

# EDT-EDS-S100

PULEGGE  
PULLEYS  
SCHEIBEN



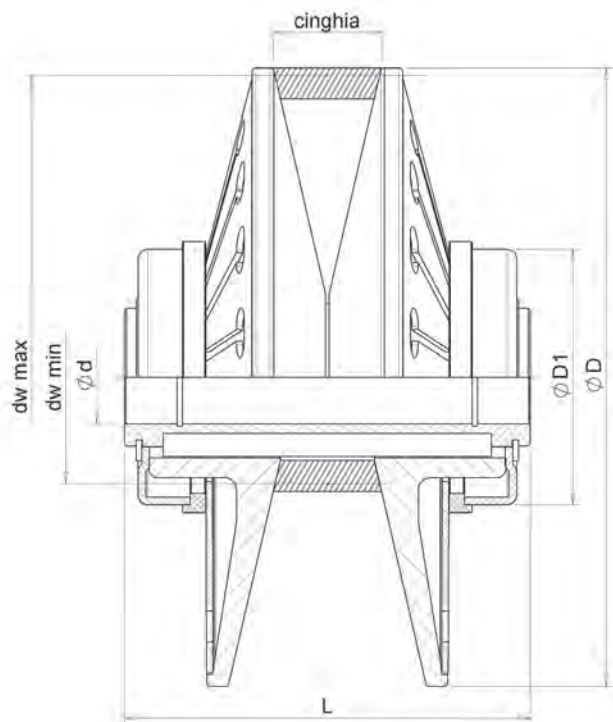


# **PULEGGE PULLEYS SCHEIBEN**

Quando la variazione di velocità deve essere continua, precisa e, soprattutto, esente da manutenzione, le pulegge espansibili Piazzalunga della serie EDT, EDS o S100 offrono una risposta adeguata al problema. Tutto ciò grazie all'ampia gamma di potenze applicabili ( $0.37 \div 18.5$  Kw) ed un rapporto di variazione 1:3, ma soprattutto grazie alle prestazioni consentite dai componenti: albero poligonale autolubrificante, semiflange in ghisa zincate o fosfatate, molle a diaframma o elicoidali in acciaio speciale al cromo-vanadio.

When speed variation must be continuous and precise, and above all free from maintenance, Piazzalunga EDT, EDS or S100 series expanding pulleys offer a suitable solution to the problem. This is possible thanks to the wide range of powers which can be applied ( $0.37 - 18.5$  Kw) and 1:3 variation ratio, but above all thanks to component performance: selflubricating polygonal shaft, galvanized or phosphatized cast iron semiflanges, flat or helical springs made of special chrome-vanadium steel.

Wenn die Geschwindigkeitsänderung stufenlos, präzise und vor allem wartungslos sein soll, so sind die spreizbaren Scheiben Piazzalunga der Serie EDT, EDS oder S100 eine geeignete Antwort des Problems. Dies dank der grossen Auswahl an anwendbaren Leistungen ( $0.37 - 18.5$  Kw) und einem Variationsverhältnis von 1:3, doch vor allem dank den durch die Komponenten ermöglichten Betriebsleistungen: vieleckige selbstschmierende Welle, Halbflanschen aus verzinktem oder phosphatiertem Gusseisen, Membranfedern oder Schraubenfeder aus ChromVanadium-Stahl.



