDEX®-Kupplungen Dimensions SPIDEX® couplings



Nabenkombination A/A
Hub combination A/A



Nabenkombination A/B
Hub combination A/B



Nabenkombination B/B
Hub combination B/B

| SPIDEX® | Bohrungen Bores | | | | Abmessungen [mm] Dimensions [mm] | | | | | | | | | | | | | | Gewicht Weight [kg] | Naben Sonderlänge Special hub length [mm] |
|---|---------------------------|-----|-----------------|-----|-------------------------------------|-----|-----|-----|-------|----|-----|----|----|-----|-----|-----|----|----|---------------------------|---|
| | Fertigbohrung Finish bore | | | | A | B | Ba | L | L1/L2 | E | s | b | C | C1 | dh | g | f | H* | | |
| | Nabe A Hub A | | Nabe B Hub B | | | | | | | | | | | | | | | | | |
| min | max | min | max | | | | | | | | | | | | | | | | | |
| Werkstoff: Aluminium Druckguss (ALU) Material: die-cast aluminium (ALU) | | | | | | | | | | | | | | | | | | | | |
| A15 | - | - | 4 | 15 | 26 | - | 26 | 28 | 10 | 8 | 1.0 | 6 | - | - | 12 | M5 | 5 | 8 | 0.025 | - |
| A19/24 | 6 | 19 | 19 | 24 | 40 | 32 | 39 | 66 | 25 | 16 | 2.0 | 12 | 20 | 21 | 18 | M5 | 10 | 14 | 0.130 | 55 |
| A24/32 | 8 | 24 | 16 | 32 | 55 | 40 | 53 | 78 | 30 | 18 | 2.0 | 14 | 24 | 26 | 27 | M5 | 10 | 16 | 0.260 | 60 |
| A28/38 | 10 | 28 | 28 | 38 | 65 | 48 | 63 | 90 | 35 | 20 | 2.5 | 15 | 28 | 29 | 30 | M6 | 15 | 18 | 0.460 | 60 |
| A38/45 | 14 | 38 | 38 | 45 | 80 | 66 | 79 | 114 | 45 | 24 | 3.0 | 18 | 37 | 39 | 38 | M8 | 15 | 19 | 0.900 | 70 |
| Werkstoff: Grauguss (GG), Sphäroguss (GGG), Stahl (St), Sinterstahl (Si) Material: cast iron (GG), SG iron (GGG), steel (St), sintered steel (Si) | | | | | | | | | | | | | | | | | | | | |
| A14/16 St | - | - | 4 | 16 | 30 | - | 30 | 35 | 11 | 13 | 1.5 | 10 | - | - | 10 | M4 | 5 | 12 | 0.140 | 18.5 |
| A19/24 GG/St/Si | 6 | 19 | 12 | 24 | 40 | 32 | 39 | 66 | 25 | 16 | 2.0 | 12 | 20 | 21 | 18 | M5 | 10 | 14 | 0.350 | 55 |
| A24/32 GG/St/Si | 10 | 24 | 14 | 32 | 55 | 40 | 52 | 78 | 30 | 18 | 2.0 | 14 | 24 | 26 | 27 | M5 | 10 | 16 | 1.000 | 60 |
| A28/38 GG/St/Si | 12 | 28 | 28 | 38 | 65 | 48 | 62 | 90 | 35 | 20 | 2.5 | 15 | 28 | 29 | 30 | M6 | 15 | 18 | 1.600 | 80 |
| A38/45 GG/GGG/St/Si | 14 | 38 | 38 | 45 | 80 | 66 | 77 | 114 | 45 | 24 | 3.0 | 18 | 37 | 38 | 38 | M8 | 15 | 19 | 2.300 | 110 |
| A42/55 GG/GGG/St/Si | 19 | 42 | 42 | 55 | 95 | 75 | 94 | 126 | 50 | 26 | 3.0 | 20 | 40 | 40 | 46 | M8 | 20 | 21 | 3.600 | 110 |
| A48/60 GG/GGG/St/Si | 19 | 48 | 48 | 60 | 105 | 85 | 102 | 140 | 56 | 28 | 3.5 | 21 | 45 | 45 | 51 | M8 | 20 | 22 | 4.800 | 110 |
| A55/70 GG/GGG/St | 19 | 55 | 55 | 70 | 120 | 98 | 118 | 160 | 65 | 30 | 4.0 | 22 | 52 | 52 | 60 | M10 | 20 | 23 | 7.400 | 140 |
| A65/75 GG/GGG/St | 22 | 65 | 65 | 75 | 135 | 115 | 132 | 185 | 75 | 35 | 4.5 | 26 | 61 | 59 | 68 | M10 | 20 | 27 | 10.900 | 140 |
| A75/90 GG/GGG/St | 30 | 75 | 75 | 90 | 160 | 135 | 158 | 210 | 85 | 40 | 5.0 | 30 | 69 | 65 | 80 | M10 | 25 | 31 | 17.700 | 195 |
| A90/100 GG/GGG/St | 40 | 90 | 90 | 100 | 200 | 160 | 180 | 245 | 100 | 45 | 5.5 | 34 | 81 | 81 | 100 | M10 | 25 | 35 | 29.500 | 140/210 |
| A100/110 GG/GGG/St | - | - | 55 | 110 | 225 | - | 200 | 270 | 110 | 50 | 6.0 | 38 | - | 89 | 113 | M16 | 30 | 39 | 43.500 | - |
| A110/125 GG/GGG/St | - | - | 65 | 125 | 255 | - | 230 | 295 | 120 | 55 | 6.5 | 42 | - | 96 | 127 | M16 | 35 | 43 | 63.000 | - |
| A125/145 GG/GGG/St | - | - | 65 | 145 | 290 | - | 265 | 340 | 140 | 60 | 7.0 | 46 | - | 112 | 147 | M16 | 40 | 47 | 95.000 | - |

H* ist das Mindestmaß, um welches die Aggregate auseinander geschoben werden müssen, um einen radialen Ausbau zu ermöglichen. Fertigbohrung nach ISO-Passung H7, Passfedernut nach DIN 6885, Blatt 1 (JS9). Das Gewicht und Massenträgheitsmoment beziehen sich auf die Werkstoffe Al/GG/GGG bei max. möglichem Durchmesser d ohne Nut. H* is the minimum dimension required for the disassembly of the aggregates in the radial direction. Finish bore acc. to ISO standard H7, keyway acc. to DIN 6885, sheet 1 (JS9). Weight and moment of inertia in relation to the materials Al/GG/GGG with max. diameter without keyway.

Standardprogramm

- A Naben und B Naben in Aluminium Druckguss „ALU“ und Grauguss „GG“
- B Naben in Sphäroguss „GGG“, Stahl „St“, Sinterstahl „Si“
- Sonderanfertigungen lieferbar
- Baureihen 140/160/180 auf Anfrage

Standard program

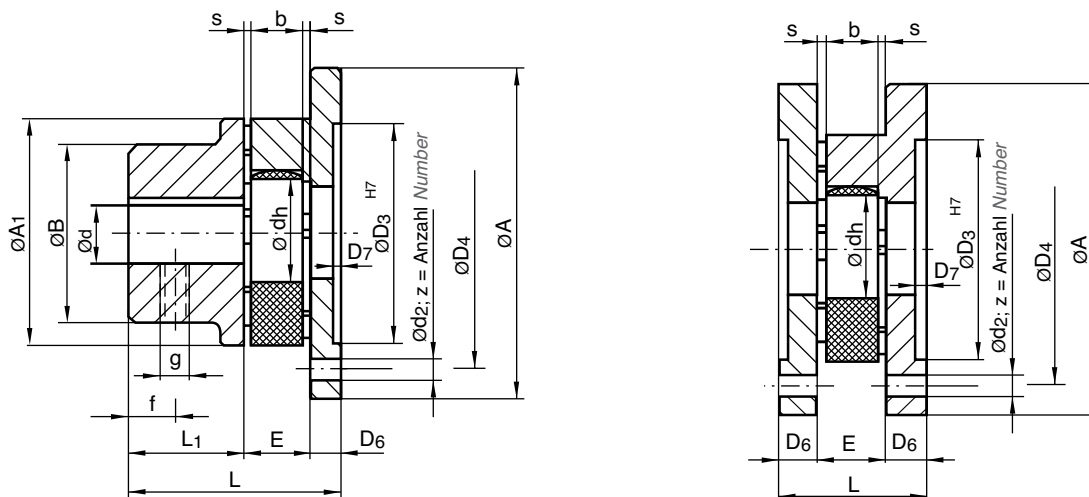
- A hubs and B hubs made of die-cast aluminium „ALU“ and cast iron „GG“
- B hubs made of SG iron „GGG“, steel „St“, sintered steel „Si“
- Custom-made versions available
- Series 140/160/180 on request

Massenträgheitsmomente J [kg m²] (Standardnabe mit maximalem Bohrungsdurchmesser ohne Nut)

Moment of inertia J [kg m²] (Standard hub with max. diameter of bore without keyway)

| Nabenteil Part of coupling | Material Material | Kupplungsgröße Coupling size | | | | | | | | | | | | | |
|----------------------------------|----------------------|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|---------|---------|
| | | 14/16 | 15 | 19/24 | 24/32 | 28/38 | 38/45 | 42/55 | 48/60 | 55/70 | 65/75 | 75/90 | 90/100 | 100/110 | 110/125 |
| Nabe A Hub A | Al | - | - | 0.000010 | 0.000040 | 0.000100 | 0.000350 | - | - | - | - | - | - | - | - |
| | GG/GGG/St | - | - | 0.000050 | 0.000250 | 0.000400 | 0.001100 | 0.002000 | 0.003000 | 0.006000 | 0.012500 | 0.025000 | 0.069000 | - | - |
| Nabe B | Al | - | 0.000004 | 0.000020 | 0.000090 | 0.000200 | 0.000450 | - | - | - | - | - | - | - | |

Abmessungen SPIDEX®-Flanschkupplungen Dimensions SPIDEX® flange couplings



Baureihe F Series F

| SPIDEX® | Fertigbohrung ¹⁾ Finish bore ¹⁾ | | Abmessungen [mm] Dimensions [mm] | | | | | | | | | | | | | | Gewicht Weight | Massenträgheitsmoment ²⁾ Moment of inertia ²⁾ | | | |
|---------|--|-------------------|-------------------------------------|-----|-----|-----|-----|----|-----|----|-----|-----|----|----|-----|--------------|-------------------|--|-----------------------|-------|--------|
| | min | max ⁴⁾ | A | A1 | B | L1 | L | E | s | b | dh | g | f | D6 | D7 | d2 DIN 69 | | | z Anzahl Number | D3 | D4 |
| F 28 | 10 | 28 | 100 | 65 | 65 | 35 | 65 | 20 | 2.5 | 15 | 30 | M8 | 15 | 10 | 1.5 | 7 | 6 | 65 | 80 | 1.18 | 0.0012 |
| F 38 | 14 | 38 | 115 | 80 | 66 | 45 | 79 | 24 | 3.0 | 18 | 38 | M8 | 15 | 10 | 1.5 | 7 | 6 | 80 | 95 | 1.87 | 0.0023 |
| F 42 | 19 | 42 | 140 | 95 | 75 | 50 | 88 | 26 | 3.0 | 20 | 46 | M8 | 20 | 12 | 2.0 | 9 | 6 | 95 | 115 | 3.06 | 0.0054 |
| F 48 | 19 | 48 | 150 | 105 | 85 | 56 | 96 | 28 | 3.5 | 21 | 51 | M8 | 20 | 12 | 2.0 | 9 | 8 | 105 | 125 | 3.88 | 0.0080 |
| F 55 | 19 | 55 | 175 | 120 | 98 | 65 | 111 | 30 | 4.0 | 22 | 60 | M10 | 20 | 16 | 2.0 | 11 | 8 | 120 | 145 | 6.21 | 0.0178 |
| F 65 | 22 | 65 | 190 | 135 | 115 | 75 | 126 | 35 | 4.5 | 26 | 68 | M10 | 20 | 16 | 2.0 | 11 | 10 | 135 | 160 | 8.63 | 0.0293 |
| F 75 | 30 | 75 | 215 | 160 | 135 | 85 | 144 | 40 | 5.0 | 30 | 80 | M10 | 25 | 19 | 2.5 | 14 | 10 | 160 | 185 | 13.20 | 0.0595 |
| F 90 | 40 | 90 | 260 | 200 | 160 | 100 | 165 | 45 | 5.5 | 34 | 100 | M12 | 30 | 20 | 3.0 | 14 | 12 | 200 | 225 | 22.00 | 0.1443 |

Baureihe FF Series FF

| SPIDEX® | Abmessungen [mm] Dimensions [mm] | | | | | | | | | | | | Gewicht Weight | Massenträgheitsmoment ²⁾ Moment of inertia ²⁾ |
|---------|-------------------------------------|----|----|-----|----|-----|----|-----|----------------------------|-----------------------|-----|-----|-------------------|--|
| | A | L | E | s | b | dh | D6 | D7 | d2 DIN 69 ³⁾ | z Anzahl Number | D3 | D4 | | |
| FF 28 | 100 | 40 | 20 | 2.5 | 15 | 30 | 10 | 1.5 | 7 | 6 | 65 | 80 | 1.19 | 0.0015 |
| FF 38 | 115 | 44 | 24 | 3.0 | 18 | 38 | 10 | 1.5 | 7 | 6 | 80 | 95 | 1.66 | 0.0028 |
| FF 42 | 140 | 50 | 26 | 3.0 | 20 | 46 | 12 | 2.0 | 9 | 6 | 95 | 115 | 2.91 | 0.0072 |
| FF 48 | 150 | 52 | 28 | 3.5 | 21 | 51 | 12 | 2.0 | 9 | 8 | 105 | 125 | 3.35 | 0.0092 |
| FF 55 | 175 | 62 | 30 | 4.0 | 22 | 60 | 16 | 2.0 | 11 | 8 | 120 | 145 | 5.78 | 0.0230 |
| FF 65 | 190 | 67 | 35 | 4.5 | 26 | 68 | 16 | 2.0 | 11 | 10 | 135 | 160 | 7.13 | 0.0340 |
| FF 75 | 215 | 78 | 40 | 5.0 | 30 | 80 | 19 | 2.5 | 14 | 10 | 160 | 185 | 10.50 | 0.0650 |
| FF 90 | 260 | 85 | 45 | 5.5 | 34 | 100 | 20 | 3.0 | 14 | 12 | 200 | 225 | 16.50 | 0.1500 |

1) Fertigbohrung nach ISO-Passung H7, Passfedernut nach DIN 6885, Blatt 1 (JS9).

2) Gewicht und Massenträgheitsmoment für Werkstoffe GG/GGG bei maximalem Bohrungsdurchmesser ohne Nut.

