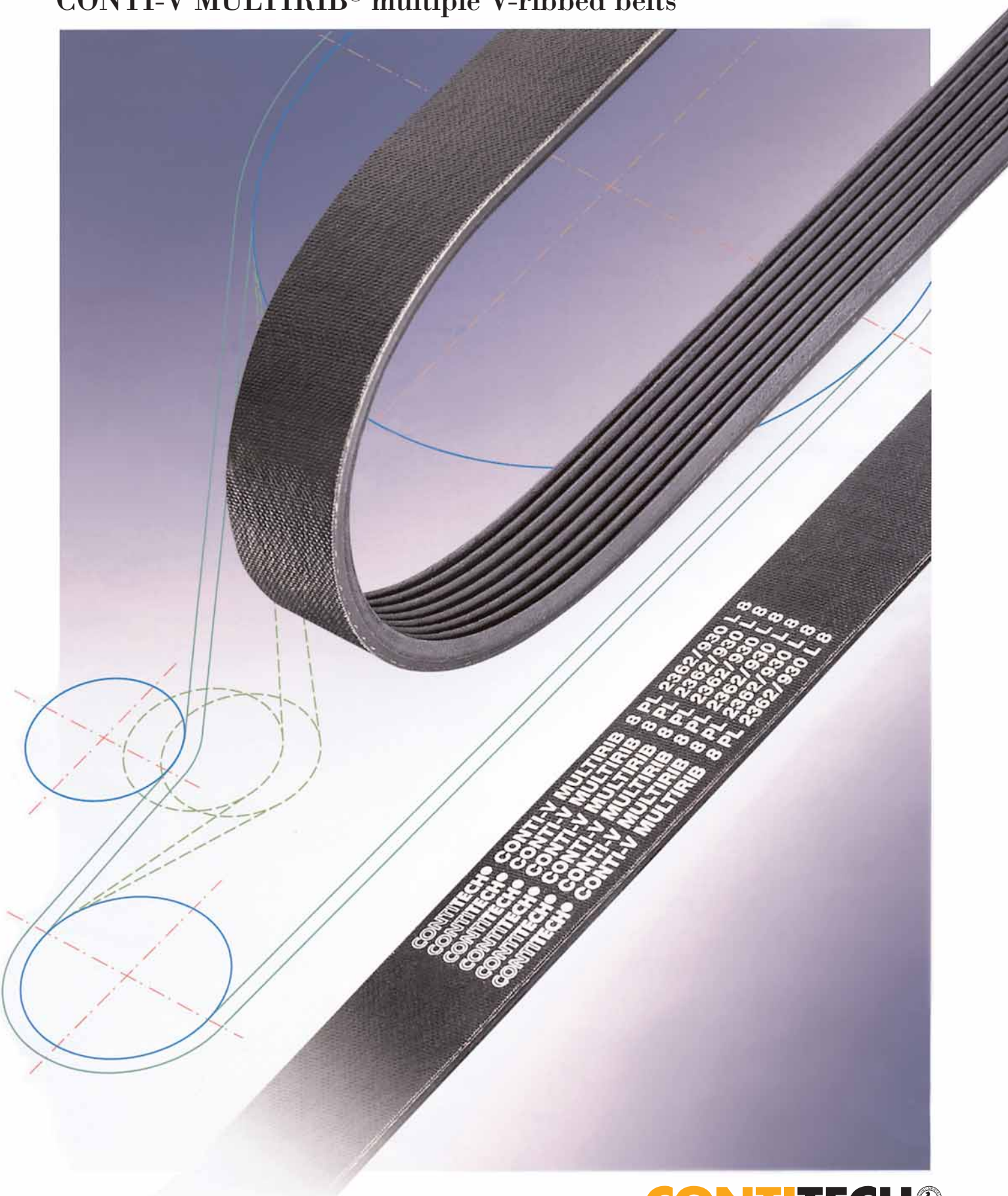
CONTI-V MULTIRIB® multiple V-ribbed belts



CONTITECH

ContiTech
Specialist in rubber and plastics technology

The ContiTech Division is a development partner and original equipment manufacturer for many branches of industry: with high-grade functional parts, components and systems. It is part of the Continental AG with 8 business units specialising in rubber and plastics technology and utilising their common know-how.

That's what the ContiTech brand is all about.

CONTITECH

TÜV CERT

CERTIFICATE

The TÜV CERT Certification Body of Rheinisch-Westfälischer TÜV e.V.

hereby certifies in accordance with TÜV CERT procedure that

ContiTech Antriebssysteme GmbH
Vahrenwald Plant
30165 Hannover/Germany

has established and applies a quality system for

Development, Manufacture and Sale of multiple V-ripped Belts, Raw-edged cogged V-belts, wrapped V-belts and Rubber toothed Belts

An audit was performed in accordance with the requirements of QS-9000, Appendix B, Code of Practice and documented in Report No. **20406778**

Proof has been furnished that the requirements according to **DIN EN ISO 9001 : 1994 and QS-9000 : 1998** are fulfilled.

The certificate is valid until **July 2003**

Certificate Registration No. **041017097**

RWTÜV

VDA TÜV CERT RWTÜV

SUPPLEMENTARY CERTIFICATE

The TÜV CERT Certification Body of Rheinisch-Westfälischer TÜV (RWTÜV) e.V.

VERBAND DER AUTOMOBILINDUSTRIE e.V. (VDA) / Cert. N° 07/97

certifies in accordance with TÜV CERT procedures that

ContiTech Antriebssysteme GmbH
Plant Vahrenwald
D-30165 Hannover
Location: Plant Vahrenwald

Producer of multiple V-ripped Belts, Raw-edged cogged V-belts, wrapped V-belts and Rubber toothed Belts for the Automotive Industry applies a

quality system in accordance with VDA 6, Part 1
- material products -

with product development

This supplementary certificate is only valid in conjunction with TÜV CERT Certificate, Registration No. **041017097**
It certifies that the QM-System is additionally qualified on the basis of the fulfilment of the requirements of VDA 6, Part 1 extending the requirements of DIN EN ISO 9001 : 1997 / QS-9000 : 1998.
Proof has been furnished within the framework of the certification audit, Report No. 20406778

This certificate is valid until **July 2003**
Date of issue **13.07.2000**

TÜV CERT Certification Body of Rheinisch-Westfälischer TÜV e.V.

SGS

SGS Yarsley International Certification Services

Certificate Number

Q3974

This is to certify that the Quality Management systems of

Contitech Power Transmission Systems Limited

have been assessed and registered as meeting the requirements of ISO 9001 : 1994 and QS-9000 : Third Edition and in accordance with QS-9000 Appendix E "Code of Practice"

Location:

PO Box 20
Leigh Road
Hindley Green
Wigan
WN2 4HZ

Product Area Assessed: Design, manufacture and supply of power transmission belting in accordance with Quality System Requirements QS-9000.

Upgraded to QS-9000 3rd Edition on 11 July 2000.
Certificate last updated 08 March 2001.
Certificate Issue 2

SGS Yarsley International Certification Services
Signed by

02 November 1994 — Original registration date
02 February 2001 — Certificate issue date

This certificate remains valid subject to satisfactory maintenance of the system for 4 years from the above certificate issue date.

SGS Yarsley International Certification Services is a division of SGS United Kingdom Ltd.
Registered in England No. 1155985
Registered Office:
SGS House, 217/221 London Road,
Camberley, Surrey GU15 3EY, United Kingdom.

QS 9000 SGS

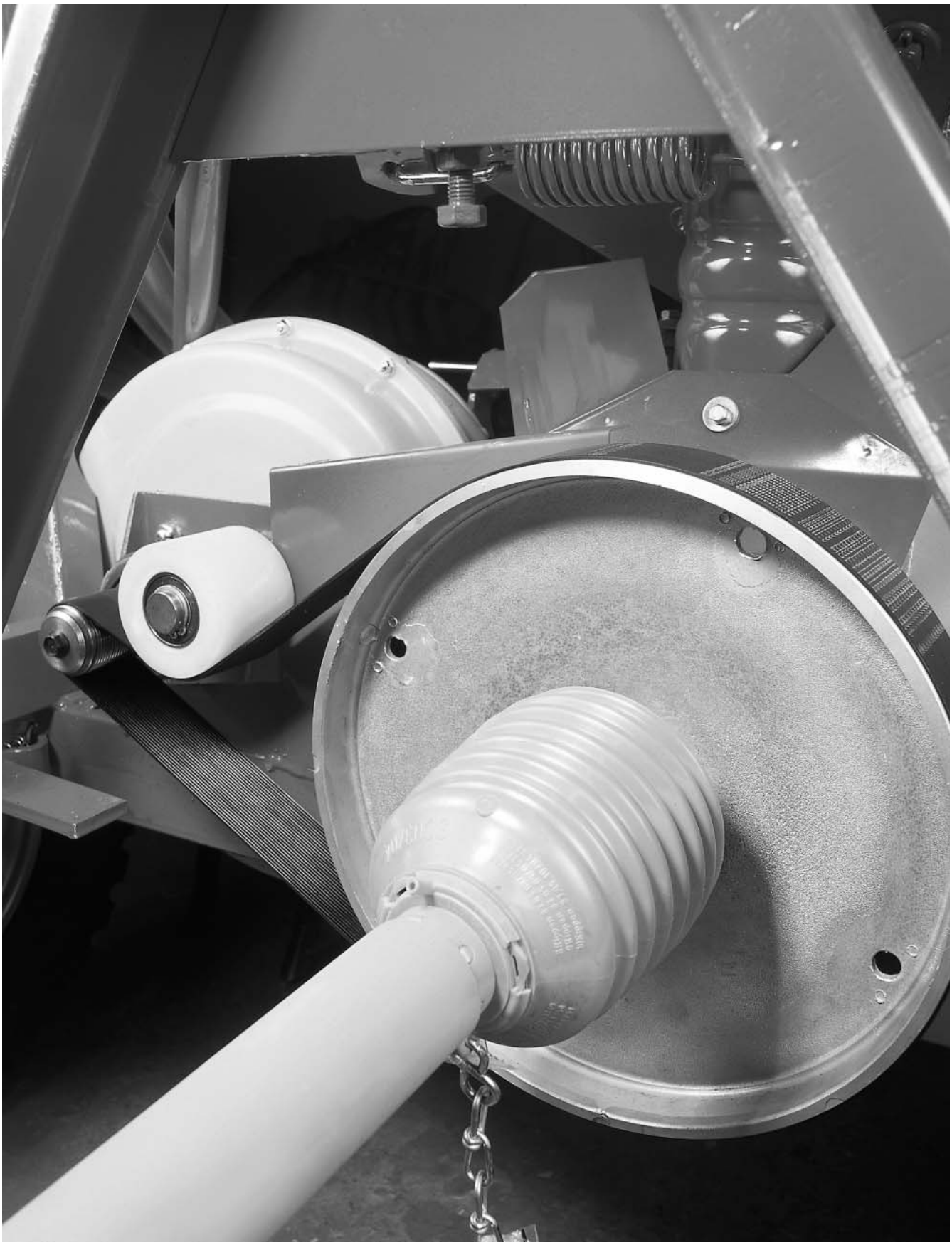
ISO 9001 SGS

UKAS QUALITY MANAGEMENT

005

Member of the SGS Group (Société Générale de Surveillance)

Product description



CONTI-V MULTIRIB® Multiple V-Ribbed Belt in a grain drill

Greater design flexibility with CONTI-V MULTIRIB® Multiple V-Ribbed Belts – for high transmission ratios, high belt speeds and serpentine drives.

CONTI-V MULTIRIB® Multiple V-Ribbed Belts are the result of constant further development of CONTI® Power Transmission Products. They combine the high flexibility of flat belts with the high power transmission capacity of V-belts.

CONTI-V MULTIRIB® Multiple V-Ribbed Belts allow low cost design, even with difficult drive system requirements such as high transmission ratios, high belt speeds, small pulley diameters and reverse-tensioning idlers.

They are particularly suitable for serpentine drives and provide a reliable and highly efficient element of friction transmission, compact drives.

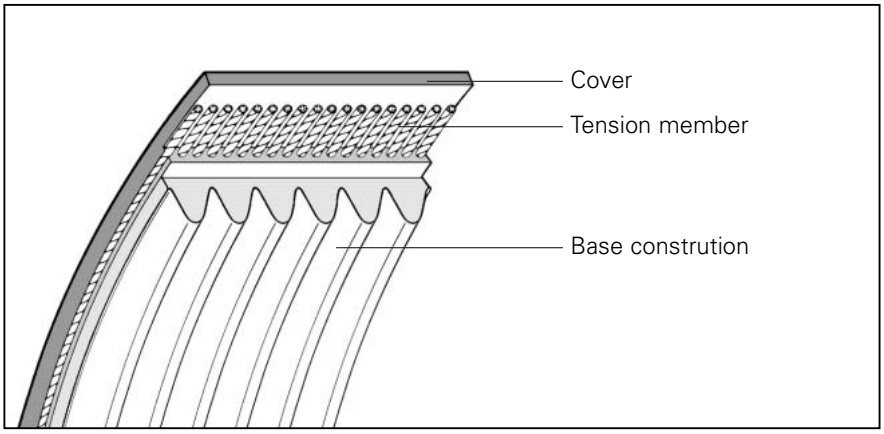
CONTI-V MULTIRIB® Multiple V-Ribbed Belts are available in 5 section sizes capable of transmitting anything from just a few watts to 20 kW per rib, and so cover a host of different applications from household appliances to heavy-duty machinery.

Modern production techniques and constant inprocess quality checks guarantee products with maximum reliability and high quality standards.

CONTI-V MULTIRIB® Multiple V-Ribbed Belts are versatile and can handle even the most difficult drive configurations another CONTI product creating new perspectives in today's drive technology.

CONTI-V MULTIRIB® Multiple V-Ribbed Belt in a washing machine

Construction



CONTI-V MULTIRIB® Multiple V-Ribbed Belts are made of first class materials and consist of the following three components:
– base construction
– tension member
– cover

Base construction
The base construction is made up of parallel V-shaped ribs in the direction of th belt travel. These ribs guarantee a good frictional engagement and ensure an even load distribution throughout the entire width of the belt. The polychloroprene-base elastomer is reinforced by transversely aligned fibres. It is hard wearing and virtually unaffected by ambient influences.

Tension member
The tension member consists of high-strength low-stretch polyester cords, which are continuously wound across the whole belt width, and encased in a special compound firmly bonded to the base construction.

Cover
The durable, flexible cover provides lasting protection of the tension member and permits the use of reverse-tensioning idlers.

Properties

High transmission ratio
The belt's construction ensures extremely high flexibility and consequently transmission ratios of up to 1:40 using pulleys of extremely small diameter.

High belt speed
Construction and materials allow high-speed drives with belt speeds of up to 60 m/s.

Compact drives
The outstanding flexibility permits a high reverse bending capacity at a belt flex frequency of up to 120 per second. This in turn means extremely small pulley diameters and allows counterflexing. Short centre distances and restricted spaces can be overcome by using reverse-tensioning idlers and serpentine drives.

High power transmission
Excellent frictional engagement and even load distribution across the entire belt width contribute to ensure an efficiency of 98%. For high power transmissions we can supply Multiple V-Ribbed Belts of the ZAR type which have aramid tension members. For lower power transmissions and high speed changes, CONTI-V MULTIRIB® Multiple V-Ribbed Belts can be used as V-flat drives.

Smooth running
No twisting in the pulley grooves due to the single belt design characteristics. This ensures low vibration and quiet operation.

Long service life
The tough, abrasion resistant materials can withstand high loading and dynamic stress. This assures long belt life and economical drives.

