

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*
- *Simple and easy assembly*
- *High electrical insulating property*
- *High thermal stability*
- *No maintenance*

Funktionsweise

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, auch treten 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 Verschleißigenschaften 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.

Technical description

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 meets the requirement to compensate radial, angular and axial shaft displacements in order to release 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 excels by its excellent sliding properties and wear resistance especially by the combination of toughness, hardness and rigidity; it is also resistant to condensation and splash water, engine fuels, oils, greases, alcohols, esters, ketones, aliphatic and aromatic hydrocarbons and many other agents. 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 in the range from -25 °C up to +80 °C. It is necessary to use a coupling sleeve in heat stabilised polyamide for temperature up to 140 °C.

Typenbezeichnung Model type

| KL | | B 42 . 38 H 7 | | L = 60 | | SO | |
|---------------------------|----|---------------------------------|--|--|-----------------------------|--|------------------------------------|
| Standard Standard | - | Nabenausführung Type of hub | | Verlängerte Naben Extended hub length | | Sonderbearbeitung Special machining | |
| Klemmnabe Clamping hub | KL | Serie B Series B | | - | Standard Standard | - | Standard Standard |
| | | 14 | | 60 | Siehe Seite 4 See page 4 | SO | Sonderzeichnung Special drawing |
| | | 24 | | Beispiel Fertigbohrungen Example finish bores | | | |
| | | 28 | | Ung. | | | |
| | | 32 | | Vorg. | | | |
| | | 38 | | 38H7 | | | |
| | | 42 | | B17 | | | |
| | | 48 | | F | | | |
| | | 55 | | SAE 16/32Z13 | SAE | Profile Splines | |
| | | 65 | | A35 x 31 | DIN 5482 | | |
| | | 80 | | N30 x 2 x 14 x 9G | DIN 5480 | | |
| | | 100 | | | | | |
| | | Serie B3R Series B3R | | | | | |
| | | 24 | | | | | |
| | | 28 | | | | | |
| | | Serie B3R/B4R Series B3R/B4R | | | | | |
| | | 32 | | | | | |
| | | 45 | | | | | |
| | | 65 | | | | | |
| | | 80 | | | | | |
| | | 100 | | | | | |

DENTEX®-Kupplungen für IEC-Normmotoren

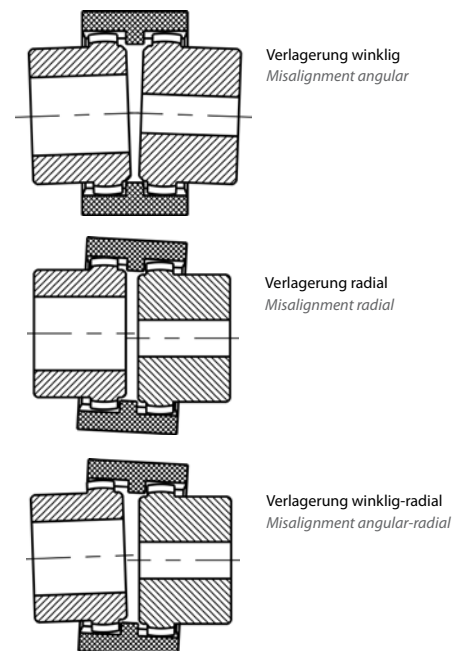
DENTEX®-Couplings for IEC standard motors