3) Wenn Gewindebohrungen anstatt Durchgangsbohrungen benötigt werden, ändert sich die Flanschbezeichnung in BF bzw. BFF.

4) Wenn größere Fertigbohrungen benötigt werden, können B-Naben verwendet werden.

1) Finish bore acc. to ISO standard H7, keyway acc. to DIN 6885, sheet 1 (JS9).

2) Weight and moment of inertia for materials GG/GGG at maximum bore diameter without keyway.

3) If threaded holes instead of through holes are required, the flange designation changes to BF or BFF.

4) If larger finish bores are required, B-hubs can be used.

Standard-Zahnkränze Standard spiders



**Zahnkranz Polyurethan
92° Shore A**
*Spider polyurethane
92° Shore A*

- Weiß
White
- Allgemeine Antriebe
Normal drives



**Zahnkranz Polyurethan
95/98° Shore A**
*Spider polyurethane
95/98° Shore A*

- Rot
Red
- Allgemeine Antriebe mit erhöhten Belastungen
Normal drives with high performance



**Zahnkranz Polyurethan
64° Shore D**
*Spider polyurethane
64° Shore D*

- Grün
Green
- Hohe Belastbarkeit mit geringem Verdrehwinkel
High performance with small torsional angle

Technische Daten Technical data

| Zahnkranz Spider | Größe Size | Drehmoment Torque [Nm] | | | Max. Drehzahl Max. RPM n [1/min] | | Verdrehwinkel Torsional angle | | Drehfedersteife Torsional rigidity C _{dyn} [Nm/rad] | | | | Verhältnis- mäßige Dämpfung Relative damping | | | |
|---|--|-----------------------------------|---|---|--|--------------------------|----------------------------------|------------------------------------|---|--------------------------|--------------------------|---------------------------|--|--------------------------|--------------------------|--------------------------|
| | | Nenn Contin T _{KN} | Maximal Maximum T _{Kmax} | Wechsel Alternat. T _{KW} | V* | 30 m/s | 40 m/s | T _{KN} Φ _{KN} | T _{Kmax} Φ _{Kmax} | 1.00 T _{KN} | 0.75 T _{KN} | 0.5 T _{KN} | | 0.25 T _{KN} | | |
| | | | | | | | | | | | | | | | | |
| 92° Shore Skala A Farbe: Weiß Scale A Colour: White | 14/16, 15 | 7.5 | 15 | 2.0 | 19000 | - | 6.4° | 10° | 0.38 x 10 ³ | 0.31 x 10 ³ | 0.24 x 10 ³ | 0.14 x 10 ³ | 0.75 | | | |
| | 19/24 | 10.0 | 20 | 2.6 | 14000 | 19000 | 3.2° | 5° | 1.28 x 10 ³ | 1.05 x 10 ³ | 0.80 x 10 ³ | 0.47 x 10 ³ | | | | |
| | 24/32 | 35.0 | 70 | 9.1 | 10600 | 14000 | | | 4.86 x 10 ³ | 3.98 x 10 ³ | 3.01 x 10 ³ | 1.79 x 10 ³ | | | | |
| | 28/38 | 95.0 | 190 | 25.0 | 8500 | 11800 | | | 10.90 x 10 ³ | 8.94 x 10 ³ | 6.76 x 10 ³ | 4.01 x 10 ³ | | | | |
| | 38/45 | 190.0 | 380 | 49.0 | 7100 | 9500 | | | 21.05 x 10 ³ | 17.26 x 10 ³ | 13.05 x 10 ³ | 7.74 x 10 ³ | | | | |
| | 42/55 | 265.0 | 530 | 69.0 | 6000 | 8000 | | | 23.74 x 10 ³ | 19.47 x 10 ³ | 14.72 x 10 ³ | 8.73 x 10 ³ | | | | |
| | 48/60 | 310.0 | 620 | 81.0 | 5600 | 7100 | | | 36.70 x 10 ³ | 30.09 x 10 ³ | 22.75 x 10 ³ | 13.49 x 10 ³ | | | | |
| | 55/70 | 410.0 | 820 | 107.0 | 4750 | 6300 | | | 50.72 x 10 ³ | 41.59 x 10 ³ | 31.45 x 10 ³ | 18.64 x 10 ³ | | | | |
| | 65/75 | 625.0 | 1250 | 163.0 | 4250 | 5600 | | | 97.13 x 10 ³ | 79.65 x 10 ³ | 60.22 x 10 ³ | 35.70 x 10 ³ | | | | |
| | 75/90 | 1280.0 | 2560 | 333.0 | 3550 | 4750 | | | 113.32 x 10 ³ | 92.92 x 10 ³ | 70.26 x 10 ³ | 41.65 x 10 ³ | | | | |
| | 90/100 | 2400.0 | 4800 | 624.0 | 2800 | 3750 | | | 190.09 x 10 ³ | 155.87 x 10 ³ | 117.86 x 10 ³ | 69.86 x 10 ³ | | | | |
| | 100/110 | 3300.0 | 6600 | 858.0 | 2500 | 3350 | | | 253.08 x 10 ³ | 207.53 x 10 ³ | 156.91 x 10 ³ | 93.01 x 10 ³ | | | | |
| 110/125 | 4800.0 | 9600 | 1248.0 | 2240 | 3000 | 311.61 x 10 ³ | | | 255.52 x 10 ³ | 193.20 x 10 ³ | 114.52 x 10 ³ | | | | | |
| 125/145 | 6650.0 | 13300 | 1729.0 | 2000 | 2650 | 474.86 x 10 ³ | 389.39 x 10 ³ | 294.41 x 10 ³ | 174.51 x 10 ³ | | | | | | | |
| 98° Shore Skala A Farbe: Rot Scale A Colour: Red | 14/16, 15 | 12.5 | 25 | 3.3 | 19000 | - | 3.2° | 5° | 0.56 x 10 ³ | 0.46 x 10 ³ | 0.35 x 10 ³ | 0.21 x 10 ³ | 0.70 | | | |
| | 19/24 | 17.0 | 34 | 4.4 | 14000 | 19000 | 6.4° | 10° | 2.92 x 10 ³ | 2.39 x 10 ³ | 1.81 x 10 ³ | 1.07 x 10 ³ | | | | |
| | 24/32 | 60.0 | 120 | 16.0 | 10600 | 14000 | 3.2° | 5° | 9.93 x 10 ³ | 8.14 x 10 ³ | 6.16 x 10 ³ | 3.65 x 10 ³ | | | | |
| | 28/38 | 160.0 | 320 | 42.0 | 8500 | 11800 | | | 26.77 x 10 ³ | 21.95 x 10 ³ | 16.60 x 10 ³ | 9.84 x 10 ³ | | | | |
| | 38/45 | 325.0 | 650 | 85.0 | 7100 | 9500 | | | 48.57 x 10 ³ | 39.83 x 10 ³ | 30.11 x 10 ³ | 17.85 x 10 ³ | | | | |
| | 42/55 | 450.0 | 900 | 117.0 | 6000 | 8000 | | | 54.50 x 10 ³ | 44.69 x 10 ³ | 33.79 x 10 ³ | 20.03 x 10 ³ | | | | |
| | 48/60 | 525.0 | 1050 | 137.0 | 5600 | 7100 | | | 65.29 x 10 ³ | 53.54 x 10 ³ | 40.48 x 10 ³ | 24.00 x 10 ³ | | | | |
| | 55/70 | 685.0 | 1370 | 178.0 | 4750 | 6300 | | | 94.97 x 10 ³ | 77.88 x 10 ³ | 58.88 x 10 ³ | 34.90 x 10 ³ | | | | |
| | 95° Shore Skala A Farbe: Rot Scale A Colour: Red | 65/75 | 940.0 | 1880 | 244.0 | 4250 | | | 5600 | 3.2° | 5° | 129.51 x 10 ³ | | 106.20 x 10 ³ | 80.30 x 10 ³ | 47.60 x 10 ³ |
| | | 75/90 | 1920.0 | 3840 | 499.0 | 3550 | | | 4750 | | | 197.50 x 10 ³ | | 161.95 x 10 ³ | 122.45 x 10 ³ | 72.58 x 10 ³ |
| | | 90/100 | 3600.0 | 7200 | 936.0 | 2800 | | | 3750 | | | 312.20 x 10 ³ | | 256.00 x 10 ³ | 193.56 x 10 ³ | 114.73 x 10 ³ |
| | | 100/110 | 4950.0 | 9900 | 1287.0 | 2500 | | | 3350 | | | 383.26 x 10 ³ | | 314.27 x 10 ³ | 237.62 x 10 ³ | 140.85 x 10 ³ |
| 100/125 | | 7200.0 | 14400 | 1872.0 | 2240 | 3000 | | | 690.06 x 10 ³ | | | 565.85 x 10 ³ | 427.84 x 10 ³ | 253.60 x 10 ³ | | |
| 125/145 | | 10000.0 | 20000 | 2600.0 | 2000 | 2650 | | | 1343.64 x 10 ³ | | | 1101.79 x 10 ³ | 833.06 x 10 ³ | 493.79 x 10 ³ | | |
| 64° Shore** Skala D Farbe: Grün Scale D Colour: Green | 24/32 | 75.0 | 150 | 19.5 | 10600 | 14000 | 2.5° | 3.6° | 15.11 x 10 ³ | 12.39 x 10 ³ | 9.37 x 10 ³ | 5.55 x 10 ³ | | | | |
| | 28/38 | 200.0 | 400 | 52.0 | 8500 | 11800 | | | 27.52 x 10 ³ | 22.57 x 10 ³ | 17.06 x 10 ³ | 10.12 x 10 ³ | | | | |
| | 38/45 | 405.0 | 810 | 105.0 | 7100 | 9500 | | | 70.15 x 10 ³ | 57.52 x 10 ³ | 43.49 x 10 ³ | 25.78 x 10 ³ | | | | |
| | 42/55 | 560.0 | 1120 | 146.0 | 6000 | 8000 | | | 79.86 x 10 ³ | 65.49 x 10 ³ | 49.52 x 10 ³ | 29.35 x 10 ³ | | | | |
| | 48/60 | 655.0 | 1310 | 170.0 | 5600 | 7100 | | | 95.51 x 10 ³ | 78.32 x 10 ³ | 59.22 x 10 ³ | 35.10 x 10 ³ | | | | |
| | 55/70 | 825.0 | 1650 | 215.0 | 4750 | 6300 | | | 107.52 x 10 ³ | 88.50 x 10 ³ | 66.91 x 10 ³ | 39.66 x 10 ³ | | | | |
| | 65/75 | 1175.0 | 2350 | 306.0 | 4250 | 5600 | | | 151.09 x 10 ³ | 123.90 x 10 ³ | 93.68 x 10 ³ | 55.53 x 10 ³ | | | | |
| | 75/90 | 2400.0 | 4800 | 624.0 | 3550 | 4750 | | | 248.22 x 10 ³ | 203.54 x 10 ³ | 153.90 x 10 ³ | 91.22 x 10 ³ | | | | |

TPS-Zahnkränze für den Einsatz bei hohen Temperaturen TPS spiders for high-temperature usage



TPS-Zahnkranz
Polyurethan optimiert
92° Shore A
TPS Spider
high-performance
polyurethane
92° Shore A

TPS-Zahnkranz
Polyurethan optimiert
98° Shore A
TPS Spider
high-performance
polyurethane
98° Shore A

- Jetzt bis +150 °C Einsatztemperatur
- Hergestellt aus Hochleistungs-PU-Kunststoff
- Für SPIDEX®-Kupplungsgrößen von 19 – 90
- Now for operating temperatures up to +150 °C
- Made from high-performance polyurethane
- For SPIDEX® couplings sizes 19 – 90

■ Gelb
Yellow

■ Weinrot
Wine Red

Technische Daten Technical data

| Zahnkranz Spider | Größe Size | Drehmoment Torque [Nm] | | | Max. Drehzahl Max. rotation n [1/min] | | Verdrehwinkel Torsional angle | | Drehfedersteife Torsional rigidity C _{dyn} [Nm/rad] | | | | Verhältnis- mäßige Dämpfung Relative damping |
|---|---------------|------------------------------------|--------------------------------------|---|---|--------------------------|------------------------------------|--|--|--------------------------|--------------------------|--------------------------|--|
| | | Nenn Contin. T _{KN} | Maximal Max. T _{Kmax} | Wechsel Alternat. T _{KW} | V* | 40 m/s | T _{KN} Φ _{KN} | T _{Kmax} Φ _{Kmax} | 1.00 T _{KN} | 0.75 T _{KN} | 0.5 T _{KN} | 0.25 T _{KN} | |
| 92° Shore Skala A Farbe: Gelb Scale A Colour: Yellow | 19/24 | 10 | 20 | 2.6 | 14000 | 19000 | 3.2° | 5° | 1.28 x 10 ³ | 1.05 x 10 ³ | 0.80 x 10 ³ | 0.47 x 10 ³ | 0.75 |
| | 24/32 | 35 | 70 | 9.1 | 10600 | 14000 | | | 4.86 x 10 ³ | 3.98 x 10 ³ | 3.01 x 10 ³ | 1.79 x 10 ³ | |
| | 28/38 | 95 | 190 | 25.0 | 8500 | 11800 | | | 10.90 x 10 ³ | 8.94 x 10 ³ | 6.76 x 10 ³ | 4.01 x 10 ³ | |
| | 38/45 | 190 | 380 | 49.0 | 7100 | 9500 | | | 21.05 x 10 ³ | 17.26 x 10 ³ | 13.05 x 10 ³ | 7.74 x 10 ³ | |
| | 42/55 | 265 | 530 | 69.0 | 6000 | 8000 | | | 23.74 x 10 ³ | 19.47 x 10 ³ | 14.72 x 10 ³ | 8.73 x 10 ³ | |
| | 48/60 | 310 | 620 | 81.0 | 5600 | 7100 | | | 36.70 x 10 ³ | 30.09 x 10 ³ | 22.75 x 10 ³ | 13.49 x 10 ³ | |
| | 55/70 | 410 | 820 | 107.0 | 4750 | 6300 | | | 50.72 x 10 ³ | 41.59 x 10 ³ | 31.45 x 10 ³ | 18.64 x 10 ³ | |
| | 65/75 | 625 | 1250 | 163.0 | 4250 | 5600 | | | 97.13 x 10 ³ | 79.65 x 10 ³ | 60.22 x 10 ³ | 35.70 x 10 ³ | |
| | 75/90 | 1280 | 2560 | 333.0 | 3550 | 4750 | | | 113.32 x 10 ³ | 92.92 x 10 ³ | 70.26 x 10 ³ | 41.65 x 10 ³ | |
| 90/100 | 2400 | 4800 | 624.0 | 2800 | 3750 | 190.09 x 10 ³ | 155.87 x 10 ³ | 117.86 x 10 ³ | 69.86 x 10 ³ | | | | |
| 98° Shore Skala A Farbe: Weinrot Scale A Colour: Wine Red | 19/24 | 17 | 34 | 4.4 | 14000 | 19000 | 3.2° | 5° | 2.92 x 10 ³ | 2.39 x 10 ³ | 1.81 x 10 ³ | 1.07 x 10 ³ | 0.70 |
| | 24/32 | 60 | 120 | 16.0 | 10600 | 14000 | | | 9.93 x 10 ³ | 8.14 x 10 ³ | 6.16 x 10 ³ | 3.65 x 10 ³ | |
| | 28/38 | 160 | 320 | 42.0 | 8500 | 11800 | | | 26.77 x 10 ³ | 21.95 x 10 ³ | 16.60 x 10 ³ | 9.84 x 10 ³ | |
| | 38/45 | 325 | 650 | 85.0 | 7100 | 9500 | | | 48.57 x 10 ³ | 39.83 x 10 ³ | 30.11 x 10 ³ | 17.85 x 10 ³ | |
| | 42/55 | 450 | 900 | 117.0 | 6000 | 8000 | | | 54.50 x 10 ³ | 44.69 x 10 ³ | 33.79 x 10 ³ | 20.03 x 10 ³ | |
| | 48/60 | 525 | 1050 | 137.0 | 5600 | 7100 | | | 65.29 x 10 ³ | 53.54 x 10 ³ | 40.48 x 10 ³ | 24.00 x 10 ³ | |
| | 55/70 | 685 | 1370 | 178.0 | 4750 | 6300 | | | 94.97 x 10 ³ | 77.88 x 10 ³ | 58.88 x 10 ³ | 34.90 x 10 ³ | |
| 95° Shore Skala A, Farbe: Rot Scale A, Colour: Red | 65/75 | 940 | 1880 | 244.0 | 4250 | 5600 | 3.2° | 5° | 129.51 x 10 ³ | 106.20 x 10 ³ | 80.30 x 10 ³ | 47.60 x 10 ³ | |
| | 75/90 | 1920 | 3840 | 499.0 | 3550 | 4750 | | | 197.50 x 10 ³ | 161.95 x 10 ³ | 122.45 x 10 ³ | 72.58 x 10 ³ | |
| | 90/100 | 3600 | 7200 | 936.0 | 2800 | 3750 | | | 312.20 x 10 ³ | 256.00 x 10 ³ | 193.56 x 10 ³ | 114.73 x 10 ³ | |