All standard **CONTI-V MULTIRIB® Multiple V-Ribbed Belts** are:
– designed for temperatures ranging from +80 °C to –30 °C
– resistant to certain oils
– unaffected by weathering
– resistant to effects of ozone
– suited to use in tropical climates
– electrically conductive

Designation

CONTI-V MULTIRIB® Multiple V-Ribbed Belts are fully specified by a coding system based on DIN 7867/ISO 9982 and showing the following data:
– number of ribs
– belt section
– effective length
– type

Examples

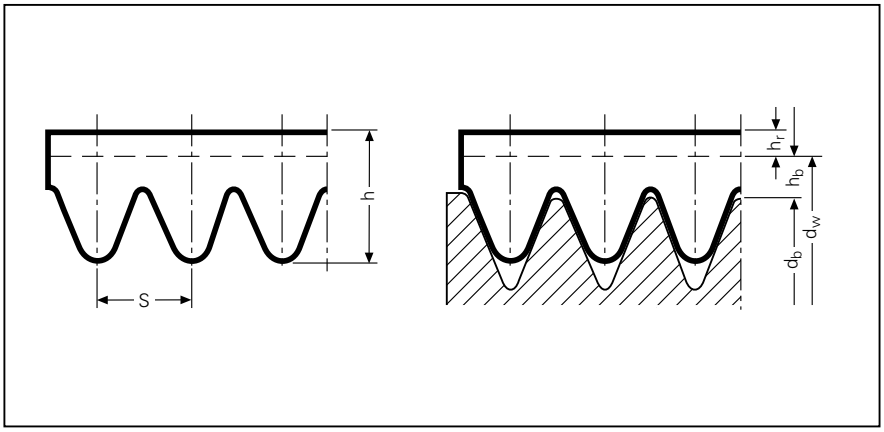
CONTI-V MULTIRIB® Multiple V-Ribbed Belts 6 PJ 1321/520 J 6

DIN/ISO designation	6 ____ number of ribs
	PJ ____ belt section
	1321 ____ effective length in mm
UK designation	520 ____ effective length in $^{1}/_{10}$ inch
	J ____ belt section
	6 ____ number of ribs

CONTI-V MULTIRIB® Multiple V-Ribbed Belts 8 PL 2070/815 L 8 ZAR

DIN/ISO designation	8 ____ number of ribs
	PL ____ belt section
	2070 ____ effective length in mm
UK designation	815 ____ effective length in $^{1}/_{10}$ inch
	L ____ belt section
	8 ____ number of ribs
Type designation	ZAR ____ Type with aramid tension member

Available sizes



Belt section Fig. 1

Characteristic sizes Table 1

Section DIN/ISO designation			PH	PJ	PK	PL	PM
Rib spacing s		mm	1.60	2.34	3.56	4.70	9.40
Belt height h ≈		mm	2.7	3.8	5.0	9.0/7.5*	14.5
Effective line differential h_b		mm	0.8	1.2	1.5	3.0	4.0
Back height h_r		mm	1.0	1.1	1.5	1.5	2.0
Minimum pulley diameter $d_{b\,min}$		mm	13	20	45	75	180
Maximum belt speed v_{max}		m/s	60	60	50	40	35
Weight per rib		kg/m	0.005	0.009	0.021	0.040/0.037*	0.120
Effective length range L_b	from	mm	1140	356	527	991/2324*	2286
	to	mm	1992	2489	2550	2235/6096*	16764

*Values for truncated profile.

Sections
CONTI-V MULTIRIB® Multiple V-Ribbed Belts comply with DIN and international standards.

Available sections and sizes are shown in the above table.

Lengths
CONTI-V MULTIRIB® Multiple V-Ribbed Belts are manufactured in graduated lengths, with successive lengths varying by small differences. The lengths are in compliance with international standards.

Available lengths are listed in Table 2.

Special types
CONTI-V MULTIRIB® Multiple V-Ribbed Belts are also available in the following special types:

ELAST elastic type for sections PH and PJ.
ZAR type with particularly high load carrying capacity. It has an aramid tension member. The belts are developed for use on commercially available standard pulleys.
Section PL available from 2019 mm length
Section PM available from 2268 mm length

The properties of standard CONTI-V MULTIRIB® Multiple V-Ribbed Belts are listed on page 6.

Standard lengths of CONTI-V MULTIRIB® Multiple V-Ribbed Belts

Table 2

Section PH*

Effective length L_b mm	1/10 inch
1580	622
1600	630
1874	738
1890	744
1915	754
1930	760
1951	768
1980	780
1992	784

*on request

Section PJ

Effective length L_b mm	1/10 inch
356	140
381	150
406	160
432	170
457	180
483	190
508	200
559	220
584	230
610	240
660	260
686	270
711	280
737	290
762	300
787	310
813	320
838	330
864	340
889	350
914	360
965	380
991	390
1016	400
1054	415
1092	430
1143	450
1168	460
1194	470
1219	480
1245	490
1270	500
1295	510
1321	520
1372	540
1397	550
1461	575
1473	580
1549	610
1600	630
1626	640
1651	650
1702	670
1753	690
1778	700
1854	730
1915	754
1930	760
1956	770
1981	780
2019	795
2083	820
2210	870
2286	900
2337	920
2489	980

Section PK

Effective length L_b mm	1/10 inch
527	207
630	248
648	255
698	275
730	287
770	303
810	319
830	327
880	346
920	362
960	378
1000	394
1035	407
1130	445
1205	474
1280	504
1314	517
1397	550
1420	559
1460	575
1480	583
1520	598
1549	610
1610	634
1645	648
1664	655
1725	679
1843	726
1885	742
1980	780
2031	800
2080	819
2164	852
2236	880
2550	1004

Futher lengths on request

Section PL

Effective length L_b mm	1/10 inch
991	390
1041	410
1149	452
1168	460
1194	470
1219	480
1270	500
1295	510
1321	520
1334	525
1346	530
1372	540
1397	550
1422	560
1435	565
1473	580
1499	590
1562	615
1613	635
1651	650
1664	655
1715	675
1765	695
1803	710
1841	725
1943	765
1956	770
1981	780
2019	795
2070	815
2096	825
2134	840
2195	865
2235	880
2324	915
2362	930
2477	975
2515	990
2705	1065
2743	1080
2845	1120
2895	1140
2921	1150
2997	1180
3085	1215
3124	1230
3289	1295
3327	1310
3492	1375
3696	1455
4051	1595
4191	1650
4470	1760
4622	1820
5029	1980
5385	2120
6096	2400

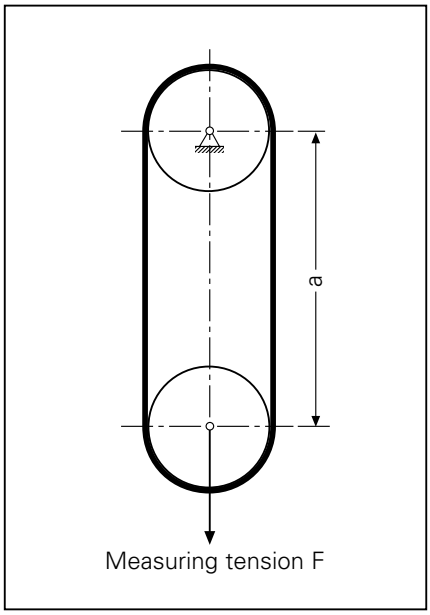
Section PM

Effective length L_b mm	1/10 inch
2286	900
2388	940
2515	990
2693	1060
2832	1115
2921	1150
3010	1185
3124	1230
3327	1310
3531	1390
3734	1470
4089	1610
4191	1650
4470	1760
4648	1830
5029	1980
5410	2130
6121	2410
6883	2710
7646	3010
8408	3310
9169	3610
9931	3910
10693	4210
12217	4810
13741	5410
15266	6010
16764	6600

Length tolerances for CONTI-V MULTIRIB® Multiple V-Ribbed Belts

(measurements in mm) Table 3

Profil PH		**Profil PJ**		**Profil PK**		**Profil PL**		**Profil PM**	
Effective length L_b	Tolerance	Effective length L_b	Tolerance	Effective length L_b	Tolerance	Effective length L_b	Tolerance	Effective length L_b	Tolerance
all lengths	±5	356–1500	±5	527–1000	±5	991–2000	±7	2286–3000	±15
		1501–2000	±7	1001–1500	±6	2001–2600	±10	3001–5000	±20
		2001–2500	±10	1501–2550	±8	2601–3000	±15	5001–6500	±30
						3001–5000	±20	6501–9000	±45
						5001–6100	±30	9001–13000	±60
								13001–16800	±90



Length measurement Fig. 2

Length measurement

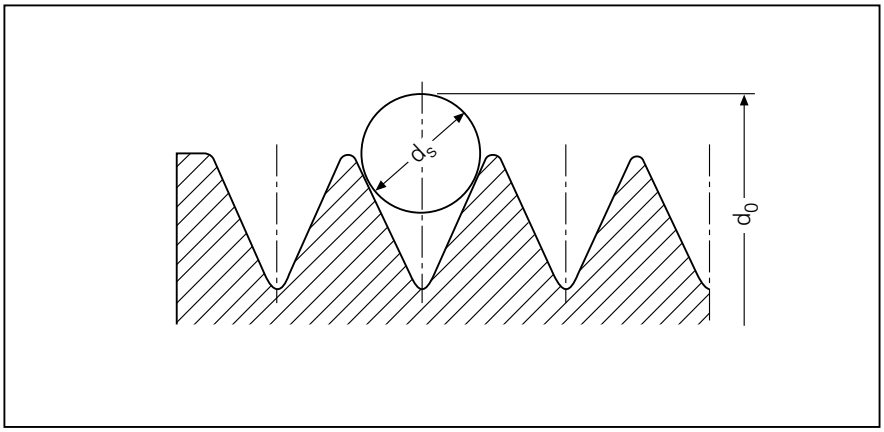
The effective length is the length that is calculated using this catalogue and used to designate a CONTI-V MULTIRIB® Multiple V-Ribbed Belt.

The CONTI-V MULTIRIB® Multiple V-Ribbed Belt length is measured – as standardised in DIN 7867 – using two pulleys with the same diameter (see Fig. 2).

The effective circumference of the measuring pulleys as well as the measuring tension per rib are both shown in Table 4.

The effective length L_b is calculated from twice the centre distance "a" plus the effective circumference of the measuring pulley U_b.

$$L_b = 2\,a + U_b$$



Measuring pulley Fig. 3

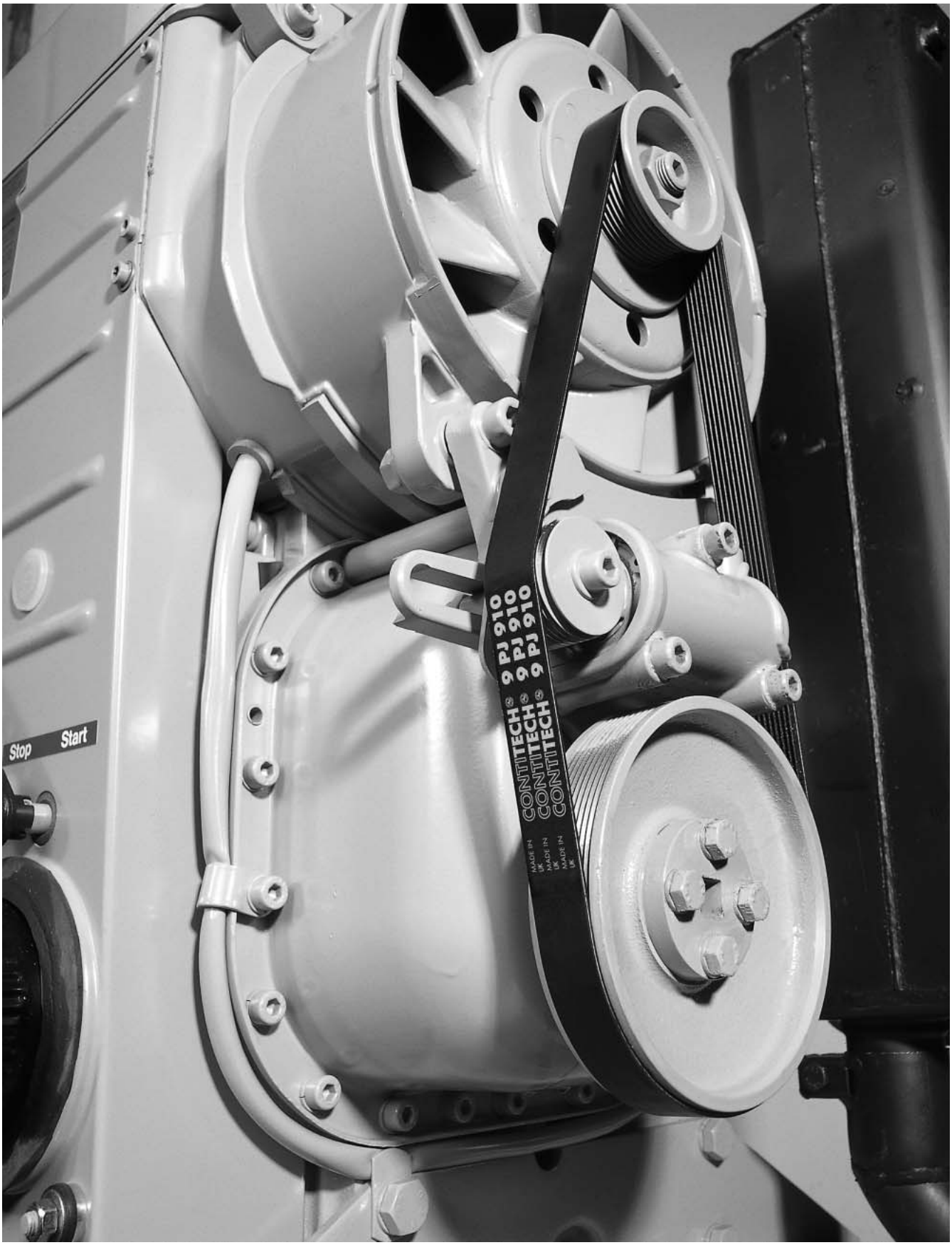
Measuring pulleys and measuring tension

Table 4

Section		PH	PJ		PK	PL	PM
Effective length of belt	mm	all lengths	<559	≧559	all lengths	all lengths	all lengths
Effective circumference U_b of pulley	mm	300	100	300	300	500	800
Diameter over rod d_0 ± 0.13	mm	95.60	32.06	95.72	96.48	161.51	259.17
Rod diameter d_s ± 0.011	mm	1.0	1.5	1.5	2.5	3.5	7.0
Measuring tension F per rib	N	30	50	50	100	200	450

Further information is given in Section 2 on "Multi-grooved pulleys", page 13

Multi-grooved pulleys



CONTI-V MULTIRIB® Multiple V-Ribbed Belt on an internal combustion engine

Multi-grooved pulleys

The performance of a Multiple V-Ribbed Belt drive is affected to a large extent by the multi-grooved pulleys contained in the drive. Pulleys should be manufactured to DIN 7867/ISO 9982 specifications.

Multi-grooved pulleys are made of materials widely used in mechanical engineering, such as St 37 and steel of higher strength ratings, grey cast iron (e.g. GG 20) with no signs of bubbles or other surface irregularities, as well as aluminium alloys with coated surface.

Selection

– Only use recommended pulley diameters.
  The effective diameter d_b of the small pulley is shown for each section size in the first column of the "Power capacity rating" tables on Pages 32 to 45. In general, the effective diameters have been selected according to the R-20 series.

– Never use below minimum pulley diameters.
  Pulley diameters smaller than those recommended will shorten the belt's life and hence impair the economical and reliable operation of the drive.

– Try to select relatively large pulley diameters.
  Large pulley diameters have a positive impact on the service life of the belt. However, care should be taken to ensure that the maximum belt speed is not exceeded. Drive economy factors should also be taken into consideration for each individual case. Where a high transmission ratio and low power are required, a flat pulley may also be used as the large pulley.

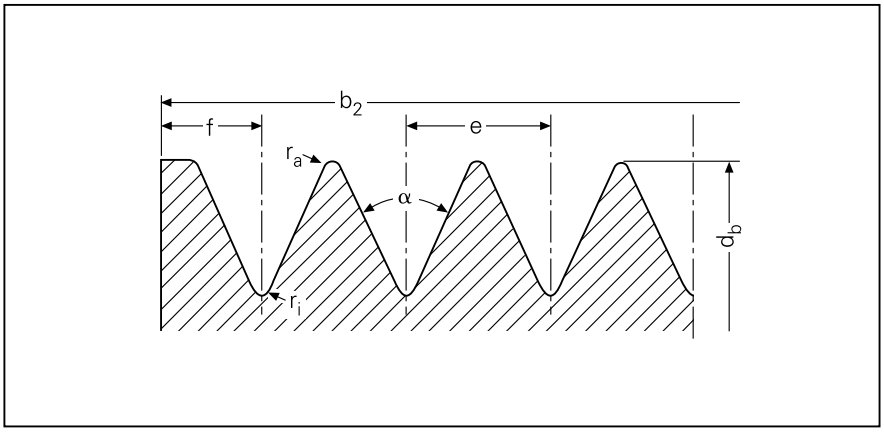
Pulleys in service

– Multigrooved pulleys must be clean and entirely free from burr. They are to be correctly aligned and installed parallel to the axis.

– Pulleys that are damaged – e.g. bent, worn or corroded – should be replaced without delay.

Further information is given in Section 5 on "Installation and storage of multiple V-Ribbed belts", Page 62.