| Motor- baugröße Motor- size | Welle Shaft D x l [mm] | | n = 750 [1/min] Leistung P Power P | | Dentex® Typ Type | T _k max [Nm] | n = 1000 [1/min] Leistung P Power P | | Dentex® Typ Type | T _k max [Nm] | n = 1500 [1/min] Leistung P Power P | | Dentex® Typ Type | T _k max [Nm] | n = 3000 [1/min] Leistung P Power P | | Dentex® Typ Type | 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 | 20 | - | - | 14 | 20 | 0.06 | 0.40 | 14 | 20 | 0.09 | 0.30 | 14 | 20 |
| 63 | 11 x 23 | | - | - | | | - | - | | | 0.09 | 0.60 | | | 0.12 | 0.40 | | |
| 71 | 14 x 30 | | - | - | | | - | - | | | 0.12 | 0.90 | | | 0.18 | 0.60 | | |
| 80 | 19 x 40 | | - | - | 19 | 32 | 0.37 | 3.70 | 19 | 32 | 0.25 | 1.80 | 19 | 32 | 0.37 | 1.30 | 19 | 32 |
| 90S | 24 x 50 | | - | - | 24 | 40 | 0.55 | 5.50 | 24 | 40 | 0.37 | 2.5 | 24 | 40 | 0.55 | 1.9 | 24 | 40 |
| 90 L | 28 x 60 | | 0.75 | 11 | 28 | 90 | 0.75 | 7.90 | 28 | 90 | 0.75 | 5.00 | 28 | 90 | 1.10 | 3.70 | 28 | 90 |
| 100 L | 28 x 60 | | 1.10 | 16 | | | 1.10 | 11.00 | | | 1.10 | 10.00 | | | 2.20 | 7.40 | | |
| 112 M | 38 x 80 | | 1.50 | 21 | | | 1.50 | 15.00 | | | 1.50 | 15.00 | | | 3.00 | 9.80 | | |
| 132 S | 38 x 80 | | 2.20 | 29 | 38 | 160 | 2.20 | 22.00 | 38 | 160 | 3.00 | 27.00 | 38 | 160 | 3.00 | 13.00 | 38 | 160 |
| 132 M | 42 x 110 | | 3.00 | 40 | | | 3.00 | 30.00 | | | 3.00 | 30.00 | | | 4.00 | 13.00 | | |
| 160 M | 42 x 110 | | 4.00 | 54 | 42 | 200 | 4.00 | 39.00 | 42 | 200 | 5.50 | 55.00 | 42 | 200 | 5.50 | 18.00 | 42 | 200 |
| 160 L | 48 x 110 | | 5.50 | 74 | | | 5.50 | 55.00 | | | 7.50 | 49.00 | | | 7.50 | 25.00 | | |
| 180 M | 48 x 110 | | 7.50 | 100 | 48 | 280 | 7.50 | 74.00 | 48 | 280 | 11.00 | 72.00 | 48 | 280 | 11.00 | 35.00 | 48 | 280 |
| 180 L | 55 x 110 | | 11.00 | 147 | | | 11.00 | 108.00 | | | 15.00 | 98.00 | | | 15.00 | 49.00 | | |
| 200 L | 55 x 110 | | 15.00 | 196 | 55 | 500 | 15.00 | 147.00 | 55 | 500 | 18.50 | 121.00 | 55 | 500 | 18.50 | 72.00 | 55 | 500 |
| 225 S | 60 x 140 | | 18.50 | 245 | 65 | 780 | 18.50 | 185.00 | 65 | 780 | 22.00 | 144.00 | 65 | 780 | 22.00 | 72.00 | 65 | 780 |
| 225 M | 60 x 140 | | 22.00 | 294 | | | 22.00 | 215.00 | | | 30.00 | 195.00 | | | 30.00 | 97.00 | | |
| 250 M | 65 x 140 | | 30.00 | 390 | | | 30.00 | 361.00 | | | 37.00 | 270.00 | | | 37.00 | 117.00 | | |
| 280 S | 65 x 140 | | 37.00 | 490 | 80 | 1400 | 37.00 | 440.00 | 80 | 1400 | 45.00 | 440.00 | 80 | 1400 | 45.00 | 245.00 | 80 | 1400 |
| 280 M | 80 x 170 | | 45.00 | 585 | | | 45.00 | 536.00 | | | 55.00 | 536.00 | | | 55.00 | 294.00 | | |
| 315 S | 80 x 170 | | 55.00 | 715 | | | 55.00 | 730.00 | | | 75.00 | 714.00 | | | 75.00 | 350.00 | | |
| 315 M | 80 x 170 | | 75.00 | 970 | 100 | 2400 | 75.00 | 876.00 | 100 | 2400 | 90.00 | 857.00 | 100 | 2400 | 90.00 | 420.00 | 100 | 2400 |
| 315 L | 80 x 170 | | 90.00 | 1170 | | | 90.00 | 1070.00 | | | 110.00 | 1030.00 | | | 110.00 | 513.00 | 80 | 1400 |
| | 80 x 170 | | 110.00 | 1420 | | | 110.00 | 1280.00 | | | 132.00 | 1290.00 | | | 132.00 | 641.00 | | |