## SERIE EDS

**SERIE EDS:** rapporto di variazione 1:3.

**EDS SERIES:** variation ratio 1:3.

**SERIE EDS:** Variationsverhältnis 1:3.



**AD ESAURIMENTO SCORTE** - sostituita dalla serie EDT

**END AVAILABILITY** - replaced by "serie EDT"

**ENTSORGUNG VON LAGERBESTÄNDEN** - sdurch serie EDT ersetzt

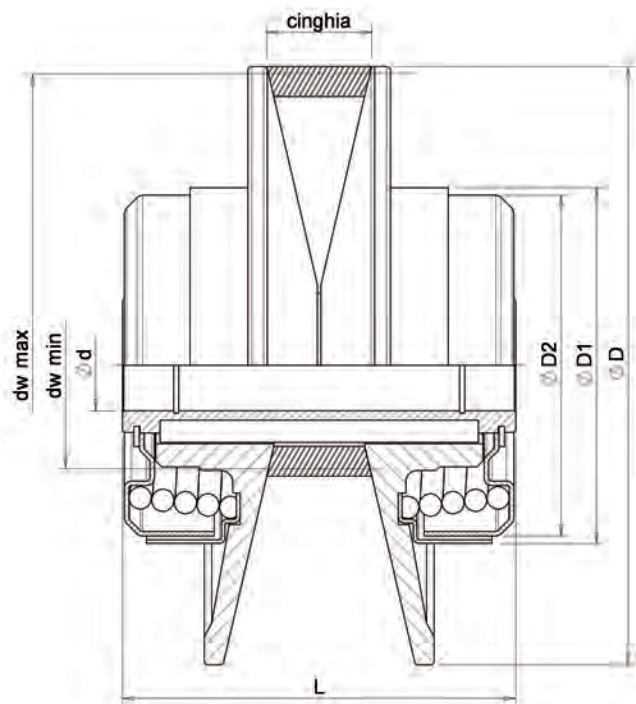
**TABELLA DIMENSIONALE (mm) - DIMENSIONS TABLE - GRÖSSENTABELLE**

| GRANDEZZA<br>SIZE<br>GRÖSSE                         | 130    | 160    | 185     | 200     | 225     | 270     | 300     | 330     | 360     |
|-----------------------------------------------------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| Potenza (Kw) - Power - Motorleistung <sup>(1)</sup> | 0,75   | 1,5    | 2,2     | 2,2     | 3       | 4       | 7,5     | 15      | 18,5    |
| Sezione cinghia - Belt - Riemen                     | 22 x 8 | 28 x 8 | 37 x 10 | 37 x 10 | 47 x 13 | 47 x 13 | 55 x 15 | 65 x 20 | 70 x 20 |
| ø d standard <sup>(2)</sup>                         | 14-19  | 19-24  | 24-28   | 24-28   | 28      | 28      | 38      | 38-42   | 42-48   |
| ø d max <sup>(2)</sup>                              | 22     | 25     | 30      | 30      | 30      | 42      | 42      | 42      | 50      |
| ø D                                                 | 130    | 160    | 185     | 195     | 225     | 270     | 300     | 330     | 360     |
| ø D1                                                | 58     | 66     | 66      | 66      | 85      | 85      | 115     | 115     | 115     |
| dw min                                              | 48     | 50     | 61      | 61      | 65      | 80      | 83      | 92      | 105     |
| dw max                                              | 126    | 156    | 180     | 190     | 218,5   | 263,5   | 292,5   | 320     | 350     |
| L                                                   | 92     | 105    | 125     | 125     | 140     | 150     | 180     | 220     | 220     |
| Peso (Kg) - Weight - Gewicht                        | 1,7    | 3      | 4,5     | 5       | 6,5     | 11      | 14      | 21      | 22      |

(1) MOTORI A 4 POLI 1400/1' - 4 POLES MOTORS 1400/1' - MOTOREN BEI 4 POLIG 1400/1'  
 (2) FORI - BORES - BOHRUNG: ISO H7  
 CAVE - KEYWAYS - NUT: UNI 6604/69 - DIN 6885/1-3