Sizes



Cross-section of pulley grooves Fig. 4

Groove profiles and dimensions (dimensions in mm) Table 5

Section acc. DIN/ISO designation		PH	PJ	PK	PL	PM
Groove spacing e		1.60	2.34	3.56	4.70	9.40
Permissible deviation from e		±0.03	±0.03	±0.05	±0.05	±0.08
Sum of permissible deviations from e		±0.30	±0.30	±0.30	±0.30	±0.30
f_{min}		1.3	1.8	2.5	3.3	6.4
Groove angle α	±0.5°	40°	40°	40°	40°	40°
Top radius $r_{a\ min}$		0.15	0.20	0.25	0.40	0.75
Bottom radius $r_{i\ max}$		0.30	0.40	0.50	0.40	0.75
Minimum effective diameter $d_{b\ min}$		13	20	45	75	180
Minimum face width b_2 where number of grooves is z	3	5.8	8.28	12.12	16.0	31.6
	4	7.4	10.62	15.68	20.7	41.0
$b_2 = (z - 1) \cdot e + 2f$	5	9.0	12.96	19.24	25.4	50.4
	6	10.6	15.30	22.80	30.1	59.8
	7	12.2	17.64	26.36	34.8	69.2
	8	13.8	19.98	29.92	39.5	78.6
	9	15.4	22.32	33.48	44.2	88.0
	10	17.0	24.66	37.04	48.9	97.4

Fig. 4 is not a scale drawing, but for reference purposes only.
Full details are contained in DIN 7867/ISO 9982/BS 7620

Designation

Designation of multi-grooved pulleys to DIN 7867/ISO 9982 specifications shows the number of grooves, belt section and the effective diameter.

Example

Multigrooved pulley – P 6 PJ 100 1R

P _____ designation for multi-grooved pulleys
6 _____ number of grooves
PJ _____ belt section
100 _____ effective diameter in mm
1R _____ type of pulley

Diameters

d_b — effective diameter
d_w — pitch diameter
h_b — effective line differential

Effective diameter
The effective diameter d_b of a multigrooved pulley is the key factor when the length and design power of a drive are calculated.

Pitch diameter
The pitch diameter d_w is used to calculate the transmission ratio. It is the sum of the effective diameter d_b and twice the effective line differential h_b.

$$d_w = d_b + 2\ h_b$$

The values h_b for the effective line differential are given in Table 6.

Effective line differential h_b — Table 6

Belt section	PH	PJ	PK	PL	PM
Effective line differential h_b mm	0.8	1.2	1.5	3.0	4.0

Tolerances

Tolerances for the effective diameter, radial and axial runout are specified in DIN 7867.

Permissible tolerance for the diameters — Table 7

Effective diameter d_b in mm	Tolerance mm
≦ 74	6 grooves or less; 0.10
	plus 0.003 for each additional groove
> 74–500	10 grooves or less; 0.15
	plus 0.005 for each additional groove
> 500	10 grooves or less; 0.25
	plus 0.010 for each additional groove

Radial runout tolerance — Table 8

Effective diameter d_b mm	Tolerance in mm
≦ 74	0.13
> 74–250	0.25
> 250	0.25 + 0.0004 per mm effective diameter above 250

Axial runout tolerance
Axial runout tolerance may not exceed 0.002 mm per mm of effective diameter.

Surface finish

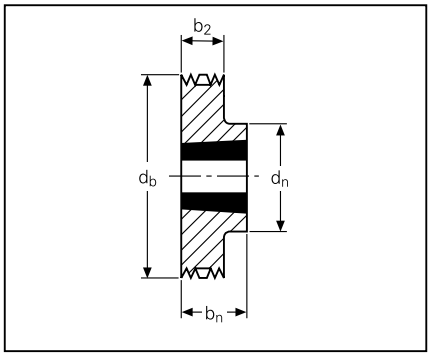
Surface texture of multigrooved pulleys should not exceed R_z 16 µm. A greater roughness index could shorten the service life of the belt.

Multi-grooved pulleys with taper bushes, standard range

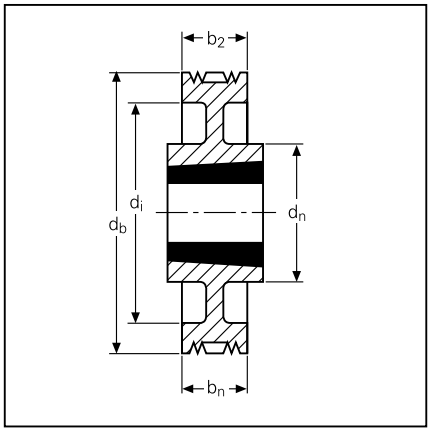
For the sections PJ and PL the measurements of the most common types of pulleys with standard diameters and a standard number of grooves are shown in Tables 9 to 17. They also list the designations and bore diameters of corresponding taper bushes.

Tolerance of pilot bore in accordance with DIN 7157 H 7.

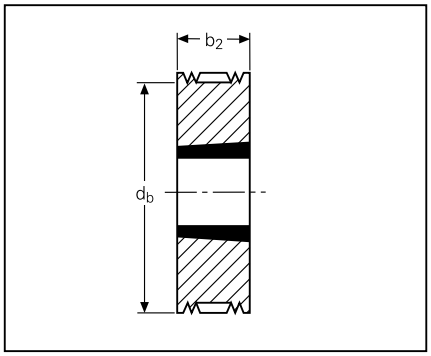
Dimensions of taper bushes are shown on page 19.



Type 1R



Type 6



Type 2

Section PJ – With 4 grooves

Table 9

Face width 13.5 mm (measurements in mm)

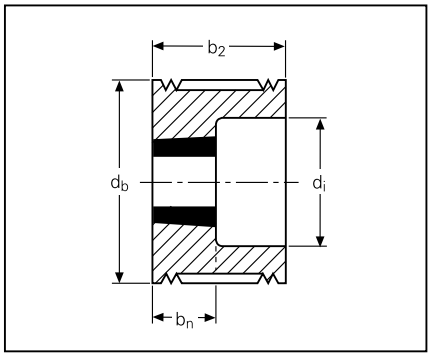
Multi-grooved pulley					Taper bush				
Effective Ø d_b	Pitch Ø d_w	Hub Ø d_n	Recess Ø d_i	Hub width b_n	Designation	Bore diameter max. $d_{v\,max}$	Bore diameter min. $d_{v\,min}$	Pulley designation	Type
56	58.4	50	–	23	1108	24	10	P4PJ56–1108	1R
60	62.4	50	–	23	1108	24	10	P4PJ60–1108	1R
63	65.4	50	–	23	1108	24	10	P4PJ63–1108	1R
67	69.4	50	–	23	1108	24	10	P4PJ67–1108	1R
71	73.4	60	–	23	1108	24	10	P4PJ71–1108	1R
75	77.4	60	–	23	1108	24	10	P4PJ75–1108	1R
80	82.4	70	–	26	1310	32	14	P4PJ80–1310	1R
85	87.4	70	–	26	1310	32	14	P4PJ85–1310	1R
90	92.4	82	–	26	1610	38	14	P4PJ90–1610	1R
95	97.4	82	–	26	1610	38	14	P4PJ95–1610	1R
100	102.4	82	–	26	1610	38	14	P4PJ100–1610	1R
112	114.4	92	–	26	1610	38	14	P4PJ112–1610	1R
125	127.4	92	–	26	1610	38	14	P4PJ125–1610	1R
140	142.4	92	–	26	1610	38	14	P4PJ140–1610	1R
160	162.4	112	–	32	2012	48	19	P4PJ160–2012	1R
180	182.4	112	164	32	2012	48	19	P4PJ180–2012	6
200	202.4	112	184	32	2012	48	19	P4PJ200–2012	6
250	252.4	112	234	32	2012	48	19	P4PJ250–2012	6

Section PJ – With 8 grooves

Table 10

Face width 23 mm (measurements in mm)

Multi-grooved pulley					Taper bush				
Effective Ø d_b	Pitch Ø d_w	Hub Ø d_n	Recess Ø d_i	Hub width b_n	Designation	Bore diameter max. $d_{v\,max}$	Bore diameter min. $d_{v\,min}$	Pulley designation	Type
56	58.4	–	–	23	1108	24	10	P8PJ56–1108	2
60	62.4	–	–	23	1108	24	10	P8PJ60–1108	2
63	65.4	–	–	23	1108	24	10	P8PJ63–1108	2
67	69.4	–	–	23	1108	24	10	P8PJ67–1108	2
71	73.4	–	–	23	1108	24	10	P8PJ71–1108	2
75	77.4	–	–	23	1108	24	10	P8PJ75–1108	2
80	82.4	70	–	26	1310	32	14	P8PJ80–1310	1R
85	87.4	70	–	26	1310	32	14	P8PJ85–1310	1R
90	92.4	82	–	26	1610	38	14	P8PJ90–1610	1R
95	97.4	82	–	26	1610	38	14	P8PJ95–1610	1R
100	102.4	82	–	26	1610	38	14	P8PJ100–1610	1R
112	114.4	92	–	26	1610	38	14	P8PJ112–1610	1R
125	127.4	92	–	26	1610	38	14	P8PJ125–1610	1R
140	142.4	92	–	26	1610	38	14	P8PJ140–1610	1R
160	162.4	112	–	32	2012	48	19	P8PJ160–2012	1R
180	182.4	112	164	32	2012	48	19	P8PJ180–2012	6
200	202.4	112	184	32	2012	48	19	P8PJ200–2012	6
250	252.4	112	234	32	2012	48	19	P8PJ250–2012	6



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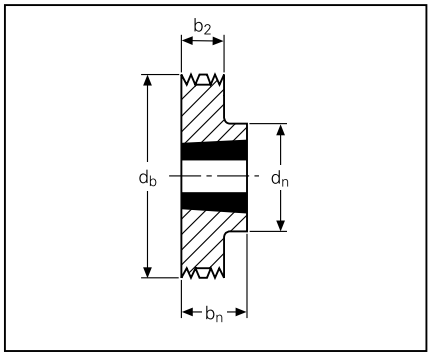

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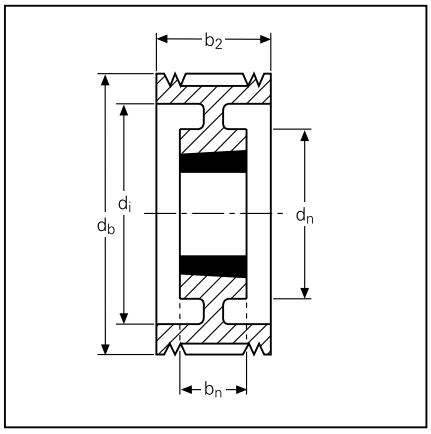


Type 5

Section PJ – With 12 grooves

Table 11

Face width 32.5 mm (measurements in mm)

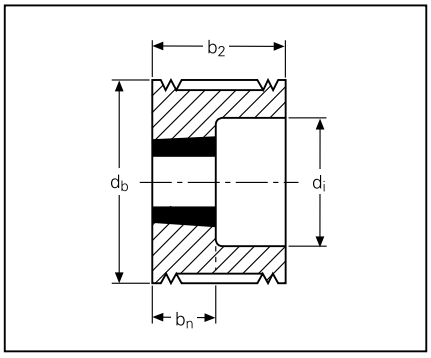
Multi-grooved pulley					Taper bush				
Effective Ø d_b	Pitch Ø d_w	Hub Ø d_n	Recess Ø d_i	Hub width b_n	Designation	Bore diameter max. $d_{v\,max}$	Bore diameter min. $d_{v\,min}$	Pulley designation	Type
67	69.4	–	51	23	1108	24	10	P12PJ67–1108	3R
71	73.4	–	55	23	1108	24	10	P12PJ71–1108	3R
75	77.4	–	59	26	1610	38	14	P12PJ75–1610	3R
80	82.4	–	64	26	1610	38	14	P12PJ80–1610	3R
85	87.4	–	69	26	1610	38	14	P12PJ85–1610	3R
90	92.4	–	74	26	1610	38	14	P12PJ90–1610	3R
95	97.4	–	79	26	1610	38	14	P12PJ95–1610	3R
100	102.4	–	82	26	1610	38	14	P12PJ100–1610	3R
112	114.4	–	94	26	1610	38	14	P12PJ112–1610	3R
125	127.4	–	105	32	2012	48	19	P12PJ125–2012	3R
140	142.4	124	–	45	2517	60	18	P12PJ140–2517	1R
160	162.4	124	–	45	2517	60	18	P12PJ160–2517	1R
180	182.4	124	160	45	2517	60	18	P12PJ180–2517	5
200	202.4	124	180	45	2517	60	18	P12PJ200–2517	5
250	252.4	124	230	45	2517	60	18	P12PJ250–2517	5

Section PJ – With 16 grooves

Table 12

Face width 42.0 mm (measurements in mm)

Multi-grooved pulley					Taper bush				
Effective Ø d_b	Pitch Ø d_w	Hub Ø d_n	Recess Ø d_i	Hub width b_n	Designation	Bore diameter max. $d_{v\,max}$	Bore diameter min. $d_{v\,min}$	Pulley designation	Type
80	82.4	–	64	26	1610	38	14	P16PJ80–1610	3R
85	87.4	–	69	26	1610	38	14	P16PJ85–1610	3R
90	92.4	–	74	26	1610	38	14	P16PJ90–1610	3R
95	97.4	–	79	26	1610	38	14	P16PJ95–1610	3R
100	102.4	–	82	26	1610	38	14	P16PJ100–1610	3R
112	114.4	–	94	26	1610	38	14	P16PJ112–1610	3R
125	127.4	–	105	32	2012	48	19	P16PJ125–2012	3R
140	142.4	124	–	45	2517	60	18	P16PJ140–2517	1R
160	162.4	124	–	45	2517	60	18	P16PJ160–2517	1R
180	182.4	124	160	45	2517	60	18	P16PJ180–2517	5
200	202.4	124	180	45	2517	60	18	P16PJ200–2517	5
250	252.4	124	230	45	2517	60	18	P16PJ250–2517	5



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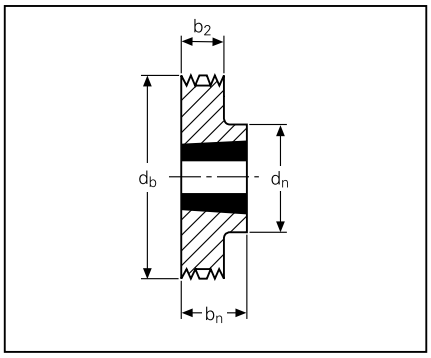

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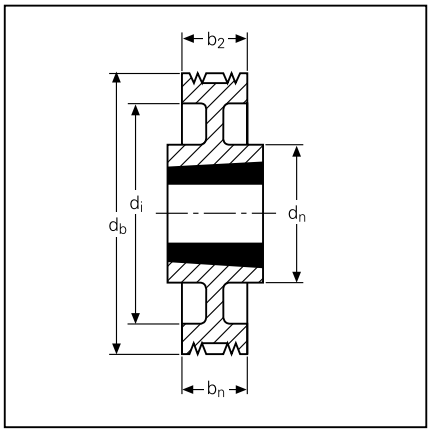
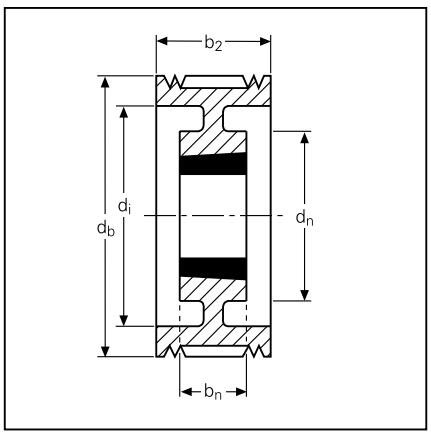


Type 6



Type 5

Section PL – With 6 grooves

Table 13

Face width 38.5 mm (measurements in mm)