* Bei Umfangsgeschwindigkeit über V = 30 m/s ist dynamisches Wuchten erforderlich.
* For speeds of over V = 30 m/s dynamic balancing is necessary.

* Für Umfangsgeschwindigkeit über V = 35 m/s nur Stahl bzw. Sphäroguss verwenden.
* For rotational speeds above V = 35 m/s, use only steel or SG iron.

Einsatzbedingungen für SPIDEX®-Zahnkränze (Standard und TPS) Operating conditions for SPIDEX® spiders (Standard and TPS)

| | Standard | TPS | Standard | TPS | Standard |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Zahnkranzhärte Hardness of spider | 92° Shore A | 92° Shore A | 95°/98° Shore A | 98° Shore A | 64° Shore D |
| Zahnkranzfarbe Colour of spider | Weiß White | Gelb Yellow | Rot Red | Weinrot Wine Red | Grün Green |
| Zul. Temperaturbereich Dauereinsatz Permissible durable temperature range | -40 °C bis/up to +90 °C | -50 °C bis/up to +120 °C | -30 °C bis/up to +100 °C | -50 °C bis/up to +120 °C | -20 °C bis/up to +100 °C |
| Zul. kurzfristige Temperaturspitzen Permissible short-term temperature peaks | -50 °C bis/up to +120 °C | -50 °C bis/up to +150 °C | -40 °C bis/up to +120 °C | -50 °C bis/up to +150 °C | -30 °C bis/up to +120 °C |
| Dämpfung Damping | Gut Good | Gut Good | Mittel Medium | Mittel Medium | Gering Low |
| Elastizität Elasticity | Mittel Medium | Mittel Medium | Hart Hard | Hart Hard | Sehr hart Very hard |
| Abriebfestigkeit Abrasion resistance | Sehr gut Very good | Sehr gut Very good | Gut Good | Gut Good | Gut Good |
| Dauerfestigkeit Durability | Sehr gut Very good | Sehr gut Very good | Sehr gut Very good | Sehr gut Very good | Sehr gut Very good |

Bestellbezeichnungen für SPIDEX® Order description for SPIDEX®

Typenbezeichnung Kupplungsnahe Model type of hub

| KL | | ST | A38/45 . | | A35 x 31 | L = 70 | | SO | |
|--|-----|----|---|----------|--|--|---|----|---|
| Standard <i>Standard</i> | - | | | | | Verlängerte Naben <i>Extended hub length</i> | | | |
| Klemmnabe <i>Clamping hub</i> | KL | | | | | - | Standard <i>Standard</i> | | |
| | | | | | | 70 | Siehe Seite 9 <i>See page 9</i> | | |
| Nabenwerkstoff <i>Material of hub</i> | | | Nabengröße/Nabenausführung <i>Size/Design of hub</i> | | Beispiel Fertigbohrung <i>Example finish bore</i> | | Sonderbearbeitung <i>Special machining</i> | | |
| Aluminium <i>Aluminium</i> | Al | | A15 | A14/16 | Ung. | Ungebohrt <i>Unbored</i> | | - | Standard <i>Standard</i> |
| Aluminium Druckguss <i>Die-cast aluminium</i> | ALU | | A19 | A19/24 | Vorg. | Vorgebohrt <i>Prebored</i> | | SO | Sonderzeichnung <i>Special drawing</i> |
| Sinterstahl <i>Sintered steel</i> | Si | | A24 | A24/32 | 38H7 | Metrisch* <i>Metric*</i> | | | |
| Grauguss <i>Cast iron</i> | GG | | A28 | A28/38 | B17 | Kegelig** <i>Tapered**</i> | | | |
| Sphäroguss <i>SG iron</i> | GGG | | A38 | A38/45 | F | Zöllig*** <i>Inch bored***</i> | | | |
| Stahl <i>Steel</i> | St | | A42 | A42/55 | Profile | SAE | SAE 16/32Z13*** | | |
| | | | A48 | A48/60 | | DIN 5482 | A35x31*** | | |
| | | | A55 | A55/70 | DIN 5480 | N30x2x14x9G*** | | | |
| | | | A65 | A65/75 | | | | | |
| | | | A75 | A75/90 | | | | | |
| | | | A90 | A90/100 | | | | | |
| | | | A100 | A100/110 | | | | | |
| | | | A110 | A110/125 | | | | | |
| | | | A125 | A125/145 | | | | | |

* Siehe Seite 14 *See page 14*
 ** Siehe Seite 16 *See page 16*
 *** Siehe Seite 15 *See page 15*

Typenbezeichnung Kupplungsflansch Model type of flange

| GGG | | A38 . FLANSCH | F |
|--|-----|---------------|---|
| Flanschwerkstoff <i>Material of flange</i> | | FLANGE | |
| Sphäroguss <i>SG iron</i> | GGG | A28 | Flanschausführung <i>Desig of flange</i> |
| GGG40 | | A38 | |
| | | A42 | - |
| | | A48 | Ungebohrt <i>Unbored</i> |
| | | A55 | F |
| | | A65 | Durchgangslöcher <i>Through bores</i> |
| | | A75 | BF |
| | | A90 | Gewindebohrungen <i>Threaded bores</i> |
| | | | CFA |
| | | | Ausführung für Hydraulikpumpen Fabrikat LINDE |
| | | | CFB |

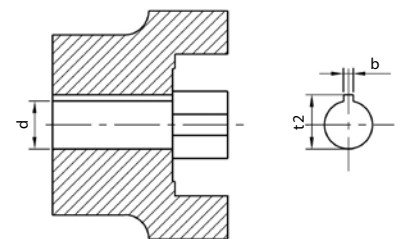
Basisprogramm Zollbohrungen Standard inch bores

| Typ Type | Nabe Hub | Material Material | V | TA | DNC | S | E | ES | ED | DNH | Ad | AS | A | G | F | B | Bs | H | Hs | Sb | Sd | Js | K | M | C | N | L | KS | NM | D | P | W | |
|----------|----------|-------------------|---|----|-----|---|---|----|----|-----|----|----|---|---|---|---|----|---|----|----|----|----|---|---|---|---|---|----|----|---|---|---|--|
| A19 | A | Al | x | x | x | | | | x | x | x | x | x | | | | | | | | | | | | | | | | | | | | |
| A19/24 | B | | | | | | | | | | | | | x | | x | | | | | | | | | | | | | | | | | |
| A19 | A | GG | x | x | | | | x | x | x | | | x | | | | | | | | | | | | | | | | | | | | |
| A19/24 | B | | | | | | | | | | | | | x | x | | | | | | | | | | | | | | | | | | |
| A24 | A | Al | | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| A24/32 | B | | | | | | | | | | | | | | | x | x | | x | x | | | | | x | | | | | | | | |
| A24 | A | GG | | x | | x | | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | |
| A24/32 | B | | | | | | | | | | | | | | | | x | | | x | | x | x | | | | | | | | | | |
| A28 | A | Al | | x | | | | x | | x | | | x | x | x | | | | | | | | | | | | | | | | | | |
| A28/38 | B | | | | | | | | | | | | | | | | | | | | | x | x | x | x | x | | | | | | | |
| A28 | A | GG | | | | | | | | x | | | x | x | x | | | | | | | | | | | | | | | | | | |
| A28/38 | B | | | | | | | | | | | | | | | | | | | | x | x | x | x | x | | | | | | | | |
| A38 | A | Al | | | | | | | x | x | | x | x | x | x | | | | x | x | x | x | x | x | x | | | | | | | | |
| A38/45 | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A38 | A | GG | | | | | | | | | | | | x | x | | | | | | | x | | | | | | | | | | | |
| A38/45 | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A42 | A | GG | | | | | | | | | | | | x | x | | | | | | | | | x | x | x | x | | | | | | |
| A42/55 | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A48 | A | GG | | | | | | | | | | | | x | x | | | | | | | | | x | x | x | x | x | | | | | |
| A48/60 | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Typ Type | Nabe Hub | Material Material | G | F | K | M | C | N | L | NM | DS | D | P | W | WN | WA | WK |
|----------|----------|-------------------|---|---|---|---|---|---|---|----|----|---|---|---|----|----|----|
| A55 | A | GG | x | x | x | x | x | x | x | x | | | | | | | |
| A55/70 | B | | | | | | | | | | | | x | x | | | |
| A65 | A | GG | | | x | x | x | x | x | | | x | | x | | | |
| A65/75 | B | | | | | | | | | | | | | | x | | |
| A75 | A | GG | | | x | | x | | x | | x | x | | x | | | |
| A75/90 | B | | | | | | | | | | | | | | | x | |
| A90 | A | GG | | | | | | | x | | x | x | | | | | x |

Abmessungen Zollbohrungen Dimensions inch bores

| Code | Ø d [mm] | b [mm] | t2 [mm] | | Code | Ø d [mm] | b [mm] | t2 [mm] | | Code | Ø d [mm] | b [mm] | t2 [mm] | |
|------|---------------|--------|---------|------|------|--------------|--------|---------|------|------|---------------|--------|---------|------|
| | | | +0.05 | +0.2 | | | | +0.05 | +0.2 | | | | +0.05 | +0.2 |
| V | 11.110 H7 | 3.18 | 12.34 | | G | 22.22 +0.030 | 4.75 | 24.70 | | C | 38.070 +0.030 | 9.55 | 43.0 | |
| TA | 12.700 +0.030 | 3.17 | 14.30 | | F | 22.22 +0.030 | 6.35 | 25.20 | | N | 41.290 +0.030 | 9.55 | 46.1 | |
| DNC | 13.450 H7 | 3.17 | 14.90 | | B | 25.37 +0.030 | 4.78 | 27.80 | | L | 44.450 +0.030 | 11.11 | 49.5 | |
| S | 15.870 +0.030 | 3.97 | 17.90 | | BS | 25.38 +0.030 | 6.37 | 28.30 | | NM | 47.625 +0.030 | 12.73 | 53.4 | |
| E | 15.870 +0.030 | 3.17 | 17.50 | | H | 25.40 +0.030 | 4.78 | 27.80 | | DS | 50.770 +0.030 | 12.73 | 56.4 | |
| ES | 15.880 +0.030 | 4.00 | 17.70 | | SB | 28.60 +0.020 | 6.35 | 32.10 | | D | 50.800 +0.030 | 12.73 | 55.1 | |
| Ed | 15.890 +0.020 | 4.75 | 18.30 | | SD | 28.58 +0.030 | 7.93 | 32.10 | | P | 53.950 +0.030 | 12.73 | 59.6 | |
| DNH | 17.465 H7 | 4.75 | 19.60 | | JS | 31.75 +0.030 | 6.35 | 34.62 | | W | 60.370 +0.030 | 15.87 | 68.8 | |
| Ad | 19.020 +0.030 | 3.17 | 20.70 | | K | 31.75 K7 | 7.93 | 35.50 | | WN | 73.025 +0.030 | 19.05 | 83.0 | |
| AS | 19.020 +0.030 | 4.78 | 21.30 | | KS | 31.75 +0.030 | 7.93 | 36.60 | | WA | 85.780 +0.030 | 22.22 | 97.3 | |
| A | 19.050 +0.030 | 4.78 | 21.30 | | M | 34.94 +0.030 | 7.93 | 39.00 | | WK | 92.080 +0.030 | 22.22 | 103.3 | |



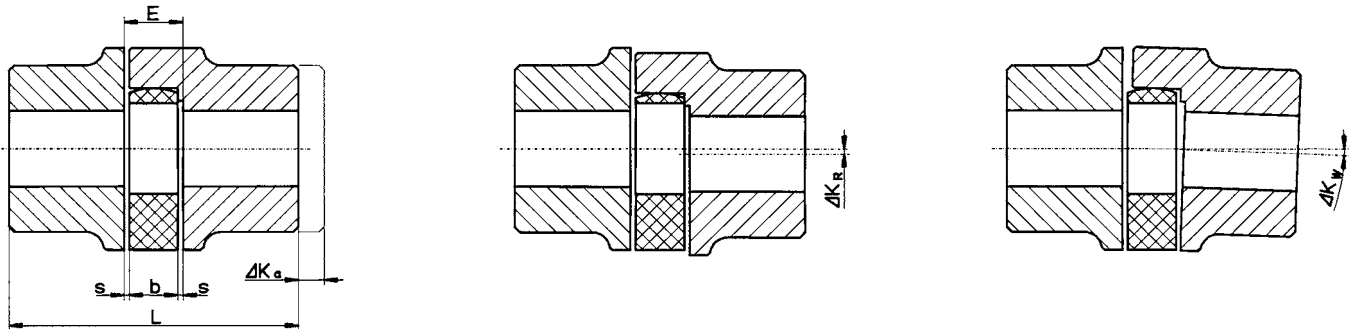
Verzahnungsvarianten Available splines

| Profil DIN 5480 Spline DIN 5480 | Profil DIN 5482 Spline DIN 5482 | Profil SAE Spline SAE |
|------------------------------------|------------------------------------|--------------------------|
| N 20 x 1.25 x 14 x 9H | A 17 x 14 | 16/32 x 9 J 498 B |
| N 25 x 1.25 x 18 x 9H | A 28 x 25 | 16/32 x 11 J 498 B |
| N 30 x 2 x 14 x 9H | A 30 x 27 | 16/32 x 13 J 498 B |
| N 35 x 2 x 16 x 9H | A 35 x 31 | 16/32 x 15 J 498 B |
| N 40 x 2 x 18 x 9H | A 40 x 36 | 16/32 x 21 J 498 B |
| N 45 x 2 x 21 x 9H | A 45 x 41 | 16/32 x 23 J 498 B |
| N 50 x 2 x 24 x 9G | A 48 x 44 | 16/32 x 27 J 498 B |
| N 55 x 2 x 26 x 9G | A 50 x 45 | 12/24 x 14 J 498 B |
| N 60 x 2 x 28 x 9G | A 58 x 53 | 12/24 x 17 J 498 B |

Kupplungsnaven mit Verzahnung sind vorzugsweise als Klemmnabe einzusetzen!
Erhältlich jedoch auch ohne Klemmung mit Gewindestift.