ESECUZIONI SPECIALI A RICHIESTA  
 SPECIAL VERSIONS ON REQUEST  
 SPEZIALAUSFÜHRUNGEN AUF ANFRAGE

DATI NON IMPEGNATIVI  
 NOT BINDING DATA  
 UNVERBINDLICHE DATEN



## SERIE EDT

**SERIE EDT:** rapporto di variazione 1:3.

**EDT SERIES:** variation ratio 1:3.

**SERIE EDS:** Variationsverhältnis 1:3.



**TABELLA DIMENSIONALE (mm) - DIMENSIONS TABLE - GRÖSSENTABELLE**

| GRANDEZZA<br>SIZE<br>GRÖSSE                         | 130    | 160    | 185 <sup>(3)</sup> | 200     | 225     | 270     | 300     | 330     | 360     |
|-----------------------------------------------------|--------|--------|--------------------|---------|---------|---------|---------|---------|---------|
| Potenza (Kw) - Power - Motorleistung <sup>(1)</sup> | 0,75   | 1,5    | 2,2                | 2,2     | 3       | 4       | 7,5     | 15      | 18,5    |
| Sezione cinghia - Belt - Riemen                     | 22 x 8 | 28 x 8 | 37 x 10            | 37 x 10 | 47 x 13 | 47 x 13 | 55 x 15 | 65 x 20 | 70 x 20 |
| ø d standard <sup>(2)</sup>                         | 14-19  | 19-24  | 24-28              | 24-28   | 28      | 28      | 38      | 38-42   | 42-48   |
| ø d max <sup>(2)</sup>                              | 22     | 25     | 30                 | 30      | 30      | 42      | 42      | 42      | 50      |
| ø D                                                 | 130    | 160    | 185                | 195     | 225     | 270     | 300     | 330     | 360     |
| ø D1                                                | 81     | 95     | 95                 | 95      | 106     | 133     | 201     | 201     | 201     |
| ø D2                                                | 77     | 91     | 91                 | 91      | 101     | 129     | 196     | 196     | 196     |
| d <sub>w</sub> min                                  | 51     | 56     | 65                 | 65      | 70      | 82,5    | 90,5    | 95      | 110     |
| d <sub>w</sub> max                                  | 126    | 156    | 180                | 190     | 219     | 236,5   | 292,5   | 320     | 350     |
| L                                                   | 92     | 105    | 125                | 125     | 140     | 150     | 180     | 220     | 220     |
| Peso (Kg) - Weight - Gewicht                        | 2      | 3,5    | 5                  | 5       | 7       | 14      | 18      | 25,5    | 27      |

(1) MOTORI A 4 POLI 1400/1' - 4 POLES MOTORS 1400/1' - MOTOREN BEI 4 POLIG 1400/1'

(2) FORI - BORES - BOHRUNG: ISO H7

(2) CAVE - KEYWAYS - NUT: UNI 6604/69 - DIN 6885/1-3

(3) FORNIBILE SOLO A RICHIESTA - ON REQUEST ONLY - AUF ANFRAGE

ESECUZIONI SPECIALI A RICHIESTA  
SPECIAL VERSIONS ON REQUEST  
SPEZIALAUSFÜHRUNGEN AUF ANFRAGE

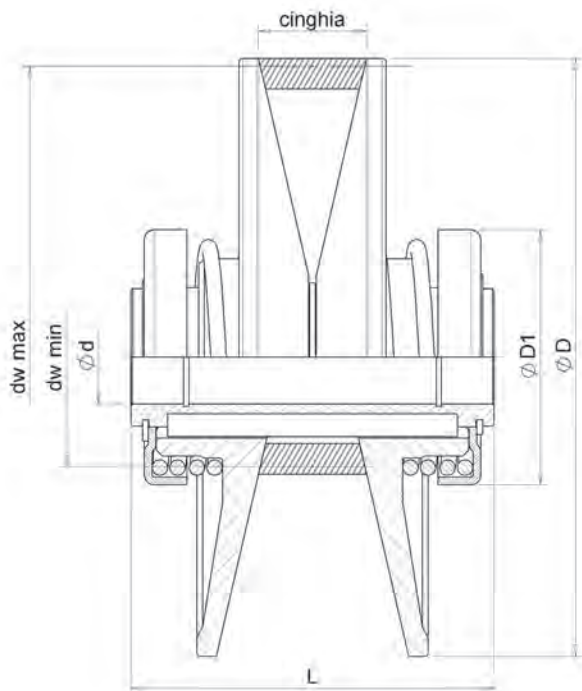
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**SERIE 100:** rapporto di variazione 1:3.