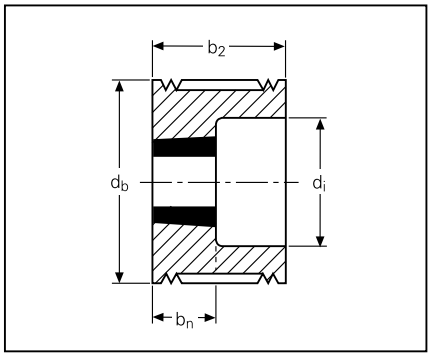
Multi-grooved pulley					Taper bush				
Effective Ø d_b	Pitch Ø d_w	Hub Ø d_n	Recess Ø d_i	Hub width b_n	Designation	Bore diameter max. $d_{v\,max}$	Bore diameter min. $d_{v\,min}$	Pulley designation	Type
100	106	–	76	26	1610	38	14	P6PL100–1610	3R
106	112	–	82	26	1610	38	14	P6PL106–1610	3R
112	118	–	88	26	1610	38	14	P6PL112–1610	3R
118	124	–	94	32	2012	48	19	P6PL118–2012	3R
125	131	–	101	32	2012	48	19	P6PL125–2012	3R
132	138	–	108	32	2012	48	19	P6PL132–2012	3R
140	146	124	–	45	2517	60	18	P6PL140–2517	1R
150	156	124	–	45	2517	60	18	P6PL150–2517	1R
160	166	124	–	45	2517	60	18	P6PL160–2517	1R
170	176	124	–	45	2517	60	18	P6PL170–2517	1R
180	186	124	156	45	2517	60	18	P6PL180–2517	6
190	196	124	166	45	2517	60	18	P6PL190–2517	6
200	206	124	176	45	2517	60	18	P6PL200–2517	6
212	218	124	188	45	2517	60	18	P6PL212–2517	6
224	230	124	200	45	2517	60	18	P6PL224–2517	6
236	242	124	212	45	2517	60	18	P6PL236–2517	6
250	256	124	226	45	2517	60	18	P6PL250–2517	6
280	286	124	256	45	2517	60	18	P6PL280–2517	6
315	321	124	285	45	2517	60	18	P6PL315–2517	6
355	361	146	325	52	3020	75	35	P6PL355–3020	6
400	406	146	370	52	3020	75	35	P6PL400–3020	6
500	506	146	470	52	3020	75	35	P6PL500–3020	6
630	636	146	600	52	3020	75	35	P6PL630–3020	6
800	806	178	770	89	3535	85	48	P6PL800–3535	6

Section PL – With 8 grooves

Table 14

Face width 48.0 mm (measurements in mm)

Multi-grooved pulley					Taper bush				
Effective Ø d_b	Pitch Ø d_w	Hub Ø d_n	Recess Ø d_i	Hub width b_n	Designation	Bore diameter max. $d_{v\,max}$	Bore diameter min. $d_{v\,min}$	Pulley designation	Type
100	106	–	76	26	1610	38	14	P8PL100–1610	3R
106	112	–	82	26	1610	38	14	P8PL106–1610	3R
112	118	–	88	26	1610	38	14	P8PL112–1610	3R
118	124	–	94	32	2012	48	19	P8PL118–2012	3R
125	131	–	101	32	2012	48	19	P8PL125–2012	3R
132	138	–	108	32	2012	48	19	P8PL132–2012	3R
140	146	–	116	45	2517	60	18	P8PL140–2517	3R
150	156	–	126	45	2517	60	18	P8PL150–2517	3R
160	166	–	136	45	2517	60	18	P8PL160–2517	3R
170	176	–	146	45	2517	60	18	P8PL170–2517	3R
180	186	124	156	45	2517	60	18	P8PL180–2517	5
190	196	124	166	45	2517	60	18	P8PL190–2517	5
200	206	124	176	45	2517	60	18	P8PL200–2517	5
212	218	124	188	45	2517	60	18	P8PL212–2517	5
224	230	124	200	45	2517	60	18	P8PL224–2517	5
236	242	124	212	45	2517	60	18	P8PL236–2517	5
250	256	124	226	45	2517	60	18	P8PL250–2517	5
280	286	146	256	52	3020	75	35	P8PL280–3020	6
315	321	146	285	52	3020	75	35	P8PL315–3020	6
355	361	146	325	52	3020	75	35	P8PL355–3020	6
400	406	146	370	52	3020	75	35	P8PL400–3020	6
500	506	146	470	52	3020	75	35	P8PL500–3020	6
630	636	146	600	52	3020	75	35	P8PL630–3020	6
800	806	178	770	89	3535	85	48	P8PL800–3535	6



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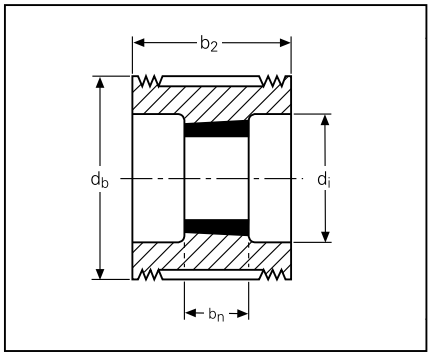

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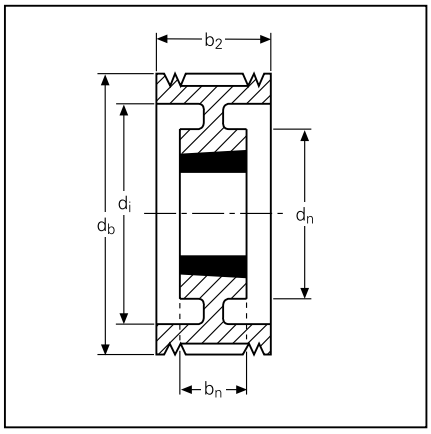
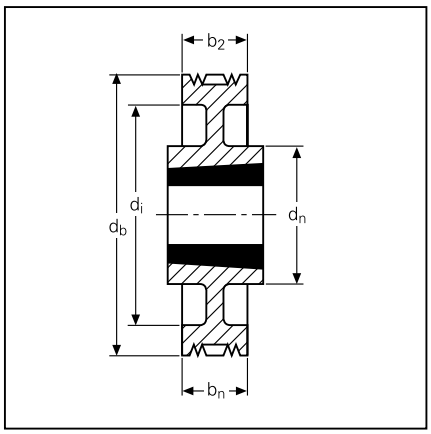


Type 5



Type 6

Section PL – With 10 grooves

Table 15

Face width 57.0 mm (measurements in mm)

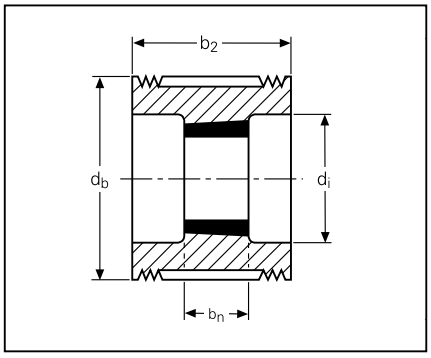
Multi-grooved pulley					Taper bush				
Effective Ø d_b	Pitch Ø d_w	Hub Ø d_n	Recess Ø d_i	Hub width b_n	Designation	Bore diameter max. $d_{v\,max}$	Bore diameter min. $d_{v\,min}$	Pulley designation	Type
100	106	–	76	32	2012	48	19	P10PL100–2012	3R
106	112	–	82	32	2012	48	19	P10PL106–2012	3R
112	118	–	88	32	2012	48	19	P10PL112–2012	3R
118	124	–	94	45	2517	60	18	P10PL118–2517	10
125	131	–	101	45	2517	60	18	P10PL125–2517	10
132	138	–	108	45	2517	60	18	P10PL132–2517	10
140	146	–	116	45	2517	60	18	P10PL140–2517	10
150	156	–	126	45	2517	60	18	P10PL150–2517	10
160	166	–	136	45	2517	60	18	P10PL160–2517	10
170	176	–	146	45	2517	60	18	P10PL170–2517	10
180	186	124	156	45	2517	60	18	P10PL180–2517	5
190	196	124	166	45	2517	60	18	P10PL190–2517	5
200	206	146	176	52	3020	75	35	P10PL200–3020	5
212	218	146	188	52	3020	75	35	P10PL212–3020	5
224	230	146	200	52	3020	75	35	P10PL224–3020	5
236	242	146	212	52	3020	75	35	P10PL236–3020	5
250	256	146	226	52	3020	75	35	P10PL250–3020	5
280	286	146	256	52	3020	75	35	P10PL280–3020	5
315	321	178	285	89	3535	85	48	P10PL315–3535	6
355	361	178	325	89	3535	85	48	P10PL355–3535	6
400	406	178	370	89	3535	85	48	P10PL400–3535	6
500	506	178	470	89	3535	85	48	P10PL500–3535	6
630	636	178	600	89	3535	85	48	P10PL630–3535	6
800	806	216	770	102	4040	95	55	P10PL800–4040	6

Section PL – With 12 grooves

Table 16

Face width 67.0 mm (measurements in mm)

Multi-grooved pulley					Taper bush				
Effective Ø d_b	Pitch Ø d_w	Hub Ø d_n	Recess Ø d_i	Hub width b_n	Designation	Bore diameter max. $d_{v\,max}$	Bore diameter min. $d_{v\,min}$	Pulley designation	Type
100	106	–	76	32	2012	48	19	P12PL100–2012	3R
106	112	–	82	32	2012	48	19	P12PL106–2012	3R
112	118	–	88	32	2012	48	19	P12PL112–2012	3R
118	124	–	94	45	2517	60	18	P12PL118–2517	10
125	131	–	101	45	2517	60	18	P12PL125–2517	10
132	138	–	108	45	2517	60	18	P12PL132–2517	10
140	146	–	116	45	2517	60	18	P12PL140–2517	10
150	156	–	126	45	2517	60	18	P12PL150–2517	10
160	166	–	136	45	2517	60	18	P12PL160–2517	10
170	176	–	146	45	2517	60	18	P12PL170–2517	10
180	186	–	156	45	2517	60	18	P12PL180–2517	10
190	196	124	166	45	2517	60	18	P12PL190–2517	5
200	206	146	176	52	3020	75	35	P12PL200–3020	5
212	218	146	188	52	3020	75	35	P12PL212–3020	5
224	230	146	200	52	3020	75	35	P12PL224–3020	5
236	242	146	212	52	3020	75	35	P12PL236–3020	5
250	256	146	226	52	3020	75	35	P12PL250–3020	5
280	286	146	256	52	3020	75	35	P12PL280–3020	5
315	321	178	285	89	3535	85	48	P12PL315–3535	6
355	361	178	325	89	3535	85	48	P12PL355–3535	6
400	406	178	370	89	3535	85	48	P12PL400–3535	6
500	506	178	470	89	3535	85	48	P12PL500–3535	6
630	636	178	600	89	3535	85	48	P12PL630–3535	6
800	806	216	770	102	4040	95	55	P12PL800–4040	6



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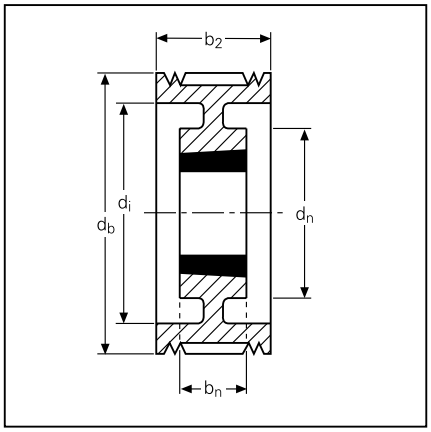

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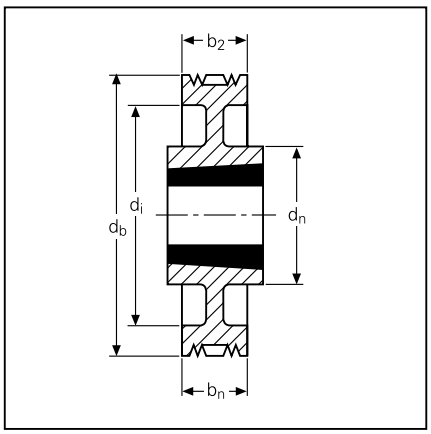


Type 6

Section PL – With 16 grooves

Table 17

Face width 86.0 mm (measurements in mm)

Multi-grooved pulley					Taper bush				
Effective Ø d_b	Pitch Ø d_w	Hub Ø d_n	Recess Ø d_i	Hub width b_n	Designation	Bore diameter max. $d_{v\,max}$	Bore diameter min. $d_{v\,min}$	Pulley designation	Type
118	124	–	94	45	2517	60	18	P16PL118–2517	10
125	131	–	101	45	2517	60	18	P16PL125–2517	10
132	138	–	108	45	2517	60	18	P16PL132–2517	10
140	146	–	116	45	2517	60	18	P16PL140–2517	10
150	156	–	126	45	2517	60	18	P16PL150–2517	10
160	166	–	136	52	3020	75	35	P16PL160–3020	10
170	176	–	146	52	3020	75	35	P16PL170–3020	10
180	186	–	156	52	3020	75	35	P16PL180–3020	10
190	196	146	166	52	3020	75	35	P16PL190–3020	5
200	206	146	176	52	3020	75	35	P16PL200–3020	5
212	218	146	188	52	3020	75	35	P16PL212–3020	5
224	230	146	200	52	3020	75	35	P16PL224–3020	5
236	242	146	212	52	3020	75	35	P16PL236–3020	5
250	256	146	226	52	3020	75	35	P16PL250–3020	5
280	286	178	256	89	3535	85	48	P16PL280–3535	6
315	321	178	285	89	3535	85	48	P16PL315–3535	6
355	361	178	325	89	3535	85	48	P16PL355–3535	6
400	406	178	370	89	3535	85	48	P16PL400–3535	6
500	506	178	470	89	3535	85	48	P16PL500–3535	6
630	636	216	600	102	4040	95	55	P16PL630–4040	6
800	806	267	770	127	5050	125	70	P16PL800–5050	6

Taper bushes

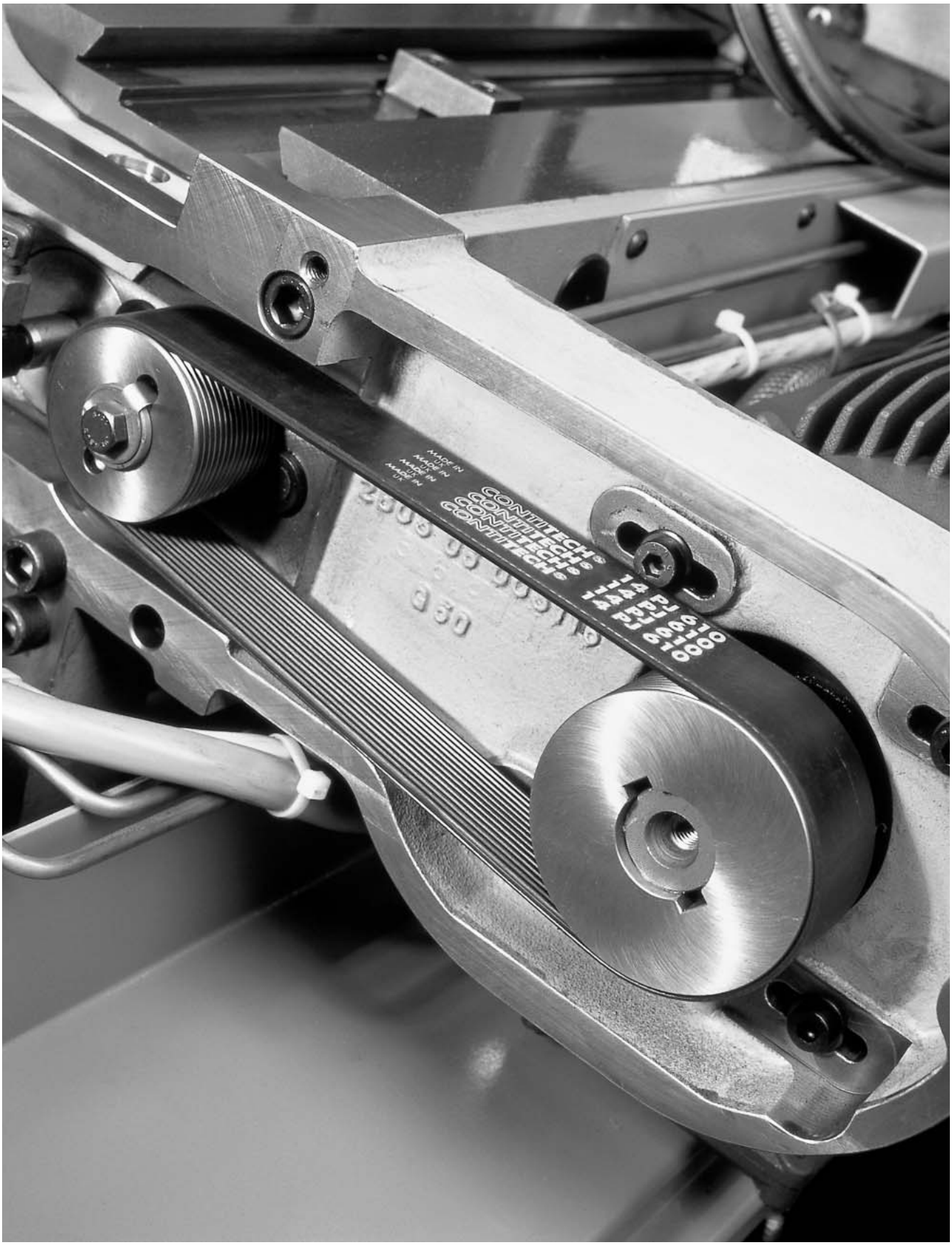
Table 18

Designation and dimensions (measurements in mm)