Technische Daten

Technical data

| Typ Type | Drehzahl Rotation n max [1/min] | Drehmoment Torque [Nm] | | Leistung Power P [kW/min-1] | | Max. Verlagerung Max. misalignment [mm] | | |
|-------------|--|------------------------------|------------------------|-----------------------------------|--------|---|--|---------|
| | | Normal T _{KN} | Max. T _K | Normal | Max. | axial | radial oder winklig radial or angular | |
| B-14 | 8000 | 10 | 20 | 0.0010 | 0.0021 | ± 1 | ± 0.3 | ± 1 |
| B-19 | 8000 | 16 | 32 | 0.0017 | 0.0033 | | | je Nabe |
| B-24 | 8000 | 20 | 40 | 0.0021 | 0.0042 | | ± 0.4 | per hub |
| 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 | | ± 0.6 | |
| B-80 | 3000 | 700 | 1400 | 0.0730 | 0.1500 | | ± 0.7 | |
| B-100 | 2400 | 1250 | 2400 | 0.1300 | 0.2500 | | ± 0.8 | |
| | 24 | 10200 | 20 | 40 | 0.0020 | 0.0040 | ± 0.4 | |
| B3R | 28 | 8300 | 45 | 90 | 0.0045 | 0.0095 | | |
| | 32 | 7000 | 80 | 160 | 0.0084 | 0.0170 | | |
| | 45 | 5000 | 140 | 280 | 0.0150 | 0.0290 | | |
| B3R | 65 | 3800 | 390 | 780 | 0.0410 | 0.0800 | ± 0.6 | |
| B4R | 80 | 3000 | 700 | 1400 | 0.0730 | 0.1500 | ± 0.7 | |
| | 100 | 2400 | 1250 | 2400 | 0.1300 | 0.2500 | ± 0.8 | |



Montagehinweis

Bei Montage der Kupplung ist zu beachten, dass die Naben mit den Wellenden 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.

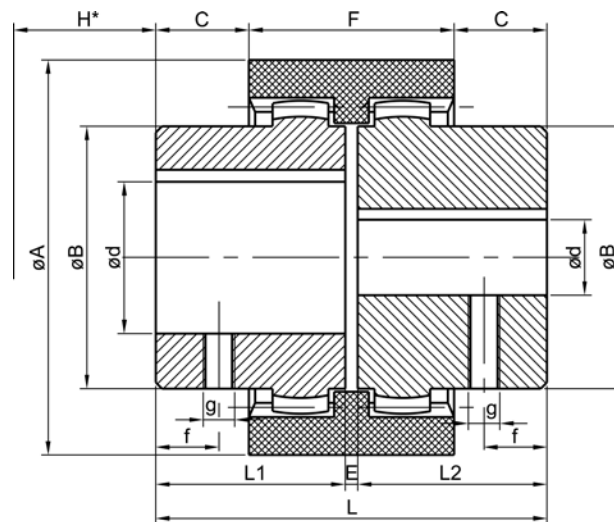
Assembly instruction

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 controlled by the total assembly length L.

An inexact dimension E has a negative influence on the performance of the coupling. Before set into operation is to be checked if the coupling sleeve has a minimal axial movement.

The permissible displacement values depend on rotation and transmitted power.

Abmessungen DENTEX®-Kupplungen, Serie B Dimensions DENTEX®-Couplings, series B



| Typ Type | Vor- bohrung Pre- bored | Fertigbohrungen Finish bores d [mm] | | A | B | L | L1+L2 | E | H* | C | F | g | f | Sonderlänge Extended hub length L2 | Gewicht Weight kg | Massenträg- heitsmoment Moment of inertia J kg/m ² |
|-------------|----------------------------------|---|------|-----|-----|-----|-------|---|----|------|-----|-----|----|---|-------------------------|---|
| | | min. | max. | | | | | | | | | | | | | |
| 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 | - | 11.50 | 0.037000 |
| B-100 | 35 | 40 | 100 | 210 | 152 | 228 | 110 | 8 | 55 | 63.0 | 102 | M12 | 30 | - | 20.50 | 0.115600 |

H* ist das Mindestmaß, um welches die Aggregate auseinander geschoben werden müssen, um einen radialen Ausbau zu ermöglichen.