**100 SERIES:** variation ratio 1:3.

**SERIE 100:** Variationsverhältnis 1:3.



## SERIE 100



**TABELLA DIMENSIONALE (mm) - DIMENSIONS TABLE - GRÖSSENTABELLE**

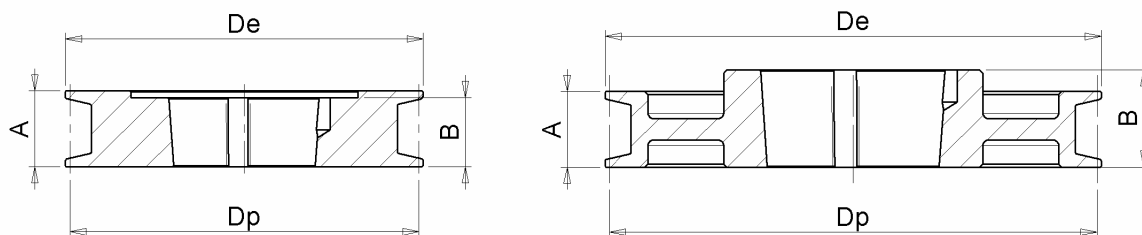
| GRANDEZZA<br>SIZE<br>GRÖSSE                         | 95     | 110    | 120    | 155    | 180    | 220     |
|-----------------------------------------------------|--------|--------|--------|--------|--------|---------|
| Potenza (Kw) - Power - Motorleistung <sup>(1)</sup> | 0,37   | 0,55   | 0,75   | 1,5    | 3      | 4       |
| Sezione cinghia - Belt - Riemen                     | 13 x 6 | 17 x 5 | 22 x 8 | 28 x 8 | 28 x 8 | 37 x 10 |
| Ø d standard <sup>(2)</sup>                         | 14     | 14-19  | 14-19  | 19-24  | 24-28  | 28      |
| Ø d max <sup>(2)</sup>                              | 20     | 20     | 22     | 25     | 30     | 30      |
| Ø D                                                 | 95     | 110    | 120    | 155    | 180    | 220     |
| Ø D1                                                | 58     | 58     | 58     | 66     | 85     | 85      |
| d <sub>w</sub> min                                  | 40     | 38,5   | 48     | 50     | 58     | 61      |
| d <sub>w</sub> max                                  | 92     | 107,5  | 116    | 151    | 176    | 215     |
| L                                                   | 65     | 72     | 72     | 94     | 110    | 130     |
| Peso (Kg) - Weight - Gewicht                        | 1      | 1,4    | 1,6    | 2,5    | 4      | 5       |

(1) MOTORI A 4 POLI 1400/1' - 4 POLES MOTORS 1400/1' - MOTOREN BEI 4 POLIG 1400/1'  
 (2) FORI - BORES - BOHRUNG: ISO H7  
 CAVE - KEYWAYS - NUT: UNI 6604/69 - DIN 6885/1-3