Designation	Bore diameter														
1108	10	12	14	16	18	19	20	22	24	25*	28*				
1310	14	16	18	19	20	22	24	25	28	30	32	35*			
1610	14	16	18	19	20	22	24	25	28	30	32	35	38	40*	42*
1615	14	16	18	19	20	22	24	25	28	30	32	35	38	40*	42
2012	19	20	22	24	25	28	30	32	35	38	40	42	45	48,	50
2517	24	25	28	30	32	35	38	40	42	45	48	50	55	60	
3020	30	32	35	38	40	42	45	48	50	55	60	65	70	75	
3535	48	50	55	60	65	70	75	80	85	90*					
4040	55	60	65	70	75	80	85	90	95	100*					
5050	70	75	80	85	90	95	100	125							

*denotes shallow keyway
Keyways to BS 4235

Calculation of Multiple V-Ribbed Belt drives



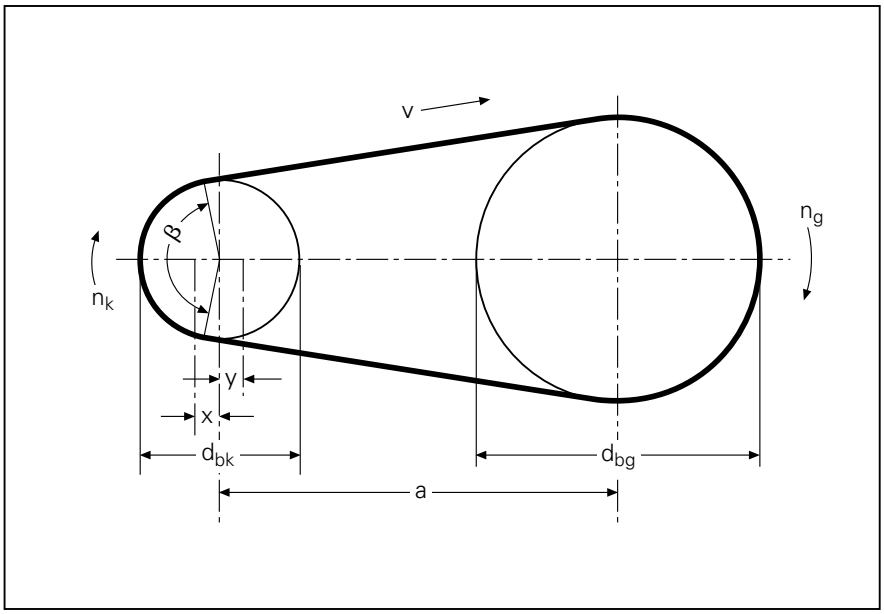
CONTI-V MULTIRIB® Multiple V-Ribbed Belt on a machine tool

CONTITECH

Calculation of Multiple V-Ribbed Belt drives

The steps outlined on the following pages are used in designing drives fitted with CONTI-V MULTIRIB® Multiple V-Ribbed Belts and are in line with the internationally recognised design procedure for enclosed drives.

As so many factors influence belt performance, it is likely that designers of complicated and series drives will find it extremely helpful to consult ContiTech's Application Engineers for free advice, without any obligation whatsoever.



Glossary of symbols and terms

Symbol	Unit	Definition
a_{er}	mm	calculated centre distance
a_{max}	mm	maximum allowable centre distance
a_{min}	mm	minimum allowable centre distance
b_2	mm	face width of multi-rooved pulley
b_F	mm	width of flat pulley
c_1		power correction factor for arc of contact
c_{1F}		power correction factor for arc of contact for Multiple V-Ribbed Belt/flat pulley drives
c_2		service factor
c_{2er}		calculated service factor
c_3		length factor
d_a	mm	outside diameter of multi-grooved pulley
d_{aF}	mm	outside diameter of flat pulley
d_b	mm	effective diameter of multi-grooved pulley
d_{b1}	mm	effective diameter of driver pulley
d_{b2}	mm	effective diameter of driven pulley
d_{bg}	mm	effective diameter of large pulley
d_{ik}	mm	effective diameter of small pulley
d_{bF}	mm	effective diameter of flat pulley
d_w	mm	pitch diameter of multi-grooved pulley
d_{wF}	mm	pitch diameter of flat pulley
e	mm	groove spacing of multi-grooved pulley
f_B	s^{-1}	flex frequency

F	N		static tension per rib
F_{ges}	N		static tension per Multiple V-Ribbed Belt
F_e	N		force applied to check installation tension per rib
F_{eges}	N		force applied to check installation tension per Multiple V-Ribbed Belt
F_u	N		effective pull
F_v	N		total span tension
h_b	mm		effective line differential
h_f	mm		height factor
i			transmission ratio
k			number of pulleys in one drive
k_1			installation tension factor
k_2			centrifugal force factor
K_F	mm		adjustment value for flat pulley diameter
L_b	mm		effective length
L_f	mm		free span length
n_1	min^{-1}		rpm of driver pulley
n_2	min^{-1}		rpm of driven pulley
n_g	min^{-1}		rpm of large pulley
n_k	min^{-1}		rpm of small pulley
P	kW		power to be transmitted
P_B	kW		design power
P_R	kW		power capacity rating per rib
s	mm		rib spacing on Multiple V-Ribbed Belt
t_e	mm		deflection of the belt
v	m/s		belt speed
x	mm		take-up allowance for tensioning and retensioning the Multiple V-Ribbed Belt
y	mm		installation allowance for easy fitting of the Multiple V-Ribbed Belt
z			number of ribs
z_{er}			calculated number of ribs
β	° (degrees)		arc of contact around the small pulley

Drive calculation data

The following pages contain all the necessary data, formulae and tables needed when designing a new drive fitted with a Multiple V-Ribbed Belt. Tables for values which can easily be calculated using the formulae provided have been omitted.

Power correction factor c_1 for arc of contact

Factor c_1 corrects the power rating P_R, which can be derived from the power capacity rating tables for an arc of contact $\beta = 180°$ at the small pulley d_{bk}, for small arcs of contact.

Power correction factor c_1 for arc of contact — Table 19

Arc of contact β °(degrees)	Power correction factor c_1 for arc of contact	Arc of contact β °(degrees)	Power correction factor c_1 for arc of contact
201	1.04	142	0.90
198	1.04	139	0.89
195	1.03	136	0.87
192	1.03	133	0.87
189	1.02	130	0.86
186	1.01	127	0.85
183	1.01	123	0.83
180	1.00	120	0.82
177	0.99	117	0.81
174	0.99	113	0.79
171	0.98	109	0.78
169	0.97	106	0.76
166	0.97	103	0.75
163	0.96	100	0.74
160	0.95	96	0.72
157	0.94	92	0.69
154	0.93	88	0.67
151	0.92	84	0.66
148	0.92	80	0.64
145	0.91	77	0.62

Service factor c_2

The service factor c_2 is selected according to the operational hours per day and the type of driver and driven machine used. Additional service factors are required for unusual conditions, such as a high torque, variable speed drives. heavy shock or frequent stops and starts. When calculating these values, no account has been taken of particular design conditions, such as the use of tensioners.

In case of doubt, consult ContiTech's Application Engineers for advice.

Service factor c_2

Table 20

		Examples of drive motors					
		AC and threephase AC motors with normal torque (up to twice the rated torque) e.g. synchronous and single-phase motors with split-phase starting, three-phase AC motors with full-voltage, star-delta or slipring starter; DC motors, shunt wound; internal combustion engines and turbines with speeds of over 600 rpm			AC and threephase AC motors with high torque (over twice the rated torque), e.g. single-phase motors with high torque; DC motors, series wound and compound wound; internal combustion engines and turbines with speeds of 600 rpm and less		
		Operational hours per day			Operational hours per day		
	Examples of driven machines	10 and less	Between 10 and 16	Over 16	10 and less	Between 10 and 16	Over 16
Light-duty drives	Domestic gadgets (kitchen appliances, washing machines, dryers), centrifugal pumps and compressors, belt conveyors (light load), fans and pumps up to 7.5 kW	1	1.1	1.2	1.1	1.2	1.3
Medium-duty drives	Sheet steel cutters, presses, chain and belt conveyors (heavy load), vibrating screens, generators, exciters, masticators, machine tools (lathes and grinders), laundry machinery, printing machinery, fans and pumps over 7.5 kW	1.1	1.2	1.3	1.2	1.3	1.4
Heavy-duty drives	Granulators, piston compressors, heavy-duty overshot loaders and reciprocating conveyors (screw conveyors, apron conveyors, bucked elevators, shovel loaders), elevators, briquetting presses, textile machinery, paper machinery, piston pumps, dredging pumps, reciprocating saws, hammer mills	1.2	1.3	1.4	1.4	1.5	1.6
Extra heavy-duty drives	Heavy-duty granulators, calenders, mixers, winches, cranes, excavators	1.3	1.4	1.5	1.5	1.6	1.8

Length factor c_3

The length factor c_3 takes into account the flex frequency as a function of Multiple V-Ribbed Belt length.

Length factor c_3

Table 21

	CONTI-V MULTIRIB® Multiple V-Ribbed Belt Section PH																		
L_b mm	400	500	610	730	870	1020	1100	1200	1280	1320	1400	1550	1750	1900	2200	2500			
c_3	0.81	0.85	0.89	0.93	0.97	1.00	1.02	1.04	1.05	1.06	1.07	1.09	1.12	1.14	1.17	1.20			
	CONTI-V MULTIRIB® Multiple V-Ribbed Belt Section PJ																		
L_b mm	356	406	483	610	723	864	1016	1105	1200	1280	1321	1397	1549	1752	1895	2210	2490		
c_3	0.78	0.81	0.85	0.89	0.93	0.97	1.00	1.02	1.04	1.05	1.06	1.07	1.09	1.12	1.14	1.17	1.20		
	CONTI-V MULTIRIB® Multiple V-Ribbed Belt Section PK																		
L_b mm	550	698	755	812	855	900	955	1000	1050	1100	1150	1200	1300	1400	1500	1985	2100	2255	
c_3	0.78	0.83	0.84	0.86	0.87	0.88	0.89	0.90	0.91	0.92	0.93	0.94	0.96	0.97	0.99	1.04	1.06	1.07	
	CONTI-V MULTIRIB® Multiple V-Ribbed Belt Section PL																		
L_b mm	1041	1270	1397	1562	1715	1841	1981	2095	2195	2325	2515	2745	2920	3125	3490	4050	4620	6095	
c_3	0.86	0.89	0.91	0.94	0.96	0.97	0.99	1.00	1.01	1.02	1.04	1.06	1.07	1.09	1.11	1.15	1.18	1.24	
	CONTI-V MULTIRIB® Multiple V-Ribbed Belt Section PM																		
L_b mm	2285	2515	2695	2830	3010	3325	3530	4090	4470	4650	5030	6120	6885	7645	9170	10695	12215	16785	
c_3	0.88	0.90	0.91	0.92	0.93	0.96	0.97	1.00	1.02	1.03	1.05	1.09	1.12	1.14	1.18	1.22	1.25	1.30	

Choosing the section

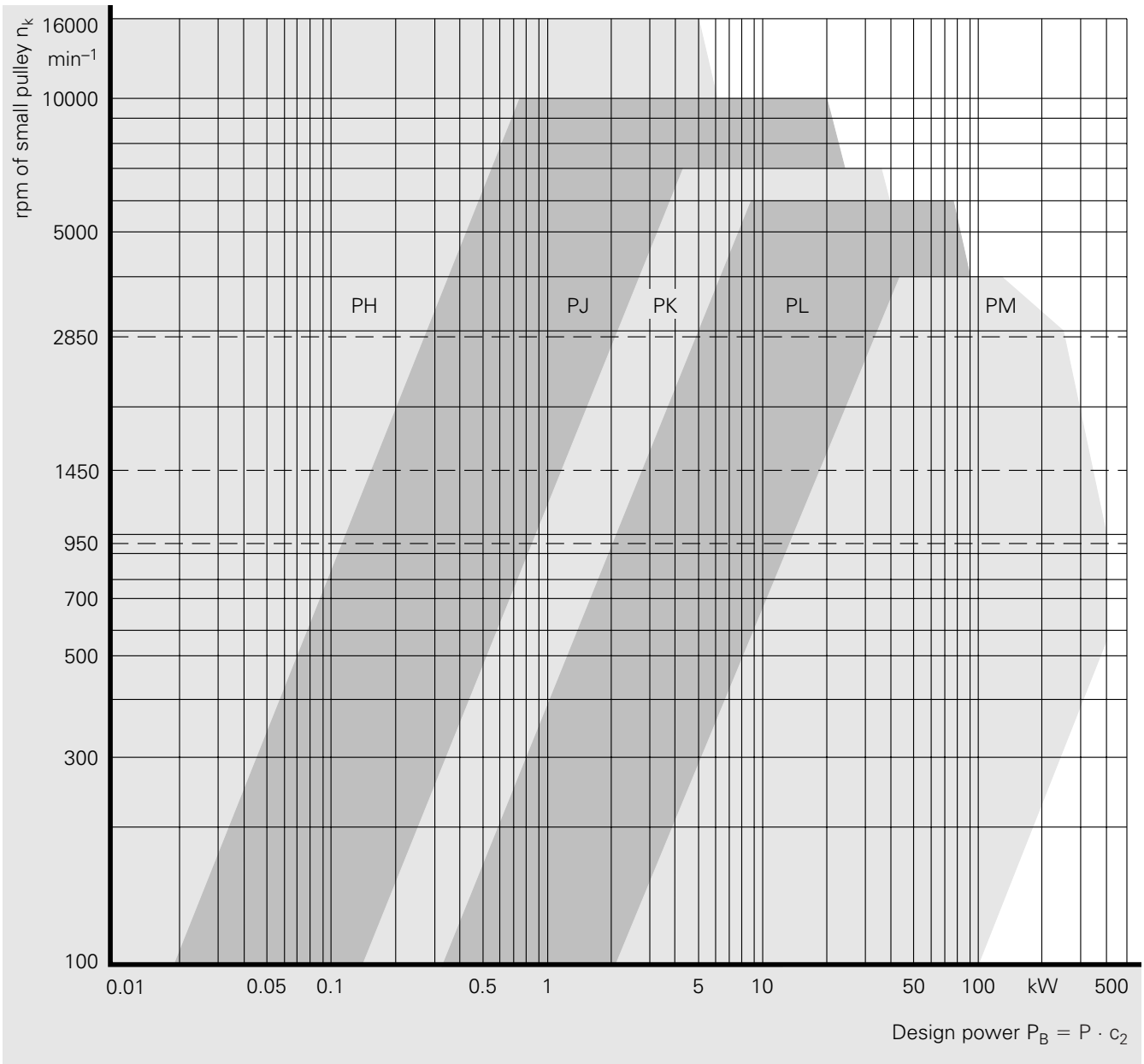
The suitable section is chosen from Fig. 5 by locating the point at which the design power (power to be transmitted P · service factor c_2) intersects with the rpm of the small pulley. Each section takes up to 20 ribs into account. The width of the belt should not exceed the effective diameter of the small pulley.

In borderline cases, the next smaller section size should also be considered on the basis of the same pulley diameters. Experience has shown us that designers should avoid the minimum pulley diameter range.

Optimum power utilisation and drive economics are attained by selecting the largest possible pulley diameters. However, care must be taken to observe the maximum allowable belt speeds for each section size.

Choosing the section

Fig. 5



Transmission ratio i
Transmission ratio i is the ratio of rpm n_1 to n_2 or pitch diameter d_{w2} to d_{w1}.

$$i = \frac{n_1}{n_2} = \frac{d_{w2}}{d_{w1}} = \frac{d_{b2} + 2 \cdot h_b}{d_{b1} + 2 \cdot h_b}$$

This results in

$$d_{b1} = \frac{d_{b2}}{i} + 2 \cdot h_b \cdot \left(\frac{1}{i} - 1\right) \quad \text{mm}$$

and

$$d_{b2} = d_{b1} \cdot i + 2 \cdot h_b \cdot (i - 1) \quad \text{mm}$$

n in min^{-1}
d_b in mm
h_b in mm from Table 1, page 7

Centre distance a
Centre distance a is calculated by the following approximation formula:

$$a \approx \frac{1}{4} \cdot \left(L_b - \frac{d_{bg} + d_{bk}}{2} \cdot \pi\right) + \frac{1}{4} \cdot \sqrt{\left(L_b - \frac{d_{bg} + d_{bk}}{2} \cdot \pi\right)^2 - 2 \cdot (d_{bg} - d_{bk})^2} \quad \text{mm}$$

The following applies if transmission ratio i = 1 : 1

$$a = \frac{L_b - \pi \cdot d_{bk}}{2} \quad \text{mm}$$

The following is recommended when determining the centre distance of a new drive design:

$$0.7 \cdot (d_{bg} + d_{bk}) \leqq a \leqq 2 \cdot (d_{bg} + d_{bk}) \quad \text{mm}$$

Deviations are possible to allow for specific drive requirements.