Coupling hubs with spline are recommended as clamping hub!
Available also with set screw.

Maximal zulässige Verlagerungswerte für Zahnkranzhärten 92°, 95°, 98° Shore A Max. permissible displacement values for spiders 92°, 95°, 98° Shore A



| SPIDEX® | Abmessungen Dimensions [mm] | | | | Axialversatz Axial displacement ΔKa [mm] | Radialversatz Radial displacement ΔKr [mm] | | | | Winkelversatz Angular displacement ΔKw [°] | | | |
|---------|-----------------------------|----|----|-----|--|--|------|------|------|--|------|------|------|
| | L | E | b | s | | Drehzahl Rotation n [1/min] | | | | Drehzahl Rotation n [1/min] | | | |
| | | | | | | 750 | 1000 | 1500 | 3000 | 750 | 1000 | 1500 | 3000 |
| A14 | 35 | 13 | 10 | 1.5 | 1.0 | 0.22 | 0.20 | 0.16 | 0.11 | 1.3 | 1.3 | 1.2 | 1.1 |
| A15 | 28 | 8 | 6 | 1.0 | 1.0 | 0.22 | 0.20 | 0.16 | 0.11 | 1.3 | 1.3 | 1.2 | 1.1 |
| A19 | 66 | 16 | 12 | 2.0 | 1.2 | 0.27 | 0.24 | 0.20 | 0.13 | 1.3 | 1.3 | 1.2 | 1.1 |
| A24 | 78 | 18 | 14 | 2.0 | 1.4 | 0.30 | 0.27 | 0.22 | 0.15 | 1.1 | 1.0 | 0.9 | 0.8 |
| A28 | 90 | 20 | 15 | 2.5 | 1.5 | 0.34 | 0.30 | 0.25 | 0.17 | 1.1 | 1.0 | 0.9 | 0.8 |
| A38 | 114 | 24 | 18 | 3.0 | 1.8 | 0.38 | 0.35 | 0.28 | 0.19 | 1.1 | 1.1 | 1.0 | 0.8 |
| A42 | 126 | 26 | 20 | 3.0 | 2.0 | 0.43 | 0.38 | 0.32 | 0.21 | 1.1 | 1.1 | 1.0 | 0.8 |
| A48 | 140 | 28 | 21 | 3.5 | 2.1 | 0.50 | 0.44 | 0.36 | 0.25 | 1.2 | 1.2 | 1.1 | 0.9 |
| A55 | 160 | 30 | 22 | 4.0 | 2.2 | 0.54 | 0.46 | 0.38 | 0.26 | 1.2 | 1.2 | 1.1 | 1.0 |
| A65 | 185 | 35 | 26 | 4.5 | 2.6 | 0.56 | 0.50 | 0.42 | 0.28 | 1.2 | 1.2 | 1.2 | 1.0 |
| A75 | 210 | 40 | 30 | 5.0 | 3.0 | 0.65 | 0.58 | 0.48 | 0.32 | 1.3 | 1.2 | 1.2 | 1.0 |
| A90 | 245 | 45 | 34 | 5.5 | 3.4 | 0.68 | 0.60 | 0.50 | 0.34 | 1.3 | 1.3 | 1.2 | 1.1 |
| A100 | 270 | 50 | 38 | 6.0 | 3.8 | 0.71 | 0.64 | 0.52 | 0.36 | 1.3 | 1.3 | 1.2 | 1.1 |
| A110 | 295 | 55 | 42 | 6.5 | 4.2 | 0.75 | 0.67 | 0.55 | 0.38 | 1.3 | 1.3 | 1.3 | 1.1 |
| A125 | 340 | 60 | 46 | 7.0 | 4.6 | 0.80 | 0.70 | 0.60 | - | 1.3 | 1.3 | 1.3 | - |

- Das Längenmaß L vergrößert sich um die angegebenen ΔKa-Werte.
- Die aufgeführten Verlagerungswerte sind allgemeine Richtwerte.
- Bei gleichzeitigem Winkel- und Radialversatz können die angegebenen Werte nur anteilmäßig ausgenutzt werden.
- Die Tabellenwerte sind gültig für eine Betriebstemperatur T = +30 °C. Bei einer Temperaturerhöhung müssen die max. zulässigen Radial- und Winkelverlagerungswerte mit dem Temperaturfaktor St multipliziert werden.

- The dimension L increases by the given ΔKa values.
- The above mentioned displacement values are general guidelines.
- In case of angular and radial displacements, the values can only be used proportionately.
- The values are valid for an operating temperature of T = +30°C. If the temperature increases, the permissible radial and simultaneous angular displacement values must be multiplied by the temperature factor St.

| Temperatur T Temperature T | -40 < +30 °C | +30 < +40 °C | +40 < +60 °C | +60 < +80 °C | +80 °C < |
|----------------------------|--------------|--------------|--------------|--------------|----------|
| Faktor St Factor St | 1.0 | 0.8 | 0.7 | 0.6 | 0.3 |

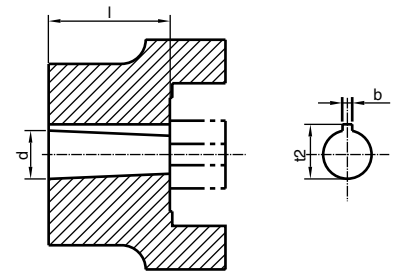
Sorgfältiges Ausrichten der Wellen erhöht die Lebensdauer der Kupplung
Achtung: Montageanleitung beachten

Careful alignment will extend the coupling life
Caution: observe the assembly instructions

Kegele Bohrungen Taper bores

| Code | Konus 1:8 Taper 1:8 | | | |
|---------|---------------------|------|-------|------|
| | Ø d | b | t2 | l |
| ...N/1 | 9.750 | 2.40 | 10.70 | 17.0 |
| ...N/1c | 11.600 | 3.00 | 12.90 | 16.5 |
| ...N/1e | 13.000 | 2.40 | 13.80 | 21.0 |
| ...N/1d | 14.000 | 3.00 | 15.50 | 17.5 |
| ...N/1b | 14.300 | 3.20 | 15.65 | 19.5 |
| ...N/2 | 17.287 | 3.20 | 18.24 | 24.0 |
| ...N/2a | 17.287 | 4.00 | 18.94 | 24.0 |
| ...N/2b | 17.287 | 3.00 | 18.24 | 24.0 |
| ...N/3 | 22.002 | 3.99 | 23.40 | 28.0 |
| ...N/4 | 25.463 | 4.78 | 28.86 | 36.0 |
| ...N/4b | 25.463 | 5.00 | 28.23 | 36.0 |
| ...N/4a | 27.000 | 4.78 | 28.80 | 32.5 |
| N/4c | 28.450 | 6.00 | 29.33 | 38.5 |

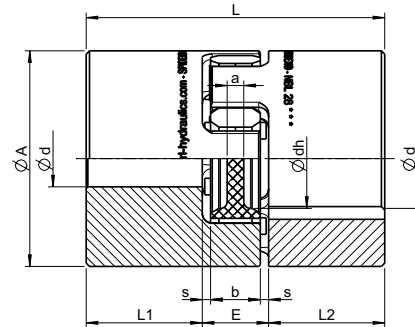
| Code | Konus 1:5 Taper 1:5 | | | |
|------|---------------------|---|-------|------|
| | Ø d | b | t2 | l |
| A10 | 9.85 | 2 | 10.85 | 11.5 |
| As12 | 11.85 | 3 | 13.65 | 16.5 |
| B17 | 16.85 | 3 | 18.90 | 18.5 |
| C20 | 19.85 | 4 | 22.05 | 21.5 |
| Cs22 | 21.95 | 3 | 23.75 | 21.5 |
| D25 | 24.85 | 5 | 27.90 | 26.5 |
| E30 | 29.85 | 6 | 32.45 | 31.5 |
| F35 | 34.85 | 6 | 37.45 | 36.5 |
| G40 | 39.85 | 6 | 42.45 | 41.5 |



SPIDEX® NBL – spielfreie Wellenkupplung SPIDEX® NBL – backlash-free shaft coupling

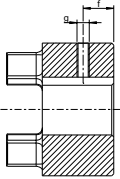
- Unter Vorspannung spielfreie Wellenverbindung
- Kleine Baumaße – geringe Schwungmomente
- Wartungsfrei
- Verschiedene Elastomerhärten der Zahnkränze (s.S. 18)
- Fertigbohrung nach ISO-Passung H7 (ausgenommen Klemmnabe), Passfedernut ab Ø 6 mm nach DIN 6885 Bl. 1 -JS9

- Backlash-free, pre-stressed shaft connection
- Compact dimensions – low moment of inertia
- Maintenance-free
- Spiders with various levels of elastomer hardness (see p. 18)
- Finish bore in accordance with ISO fit H7 (except clamping hub), keyway from Ø 6 mm in accordance with DIN 6885 sheet 1 -JS9

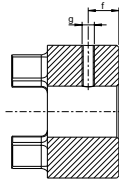


SPIDEX® NBL 9 – 55

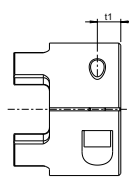
Nabenausführungen Types of hubs



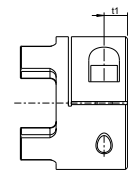
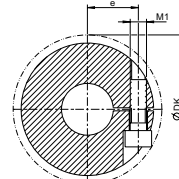
Standard: mit Passfedernut und Gewindestift
Standard
with keyway and set screw



Standard ON: ohne Passfedernut mit Gewindestift
Standard ON
without keyway and set screw



KL: Größen 9 bis 14, einfach geschlitzte Klemmnabe ohne Passfedernut, Drehmoment abhängig vom Bohrungs-Ø.
KL: sizes 9 to 14, single-slot clamping hub without keyway, torque dependent on bore diameter/Ø.



KLD: ab Größe 19, 2-fach geschlitzte Klemmnabe ohne Passfedernut, Drehmoment abhängig vom Bohrungs-Ø.
KLD: from size 19, double-slot clamping hub without keyway, torque dependent on bore diameter/Ø.

SPIDEX® NBL Standardbauarten (Größen 9 – 38: Nabenwerkstoff Aluminium / Größen 42 – 55: Nabenwerkstoff Stahl)

SPIDEX® NBL standard versions (sizes 9 – 38: hub material aluminium / sizes 42 – 55: hub material steel)

| Größe Size | Maximale Fertigbohrung Ø d für Nabenausführung Maximum finish bore Ø d for hub version | | Abmessungen [mm] Dimensions [mm] | | | | | | | | | Gewindestift DIN 916 für Standardausführung mit und ohne Nut Set screw DIN 916 for standard version with and without keyway | | Klemmschraube DIN 912 für Nabenausführung KL und KLD mit und ohne Nut Clamping screw DIN 912 for hub version KL and KLD with and without keyway | | | | |
|---------------|---|--------|-------------------------------------|----------------|-----|-------|----|----|-----|-----|-----|--|----------------|--|------|----------------|---------------------|--|
| | Standard | KL/KLD | A | d _H | L | L1/L2 | E | b | s | a | g | t | M ₁ | t ₁ | e | D _K | T _A [Nm] | |
| 9 | 11 | 11 | 20 | 7.2 | 30 | 10 | 10 | 8 | 1.0 | 1.5 | M4 | 5 | M2.5 | 5.0 | 7.5 | 23.4 | 0.76 | |
| 14 | 16 | 16 | 30 | 10.5 | 35 | 11 | 13 | 10 | 1.5 | 2.0 | M4 | 5 | M3 | 5.0 | 11.5 | 32.2 | 1.34 | |
| 19 | 24 | 24 | 40 | 18.0 | 66 | 25 | 16 | 12 | 2.0 | 3.0 | M5 | 10 | M6 | 11.0 | 14.5 | 46.0 | 10.50 | |
| 24 | 28 | 28 | 55 | 27.0 | 78 | 30 | 18 | 14 | 2.0 | 3.0 | M5 | 10 | M6 | 10.5 | 20.0 | 57.5 | 10.50 | |
| 28 | 38 | 38 | 65 | 30.0 | 90 | 35 | 20 | 15 | 2.5 | 4.0 | M8 | 15 | M8 | 11.5 | 25.0 | 73.0 | 25.00 | |
| 38 | 45 | 45 | 80 | 38.0 | 114 | 45 | 24 | 18 | 3.0 | 4.0 | M8 | 15 | M8 | 15.5 | 30.0 | 83.5 | 25.00 | |
| 42 | 55 | 50 | 95 | 46.0 | 126 | 50 | 26 | 20 | 3.0 | 4.0 | M8 | 20 | M10 | 18.0 | 32.0 | 93.5 | 69.00 | |
| 48 | 62 | 55 | 105 | 51.0 | 140 | 56 | 28 | 21 | 3.5 | 4.0 | M8 | 20 | M12 | 21.0 | 36.0 | 105.0 | 120.00 | |
| 55 | 74 | 68 | 120 | 60.0 | 160 | 65 | 30 | 22 | 4.0 | 4.5 | M10 | 20 | M12 | 26.0 | 42.5 | 119.5 | 120.00 | |