ESECUZIONI SPECIALI A RICHIESTA  
 SPECIAL VERSIONS ON REQUEST  
 SPEZIALAUSFÜHRUNGEN AUF ANFRAGE

DATI NON IMPEGNATIVI  
 NOT BINDING DATA  
 UNVERBINDLICHE DATEN

# PULEGGE CONDOTTE - DRIVEN PULLEYS



| CINGHIA | GRAND | TAPER | De    | Dp    | A    | B    | Peso [kg]<br>Weight [kg] |
|---------|-------|-------|-------|-------|------|------|--------------------------|
| 22x8    | 100   | 1610  | 99,6  | 95,6  | 28,0 | 25,0 | 0,60                     |
|         | 115   |       | 116,6 | 112,6 | 28,0 | 25,0 | 1,04                     |
|         | 130   |       | 129,6 | 125,6 | 28,0 | 25,0 | 1,44                     |
|         | 165   | 2012  | 164,6 | 160,6 | 28,0 | 32,0 | 2,89                     |
|         | 205   |       | 204,6 | 180,6 | 28,0 | 32,0 | 3,13                     |
| 28x8    | 130   | 1610  | 130,5 | 126,5 | 35,0 | 25,0 | 1,65                     |
|         | 165   | 2012  | 165,5 | 161,5 | 35,0 | 32,0 | 3,33                     |
|         | 230   | 2517  | 229,5 | 225,5 | 35,0 | 45,0 | 4,91                     |
|         | 320   |       | 320,5 | 316,5 | 35,0 | 45,0 | 8,21                     |
|         | 455   |       | 455,5 | 451,5 | 35,0 | 45,0 | 8,18                     |
| 37x10   | 185   | 2517  | 187,0 | 181,0 | 44,0 | 45,0 | 4,78                     |
|         | 230   |       | 231,0 | 225,0 | 44,0 | 45,0 | 5,44                     |
|         | 255   |       | 257,0 | 251,0 | 44,0 | 45,0 | 6,12                     |
|         | 320   |       | 322,0 | 316,0 | 44,0 | 45,0 | 8,66                     |
| 47x12   | 165   | 2517  | 165,5 | 159,0 | 50,0 | 45,0 | 3,50                     |
|         | 230   |       | 229,5 | 223,0 | 50,0 | 45,0 | 4,92                     |
|         | 263   |       | 255,5 | 249,0 | 50,0 | 45,0 | 5,75                     |
|         | 285   |       | 285,5 | 279,0 | 50,0 | 45,0 | 6,80                     |
|         | 320   | 3020  | 320,5 | 314,0 | 50,0 | 51,0 | 12,55                    |
|         | 405   |       | 405,5 | 399,0 | 50,0 | 51,0 | 9,00                     |
| 55x15   | 320   | 3020  | 322,0 | 314,5 | 63,0 | 51,0 | 9,45                     |
|         | 360   |       | 362,0 | 354,5 | 63,0 | 51,0 | 11,22                    |
|         | 405   | 3535  | 407,0 | 399,5 | 63,0 | 89,0 | 17,06                    |
|         | 460   |       | 457,0 | 449,5 | 63,0 | 89,0 | 18,91                    |
| 65x20   | 325   | 3535  | 325,0 | 314,6 | 80,0 | 89,0 | 16,56                    |
|         | 345   |       | 345,0 | 334,6 | 80,0 | 89,0 | 16,95                    |
|         | 365   |       | 365,0 | 354,6 | 80,0 | 89,0 | 17,70                    |
|         | 410   |       | 410,0 | 399,6 | 80,0 | 89,0 | 21,22                    |
|         | 460   |       | 460,0 | 449,6 | 80,0 | 89,0 | 23,08                    |
| 70x20   | 365   | 3535  | 365,0 | 355,0 | 85,0 | 89,0 | 17,93                    |
|         | 410   |       | 410,0 | 400,0 | 85,0 | 89,0 | 21,58                    |
|         | 460   |       | 460,0 | 450,0 | 85,0 | 89,0 | 23,48                    |
|         | 510   |       | 510,0 | 500,0 | 85,0 | 89,0 | 26,09                    |

## ESEMPIO CODIFICA - ITEM CODE EXAMPLE

| 90                 | V47                             | D0230                                 | T00          |
|--------------------|---------------------------------|---------------------------------------|--------------|
| Famiglia<br>Family | Sezione cinghia<br>Belt section | Diametro esterno<br>External diameter | Foro<br>Bore |



Per determinare i dati necessari al dimensionamento di una trasmissione ad interasse fisso risulterà comodo utilizzare le formule sottoelencate.

## 1. Determinazione dello sviluppo interno della cinghia

Considerando che i  $d_w$  riportati sul catalogo per convenzione sono calcolati come segue:

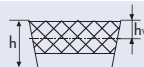
- 1.1 Determinare "di min" e "Di max" delle pulegge.
- 1.2 Calcolare lo sviluppo interno teorico della cinghia:

To determine the data required to size a transmission with fixed axle base, it is convenient to use the formulas given below.