Effective length L_b
The effetive length L_b can be approximated as following for a drive with two pulleys:

$$L_b \approx 2 \cdot a + \frac{\pi}{2} \cdot (d_{bg} + d_{bk}) + \frac{(d_{bg} - d_{bk})^2}{4 \cdot a} \quad \text{mm}$$

and is calculated precisely as follows:

$$L_b = 2 \cdot a \cdot \sin\frac{\beta}{2} + \frac{\pi}{2} \cdot (d_{bg} + d_{bk}) + \frac{\pi}{180} \cdot \left(90 - \frac{\beta}{2}\right) \cdot (d_{bg} - d_{bk}) \quad \text{mm}$$

Arc of contact β
The arc of contact β around the small pulley is:

$$\beta = 2 \cdot \arccos\left(\frac{d_{bg} - d_{bk}}{2 \cdot a}\right) \quad \text{°(degrees)}$$

The approximation formula for an arc contact $\beta > 110°$ is:

$$\beta \approx 180 - 60 \cdot \left(\frac{d_{bg} - d_{bk}}{a}\right) \quad \text{°(degrees)}$$

Take-up and installation allowances x and y
Take-up allowance x is required for tensioning and retensioning the belt and installation allowance y is needed to ensure easy fitting of the belt.

Take-up allowance x for Multiple V-Ribbed Belts is

$$x = \frac{0.01 \cdot L_b}{\sin\frac{\beta}{2}} \quad \text{mm} \qquad \text{for } L_b \leqq 700 \text{ mm}$$

$$x = \frac{0.008 \cdot L_b}{\sin\frac{\beta}{2}} \quad \text{mm} \qquad \text{for } L_b > 700 \text{ mm}$$

Installation allowance y for Multiple V-Ribbed Belts is

$$y = \frac{0.01 \cdot L_b + \pi \cdot h_f \cdot \frac{ß}{360}}{\sin\frac{\beta}{2}} \quad \text{mm} \qquad \text{for } L_b \leqq 700 \text{ mm}$$

$$y = \frac{0.005 \cdot L_b + \pi \cdot h_f \cdot \frac{ß}{360}}{\sin\frac{\beta}{2}} \quad \text{mm} \qquad \text{for } L_b > 700 \text{ mm}$$

h_f = height factor in mm

Height factor h_f

Table 22

Belt section	PH	PJ	PK	PL	PM
height factor h_f	1.5	2.5	3	6	11

Belt speed v
Belt speed v is obtained from the diameter d_b and the rpm n of the belt pulley.

$$v = \pi \cdot \frac{(d_b + 2 \cdot h_b)}{60 \cdot 10^3} \cdot n \quad \text{m/s}$$

v in m/s
d_b in mm
h_b in mm from Table 1, page 7
n in min^{-1}

Ensure compliance with the recommended belt speeds for the various section sizes (see under Charateristic data, Table 1, page 7).

Flex frequency f_B
The flex frequency f_B is calculated from the belt speed v, the number of pulleys k, the effective lenght L_b and the effective line differential h_b.

$$f_B = \frac{10^3 \cdot v \cdot k}{L_b + 2 \cdot \pi \cdot h_b} \quad s^{-1}$$

f_b in s^{-1}
v in m/s
L_b in mm
h_b in mm

Number of ribs z
The number of ribs z derived from the power to be transmitted P and the factors c_1, c_2 und c_3.

$$z_{er} = \frac{P \cdot c_2}{P_R \cdot c_1 \cdot c_3}$$

The number of ribs z actually used is generally determined by rounding up z_{er} to the next whole number.

When rounding up, make shure that the service factor c_2 is still sufficient.

If in doubt, consult ContiTech's Application Engineers.

Total span tension F_v
The total span tension F_v is, as with all friction transmission drives, a decisive factor affecting the performance and service life of a Multiple V-Ribbed Belt drive.

– Insufficient installation tension results in inadequate power transmission, reduced efficiency and premature damage to the belt due to slip.

– Excessive installation tension leads to high specific surface pressure, increased flexing stress, increased strain on the load-bearing element and consequently premature cracking as well as belt stretch. Excessive installation tension is also a common cause of damage to shaft bearings.

For this reason, the initial tension required for the specific loads imposed on the belt must be determined and adhered to as closely as possible on installation.

The installation tension required for two-pulley drives can be calculated as follows:

$$F_v = (k_1 \cdot F_u + 2 \cdot k_2 \cdot v^2 \cdot z) \cdot \sin\frac{\beta}{2} \quad N$$

whereby:

$$F_u = \frac{P \cdot 10^3}{v} \quad N \qquad \text{for P in kW}$$

with z standing for the number of ribs.

Installation tension factor k_1 is used according to the service conditions concerned (Table 23, page 30).

Table 24 on page 30 shows the centrifugal force factor k_2 for each section size.

Installation tension factor k_1

Table 23

ß ° (degrees)	Service conditions: Light-duty drives, constant load	Medium load	Heavy-duty drives shock loading, frequent stops and starts
180	1.50	1.70	1.90
175	1.53	1.73	1.93
170	1.56	1.76	1.96
165	1.59	1.79	1.99
160	1.63	1.83	2.03
155	1.67	1.87	2.07
150	1.71	1.91	2.11
145	1.75	1.95	2.15
140	1.80	2.00	2.20
135	1.85	2.05	2.25
130	1.91	2.11	2.31
125	1.97	2.17	2.37
120	2.04	2.24	2.44
115	2.11	2.31	2.51
110	2.19	2.39	2.59
105	2.28	2.48	2.68
100	2.38	2.58	2.78
95	2.49	2.69	2.89
90	2.62	2.82	3.02

Centrifugal force factor k_2

Table 24

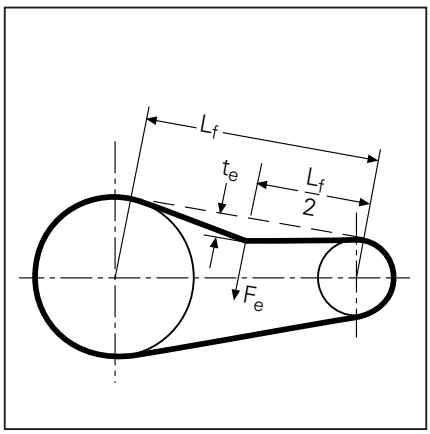
Section code	PH	PJ	PK	PL	PM
Centrifugal force factor k_2	0.005	0.009	0.021	0.040/0.037*	0.120

*Values for truncated type.

The static tension F per rib must be determined prior to adjusting the installation tension to the Multiple V-Ribbed Belt.

$$F = \frac{F_v}{2 \cdot z \cdot \sin\frac{\beta}{2}} \quad N$$

Checking the static tension
Adjustment to the calculated static tension F can be made according to the diagramms in Fig. 7 and 8. Instructions are provided in the example of a two-pulley drive on page 46.



Deflection of belt t_e Fig. 6

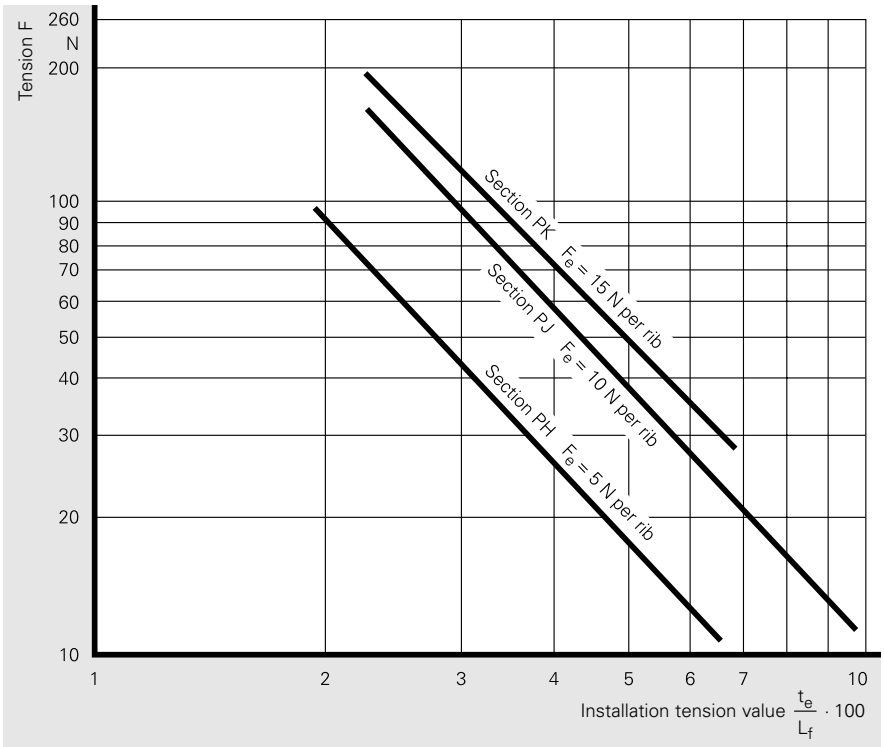
F_e _____ force applied in N per rib

t_e _____ deflection in mm

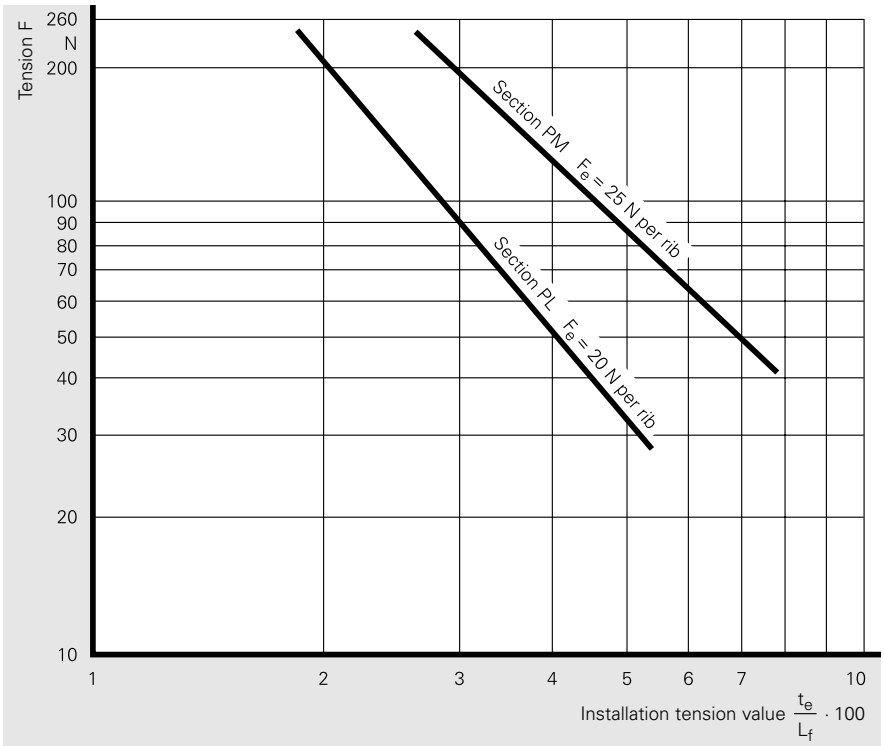
L_f _____ span length in mm

$t_e = \frac{L_f}{100} \cdot$ installation tension value

Installation tension graphs for
CONTI-V MULTIRIB® Multiple V-Ribbed Belts
Sections PH, PJ, PK Fig. 7



Section PL, PM Fig. 8



Power capacity rating P_R for CONTI-V MULTIRIB® Belt – section PH

Power capacity rating P_R (kW) for one rib as a function of the effective diameter of the small pulley d_{bk}, the transmission ratio i, the rpm of the small pulley n_k and the effective lenght L_b = 1020 mm.