KL.../ON Übertragbare Reibschlussmomente T_R [Nm] der Klemmnabe ohne Passfedernut

KL.../ON Transmissible friction torque values T_R [Nm] of the clamping hub without keyway

| Größe Size | Ø4 | Ø5 | Ø6 | Ø7 | Ø8 | Ø9 | Ø10 | Ø11 | Ø12 | Ø14 | Ø15 | Ø16 |
|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 9 | 2.1 | 2.2 | 2.3 | 2.4 | 2.5 | 2.6 | 2.7 | 2.8 | | | | |
| 14 | | 4.7 | 4.8 | 5.0 | 5.1 | 5.3 | 5.5 | 5.6 | 5.8 | 6.1 | 6.3 | 6.5 |

KLD.../ON Übertragbare Reibschlussmomente T_R [Nm] der Klemmnabe ohne Passfedernut

KLD.../ON Transmissible friction torque values T_R [Nm] of the clamping hub without keyway

| Größe Size | Ø8 | Ø10 | Ø11 | Ø14 | Ø15 | Ø16 | Ø18 | Ø19 | Ø20 | Ø22 | Ø24 | Ø25 | Ø28 | Ø30 | Ø32 | Ø35 | Ø38 | Ø40 | Ø42 | Ø45 | Ø48 | Ø50 | Ø55 | Ø60 | Ø65 |
|---------------|----|-----|-----|-----|-----|-----|-----|-----|-----|------------------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 19 | 25 | 27 | 27 | 29 | 30 | 31 | 32 | 32 | 34 | 30 ¹⁾ | 32 ¹⁾ | | | | | | | | | | | | | | |
| 24 | | 34 | 35 | 36 | 38 | 38 | 39 | 40 | 41 | 42 | 43 | 45 | 46 | | | | | | | | | | | | |
| 28 | | | | 80 | 81 | 81 | 84 | 85 | 87 | 89 | 91 | 92 | 97 | 99 | 102 | 105 | 109 | | | | | | | | |
| 38 | | | | | 92 | 94 | 97 | 98 | 99 | 102 | 104 | 105 | 109 | 112 | 113 | 118 | 122 | 123 | 126 | 130 | | | | | |

NBL-Zahnkränze NBL spiders



Zahnkranz Polyurethan 92° Shore A NBL Spider polyurethane 92° Shore A NBL

Zahnkranz Polyurethan 98° Shore A NBL Spider polyurethane 98° Shore A NBL

Zahnkranz Polyurethan 64° Shore D NBL Spider polyurethane 64° Shore D NBL

- Gelb *Yellow*
- Dauertemperatur -40 bis +90 °C
Continuous temperature -40 to +90 °C
- Max. Temperatur kurzzeitig -50 bis +120 °C
Max. short-term temperature -50 to +120 °C
- Für Antriebe von elektrischen Mess- und Regelsystemen
For drives of electrical measurement & control systems

- Rot *Red*
- Dauertemperatur -30 bis +90 °C
Continuous temperature -30 to +90 °C
- Max. Temperatur kurzzeitig -40 bis +120 °C
Max. short-term temperature -40 to +120 °C
- Positionierantriebe
Positioning motors
- Hauptspindelantriebe bei hoher Beanspruchung
Main spindle drives with high loads

- Grün *Green*
- Dauertemperatur -20 bis +110 °C
Continuous temperature -20 to +110 °C
- Max. Temperatur kurzzeitig -30 bis +120 °C
Max. short-term temperature -30 to +120 °C
- Hohe Belastbarkeit mit geringem Verdrehwinkel
High loading with low torsion angle

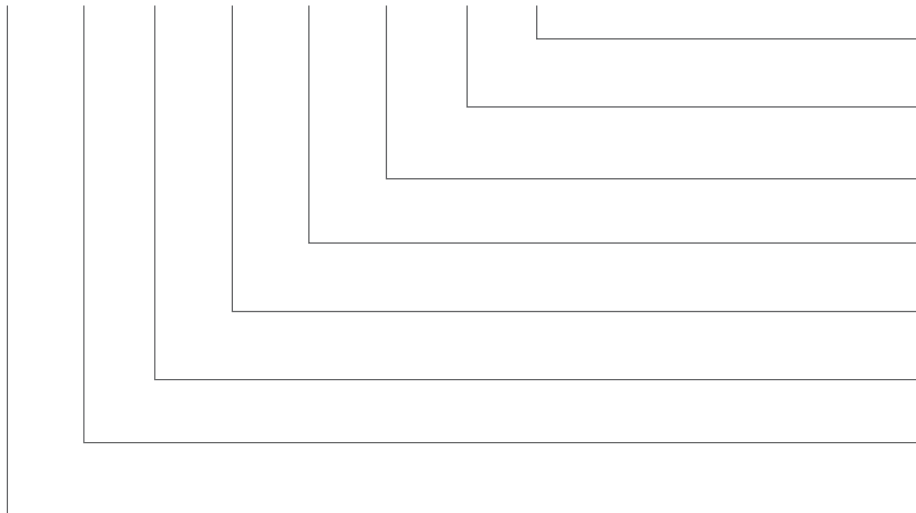
Technische Daten Technical data

| Größe Size | Zahnkranz Spider | Drehmoment Torque [Nm] | | Max. Drehzahl Max. RPM n [1/min] | | Statische Drehfedersteife Static torsional rigidity [Nm/rad] bei 0.50 T _{KN} | Dynamische Drehfedersteife Dynamic torsional rigidity [Nm/rad] bei 0.50 T _{KN} | Radiale Steifheit Radial rigidity [Nm/mm] | Gewicht Weight [kg] | | Massenträgheitsmoment J Moment of inertia J [kg m ²] | | |
|---------------|---------------------|------------------------------------|---|--|--------|--|--|---|--------------------------------------|--|--|--|------|
| | | Nenn Contin. T _{KN} | Maximal Maximum T _{Kmax} | Standard Standard | KL/KLD | | | | Nabe Hub (x 10 ⁻³) | Zahnkranz Spider (x 10 ⁻³) | Nabe Hub (x 10 ⁻⁶) | Zahnkranz Spider (x 10 ⁻⁶) | |
| NBL9 | 92° Shore A | 3.0 | 6.0 | 19000 | 23800 | 31.5 | 95 | 262 | 8 | 1.7 | 0.480 | 0.085 | |
| | 98° Shore A | 5.0 | 10.0 | | | 51.6 | 155 | | | | | | 518 |
| NBL14 | 92° Shore A | 7.5 | 15.0 | 12700 | 15900 | 114.6 | 344 | 336 | 20 | 4.6 | 2.800 | 0.457 | |
| | 98° Shore A | 12.5 | 25.0 | | | 171.9 | 513 | | | | | | 654 |
| NBL19 | 92° Shore A | 10.0 | 20.0 | 9550 | 11900 | 573.0 | 1720 | 1120 | 66 | 7.0 | 20.400 | 1.490 | |
| | 98° Shore A | 17.0 | 34.0 | | | 859.5 | 2580 | | | | | | 2010 |
| NBL24 | 92° Shore A | 35.0 | 70.0 | 6950 | 8850 | 1432.0 | 4296 | 1480 | 132 | 18.0 | 50.800 | 7.500 | |
| | 98° Shore A | 60.0 | 120.0 | | | 2063.0 | 6189 | | | | | | 2560 |
| | 64° Shore D | 75.0 | 150.0 | | | 2978.0 | 8934 | | | | | | 3696 |
| NBL28 | 92° Shore A | 95.0 | 190.0 | 5850 | 7350 | 2292.0 | 6876 | 1780 | 253 | 29.0 | 200.300 | 16.500 | |
| | 98° Shore A | 160.0 | 320.0 | | | 3438.0 | 10314 | | | | | | 3200 |
| | 64° Shore D | 200.0 | 400.0 | | | 4350.0 | 13050 | | | | | | 4348 |
| NBL38 | 92° Shore A | 190.0 | 380.0 | 4750 | 5950 | 4584.0 | 13752 | 2350 | 455 | 49.0 | 400.600 | 44.600 | |
| | 98° Shore A | 325.0 | 650.0 | | | 7160.0 | 21486 | | | | | | 4400 |
| | 64° Shore D | 405.0 | 810.0 | | | 10540.0 | 31620 | | | | | | 6474 |
| NBL42 | 92° Shore A | 265.0 | 530.0 | 4000 | 5000 | 6300.0 | 14490 | 2430 | 1850 | 79.0 | 2246.000 | 100.000 | |
| | 98° Shore A | 450.0 | 900.0 | | | 19200.0 | 48000 | | | | | | 5570 |
| | 64° Shore D | 560.0 | 1120.0 | | | 27580.0 | 68950 | | | | | | 7270 |
| NBL48 | 92° Shore A | 310.0 | 620.0 | 3600 | 4550 | 7850.0 | 18055 | 2580 | 2520 | 98.0 | 3786.000 | 200.000 | |
| | 98° Shore A | 525.0 | 1050.0 | | | 22370.0 | 55925 | | | | | | 5930 |
| | 64° Shore D | 655.0 | 1310.0 | | | 36200.0 | 90500 | | | | | | 8274 |

Bestellbezeichnungen für SPIDEX® NBL

Order description for SPIDEX® NBL

SPIDEX® KLD AI NBL 38/45 25H7 ON L = 20 SO



Sonderausführungen
Special designs

Nabenlänge
Length of hub

Nabenbohrung, Zusatz
Hub bore, supplement

Nabenbohrung, Grundform
Hub bore, basic form

Baugröße
Size

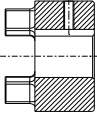
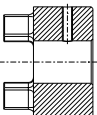
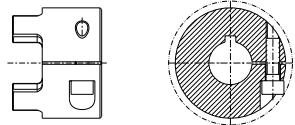
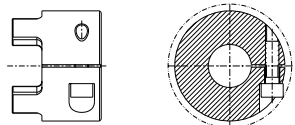
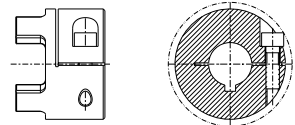

Typ
Type

Nabenwerkstoff
Material of hub

Nabenausführung
Design of hub

Erläuterung zum Bestellschlüssel *Explanation of order code*

Nabenausführungen *Design of hubs*

| Ausführung <i>Design</i> | Bestellschlüssel <i>Order code</i> | Beschreibung <i>Description</i> | Beispiel <i>Example</i> |
|--|---------------------------------------|--|---|
| Standard <i>Standard</i> | - | - zylindrische Bohrung mit Passfedernut nach DIN 6885/1 <i>- cylindrical bore with keyway in accordance with DIN 6885/1</i> |  |
| | ...-ON | - zylindrische Bohrung ohne Passfedernut <i>- cylindrical bore without keyway</i> |  |
| Klemmnabe, einfach geschlitzt <i>Clamping hub, single slot</i> | KL | - zylindrische Bohrung mit Passfedernut nach DIN 6885/1 - Nabe einfach geschlitzt mit seitlicher Klemmschraube <i>- cylindrical bore with keyway in accordance with DIN 6885/1 - single-slot hub with lateral clamping screw</i> |  |
| | KL-...-ON | - zylindrische Bohrung ohne Passfedernut - Nabe einfach geschlitzt mit seitlicher Klemmschraube <i>- cylindrical bore without keyway - single-slot hub with lateral clamping screw</i> |  |
| Klemmnabe, doppelt geschlitzt <i>Clamping hub, double slot</i> | KLD | - zylindrische Bohrung mit Passfedernut nach DIN 6885/1 - Nabe doppelt geschlitzt mit seitlicher Klemmschraube <i>- cylindrical bore with keyway in accordance with DIN 6885/1 - double-slot hub with lateral clamping screw</i> |  |
| | KLD-...-ON | - zylindrische Bohrung ohne Passfedernut - Nabe doppelt geschlitzt mit seitlicher Klemmschraube <i>- cylindrical bore without keyway - double-slot hub with lateral clamping screw</i> |  |

DENTEX®/DENTEX® FL – die flexible Kupplung *DENTEX®/DENTEX® FL – the flexible coupling*

- Ausgleich axialer, radialer und winkliger Wellenverlagerungen durch doppelkardanische Wirkungsweise
- Einfache, zeitsparende Montage
- Sehr gutes elektrisches Isoliervermögen
- Hohe thermische Beständigkeit
- Wartungsfrei

- *Compensation of axial, radial and angular misalignment of shafts through double cardanic action*
- *Quick and easy assembly*
- *Excellent electrical insulating properties*
- *High thermal stability*
- *No maintenance*



DENTEX®/DENTEX® FL – die flexible Kupplung

DENTEX®/DENTEX® FL – the flexible coupling

Funktionsweise

Technical description

Die DENTEX®-Kupplung ist eine flexible Wellenverbindung, um axiale, radiale und winklige Wellenverlagerungen auszugleichen. Das Drehmoment wird durch Ineinandergreifen von zwei kongruenten Naben mit ballig profilierten Zähnen in einer innenverzahnten Kunststoffhülse formschlüssig übertragen. Das Kupplungsprinzip bewirkt, dass die unmittelbar benachbarten Wellenlager vor unkontrolliert auftretenden Lagerkräften geschützt werden. Die Rückstellkräfte bei Winkel- und Radialverlagerung können aufgrund der doppelkardanischen Wirkungsweise vernachlässigt werden, es treten auch keine periodischen Schwankungen der Winkelgeschwindigkeit auf.

DENTEX®-Kupplungen sind für horizontale oder vertikale Wellenverbindungen geeignet und ermöglichen eine einfache und zeitsparende Montage. Durch die Kombination der Werkstoffe Stahl/Kunststoff entfällt die sonst übliche Öl- oder Fettschmierung; die Kupplung gilt als absolut wartungsfrei. Durch die Verwendung von 6.6-Polyamid für die Kunststoffhülse wurden beste Gleit- und Verschleisseigenschaften erzielt, außerdem ist das Material resistent gegen alle handelsüblichen Schmieröle und Hydraulikflüssigkeiten. Eine optimale Betriebssicherheit liegt innerhalb der Temperaturbereiche -25 °C bis +80 °C. Für Betriebstemperaturen bis +140 °C ist der Einsatz einer Kupplungshülse aus hitzestabilisiertem Polyamid erforderlich.

The DENTEX® coupling is a flexible gear coupling whose typical features are two congruent hubs with crowned teeth which transmit torque by meshing with the internal toothing of a housing component. The coupling sleeve with axially parallel involute gearing is centered at the tooth flanks of the coupling hub. The coupling design fulfills the requirement for compensation of radial, angular and axial shaft displacements in order to relieve the neighbouring shaft bearings from non-controlled, additional loads. Even with the maximum permissible displacement, edge contact of the teeth is excluded and there will be no periodic variation of the angular velocity. The high internal cushioning properties of the plastic material used for the coupling sleeve reduce the effect of shock loading.