Fertigbohrungen nach ISO-Passung H7, Passfedernut nach DIN 6885, Blatt 1 (J59).

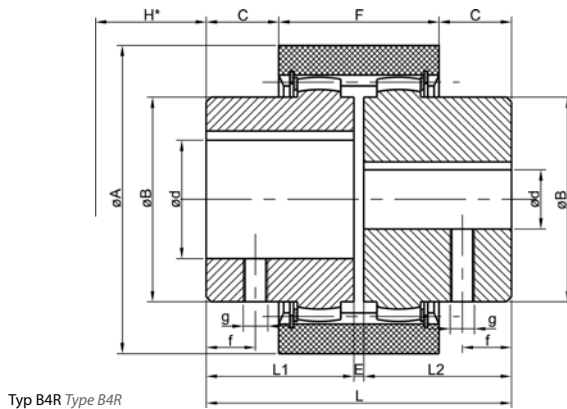
Gewicht und Massenträgheitsmoment beziehen sich auf den maximal möglichen Durchmesser d ohne Nut.

H* is the minimum dimension required for the disassembly of the aggregates in a radial direction.

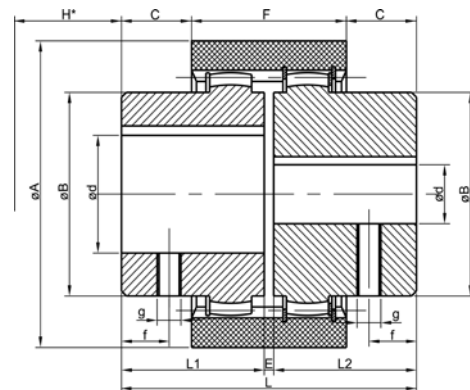
Finish bores acc. to ISO-standard H7, keyway acc. to DIN 6885, sheet 1 (J59).

Weight and moment of inertia values refer to maximum diameter d without keyway.

Abmessungen DENTEX®-Kupplungen, Serie B4R mit außenliegenden Anlauf- und Seegerringen Dimensions DENTEX®-Couplings, series B4R with outer bearing rings and seeger circlips



Typ B4R Type B4R



Typ B3R Type B3R

| Typ Type | Fertigbohrung Finish bores | | | | | | | | | | | | Gewicht Weight | Massenträgheits- moment |
|-------------|-------------------------------|------|-----|-----|-----|---------|---|------|------|-----|-----|----|-------------------|----------------------------|
| | 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 |

Abmessungen DENTEX®-Kupplungen, Serie B3R mit Innen- und Außen-Seegerringen Dimensions DENTEX®-Couplings, series B3R with inner and outer seegar circlips

| Typ Type | Fertigbohrung Finish bores | | | | | | | | | | | | Gewicht Weight | Massenträgheits- moment Moment of inertia J |
|-------------|-------------------------------|------|-----|-----|-----|---------|---|------|------|-----|-----|----|-------------------|---|
| | 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.

Fertigbohrungen 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 bores 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.

Basisprogramm metrische Bohrungen

Standard metric bores

| Typ Type | Fertigbohrungen nach ISO-Passung H7, Passfedernut nach DIN 6885, Blatt 1 (JS9) Finish bores acc. To ISO-standard H7, kwyway acc. To DIN 6885 sheet 1 (JS9) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|--|--|
| | 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 | | | | | | | | | x | x | x | x | x | x | x | x | x | | | | | | | | | | | | | | | | | | | | | |
| 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 | | x | | | x | x | | | | | | | | | | | | | | | | | | | | | | |
| B-42 | | | | x | | | x | x | | x | | | | | | x | x | | | | | | | | | | | | | | | | | | | | | |
| B-48 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-65 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B-100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