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PH — Table 25

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})																	
		200	400	**700**	**950**	1200	**1450**	2000	**2850**	3500	5000	6000	7000	8000	9000	10000	12000	14000	16000
	1.00	0.00	0.01	**0.01**	**0.01**	0.02	**0.02**	0.02	**0.03**	0.03	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.08	0.08
	1.05	0.00	0.01	**0.01**	**0.01**	0.02	**0.02**	0.02	**0.03**	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.08	0.09	0.09
13	1.20	0.00	0.01	**0.01**	**0.01**	0.02	**0.02**	0.03	**0.03**	0.04	0.05	0.06	0.07	0.07	0.08	0.08	0.09	0.10	0.11
	1.50	0.00	0.01	**0.01**	**0.02**	0.02	**0.02**	0.03	**0.04**	0.04	0.06	0.06	0.07	0.08	0.08	0.09	0.10	0.11	0.12
	3.00	0.00	0.01	**0.01**	**0.02**	0.02	**0.02**	0.03	**0.04**	0.05	0.06	0.07	0.08	0.08	0.09	0.10	0.11	0.12	0.13
	1.00	0.01	0.01	**0.01**	**0.02**	0.02	**0.03**	0.03	**0.04**	0.05	0.06	0.07	0.08	0.09	0.10	0.10	0.12	0.13	0.14
	1.05	0.01	0.01	**0.01**	**0.02**	0.02	**0.03**	0.03	**0.04**	0.05	0.07	0.08	0.09	0.09	0.10	0.11	0.12	0.13	0.14
15	1.20	0.01	0.01	**0.02**	**0.02**	0.02	**0.03**	0.04	**0.05**	0.05	0.07	0.08	0.09	0.10	0.11	0.12	0.14	0.15	0.16
	1.50	0.01	0.01	**0.02**	**0.02**	0.02	**0.03**	0.04	**0.05**	0.06	0.08	0.09	0.10	0.11	0.12	0.13	0.14	0.16	0.17
	3.00	0.01	0.01	**0.02**	**0.02**	0.03	**0.03**	0.04	**0.05**	0.06	0.08	0.09	0.10	0.11	0.12	0.13	0.15	0.17	0.18
	1.00	0.01	0.01	**0.02**	**0.02**	0.03	**0.03**	0.04	**0.05**	0.06	0.08	0.10	0.11	0.12	0.13	0.14	0.16	0.18	0.19
	1.05	0.01	0.01	**0.02**	**0.02**	0.03	**0.03**	0.04	**0.06**	0.07	0.09	0.10	0.11	0.12	0.14	0.15	0.17	0.18	0.20
17	1.20	0.01	0.01	**0.02**	**0.02**	0.03	**0.03**	0.04	**0.06**	0.07	0.09	0.11	0.12	0.13	0.14	0.16	0.18	0.20	0.21
	1.50	0.01	0.01	**0.02**	**0.02**	0.03	**0.04**	0.05	**0.06**	0.07	0.10	0.11	0.13	0.14	0.15	0.16	0.19	0.21	0.23
	3.00	0.01	0.01	**0.02**	**0.03**	0.03	**0.04**	0.05	**0.06**	0.07	0.10	0.11	0.13	0.14	0.16	0.17	0.19	0.22	0.24
	1.00	0.01	0.01	**0.02**	**0.03**	0.04	**0.04**	0.05	**0.07**	0.09	0.11	0.13	0.15	0.16	0.18	0.19	0.22	0.24	0.26
	1.50	0.01	0.01	**0.02**	**0.03**	0.04	**0.04**	0.05	**0.07**	0.09	0.12	0.13	0.15	0.17	0.18	0.20	0.23	0.25	0.27
20	1.20	0.01	0.01	**0.02**	**0.03**	0.04	**0.04**	0.06	**0.08**	0.09	0.12	0.14	0.16	0.18	0.19	0.21	0.24	0.27	0.29
	1.50	0.01	0.01	**0.02**	**0.03**	0.04	**0.04**	0.06	**0.08**	0.09	0.13	0.15	0.16	0.18	0.20	0.22	0.25	0.28	0.30
	3.00	0.01	0.02	**0.02**	**0.03**	0.04	**0.05**	0.06	**0.08**	0.10	0.13	0.15	0.17	0.19	0.21	0.22	0.26	0.28	0.31
	1.00	0.01	0.02	**0.03**	**0.03**	0.04	**0.05**	0.06	**0.09**	0.10	0.14	0.16	0.18	0.20	0.22	0.24	0.27	0.30	0.32
	1.05	0.01	0.02	**0.03**	**0.03**	0.04	**0.05**	0.07	**0.09**	0.10	0.14	0.16	0.18	0.21	0.22	0.24	0.28	0.31	0.33
22.5	1.20	0.01	0.02	**0.03**	**0.04**	0.04	**0.05**	0.07	**0.09**	0.11	0.15	0.17	0.19	0.21	0.23	0.25	0.29	0.32	0.35
	1.50	0.01	0.02	**0.03**	**0.04**	0.04	**0.05**	0.07	**0.09**	0.11	0.15	0.17	0.20	0.22	0.24	0.26	0.30	0.33	0.36
	3.00	0.01	0.02	**0.03**	**0.04**	0.05	**0.05**	0.07	**0.10**	0.11	0.15	0.18	0.20	0.22	0.25	0.27	0.31	0.34	0.37
	1.00	0.01	0.02	**0.03**	**0.04**	0.05	**0.06**	0.08	**0.10**	0.12	0.16	0.19	0.21	0.24	0.26	0.28	0.32	0.35	0.38
	1.05	0.01	0.02	**0.03**	**0.04**	0.05	**0.06**	0.08	**0.10**	0.12	0.16	0.19	0.22	0.24	0.26	0.29	0.32	0.36	0.39
25	1.20	0.01	0.02	**0.03**	**0.04**	0.05	**0.06**	0.08	**0.11**	0.13	0.17	0.20	0.22	0.25	0.27	0.30	0.34	0.37	0.40
	1.50	0.01	0.02	**0.03**	**0.04**	0.05	**0.06**	0.08	**0.11**	0.13	0.17	0.20	0.23	0.25	0.28	0.30	0.35	0.38	0.42
	3.00	0.01	0.02	**0.03**	**0.04**	0.05	**0.06**	0.08	**0.11**	0.13	0.18	0.21	0.23	0.26	0.28	0.31	0.35	0.39	0.43
	1.00	0.01	0.02	**0.04**	**0.05**	0.06	**0.07**	0.09	**0.12**	0.14	0.19	0.22	0.25	0.28	0.30	0.33	0.37	0.41	0.44
	1.05	0.01	0.02	**0.04**	**0.05**	0.06	**0.07**	0.09	**0.12**	0.14	0.19	0.22	0.25	0.28	0.31	0.33	0.38	0.42	0.45
28	1.20	0.01	0.02	**0.04**	**0.05**	0.06	**0.07**	0.09	**0.12**	0.15	0.20	0.23	0.26	0.29	0.32	0.34	0.39	0.43	0.47
	1.50	0.01	0.02	**0.04**	**0.05**	0.06	**0.07**	0.09	**0.13**	0.15	0.20	0.23	0.27	0.30	0.33	0.35	0.40	0.44	0.48
	3.00	0.01	0.02	**0.04**	**0.05**	0.06	**0.07**	0.09	**0.13**	0.15	0.20	0.24	0.27	0.30	0.33	0.36	0.41	0.45	0.49
	1.00	0.01	0.03	**0.04**	**0.05**	0.07	**0.08**	0.10	**0.14**	0.16	0.22	0.26	0.29	0.33	0.36	0.38	0.44	0.48	0.51
	1.05	0.01	0.03	**0.04**	**0.05**	0.07	**0.08**	0.10	**0.14**	0.17	0.23	0.26	0.30	0.33	0.36	0.39	0.44	0.48	0.52
31.5	1.20	0.01	0.03	**0.04**	**0.05**	0.07	**0.08**	0.11	**0.14**	0.17	0.23	0.27	0.30	0.34	0.37	0.40	0.45	0.50	0.53
	1.50	0.01	0.03	**0.04**	**0.06**	0.07	**0.08**	0.11	**0.14**	0.17	0.23	0.27	0.31	0.34	0.38	0.41	0.46	0.51	0.55
	3.00	0.01	0.03	**0.04**	**0.06**	0.07	**0.08**	0.11	**0.15**	0.17	0.24	0.28	0.31	0.35	0.38	0.41	0.47	0.52	0.56
	1.00	0.02	0.03	**0.05**	**0.06**	0.08	**0.09**	0.12	**0.16**	0.19	0.26	0.30	0.34	0.38	0.41	0.45	0.50	0.55	0.58
	1.05	0.02	0.03	**0.05**	**0.06**	0.08	**0.09**	0.12	**0.16**	0.19	0.26	0.30	0.34	0.38	0.42	0.45	0.51	0.55	0.58
35.5	1.20	0.02	0.03	**0.05**	**0.06**	0.08	**0.09**	0.12	**0.17**	0.20	0.27	0.31	0.35	0.39	0.43	0.46	0.52	0.57	0.60
	1.50	0.02	0.03	**0.05**	**0.06**	0.08	**0.09**	0.12	**0.17**	0.20	0.27	0.32	0.36	0.40	0.43	0.47	0.53	0.58	0.61
	3.00	0.02	0.03	**0.05**	**0.06**	0.08	**0.09**	0.12	**0.17**	0.20	0.27	0.32	0.36	0.40	0.44	0.47	0.54	0.59	0.62
	1.00	0.02	0.03	**0.05**	**0.07**	0.09	**0.10**	0.14	**0.19**	0.22	0.30	0.35	0.39	0.44	0.47	0.51	0.57	0.61	0.64
	1.05	0.02	0.03	**0.05**	**0.07**	0.09	**0.10**	0.14	**0.19**	0.22	0.30	0.35	0.40	0.44	0.48	0.51	0.58	0.62	0.64
40	1.20	0.02	0.03	**0.06**	**0.07**	0.09	**0.11**	0.14	**0.19**	0.23	0.31	0.36	0.40	0.45	0.49	0.52	0.59	0.63	0.66
	1.50	0.02	0.03	**0.06**	**0.07**	0.09	**0.11**	0.14	**0.19**	0.23	0.31	0.36	0.41	0.45	0.49	0.53	0.60	0.64	0.67
	3.00	0.02	0.03	**0.06**	**0.07**	0.09	**0.11**	0.14	**0.19**	0.23	0.31	0.36	0.41	0.46	0.50	0.54	0.60	0.65	0.68
	1.00	0.02	0.04	**0.06**	**0.08**	0.10	**0.12**	0.16	**0.21**	0.25	0.34	0.40	0.45	0.50	0.54	0.58	0.64	0.67	0.69
	1.05	0.02	0.04	**0.06**	**0.08**	0.10	**0.12**	0.16	**0.21**	0.26	0.35	0.40	0.45	0.50	0.54	0.58	0.64	0.68	0.69
45	1.20	0.02	0.04	**0.06**	**0.08**	0.10	**0.12**	0.16	**0.22**	0.26	0.35	0.41	0.46	0.51	0.55	0.59	0.65	0.70	0.71
	1.50	0.02	0.04	**0.06**	**0.08**	0.10	**0.12**	0.16	**0.22**	0.26	0.35	0.41	0.46	0.51	0.56	0.60	0.66	0.71	0.72
	3.00	0.02	0.04	**0.06**	**0.08**	0.10	**0.12**	0.16	**0.22**	0.26	0.36	0.41	0.47	0.52	0.56	0.60	0.67	0.71	0.73
	1.00	0.02	0.04	**0.07**	**0.09**	0.11	**0.13**	0.18	**0.24**	0.29	0.39	0.45	0.50	0.55	0.60	0.64	0.69	0.72	0.71
	1.05	0.02	0.04	**0.07**	**0.09**	0.11	**0.13**	0.18	**0.24**	0.29	0.39	0.45	0.51	0.56	0.60	0.64	0.70	0.73	0.72
50	1.20	0.02	0.04	**0.07**	**0.09**	0.11	**0.13**	0.18	**0.24**	0.29	0.39	0.46	0.51	0.56	0.61	0.65	0.71	0.74	0.74
	1.50	0.02	0.04	**0.07**	**0.09**	0.12	**0.14**	0.18	**0.25**	0.29	0.40	0.46	0.52	0.57	0.62	0.66	0.72	0.75	0.75
	3.00	0.02	0.04	**0.07**	**0.09**	0.12	**0.14**	0.18	**0.25**	0.30	0.40	0.46	0.52	0.58	0.62	0.67	0.73	0.76	0.76
v_{max}	m/s																		

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PH

Table 25

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})																	
		200	400	**700**	**950**	1200	**1450**	2000	**2850**	3500	5000	6000	7000	8000	9000	10000	12000	14000	16000
	1.00	0.03	0.05	**0.08**	**0.10**	0.13	**0.15**	0.20	**0.27**	0.32	0.44	0.50	0.56	0.62	0.66	0.70	0.75	0.76	0.72
	1.05	0.03	0.05	**0.08**	**0.10**	0.13	**0.15**	0.20	**0.27**	0.33	0.44	0.51	0.57	0.62	0.67	0.71	0.76	0.76	0.72
56	1.20	0.03	0.05	**0.08**	**0.10**	0.13	**0.15**	0.20	**0.28**	0.33	0.44	0.51	0.57	0.63	0.68	0.72	0.77	0.78	0.74
	1.50	0.03	0.05	**0.08**	**0.11**	0.13	**0.15**	0.20	**0.28**	0.33	0.45	0.52	0.58	0.64	0.68	0.72	0.78	0.79	0.75
	3.00	0.03	0.05	**0.08**	**0.11**	0.13	**0.15**	0.21	**0.28**	0.33	0.45	0.52	0.58	0.64	0.69	0.73	0.78	0.80	0.76
	1.00	0.03	0.05	**0.09**	**0.12**	0.14	**0.17**	0.23	**0.31**	0.37	0.49	0.56	0.63	0.68	0.73	0.76	0.79	0.77	0.67
	1.05	0.03	0.05	**0.09**	**0.12**	0.14	**0.17**	0.23	**0.31**	0.37	0.49	0.57	0.63	0.69	0.73	0.77	0.80	0.77	0.68
63	1.20	0.03	0.05	**0.09**	**0.12**	0.15	**0.17**	0.23	**0.31**	0.37	0.50	0.57	0.64	0.70	0.74	0.78	0.81	0.79	0.70
	1.50	0.03	0.06	**0.09**	**0.12**	0.15	**0.17**	0.23	**0.31**	0.37	0.50	0.58	0.65	0.70	0.75	0.79	0.82	0.80	0.71
	3.00	0.03	0.06	**0.09**	**0.12**	0.15	**0.17**	0.23	**0.32**	0.38	0.51	0.58	0.65	0.71	0.76	0.79	0.83	0.81	0.72
	1.00	0.03	0.06	**0.10**	**0.13**	0.16	**0.19**	0.26	**0.35**	0.41	0.55	0.63	0.70	0.75	0.79	0.82	0.81	0.73	
	1.05	0.03	0.06	**0.10**	**0.13**	0.16	**0.19**	0.26	**0.35**	0.42	0.55	0.63	0.70	0.76	0.80	0.82	0.82	0.74	
71	1.20	0.03	0.06	**0.10**	**0.13**	0.17	**0.20**	0.26	**0.35**	0.42	0.56	0.64	0.71	0.77	0.81	0.83	0.83	0.75	
	1.50	0.03	0.06	**0.10**	**0.13**	0.17	**0.20**	0.26	**0.36**	0.42	0.56	0.65	0.71	0.77	0.81	0.84	0.84	0.76	
	3.00	0.03	0.06	**0.10**	**0.14**	0.17	**0.20**	0.26	**0.36**	0.42	0.57	0.65	0.72	0.78	0.82	0.85	0.85	0.77	
	1.00	0.04	0.07	**0.11**	**0.15**	0.18	**0.22**	0.29	**0.39**	0.47	0.62	0.70	0.77	0.82	0.85	0.85	0.80	0.62	
	1.05	0.04	0.07	**0.11**	**0.15**	0.19	**0.22**	0.29	**0.39**	0.47	0.62	0.70	0.77	0.82	0.85	0.86	0.80	0.63	
80	1.20	0.04	0.07	**0.12**	**0.15**	0.19	**0.22**	0.29	**0.40**	0.47	0.62	0.71	0.78	0.83	0.86	0.87	0.81	0.64	
	1.50	0.04	0.07	**0.12**	**0.15**	0.19	**0.22**	0.29	**0.40**	0.48	0.63	0.71	0.78	0.84	0.87	0.88	0.82	0.66	
	3.00	0.04	0.07	**0.12**	**0.15**	0.19	**0.22**	0.30	**0.40**	0.48	0.63	0.72	0.79	0.84	0.87	0.88	0.83	0.66	
v_{max}	m/s																		60

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – section PJ

Power capacity rating P_R (kW) for one rib as a function of the effective diameter of the small pulley d_{bk}, the transmission ratio i, the rpm of the small pulley n_k and the effective lenght L_b = 1016 mm.