DENTEX® couplings are suitable both for horizontal and vertical shaft connection, for reversing and intermittent service. The steel/plastic combination also has the advantage that no lubrication by oil or grease is required; the coupling, therefore, does not need any maintenance. The 6.6-polyamide used for the coupling sleeve is distinguished by its excellent sliding properties and wear resistance; it is also resistant to all market-standard lubricants and hydraulic fluids. However, substances of strongly polar character such concentrated mineral acids, formic acid, cresol, glycol, benzyl alcohol can dissolve 6.6-polyamide at high temperature. Maximum service reliability is guaranteed at temperatures between -25 °C and +80 °C. A coupling sleeve in heat-stabilised polyamide is required for temperatures up to +140 °C.

Typenbezeichnung

Model type

KL

| | |
|---------------------------|----|
| Standard Standard | – |
| Klemmnabe Clamping hub | KL |

Nabenausführung Type of hub

| | |
|---------------------------------|-----|
| Serie B Series B | 14 |
| | 24 |
| | 28 |
| | 32 |
| | 38 |
| | 42 |
| | 48 |
| Serie B3R Series B3R | 55 |
| | 65 |
| | 80 |
| Serie B3R/B4R Series B3R/B4R | 100 |
| | 24 |
| | 28 |
| | 32 |
| | 45 |
| 65 | |
| 80 | |

B 42 . 38 H 7

L = 60

| | |
|--|-------------------------------|
| Verlängerte Naben Extended hub length | |
| – | Standard Standard |
| 60 | Siehe Seite 23 See page 23 |

SO

| | |
|--|------------------------------------|
| Sonderbearbeitung Special machining | |
| – | Standard Standard |
| SO | Sonderzeichnung Special drawing |

Beispiel Fertigbohrung Example finish bore

| | | |
|---------|------------------------|----------------|
| Ung. | Ungebohrt Unbored | |
| Vorg. | Vorgebohrt Prebored | |
| 38H7 | Metrisch* Metric* | |
| B17 | Kegelig* Tapered* | |
| F | Zöllig* Inch bored* | |
| Profile | SAE | SAE 16/32Z13** |
| | DIN 5482 | A25x21** |

* Siehe Seite 25

DENTEX®-Kupplungen für IEC-Normmotoren

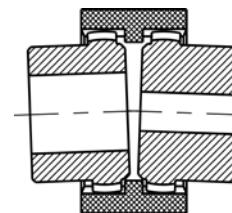
DENTEX® couplings for IEC-standard motors

| Motor- bau- größe Motor size | Welle Shaft D x l [mm] | | n = 750 [1/min] Leistung P Power P | | DENTEX® | | n = 1000 [1/min] Leistung P Power P | | DENTEX® | | n = 1500 [1/min] Leistung P Power P | | DENTEX® | | n = 3000 [1/min] Leistung P Power P | | DENTEX® | |
|--|---------------------------|-----------------|--|-------------------------|-------------------------------|------|---|-------------------------------|---------|-------------------------|---|--------------------|-------------------------|-------------------------------|---|-------------------------|-------------------------------|------|
| | 1500 [1/min] | 3000 [1/min] | [kW] | T _{AN} [Nm] | T _K max [Nm] | [kW] | T _{AN} [Nm] | T _K max [Nm] | [kW] | T _{AN} [Nm] | T _K max [Nm] | [kW] | T _{AN} [Nm] | T _K max [Nm] | [kW] | T _{AN} [Nm] | T _K max [Nm] | |
| 56 | 9 x 20 | | - | - | 14 | 20 | 0.037 0.045 | 0.43 0.52 | 14 | 20 | 0.06 0.09 | 0.40 0.60 | 14 | 20 | 0.09 0.12 | 0.30 0.40 | 14 | 20 |
| 63 | 11 x 23 | | - | - | 14 | 20 | 0.060 0.090 | 0.70 1.10 | 14 | 20 | 0.12 0.18 | 0.90 1.20 | 14 | 20 | 0.18 0.25 | 0.60 0.90 | 14 | 20 |
| 71 | 14 x 30 | | 0.09 0.12 | 1.4 1.8 | 14 | 20 | 0.180 0.250 | 2.00 2.80 | 14 | 20 | 0.25 0.37 | 1.80 2.50 | 14 | 20 | 0.37 0.55 | 1.30 1.90 | 14 | 20 |
| 80 | 19 x 40 | | 0.18 0.25 | 2.5 3.5 | 19 | 32 | 0.370 0.550 | 3.70 5.50 | 19 | 32 | 0.55 0.75 | 3.70 5.00 | 19 | 32 | 0.75 1.10 | 2.50 3.70 | 19 | 32 |
| 90 S 90 L | 24 x 50 | | 0.37 0.55 | 5.3 7.9 | 24 | 40 | 0.750 1.100 | 7.90 11.00 | 24 | 40 | 1.10 1.50 | 7.50 10.00 | 24 | 40 | 1.50 2.20 | 4.90 7.40 | 24 | 40 |
| 100 L | 28 x 60 | | 0.75 1.10 | 11.0 16.0 | 28 | 90 | 1.500 | 15.00 | 28 | 90 | 2.20 3.00 | 15.00 20.00 | 28 | 90 | 3.00 4.00 | 9.80 13.00 | 28 | 90 |
| 112 M | 28 x 60 | | 1.50 | 21.0 | 28 | 90 | 2.200 | 22.00 | 28 | 90 | 4.00 | 27.00 | 28 | 90 | 4.00 | 13.00 | 28 | 90 |
| 132 S 132 M | 38 x 80 | | 2.20 3.00 | 29.0 40.0 | 38 | 160 | 3.000 4.000 5.500 | 30.00 39.00 55.00 | 38 | 160 | 5.50 7.50 | 36.00 49.00 | 38 | 160 | 5.50 7.50 | 18.00 25.00 | 38 | 160 |
| 160 M 160 L | 42 x 110 | | 4.00 5.50 | 54.0 74.0 | 42 | 200 | 7.500 | 74.00 | 42 | 200 | 11.00 15.00 | 72.00 98.00 | 42 | 200 | 11.00 15.00 | 35.00 49.00 | 42 | 200 |
| 180 M 180 L | 48 x 110 | | - 11.00 | - 147.0 | 48 | 280 | - 15.000 | - 147.00 | 48 | 280 | 18.50 22.00 | 121.00 144.00 | 48 | 280 | 22.00 | 72.00 | 48 | 280 |
| 200 L | 55 x 110 | | 15.00 | 196.0 | 55 | 500 | 18.500 22.000 | 185.00 215.00 | 55 | 500 | 30.00 | 195.00 | 55 | 500 | 30.00 37.00 | 97.00 117.00 | 55 | 500 |
| 225 S 225 M | 60 x 140 | 55 x 110 | 18.50 22.00 | 245.0 294.0 | 65 | 780 | - 30.000 | - 292.00 | 65 | 780 | 37.00 45.00 | 245.00 294.00 | 65 | 780 | - 45.00 | - 146.00 | 65 | 780 |
| 250 M | 65 x 140 | 60 x 140 | 30.00 | 390.0 | 65 | 780 | 37.000 | 361.00 | 65 | 780 | 55.00 | 357.00 | 65 | 780 | 55.00 | 176.00 | 65 | 780 |
| 280 S 280 M | 75 x 140 | 65 x 140 | 37.00 45.00 | 490.0 585.0 | 80 | 1400 | 45.000 55.000 | 440.00 536.00 | 80 | 1400 | 75.00 90.00 | 487.00 584.00 | 80 | 1400 | 75.00 90.00 | 245.00 294.00 | 80 | 1400 |
| 315 S 315 M | 80 x 170 | 65 x 140 | 55.00 75.00 | 715.0 970.0 | 80 | 1400 | 75.000 90.000 | 730.00 876.00 | 80 | 1400 | 110.00 132.00 | 714.00 857.00 | 80 | 1400 | 110.00 132.00 | 350.00 420.00 | 80 | 1400 |
| 315 L | | | 90.00 110.00 | 1170.0 1420.0 | 100 | 2400 | 110.000 132.000 | 1070.00 1280.00 | 100 | 2400 | 160.00 200.00 | 1030.00 1290.00 | 100 | 2400 | 160.00 200.00 | 513.00 641.00 | 80 | 1400 |

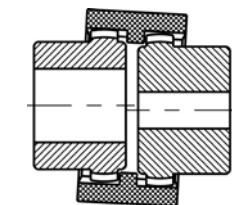
Technische Daten

Technical data

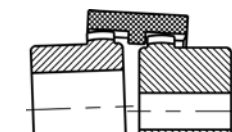
| Typ Type | Drehzahl Rotation n max [1/min] | Drehmoment Torque [Nm] | | Leistung P Power P [kW/min-1] | | Verlagerung max Misalignment max | | |
|-------------|--|------------------------------|--------------------|-------------------------------------|--------|-------------------------------------|--------------------------|------------------------------|
| | | T _{KN} | T _K max | Nenn | max | axial axial [mm] | radial radial [mm] | winklig angular [Grad] |
| B-14 | 8000 | 10 | 20 | 0.0010 | 0.0021 | ± 1 | ± 0.3 | ± 1 je Nabe |
| B-19 | 8000 | 16 | 32 | 0.0017 | 0.0033 | | | |
| B-24 | 8000 | 20 | 40 | 0.0021 | 0.0042 | | | |
| B-28 | 8000 | 45 | 90 | 0.0047 | 0.0094 | | | |
| B-32 | 7000 | 60 | 120 | 0.0063 | 0.0130 | | | |
| B-38 | 6000 | 80 | 160 | 0.0084 | 0.0170 | | | |
| B-42 | 5400 | 100 | 200 | 0.0100 | 0.0200 | | | |
| B-48 | 5000 | 140 | 280 | 0.0150 | 0.0290 | | | |
| B-55 | 4000 | 250 | 500 | 0.0260 | 0.0520 | | | |
| B-65 | 3800 | 390 | 780 | 0.0410 | 0.0800 | | | |
| B-80 | 3000 | 700 | 1400 | 0.0730 | 0.1500 | | | |
| B-100 | 2400 | 1250 | 2400 | 0.1300 | 0.2500 | | | |
| B3R | 24 | 10200 | 20 | 40 | 0.0020 | 0.0040 | ± 0.4 | |
| | 28 | 8300 | 45 | 90 | 0.0045 | 0.0095 | | |
| B3R | 32 | 7000 | 80 | 160 | 0.0084 | 0.0170 | | |
| | 45 | 5000 | 140 | 280 | 0.0150 | 0.0290 | | |
| | 65 | 3800 | 390 | 780 | 0.0410 | 0.0800 | | |



Verlagerung winklig
Misalignment angular



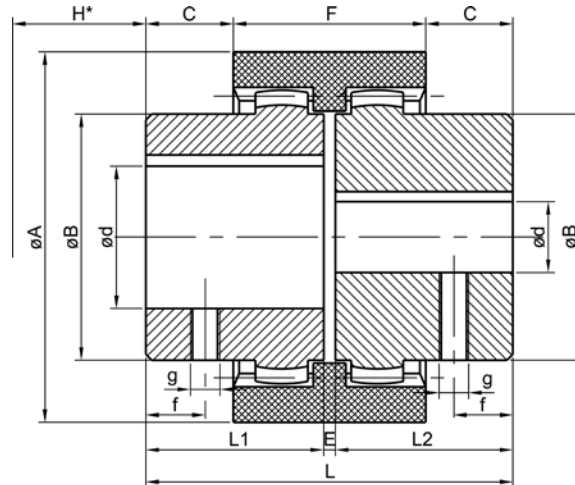
Verlagerung radial
Misalignment radial



Verlagerung winklig-radial
Misalignment angular-radial

DENTEX®-Kupplungen, Serie B

DENTEX® couplings, series B



Technische Daten

Technical data

| Typ Type | Vorbereitung Prebored | Fertigbohrung Finish bore d [mm] | | Abmessungen Dimensions [mm] | | | | | | | | | | Sonderlänge Extended hub length | Gewicht Weight [kg] | Massenträg- heitsmoment Moment of inertia J [kg m ²] |
|-------------|--------------------------|--|-----|-----------------------------------|-----|-----|-------|---|----|------|-----|-----|----|---------------------------------------|---------------------------|---|
| | | min | max | A | B | L | L1/L2 | E | H* | C | F | g | f | | | |
| B-14 | 5 | 6 | 14 | 40 | 25 | 50 | 23 | 4 | 15 | 6.5 | 37 | M5 | 6 | 40 | 0.175 | 0.000030 |
| B-19 | 8 | 9 | 19 | 48 | 30 | 54 | 25 | 4 | 17 | 7.0 | 37 | M5 | 6 | – | 0.320 | 0.000470 |
| B-24 | 9 | 10 | 24 | 52 | 36 | 56 | 26 | 4 | 17 | 7.5 | 41 | M5 | 6 | 50 | 0.316 | 0.000093 |
| B-28 | 9 | 10 | 28 | 66 | 44 | 84 | 40 | 4 | 20 | 19.0 | 46 | M8 | 10 | 55 | 0.739 | 0.000310 |
| B-32 | 11 | 12 | 32 | 76 | 50 | 84 | 40 | 4 | 20 | 18.0 | 48 | M8 | 10 | 55 | 0.950 | 0.000550 |
| B-38 | 12 | 14 | 38 | 83 | 58 | 84 | 40 | 4 | 20 | 18.0 | 48 | M8 | 10 | 60 | 1.220 | 0.000870 |
| B-42 | 16 | 20 | 42 | 92 | 65 | 88 | 42 | 4 | 22 | 19.0 | 50 | M8 | 10 | 60 | 1.490 | 0.001400 |
| B-48 | 16 | 20 | 48 | 100 | 68 | 104 | 50 | 4 | 22 | 27.0 | 50 | M8 | 10 | 60 | 1.810 | 0.001800 |
| B-55 | – | 25 | 55 | 125 | 83 | 124 | 60 | 4 | 30 | 30.0 | 65 | M10 | 20 | – | 3.450 | 0.004600 |
| B-65 | 0/30 | 10/32 | 65 | 140 | 96 | 144 | 70 | 4 | 32 | 36.0 | 72 | M10 | 20 | – | 5.180 | 0.009900 |
| B-80 | – | 30 | 80 | 175 | 124 | 186 | 90 | 6 | 45 | 46.5 | 93 | M10 | 20 | – | 11.500 | 0.037000 |
| B-100 | 35 | 40 | 100 | 210 | 152 | 228 | 110 | 8 | 55 | 63.0 | 102 | M12 | 30 | – | 20.500 | 0.115600 |

H* ist das Mindestmaß, um welches die Aggregate auseinander geschoben werden müssen, um einen radialen Ausbau zu ermöglichen. Fertigbohrung nach ISO-Passung H7, Passfedernut nach DIN 6885, Blatt 1 (JS9). Gewicht und Massenträgheitsmoment beziehen sich auf den maximal möglichen Durchmesser d ohne Nut.