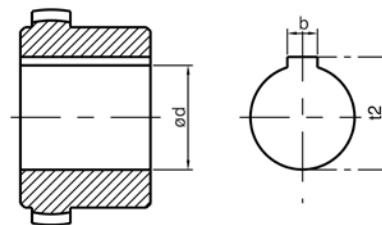
Abmessungen Zollbohrungen

Dimensions inch bores

| Code Code | Ø d [mm] | Nut Keyway b [mm] | t2 [mm] |
|--------------|-----------|-------------------------|---------|
| V | 11.11 H7 | 3.18 | 12.34 |
| TA | 12.70 | 3.17 | 14.30 |
| DNC | 13.45 H7 | 3.17 | 14.90 |
| S | 15.87 | 3.97 | 17.90 |
| E | 15.87 | 3.17 | 17.50 |
| ES | 15.88 | 4.00 | 17.70 |
| ED | 15.89 | 4.75 | 18.30 |
| DNH | 17.485 H7 | 4.75 | 19.60 |
| Ad | 19.02 | 3.17 | 20.70 |
| AS | 19.02 | 4.78 | 21.30 |
| A | 19.05 | 4.78 | 21.30 |

| Code Code | Ø d [mm] | Nut Keyway b [mm] | t2 [mm] |
|--------------|----------|-------------------------|---------|
| G | 22.22 | 4.75 | 24.70 |
| F | 22.22 | 6.35 | 25.20 |
| B | 25.37 | 4.78 | 27.80 |
| Ba | 25.38 H7 | 6.35 | 27.60 |
| H | 25.40 | 4.78 | 27.80 |
| Sb | 28.60 | 6.35 | 32.10 |
| Sd | 28.58 | 7.93 | 32.10 |
| Js | 31.75 | 6.35 | 34.62 |
| K | 31.75 K7 | 7.93 | 35.50 |
| KS | 31.75 | 7.93 | 36.60 |
| M | 34.94 | 7.93 | 39.00 |

| Code Code | Ø d [mm] | Nut Keyway b [mm] | t2 [mm] |
|--------------|----------|-------------------------|---------|
| C | 38.070 | 9.55 | 43.0 |
| N | 41.290 | 9.55 | 46.1 |
| L | 44.450 | 11.11 | 49.5 |
| NM | 47.625 | 12.73 | 53.4 |
| DS | 50.770 | 12.73 | 56.4 |
| D | 50.800 | 12.73 | 55.1 |
| P | 53.950 | 12.73 | 59.6 |
| W | 60.370 | 15.87 | 68.8 |
| WN | 73.025 | 19.05 | 83.0 |
| WA | 85.780 | 22.22 | 97.3 |
| WK | 92.080 | 22.22 | 103.3 |

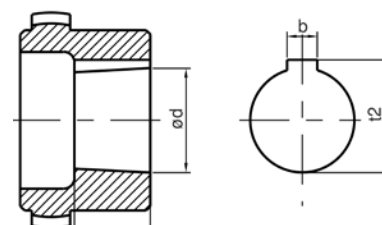


Kegelige Bohrungen

Tapered bores

| Code Code | Konus 1:8 Taper 1:8 | | | |
|--------------|------------------------|--------|---------|------|
| | Ø d [mm] | b [mm] | t2 [mm] | [mm] |
| ...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 | 17.20 | 3.20 | 18.3 | 24.0 |
| ...N/2a | 17.20 | 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 |
| ...N/6 | 43.05 | 7.95 | 46.5 | 51.0 |
| ...N/6a | 41.15 | 8.00 | 44.2 | 42.5 |

| Code Code | Konus 1:5 Taper 1:5 | | | |
|--------------|------------------------|--------|---------|------|
| | Ø d [mm] | b [mm] | t2 [mm] | [mm] |
| A10 | 9.85 | 2 | 10.9 | 11.5 |
| B17 | 16.85 | 3 | 18.9 | 18.5 |
| C20 | 19.85 | 4 | 22.0 | 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 |



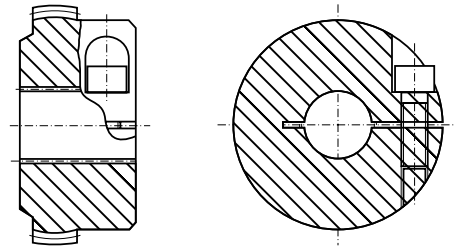
DENTEX® FL-Kupplungen sind drehstarre Flanschkupplungen für dieselmotorische Antriebe.