## 1. Determination of the internal belt development

Considering that the  $d_w$  indicated in the catalogue are normally calculated as follows:

$$h_w = 0,25h$$



- 1.1 Determine the "min. di" and "max. Di" of the pulleys.
- 1.2 Calculate the theoretical internal development of the belt:

Zur Bestimmung der zur Bemessung eines Getriebes mit festem Achsenabstand erforderlichen Daten ist es zweckmässig, unten aufgeführte Formeln anzuwenden.

## 1. Bestimmung der Innenabwicklung des Riemens

Unter Berücksichtigung der Tatsache, dass die im Katalog angegebenen  $d_w$  laut Konvention wie folgt berechnet werden:

- 1.1 "di min." und "Di max." der Riemenscheiben bestimmen.
- 1.2 Die theoretische Innenabwicklung des Riemen berechnen:

$$L_i = 2A + \pi/2 (d_i + D_i) + \frac{(d_i - D_i)^2}{4A}$$

dove: A = interasse del variatore.  
di = diametro interno minimo contatto cinghia puleggia motrice.  
Di = diametro interno massimo contatto cinghia puleggia condotta.  
Li = sviluppo interno cinghia teorico.

## 2. Determinazione della corsa di regolazione della slitta portamotore

Nel caso di trasmissioni con pulegge a doppia espansione (EDS e S100) e condotte fisse si determinerà la corsa della slitta procedendo come segue:

where: A = variator axle base.  
di = minimum internal diameter of belt driving pulley.  
Di = maximum internal diameter of belt driven pulley.  
Li = theoretical internal belt development.

## 2. Determination of the adjustment stroke of the motor support slide

For transmission with two-way pulley expansion (EDS and S100) and fixed driven pulleys, the stroke of the slide is determined as follows:

wo: A = Achsenabstand des Variators.  
di = minimaler Innendurchmesser Kontakt Riemen Antriebsriemenscheibe.  
Di = maximaler Innendurchmesser Kontakt Riemen angetriebene Riemenscheibe.  
Li = theoretische Innenabwicklung Riemen.

## 2. Bestimmung der Einstellhub des Motorschlittens

Im Falle von Riemenscheibenantrieben mit doppelter Spreizung (EDS und S100) und fester angetriebener Riemenscheibe, wird die Hub des Schlittens wie folgt bestimmt:

$$A_{max} = 0,5 [L_i - \pi/2 (d_1 + D_2) - \frac{(d_1 - D_2)^2}{L_i}] \quad A_{min} = 0,5 [L_i - \pi/2 (D_1 + D_2) - \frac{(D_1 - D_2)^2}{L_i}]$$

$$A_{max} - A_{min} = \text{corsa/stroke/Hub}$$

dove: d1 = diametro interno minimo cinghia puleggia motrice.  
D1 = diametro interno massimo contatto cinghia puleggia motrice.  
D2 = diametro interno contatto cinghia puleggia condotta.  
Li = sviluppo interno cinghia teorico.

where: d1 = minimum internal diameter of belt driving pulley.  
D1 = maximum internal diameter of belt driving pulley.  
D2 = internal diameter of belt driven pulley contact.  
Li = theoretical internal belt development.

wo: d1 = minimaler Innendurchmesser Kontakt Riemen Antriebsriemenscheibe.  
D1 = maximaler Innendurchmesser Kontakt Riemen Antriebsriemenscheibe.  
D2 = Innendurchmesser Kontakt Riemen angetriebene Riemenscheibe.  
Li = Innenabwicklung Riemen.

Per ulteriori chiarimenti o per esecuzioni speciali contattate il nostro ufficio tecnico.

For further clarification or special versions, please contact our technical office.

Für weitere Erklärungen oder für Spezialausführungen wollen Sie sich bitte an unser technisches Büro wenden.