H* is the minimum dimension required for the disassembly of the aggregates in a radial direction. Finish bore acc. to ISO standard H7, keyway acc. to DIN 6885, sheet 1 (JS9). Weight and moment of inertia values refer to maximum diameter d without keyway.

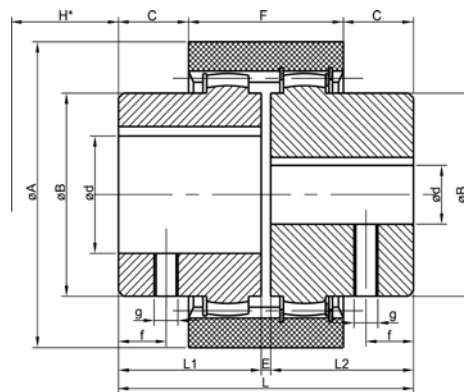
Montagehinweis

Assembly instruction

Bei Montage der Kupplung ist zu beachten, dass die Naben mit den Wellenenden bündig sind und das E-Maß eingehalten wird. Das E-Maß lässt sich anhand der Gesamtbaulänge L kontrollieren. Ein nicht exakt eingehaltenes E-Maß hat negativen Einfluss auf die Funktion der Kupplung. Vor Inbetriebnahme der Kupplung ist zu prüfen, ob die Verbindungshülse leicht axial verschiebbar ist. Die zulässigen Verlagerungswerte sind abhängig von Drehzahl und Leistung.

On assembly it is important that the hubs are correctly fitted on the shafts and that the dimension E is maintained. The dimension E can be checked by the total assembly length L. An inexact dimension E has a negative influence on the performance of the coupling. Check that axial movement of the coupling sleeve can be effected easily before operating the coupling for the first time. The permissible displacement values

DENTEX®-Kupplungen, Serie B3R mit Innen- und Außen-Seegerringen DENTEX® couplings, series B3R with inner and outer Seeger circlips



Typ B3R
Type B3R

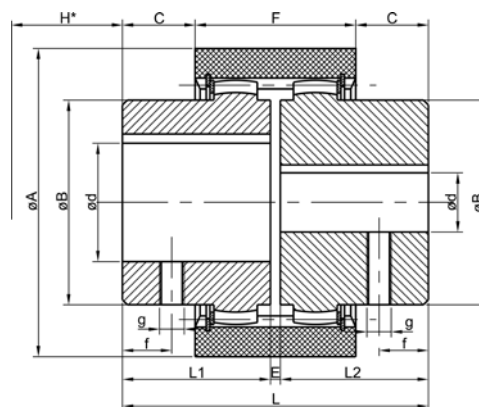
Technische Daten Technical data

| Typ Type | Fertigbohrung Finish bore d [mm] | | Abmessungen Dimensions [mm] | | | | | | | | | | Gewicht Weight [kg] | Massenträgheits- moment Moment of inertia J [kg m ²] |
|-------------|--|-----|-----------------------------------|-----|-----|-------|---|------|------|-----|-----|----|---------------------------|---|
| | min | max | A | B | L | L1/L2 | E | H* | C | F | g | f | | |
| B3R 24 | 10 | 24 | 58 | 36 | 56 | 26 | 4 | 23.5 | 2.5 | 51 | M5 | 6 | 0.3 | 0.0001 |
| B3R 28 | 10 | 28 | 70 | 44 | 84 | 40 | 4 | 26.0 | 14.0 | 56 | M8 | 10 | 0.8 | 0.0004 |
| B3R 32 | 12 | 32 | 84 | 50 | 84 | 40 | 4 | 27.0 | 13.0 | 58 | M8 | 10 | 1.1 | 0.0007 |
| B3R 45 | 20 | 42 | 100 | 65 | 88 | 42 | 4 | 28.0 | 14.0 | 60 | M8 | 10 | 1.5 | 0.0016 |
| B3R 65 | 25 | 65 | 140 | 96 | 144 | 70 | 4 | 40.0 | 30.0 | 84 | M10 | 20 | 5.4 | 0.0115 |
| B3R 80 | 30 | 80 | 175 | 124 | 186 | 90 | 6 | 45.0 | 46.5 | 93 | M10 | 20 | 11.6 | 0.0378 |
| B3R 100 | 40 | 100 | 210 | 152 | 228 | 110 | 8 | 49.0 | 63.0 | 102 | M12 | 30 | 20.7 | 0.0974 |

H* ist das Mindestmaß, um welches die Aggregate auseinander geschoben werden müssen, um einen radialen Ausbau zu ermöglichen. Fertigbohrung nach ISO-Passung H7, Passfedernut nach DIN 6885, Blatt 1 (JS9). Gewicht und Massenträgheitsmoment beziehen sich auf den maximal möglichen Durchmesser d ohne Nut.

H* is the minimum dimension required for the disassembly of the aggregates in a radial direction. Finish bore acc. to ISO standard H7, keyway acc. to DIN 6885, sheet 1 (JS9). Weight and moment of inertia values refer to maximum diameter d without keyway.

DENTEX®-Kupplungen, Serie B4R mit außenliegenden Anlauf- und Seegerringen DENTEX® couplings, series B4R with outer bearing rings and Seeger circlips



Typ B4R
Type B4R

Technische Daten Technical data

| Typ Type | Fertigbohrung Finish bore d [mm] | | Abmessungen Dimensions [mm] | | | | | | | | | | Gewicht Weight [kg] | Massenträgheits- moment Moment of inertia J [kg m ²] |
|-------------|--|-----|-----------------------------------|-----|-----|-------|---|------|------|-----|-----|----|---------------------------|---|
| | min | max | A | B | L | L1/L2 | E | H* | C | F | g | f | | |
| B4R 32 | 12 | 32 | 84 | 50 | 84 | 40 | 4 | 18.0 | 13.0 | 58 | M8 | 10 | 1.1 | 0.0007 |
| B4R 45 | 20 | 42 | 100 | 65 | 88 | 42 | 4 | 18.0 | 14.0 | 60 | M8 | 10 | 1.5 | 0.0017 |
| B4R 65 | 25 | 65 | 140 | 96 | 144 | 70 | 4 | 15.0 | 30.0 | 84 | M10 | 20 | 5.4 | 0.0118 |
| B4R 80 | 30 | 80 | 175 | 124 | 186 | 90 | 6 | 3.5 | 46.5 | 93 | M10 | 20 | 11.7 | 0.0385 |
| B4R 100 | 40 | 100 | 210 | 152 | 228 | 110 | 8 | - | 63.0 | 102 | M12 | 30 | 20.8 | 0.0987 |

Basisprogramm metrische Bohrungen und Zollbohrungen Standard metric bores and standard inch bores

Basisprogramm metrische Bohrungen *Standard metric bores*

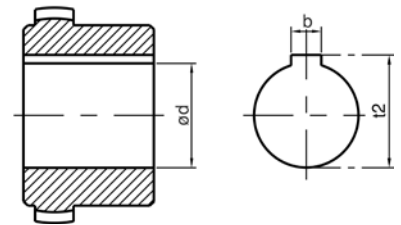
| Typ Type | Fertigbohrung nach ISO-Passung H7, Passfedernut nach DIN 6885, Blatt 1 (J59) <i>Finish bore acc. to ISO standard H7, keyway acc. to DIN 6885, sheet 1 (J59)</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|--|--|
| | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 22 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42 | 45 | 48 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 100 | | |
| B-14 | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-28 | | | | | | x | x | x | x | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | | | |
| B-32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-42 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B3R 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B4R 45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Basisprogramm Zollbohrungen *Standard inch bores*

| Typ Type | V | TA | DNC | DNH | Ad | AS | A | G | GS | F | B | Bs | H | Hs | Sb | Sd | Js | K | M | C | N | L | KS | NM | D | P | W | | | | | | | | | | | | |
|-------------|---|----|-----|-----|----|----|---|---|----|---|---|----|---|----|----|----|----|---|---|---|---|---|----|----|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|
| B-14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-24 | | x | | | x | x | x | x | | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-28 | x | x | | x | x | x | x | x | | x | | x | | x | x | x | | | | | | | | | | | | | | | | | | | | | | | |
| B-32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-38 | | | | x | | | x | x | x | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-42 | | | | x | | | x | x | | x | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Abmessungen Zollbohrungen *Dimensions inch bores*

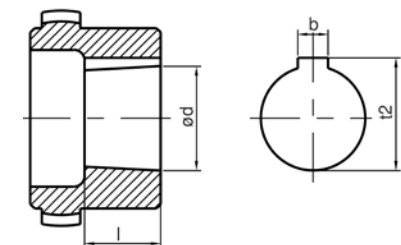
| Code | Ø d [mm] | b [mm] | t2 [mm] | | Code | Ø d [mm] | b [mm] | t2 [mm] | | Code | Ø d [mm] | b [mm] | t2 [mm] | |
|------|---------------|--------|---------|------|------|--------------|--------|---------|------|------|---------------|--------|---------|------|
| | | | +0.05 | +0.2 | | | | +0.05 | +0.2 | | | | +0.05 | +0.2 |
| V | 11.110 H7 | 3.18 | 12.34 | | G | 22.22 +0.030 | 4.75 | 24.70 | | C | 38.070 +0.030 | 9.55 | 43.0 | |
| TA | 12.700 +0.030 | 3.17 | 14.30 | | F | 22.22 +0.030 | 6.35 | 25.20 | | N | 41.290 +0.030 | 9.55 | 46.1 | |
| DNC | 13.450 H7 | 3.17 | 14.90 | | B | 25.37 +0.030 | 4.78 | 27.80 | | L | 44.450 +0.030 | 11.11 | 49.5 | |
| S | 15.870 +0.030 | 3.97 | 17.90 | | BS | 25.38 +0.030 | 6.37 | 28.30 | | NM | 47.625 +0.030 | 12.73 | 53.4 | |
| E | 15.870 +0.030 | 3.17 | 17.50 | | H | 25.40 +0.030 | 4.78 | 27.80 | | DS | 50.770 +0.030 | 12.73 | 56.4 | |
| ES | 15.880 +0.030 | 4.00 | 17.70 | | SB | 28.60 +0.020 | 6.35 | 32.10 | | D | 50.800 +0.030 | 12.73 | 55.1 | |
| Ed | 15.890 +0.020 | 4.75 | 18.30 | | SD | 28.58 +0.030 | 7.93 | 32.10 | | P | 53.950 +0.030 | 12.73 | 59.6 | |
| DNH | 17.465 H7 | 4.75 | 19.60 | | JS | 31.75 +0.030 | 6.35 | 34.62 | | W | 60.370 +0.030 | 15.87 | 68.8 | |
| Ad | 19.020 +0.030 | 3.17 | 20.70 | | K | 31.75 K7 | 7.93 | 35.50 | | WN | 73.025 +0.030 | 19.05 | 83.0 | |
| AS | 19.020 +0.030 | 4.78 | 21.30 | | KS | 31.75 +0.030 | 7.93 | 36.60 | | WA | 85.780 +0.030 | 22.22 | 97.3 | |
| A | 19.050 +0.030 | 4.78 | 21.30 | | M | 34.94 +0.030 | 7.93 | 39.00 | | WK | 92.080 +0.030 | 22.22 | 103.3 | |



Kegelige Bohrungen *Tapered bores*

| Code | Konus 1:8 Taper 1:8 | | | |
|---------|---------------------|------|------|------|
| | Ø d | b | t2 | l |
| ...N/1 | 9.75 | 2.40 | 10.7 | 17.0 |
| ...N/1c | 11.60 | 3.00 | 12.9 | 16.5 |
| ...N/1e | 13.00 | 2.40 | 13.8 | 21.0 |
| ...N/1d | 14.00 | 3.00 | 15.5 | 17.5 |
| ...N/1b | 14.30 | 3.20 | 15.7 | 19.5 |
| ...N/2 | 17.28 | 3.20 | 18.2 | 24.0 |
| ...N/2a | 17.28 | 4.00 | 18.9 | 24.0 |
| ...N/3 | 22.00 | 4.00 | 23.4 | 28.0 |
| ...N/4 | 25.46 | 4.78 | 27.8 | 36.0 |
| ...N/4b | 25.46 | 5.00 | 28.2 | 36.0 |
| ...N/4a | 27.00 | 4.78 | 28.8 | 32.5 |
| ...N/4g | 28.45 | 6.00 | 29.3 | 38.5 |
| ...N/5 | 33.17 | 6.38 | 35.4 | 44.0 |
| ...N/5a | 33.17 | 7.00 | 35.4 | 44.0 |

| Code | Konus 1:5 Taper 1:5 | | | |
|------|---------------------|---|-------|------|
| | Ø d | b | t2 | l |
| A10 | 9.85 | 2 | 10.9 | 11.5 |
| B17 | 16.85 | 3 | 18.9 | 18.5 |
| C20 | 19.85 | 4 | 220.0 | 21.5 |
| Cs22 | 21.95 | 3 | 23.8 | 21.5 |
| D25 | 24.85 | 5 | 27.9 | 26.5 |
| E30 | 29.85 | 6 | 32.5 | 31.5 |
| F35 | 34.85 | 6 | 37.5 | 36.5 |
| G40 | 39.85 | 6 | 45.5 | 41.5 |



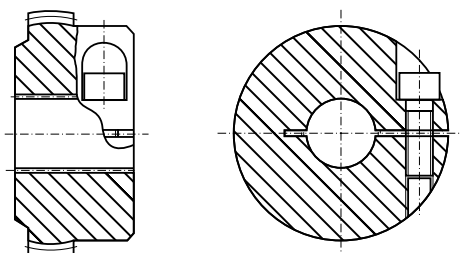
DENTEX® FL-Kupplungen – drehstarre Flanschkupplungen für dieselmotorische Antriebe

DENTEX® FL couplings – torsionally rigid flange couplings for diesel driven units

- Minimale Einbaulänge
 - Blindmontage durch axiales Zusammenstecken
 - Wartungsfrei durch Werkstoffpaarung Kunststoff/Stahl
 - Glasfaserverstärkter Polyamidflansch hitzebeständig bis +120 °C
 - Hohes Axialspiel von ± 2 mm schützt die benachbarten Wellenlager vor auftretenden Lagerkräften
 - Sonderflansche lieferbar
 - Hohe Drehsteifigkeit – resonanzfreier Betrieb
- Minimum mounting length
 - Blind mounting through push-fit assembly
 - Maintenance-free on account of the steel/plastic combination
 - Glass-fibre reinforced polyamide coupling sleeve heat resistant up to +120 °C
 - High axial play of ± 2 mm protecting neighbouring shaft bearings from additional loads
 - Special flanges available
 - High torsional rigidity – resonance-free operation

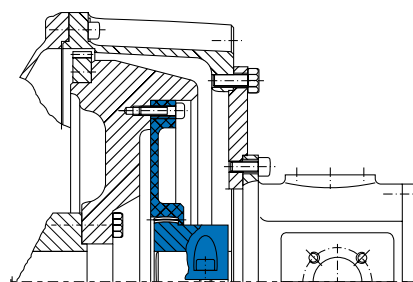
Die glasfaserverstärkten Polyamid-Flansche der DENTEX® FL-Kupplungen basieren auf den genannten SAE-Anschlussmaßen für alle gängigen Dieselmotoren. Die DENTEX® FL-Kupplung ermöglicht eine formschlüssige Verbindung zwischen Dieselmotor und Hydraulikpumpe. Die Pumpenzentrierung erfolgt über das SAE-Gehäuse. Falls bei Pumpenwellen mit Profilverzahnung (DIN 5480, 5482, SAE) eine Naben-sicherung durch Endscheibe und Schraube nicht möglich ist, sollte die Verwendung einer Klemmnabenverbindung vorgesehen werden. Die radiale Verspannung gewährleistet einen spielfreien Sitz auf der Pumpenwelle.