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.

Aufgrund der Kupplungssteifigkeit ergibt sich bei Verwendung der DENTEX® FL-Kupplung ein unkritischer Betrieb, beim Antrieb wird dabei eine Drehschwingungsgefährdung vermieden.

Falls bei Pumpenwellen mit Profilverzahnung (DIN 5480, 5482, SAE) eine Nabsicherung durch Endscheibe und Schraube nicht möglich ist, sollte die Verwendung einer Klemmnabenverbindung vorgesehen werden. Die radiale Verspannung gewährleistet einen spielfreien Sitz auf der Pumpenwelle.



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

DENTEX® FL

- Minimale Einbaulänge
- Blindmontage durch axiales Zusammenstecken
- Kombination Kunststoff/Stahl, dadurch wartungsfrei
- Glasfaserverstärkter Polyamidflansch hitzebeständig bis +120 °C
- Hohes Axialspiel von ± 2 mm schützt die benachbarten Wellenlager vor auftretenden Lagerkräften
- Sonderflansche lieferbar

Technische Daten DENTEX® FL

Technical data DENTEX® FL

Drehmoment / Gewicht / Massenträgheitsmoment / Drehfedersteife

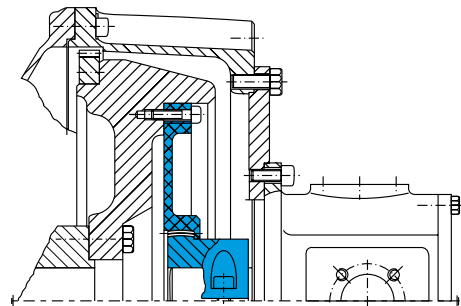
DENTEX® FL-Couplings are unyielding to rotation flange couplings for diesel driven units.

The glass-fibre reinforced polyamide coupling flange of the DENTEX® FL-Couplings are based on the above mentioned mounting clearances for all conventional Diesel engines.

The DENTEX® FL-Coupling allows a keyed connection between Diesel engine and hydraulic pump. The pump is to be centred over the SAE-housing.

The application of the DENTEX® FL-Coupling results in a non-critical service on account of the coupling stiffness, as the hazard of a rotating oscillation during the drive will be avoided.

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 fit on the pump shaft which is free from clearance.



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

Typical example for an installation of DENTEX® FL-Coupling between diesel engine and hydraulic pump

DENTEX® FL

- 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

Torque / Weight / Moment of inertia / Rotating spring stiffness

| Größe* Size* | Drehmoment in (Nm) Torque in (Nm) | | | Gewicht / Massenträgheitsmoment Weight / Moment of inertia | Nabe bei max. Bohr-Ø Hub at max. bores-Ø | Flansche nach SAE Flanges SAE | | | | | | Drehfedersteife Rotating spring stiffness [Nm 7 rad] |
|-----------------|--------------------------------------|-------------------|-----------------|--|---|----------------------------------|--------|------|--------|---------|-------|--|
| | T _{KN} | T _{Kmax} | T _{KW} | | | 6 1/2" | 7 1/2" | 8" | 10" | 11 1/2" | 14" | |
| 42 | 240 | 480 | 120 | [kg] | 0.675 | 0.40 | 0.52 | 0.50 | 0.7500 | | | 0.30 TKN = 35x10 ³ |
| | | | | [kgm ²] | | | | | | | | 0.0006 |
| 48 | 240 | 480 | 120 | [kg] | 0.790 | 0.32 | 0.43 | 0.51 | 0.6400 | | | 0.30 TKN = 35x10 ³ |
| | | | | [kgm ²] | | | | | | | | 0.0007 |
| 65 | 650 | 1600 | 325 | [kg] | 2.190 | | | | 0.6400 | 0.890 | | 0.30 TKN = 35x10 ³ |
| | | | | [kgm ²] | | | | | | | | 0.0039 |
| 80 | 1200 | 3000 | 600 | [kg] | 5.200 | | | | | | 1.120 | 0.30 TKN = 200x10 ³ |
| | | | | [kgm ²] | | | | | | | | 0.0151 |
| 80 | 1200 | 3000 | 600 | [kg] | 5.200 | | | | | | | 0.30 TKN = 200x10 ³ |
| | | | | [kgm ²] | | | | | | | | 0.0151 |
| | | | | | | | | | | | | 0.75 TKN = 580x10 ³ |
| | | | | | | | | | | | | 1.00 TKN = 700x10 ³ |
| | | | | | | | | | | | 7.35 | 0.30 TKN = 200x10 ³ |
| | | | | | | | | | | | | 0.50 TKN = 410x10 ³ |
| | | | | | | | | | | | | 0.75 TKN = 580x10 ³ |
| | | | | | | | | | | | | 1.00 TKN = 700x10 ³ |