The glass-fibre reinforced polyamide coupling flange of the DENTEX® FL couplings are based on the above mentioned mounting clearances for all conventional diesel motors. The DENTEX® FL coupling allows a keyed connection between diesel motor and hydraulic pump. The pump is centred via the SAE housing. Should the securing of the hub by means of end-disc and screw not be possible in the case of pump shafts with profiled gear teeth (acc. to Standardization DIN 5480, 5482, SAE), the use of a clamping hub connection should be considered. The radial distortion guarantees a backlash-free fit on the pump shaft.



Bestellbeispiel: Bauart und Kupplungsgröße DENTEX® 48 FL, SAE-Flanschgröße 10, Fertigungsbohrung und Nabenlänge Ø 40 x 50

Ordering example: Type and clutch size DENTEX® 48 FL, SAE flange size 10, manufacturing bore and hub length Ø 40 x 50



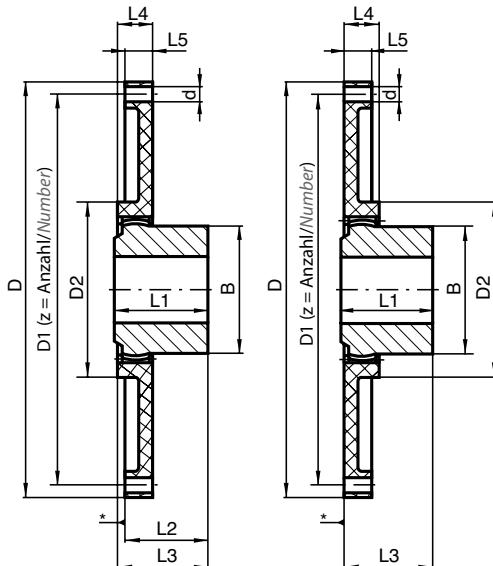
Typisches Einbaubeispiel für eine DENTEX® FL-Kupplung zwischen Dieselmotor und Hydraulikpumpe

Typical example for an installation of a DENTEX® FL coupling between diesel motor and hydraulic pump

Technische Daten *Technical data*

| Größe* Size* | Drehmoment in [Nm] Torque in [Nm] | | | Nabe bei max. Bohr-Ø Hub at max. bore Ø | | Flansche nach SAE Flanges SAE | | | | | Drehfedersteife Dynamic torsional stiffness [Nm/rad] | |
|-----------------|--------------------------------------|-------------------|-----------------|--|-----------------------------|----------------------------------|--------|--------|--------|---------|--|--|
| | T _{KN} | T _{Kmax} | T _{KW} | Massenträgheitsmoment J [kg m ²] Moment of inertia J [kg m ²] | Gewicht [kg] Weight [kg] | 6 1/2" | 7 1/2" | 8" | 10" | 11 1/2" | | 14" |
| 42 | 240 | 480 | 120 | 0.0006 | 0.675 | 0.4000 | 0.5200 | 0.5000 | 0.7500 | | | 0.30 T _{KN} = 35 x 10 ³ |
| | | | | | | 0.0025 | 0.0045 | 0.0048 | 0.0100 | | | 0.50 T _{KN} = 75 x 10 ³ |
| 48 | 240 | 480 | 120 | 0.0007 | 0.790 | 0.3200 | 0.4300 | 0.5100 | 0.6400 | | | 0.75 T _{KN} = 105 x 10 ³ |
| | | | | | | 0.0021 | 0.0035 | 0.0049 | 0.0085 | | | 1.00 T _{KN} = 125 x 10 ³ |
| 65 | 650 | 1600 | 325 | 0.0039 | 2.190 | | | | 0.6400 | 0.8900 | | 0.30 T _{KN} = 110 x 10 ³ |
| | | | | | | | | | 0.0065 | 0.0120 | | 0.50 T _{KN} = 160 x 10 ³ |
| 80 | 1200 | 3000 | 600 | 0.0151 | 5.200 | | | | | 1.1200 | | 0.75 T _{KN} = 200 x 10 ³ |
| | | | | | | | | | | 0.0220 | | 1.00 T _{KN} = 230 x 10 ³ |
| 80 | 1200 | 3000 | 600 | 0.0151 | 5.200 | | | | | | 0.7350 | 0.30 T _{KN} = 200 x 10 ³ |
| | | | | | | | | | | | | 0.50 T _{KN} = 410 x 10 ³ |
| | | | | | | | | | | | | 0.75 T _{KN} = 580 x 10 ³ |
| | | | | | | | | | | | | 1.00 T _{KN} = 700 x 10 ³ |
| | | | | | | | | | | | | 0.30 T _{KN} = 200 x 10 ³ |
| | | | | | | | | | | | | 0.50 T _{KN} = 410 x 10 ³ |
| | | | | | | | | | | | | 0.75 T _{KN} = 580 x 10 ³ |
| | | | | | | | | | | | | 1.00 T _{KN} = 700 x 10 ³ |

DENTEX® FL-Kupplungen DENTEX® FL couplings



* Anschlagseite Montage kurz
* Stop side mounting short

SAE-Flanschabmessungen (SAE J 620) SAE flange dimensions (SAE J 620)

| Nenngröße Nominal dimension | Lochkreis-Ø Circular bore Ø | Außen-Ø Outer Ø | Befestigungsbohrung Ø Clamping borehole Ø | Anzahl Number |
|--------------------------------|--------------------------------|--------------------|--|------------------|
| | D1 [mm] | D [mm] | [mm] | z |
| 6 1/2" | 200.02 | 215.90 | 9 | 6 |
| 7 1/2" | 222.25 | 241.30 | 9 | 8 |
| 8" | 244.47 | 263.52 | 11 | 6 |
| 10" | 295.27 | 314.32 | 11 | 8 |
| 11 1/2" | 333.37 | 352.42 | 11 | 8 |
| 14** | 438.15 | 466.72 | 14 | 8 |

*2-teilig *2-parts

Metrische Flanschabmessungen Metric flange dimensions

| Nenngröße Nominal dimension | Lochkreis-Ø Circular bore Ø | Außen-Ø Outer Ø | Befestigungsbohrung Ø Clamping borehole Ø | Zentrier-Ø Centre Ø |
|--------------------------------|--------------------------------|--------------------|--|------------------------|
| | D1 [mm] | D [mm] | [mm] | [mm] |
| 96 | 50 | 96 | 4.0 x 8.0 | 70 |
| 125 | 100 | 125 | 3.0 x 8.0 | 80 |
| 135 | 100 | 135 | 3.0 x 10.5 | 135 |
| 150 | 130 | 150 | 5.0 x 8.0 | 106 |
| 152 | 122 | 152 | 3.0 x 12.0 | 105 |
| 155 | 125 | 155 | 3.0 x 12.0 | 155 |
| 210 | 185 | 210 | 3.0 x 10.0 | 125 |
| 220 | 165 | 220 | 6.0 x 10.0 | 220 |
| 220 | 185 | 220 | 3.0 x 12.0 | 125 |

Größen 165, 180 und 252 auf Anfrage Dimensions 165, 180 and 252 on request

Flansch- und Nabenabmessungen SAE Flange and hub dimensions SAE

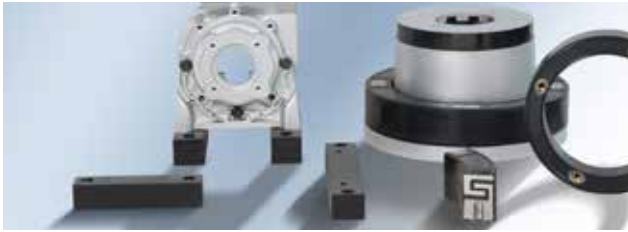
| Größe Size | Fertigbohrung Finish bore | | Abmessungen [mm] Dimensions [mm] | | | | | | | Sonderlänge [mm] Special length [mm] | Nennmaß nach SAE [D] Nominal dimension acc. to standardisation SAE [D] | | | | | |
|---------------|------------------------------|-----|-------------------------------------|-----|----|----|----|----|----|---|---|--------|----|-----|---------|-----|
| | min | max | B | D2 | L1 | L2 | L3 | L4 | L5 | L1 max | 6 1/2" | 7 1/2" | 8" | 10" | 11 1/2" | 14" |
| 42 | 20 | 42 | 65 | 100 | 42 | 33 | 42 | 20 | 13 | 60 | x | x | x | x | | |
| 48 | 20 | 48 | 68 | 100 | 50 | 41 | 50 | 20 | 13 | 60 | x | x | x | x | | |
| 65 | 25 | 65 | 96 | 132 | 70 | 60 | 70 | 27 | 21 | - | | | | x | | |
| 65 | 25 | 65 | 96 | 172 | 70 | 60 | 70 | 31 | 22 | - | | | | | x | |
| 80 | 30 | 80 | 124 | 172 | 90 | 78 | 87 | 30 | 21 | - | | | | | x | x |

Auswahltabelle DENTEX® FL-Flanschkupplung Menu table DENTEX® FL flange coupling

| Nenngröße Nominal dimension | DENTEX® Naben-Typ DENTEX® hub type | Motorhersteller/Typ (Beispiele) Engine manufacturer (examples) |
|--------------------------------|---------------------------------------|---|
| 6 1/2" | B 42/48 | Ford, Hatz, KHD, Kubota, Lister Petter, Lombardini, Perkins, Ruggerine, Slanzi, Teledyne |
| 7 1/2" | B 42/48 | Ford, Hatz, Isuzu, KHD, Kubota, Lister Petter, Lombardini, Mitsubishi, Perkins, Toyota, Yanmar |
| 8" | B 42/48 | Cummins, Ford, Hatz, Isuzu, KHD, Lister Petter, Lombardini, Mitsubishi, Perkins, Peugeot, Slanzi, Teledyne, Toyota |
| 10" | B 42/48 | Cummins, Hatz, Isuzu, KHD, Kubota, Lombardini, Lister Petter, Mitsubishi, Perkins, Slanzi, Toyota |
| 10" | B 65 | Caterpillar, Cummins, Detroit Diesel, Daimler-Benz, Ford, Hercules, Isuzu, John Deere, KHD, Lister Petter, Perkins, Slanzi |
| 11 1/2" | B 65 | Cummins, John Deere, Deutz |
| 14" | B 80 | Cummins, John Deere, Deutz |
| 96 mm | B 80 | Caterpillar, Lister Petter, Deutz, John Deere, Cummins |
| 125 mm | B 42/48 | Hatz Z 788/789/790 |
| 135 mm | B 42/48 | Kubota-650, 750, 850, 950, V 1100, 1200, Super 5 Serie (905 - 1505), Perkins 103-10 |
| 150 mm | B 42/48 | Kubota-D600B, Z400, D722, V800, WG600, WG750 (Super Mini Serie), Briggs Daihatsu DM700, DM950 |
| 152 mm | B 42/48 | Hatz-573, 673, 780, 786, E71, E75, E79 (Lochkreis-Ø/circular bore Ø 122 mm), Perkins-4108, 504-2T/2LR Deutz-F2L511 (Lochkreis-Ø/circular bore Ø 125 mm) |
| 155 mm | B 42/48 | Perkins 103-12/13/15, 104-22 |
| 210 mm | B 42/45/48 | Kubota Super 3 Serie, D1403, D1703, V1903, V2203 |
| 220 mm | B 42/45/48 | Kubota Super 3 Serie, D1403, D1703, V1903, V2203 (Lochkreis-Ø/circular bore Ø 165 mm und/and Zentrier-Ø/centre bore Ø 220 mm) |

Hydraulik-Komponenten, Öl-Kühler/Wärmetauscher

Hydraulic Components, Oil Coolers/Heat Exchangers



Pumpenträger/Dämpfungselemente
Bellhousings/Damping Elements



SPIDEX® Klauenkupplungen, DENTEX® Zahnkupplungen
SPIDEX® Jaw Couplings, DENTEX® Gear Couplings



Alubehälter NG 3,5 – NG 130
Al-Reservoirs NG 3.5 – NG 130



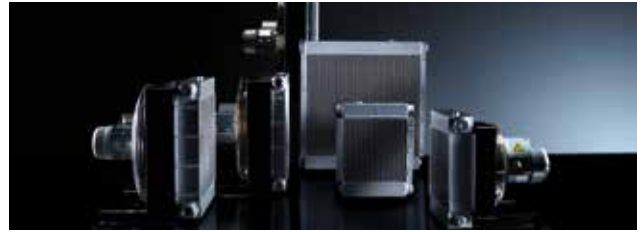
Stahlbehälter
Steel Tanks



Zubehör für Alubehälter/Stahlbehälter
Accessories for Al-Reservoirs/Steel Tanks



Steuerblöcke
Control Blocks



Öl-Luftkühler ACN und DCN
Oil-Air Coolers ACN and DCN



OCN Nebenstromkühleinheiten
OCN Offline Cooling Units



Öl-Wasserkühler BNZ
Oil-Water Cooler BNZ



Einschraub-Wärmetauscher ESK
Screw-in Heat Exchanger ESK



Plattenwärmetauscher PK
Plate Heat Exchanger PK



NRS – System zur Schallpegel-Reduzierung bei Hydraulik-Anlagen
NRS – System for noise level reduction on hydraulic equipment