*Hochbelastbare Naben auf Anfrage *Hubs resistant against high loads are available on request

DENTEX® FL-Kupplungen DENTEX® FL-Couplings SAE-Flanschabmessungen (SAE J 620) SAE-Flange dimensions (SAE J 620)

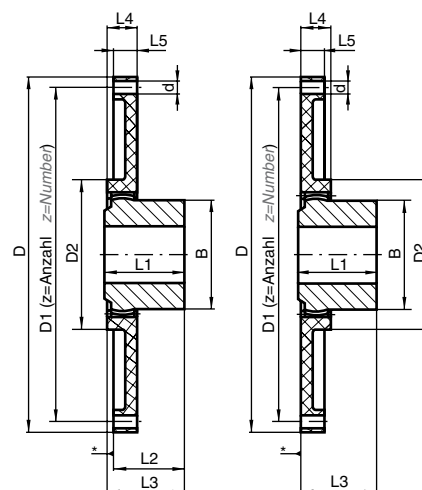
| Nenngröße Nominal dimension | Lochkreis-Ø Circular bore-Ø | Außen-Ø Outer-Ø | Befestigungsbohrung Ø Borehole Ø | Anzahl Number |
|--------------------------------|--------------------------------|--------------------|-------------------------------------|------------------|
| | D1 mm | D mm | mm | z |
| 6 1/2" | 200.02 | 215.9 | 9 | 6 |
| 7 1/2" | 222.25 | 241.3 | 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** | 466.72 | 438.15 | 14 | 8 |

*2-teilig *2-parts

Metrische Flanschabmessungen Metrical flange dimensions

| Nenngröße Nominal dimension | Lochkreis-Ø Circular bore-Ø | Außen-Ø Outer-Ø | Befestigungsbohrung Ø Clamping borehole Ø | Zentrier-Ø Center-Ø |
|--------------------------------|--------------------------------|--------------------|--|------------------------|
| | D1 mm | D mm | mm | |
| 96 | 50 | 96 | 4 x 8 | 70 |
| 125 | 100 | 125 | 3 x 8 | 80 |
| 135 | 100 | 135 | 3 x 8 | 135 |
| 150 | 130 | 150 | 5 x 8 | 106 |
| 152 | 122 | 152 | 3 x 12 | 105 |
| 155 | 125 | 155 | 3 x 12 | 155 |
| 210 | 185 | 210 | 3 x 10 | 125 |
| 220 | 165 | 220 | 6 x 10 | 220 |
| 220 | 185 | 220 | 3 x 12 | 125 |

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

* Anschlagseite Montage kurz
* Stop side mounting short

Flansch-/Nabenabmessungen -SAE- Flange and hub dimensions -SAE-

| Größe Size | Fertigungsbohrung Finish bores | | Abmessungen [mm] Dimension [mm] | | | | | | | Sonderlänge [mm] Special lengths [mm] | Nennmaß nach SAE [D] Nominal dimension acc. standardization SAE | | | | | |
|---------------|-----------------------------------|------|------------------------------------|-----|----|----|----|----|----|--|--|--------|----|-----|---------|-----|
| | 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, Toxota |
| 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 / circular bore- Ø 122mm), Perkins-4108, 504-2T/2LR Deutz-F2L511 |
| 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/circular bore- Ø 165mm und / and Zentrier- / Center- Ø 220mm) |
| 220 mm | B 42 / 45 / 48 | Kubota Super 3 Serie, D1403, D1703, V1903, V2203 (Lochkreis/circular bore- Ø 185mm und / and Zentrier- / Center- Ø 125mm) |