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PJ — Table 26

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})														
		200	400	**700**	**950**	1200	**1450**	2000	**2850**	3500	5000	6000	7000	8000	9000	10000
	1.00	0.01	0.02	**0.04**	**0.05**	0.05	**0.06**	0.08	**0.10**	0.12	0.16	0.18	0.20	0.21	0.23	0.24
	1.05	0.01	0.02	**0.04**	**0.05**	0.06	**0.07**	0.08	**0.11**	0.13	0.16	0.19	0.21	0.23	0.24	0.26
20	1.20	0.01	0.02	**0.04**	**0.05**	0.06	**0.07**	0.09	**0.12**	0.14	0.18	0.20	0.23	0.25	0.27	0.29
	1.50	0.01	0.03	**0.04**	**0.05**	0.06	**0.07**	0.09	**0.12**	0.14	0.19	0.22	0.24	0.27	0.29	0.31
	3.00	0.01	0.03	**0.04**	**0.05**	0.06	**0.07**	0.10	**0.13**	0.15	0.20	0.23	0.25	0.28	0.30	0.32
	1.00	0.02	0.03	**0.05**	**0.07**	0.08	**0.10**	0.12	**0.16**	0.19	0.26	0.29	0.33	0.36	0.39	0.42
	1.05	0.02	0.03	**0.05**	**0.07**	0.08	**0.10**	0.13	**0.17**	0.20	0.26	0.30	0.34	0.37	0.41	0.43
25	1.20	0.02	0.03	**0.06**	**0.07**	0.09	**0.10**	0.13	**0.18**	0.21	0.28	0.32	0.36	0.40	0.43	0.46
	1.50	0.02	0.04	**0.06**	**0.07**	0.09	**0.10**	0.14	**0.18**	0.22	0.29	0.33	0.37	0.41	0.45	0.49
	3.00	0.02	0.04	**0.06**	**0.08**	0.09	**0.11**	0.14	**0.19**	0.22	0.30	0.34	0.39	0.43	0.47	0.50
	1.00	0.03	0.05	**0.07**	**0.10**	0.12	**0.14**	0.18	**0.24**	0.29	0.38	0.44	0.49	0.55	0.59	0.64
	1.05	0.03	0.05	**0.07**	**0.10**	0.12	**0.14**	0.18	**0.24**	0.29	0.39	0.45	0.50	0.56	0.61	0.65
31.5	1.20	0.03	0.05	**0.08**	**0.10**	0.12	**0.14**	0.19	**0.25**	0.30	0.40	0.47	0.53	0.58	0.63	0.68
	1.50	0.03	0.05	**0.08**	**0.10**	0.12	**0.15**	0.19	**0.26**	0.31	0.41	0.48	0.54	0.60	0.65	0.70
	3.00	0.03	0.05	**0.08**	**0.10**	0.13	**0.15**	0.20	**0.26**	0.31	0.42	0.49	0.55	0.61	0.67	0.72
	1.00	0.03	0.05	**0.09**	**0.11**	0.14	**0.16**	0.21	**0.29**	0.34	0.46	0.53	0.59	0.66	0.71	0.77
	1.05	0.03	0.05	**0.09**	**0.11**	0.14	**0.16**	0.22	**0.29**	0.35	0.46	0.54	0.60	0.67	0.73	0.78
35.5	1.20	0.03	0.06	**0.09**	**0.12**	0.14	**0.17**	0.22	**0.30**	0.36	0.48	0.55	0.62	0.69	0.75	0.81
	1.50	0.03	0.06	**0.09**	**0.12**	0.15	**0.17**	0.23	**0.31**	0.36	0.49	0.57	0.64	0.71	0.77	0.83
	3.00	0.03	0.06	**0.09**	**0.12**	0.15	**0.17**	0.23	**0.31**	0.37	0.50	0.58	0.65	0.72	0.79	0.85
	1.00	0.03	0.06	**0.10**	**0.13**	0.16	**0.19**	0.25	**0.34**	0.40	0.54	0.62	0.70	0.78	0.84	0.90
	1.05	0.03	0.06	**0.10**	**0.13**	0.16	**0.19**	0.25	**0.34**	0.41	0.55	0.63	0.71	0.79	0.85	0.92
40	1.20	0.03	0.06	**0.10**	**0.14**	0.17	**0.20**	0.26	**0.35**	0.42	0.56	0.65	0.73	0.81	0.88	0.95
	1.50	0.04	0.06	**0.11**	**0.14**	0.17	**0.20**	0.26	**0.36**	0.42	0.57	0.66	0.75	0.83	0.90	0.97
	3.00	0.04	0.07	**0.11**	**0.14**	0.17	**0.20**	0.27	**0.36**	0.43	0.58	0.67	0.76	0.84	0.92	0.98
	1.00	0.04	0.07	**0.12**	**0.15**	0.19	**0.22**	0.29	**0.39**	0.47	0.63	0.73	0.82	0.90	0.98	1.04
	1.05	0.04	0.07	**0.12**	**0.15**	0.19	**0.22**	0.29	**0.40**	0.47	0.64	0.74	0.83	0.91	0.99	1.06
45	1.20	0.04	0.07	**0.12**	**0.16**	0.19	**0.23**	0.30	**0.41**	0.48	0.65	0.75	0.85	0.94	1.02	1.09
	1.50	0.04	0.07	**0.12**	**0.16**	0.20	**0.23**	0.30	**0.41**	0.49	0.66	0.77	0.87	0.96	1.04	1.11
	3.00	0.04	0.08	**0.12**	**0.16**	0.20	**0.23**	0.31	**0.42**	0.50	0.67	0.78	0.88	0.97	1.05	1.13
	1.00	0.04	0.08	**0.13**	**0.17**	0.21	**0.25**	0.33	**0.45**	0.54	0.72	0.83	0.93	1.02	1.11	1.18
	1.05	0.04	0.08	**0.13**	**0.17**	0.21	**0.25**	0.33	**0.45**	0.54	0.73	0.84	0.94	1.04	1.12	1.19
50	1.20	0.04	0.08	**0.14**	**0.18**	0.22	**0.26**	0.34	**0.46**	0.55	0.74	0.86	0.96	1.06	1.14	1.22
	1.50	0.05	0.08	**0.14**	**0.18**	0.22	**0.26**	0.34	**0.47**	0.56	0.75	0.87	0.98	1.08	1.17	1.24
	3.00	0.05	0.08	**0.14**	**0.18**	0.22	**0.26**	0.35	**0.47**	0.56	0.76	0.88	0.99	1.09	1.18	1.26
	1.00	0.05	0.09	**0.15**	**0.20**	0.24	**0.29**	0.38	**0.52**	0.61	0.82	0.95	1.06	1.16	1.25	1.32
	1.05	0.05	0.09	**0.15**	**0.20**	0.24	**0.29**	0.38	**0.52**	0.62	0.83	0.96	1.07	1.17	1.26	1.34
56	1.20	0.05	0.09	**0.15**	**0.20**	0.25	**0.29**	0.39	**0.53**	0.63	0.84	0.97	1.09	1.20	1.29	1.36
	1.50	0.05	0.10	**0.16**	**0.20**	0.25	**0.30**	0.39	**0.53**	0.64	0.85	0.99	1.11	1.21	1.31	1.39
	3.00	0.05	0.10	**0.16**	**0.21**	0.25	**0.30**	0.40	**0.54**	0.64	0.86	1.00	1.12	1.23	1.32	1.40
	1.00	0.05	0.10	**0.16**	**0.21**	0.26	**0.31**	0.41	**0.56**	0.66	0.89	1.02	1.14	1.25	1.34	1.41
	1.05	0.05	0.10	**0.16**	**0.22**	0.27	**0.31**	0.41	**0.56**	0.67	0.90	1.03	1.15	1.26	1.35	1.42
60	1.20	0.05	0.10	**0.17**	**0.22**	0.27	**0.32**	0.42	**0.57**	0.68	0.91	1.05	1.17	1.28	1.38	1.45
	1.50	0.06	0.10	**0.17**	**0.22**	0.27	**0.32**	0.42	**0.58**	0.69	0.92	1.06	1.19	1.30	1.40	1.47
	3.00	0.06	0.10	**0.17**	**0.22**	0.27	**0.32**	0.43	**0.58**	0.69	0.93	1.07	1.20	1.31	1.41	1.49
	1.00	0.06	0.11	**0.17**	**0.23**	0.28	**0.33**	0.44	**0.59**	0.70	0.94	1.08	1.20	1.31	1.40	1.47
	1.05	0.06	0.11	**0.17**	**0.23**	0.28	**0.33**	0.44	**0.59**	0.71	0.95	1.09	1.21	1.32	1.41	1.48
63	1.20	0.06	0.11	**0.18**	**0.23**	0.28	**0.33**	0.44	**0.60**	0.72	0.96	1.11	1.23	1.34	1.44	1.51
	1.50	0.06	0.11	**0.18**	**0.23**	0.29	**0.34**	0.45	**0.61**	0.73	0.97	1.12	1.25	1.36	1.46	1.53
	3.00	0.06	0.11	**0.18**	**0.23**	0.29	**0.34**	0.45	**0.61**	0.73	0.98	1.13	1.26	1.38	1.47	1.55
	1.00	0.06	0.11	**0.19**	**0.24**	0.30	**0.35**	0.47	**0.63**	0.75	1.00	1.15	1.28	1.39	1.48	1.54
	1.05	0.06	0.11	**0.19**	**0.24**	0.30	**0.35**	0.47	**0.64**	0.76	1.01	1.16	1.29	1.40	1.49	1.55
67	1.20	0.06	0.11	**0.19**	**0.25**	0.30	**0.36**	0.48	**0.65**	0.77	1.03	1.18	1.31	1.42	1.52	1.58
	1.50	0.06	0.12	**0.19**	**0.25**	0.31	**0.36**	0.48	**0.65**	0.78	1.04	1.19	1.33	1.44	1.54	1.61
	3.00	0.06	0.12	**0.19**	**0.25**	0.31	**0.36**	0.48	**0.66**	0.78	1.05	1.20	1.34	1.46	1.55	1.62
	1.00	0.06	0.12	**0.20**	**0.26**	0.32	**0.38**	0.50	**0.68**	0.80	1.07	1.22	1.35	1.46	1.55	1.60
	1.05	0.07	0.12	**0.20**	**0.26**	0.32	**0.38**	0.50	**0.68**	0.81	1.08	1.23	1.36	1.48	1.56	1.62
71	1.20	0.07	0.12	**0.20**	**0.26**	0.32	**0.38**	0.51	**0.69**	0.82	1.09	1.25	1.38	1.50	1.59	1.65
	1.50	0.07	0.12	**0.20**	**0.27**	0.33	**0.39**	0.51	**0.69**	0.83	1.10	1.26	1.40	1.52	1.61	1.67
	3.00	0.07	0.12	**0.20**	**0.27**	0.33	**0.39**	0.51	**0.70**	0.83	1.11	1.27	1.41	1.53	1.62	1.68
	1.00	0.07	0.13	**0.21**	**0.27**	0.34	**0.40**	0.53	**0.72**	0.85	1.13	1.29	1.42	1.53	1.61	1.66
	1.05	0.07	0.13	**0.21**	**0.28**	0.34	**0.40**	0.53	**0.72**	0.86	1.14	1.30	1.44	1.54	1.62	1.67
75	1.20	0.07	0.13	**0.21**	**0.28**	0.34	**0.41**	0.54	**0.73**	0.87	1.15	1.32	1.46	1.57	1.65	1.70
	1.50	0.07	0.13	**0.21**	**0.28**	0.35	**0.41**	0.54	**0.74**	0.87	1.16	1.33	1.47	1.59	1.67	1.72
	3.00	0.07	0.13	**0.22**	**0.28**	0.35	**0.41**	0.54	**0.74**	0.88	1.17	1.34	1.48	1.60	1.69	1.74
v_{max}	m/s															

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PJ

Table 26

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})														
		200	400	**700**	**950**	1200	**1450**	2000	**2850**	3500	5000	6000	7000	8000	9000	10000
80	1.00	0.07	0.14	**0.22**	**0.29**	0.36	**0.43**	0.57	**0.77**	0.91	1.21	1.37	1.51	1.61	1.66	1.71
	1.05	0.07	0.14	**0.23**	**0.30**	0.36	**0.43**	0.57	**0.77**	0.92	1.21	1.38	1.52	1.62	1.70	1.73
	1.20	0.07	0.14	**0.23**	**0.30**	0.37	**0.43**	0.58	**0.78**	0.93	1.23	1.40	1.54	1.65	1.72	1.76
	1.50	0.07	0.14	**0.23**	**0.30**	0.37	**0.44**	0.58	**0.79**	0.93	1.24	1.41	1.55	1.67	1.74	1.78
	3.00	0.08	0.14	**0.23**	**0.30**	0.37	**0.44**	0.58	**0.79**	0.94	1.25	1.42	1.57	1.68	1.76	1.79
85	1.00	0.08	0.15	**0.24**	**0.31**	0.39	**0.46**	0.60	**0.82**	0.97	1.28	1.45	1.59	1.68	1.74	1.75
	1.05	0.08	0.15	**0.24**	**0.32**	0.39	**0.46**	0.61	**0.82**	0.98	1.29	1.46	1.60	1.70	1.75	1.77
	1.20	0.08	0.15	**0.24**	**0.32**	0.39	**0.46**	0.61	**0.83**	0.99	1.30	1.48	1.62	1.72	1.78	1.79
	1.50	0.08	0.15	**0.24**	**0.32**	0.39	**0.47**	0.62	**0.84**	0.99	1.31	1.49	1.63	1.74	1.80	1.82
	3.00	0.08	0.15	**0.25**	**0.32**	0.40	**0.47**	0.62	**0.84**	1.00	1.32	1.50	1.64	1.75	1.81	1.83
90	1.00	0.08	0.15	**0.25**	**0.33**	0.41	**0.49**	0.64	**0.87**	1.03	1.35	1.52	1.66	1.75	1.79	1.77
	1.05	0.08	0.16	**0.26**	**0.34**	0.41	**0.49**	0.65	**0.87**	1.03	1.36	1.53	1.67	1.76	1.80	1.79
	1.20	0.08	0.16	**0.26**	**0.34**	0.42	**0.49**	0.65	**0.88**	1.04	1.37	1.55	1.69	1.78	1.83	1.82
	1.50	0.08	0.16	**0.26**	**0.34**	0.42	**0.49**	0.66	**0.89**	1.05	1.38	1.56	1.70	1.80	1.85	1.84
	3.00	0.08	0.16	**0.26**	**0.34**	0.42	**0.50**	0.66	**0.89**	1.06	1.39	1.57	1.71	1.81	1.86	1.86
95	1.00	0.09	0.16	**0.27**	**0.35**	0.43	**0.51**	0.68	**0.92**	1.09	1.42	1.59	1.72	1.80	1.82	1.78
	1.05	0.09	0.16	**0.27**	**0.35**	0.44	**0.52**	0.68	**0.92**	1.09	1.43	1.60	1.73	1.81	1.83	1.79
	1.20	0.09	0.17	**0.27**	**0.36**	0.44	**0.52**	0.69	**0.93**	1.10	1.44	1.62	1.75	1.63	1.86	1.82
	1.50	0.09	0.17	**0.27**	**0.36**	0.44	**0.52**	0.69	**0.94**	1.11	1.45	1.63	1.77	1.65	1.88	1.84
	3.00	0.09	0.17	**0.27**	**0.36**	0.44	**0.53**	0.70	**0.94**	1.12	1.46	1.64	1.78	1.87	1.89	1.86
100	1.00	0.09	0.17	**0.28**	**0.37**	0.46	**0.54**	0.72	**0.97**	1.14	1.49	1.66	1.78	1.84	1.84	1.76
	1.05	0.09	0.17	**0.28**	**0.37**	0.46	**0.54**	0.72	**0.97**	1.15	1.49	1.67	1.79	1.86	1.85	1.78
	1.20	0.09	0.17	**0.29**	**0.38**	0.46	**0.55**	0.73	**0.98**	1.16	1.51	1.68	1.81	1.88	1.88	1.81
	1.50	0.09	0.17	**0.29**	**0.38**	0.47	**0.55**	0.73	**0.99**	1.17	1.52	1.70	1.83	1.90	1.90	1.83
	3.00	0.09	0.18	**0.29**	**0.38**	0.47	**0.55**	0.73	**0.99**	1.17	1.53	1.71	1.84	1.91	1.91	1.85
112	1.00	0.10	0.19	**0.32**	**0.42**	0.51	**0.61**	0.80	**1.08**	1.27	1.63	1.80	1.89	1.91	1.83	1.65
	1.05	0.10	0.19	**0.32**	**0.42**	0.52	**0.61**	0.81	**1.09**	1.28	1.64	1.81	1.90	1.92	1.84	1.67
	1.20	0.10	0.20	**0.32**	**0.42**	0.52	**0.61**	0.81	**1.09**	1.29	1.65	1.82	1.92	1.94	1.87	1.70
	1.50	0.11	0.20	**0.32**	**0.42**	0.52	**0.62**	0.82	**1.10**	1.30	1.67	1.84	1.94	1.96	1.89	1.72
	3.00	0.11	0.20	**0.32**	**0.43**	0.52	**0.62**	0.82	**1.11**	1.30	1.67	1.85	1.95	1.97	1.90	1.73
125	1.00	0.12	0.22	**0.36**	**0.47**	0.58	**0.68**	0.90	**1.20**	1.41	1.77	1.92	1.96	1.90	1.72	
	1.05	0.12	0.22	**0.36**	**0.47**	0.58	**0.68**	0.90	**1.21**	1.41	1.78	1.93	1.98	1.91	1.73	
	1.20	0.12	0.22	**0.36**	**0.47**	0.58	**0.69**	0.91	**1.21**	1.42	1.80	1.94	2.00	1.94	1.75	
	1.50	0.12	0.22	**0.36**	**0.47**	0.58	**0.69**	0.91	**1.22**	1.43	1.81	1.96	2.01	1.96	1.77	
	3.00	0.12	0.22	**0.36**	**0.48**	0.59	**0.69**	0.91	**1.23**	1.44	1.81	1.97	2.02	1.97	1.79	
140	1.00	0.13	0.24	**0.40**	**0.52**	0.64	**0.76**	1.00	**1.33**	1.55	1.91	2.01	1.98	1.80		
	1.05	0.13	0.24	**0.40**	**0.53**	0.65	**0.76**	1.00	**1.34**	1.56	1.92	2.02	1.99	1.81		
	1.20	0.13	0.24	**0.40**	**0.53**	0.65	**0.77**	1.01	**1.35**	1.57	1.93	2.04	2.01	1.83		
	1.50	0.13	0.24	**0.40**	**0.53**	0.65	**0.77**	1.01	**1.35**	1.58	1.94	2.05	2.02	1.85		
	3.00	0.13	0.25	**0.41**	**0.53**	0.65	**0.77**	1.02	**1.36**	1.58	1.95	2.06	2.04	1.86		
160	1.00	0.15	0.28	**0.46**	**0.60**	0.73	**0.87**	1.14	**1.50**	1.73	2.04	2.05	1.87			
	1.05	0.15	0.28	**0.46**	**0.60**	0.74	**0.87**	1.14	**1.50**	1.73	2.05	2.06	1.88			
	1.20	0.15	0.28	**0.46**	**0.60**	0.74	**0.87**	1.14	**1.51**	1.74	2.06	2.08	1.90			
	1.50	0.15	0.28	**0.46**	**0.60**	0.74	**0.88**	1.15	**1.52**	1.75	2.07	2.09	1.91			
	3.00	0.15	0.28	**0.46**	**0.61**	0.74	**0.88**	1.15	**1.52**	1.76	2.08	2.10	1.92			
180	1.00	0.17	0.31	**0.51**	**0.67**	0.82	**0.97**	1.27	**1.65**	1.88	2.11	1.99				
	1.05	0.17	0.31	**0.51**	**0.67**	0.82	**0.97**	1.27	**1.66**	1.88	2.12	1.99				
	1.20	0.17	0.31	**0.51**	**0.67**	0.83	**0.97**	1.27	**1.66**	1.89	2.13	2.01				
	1.50	0.17	0.31	**0.52**	**0.68**	0.83	**0.98**	1.28	**1.67**	1.90	2.14	2.02				
	3.00	0.17	0.31	**0.52**	**0.68**	0.83	**0.98**	1.28	**1.68**	1.91	2.15	2.03				
200	1.00	0.18	0.34	**0.57**	**0.74**	0.91	**1.07**	1.39	**1.79**	2.01	2.11					
	1.05	0.18	0.34	**0.57**	**0.74**	0.91	**1.07**	1.39	**1.79**	2.01	2.12					
	1.20	0.18	0.34	**0.57**	**0.75**	0.91	**1.07**	1.40	**1.80**	2.02	2.13					
	1.50	0.19	0.35	**0.57**	**0.75**	0.92	**1.08**	1.40	**1.81**	2.03	2.14					
	3.00	0.19	0.35	**0.57**	**0.75**	0.92	**1.08**	1.41	**1.81**	2.03	2.15					
250	1.00	0.23	0.42	**0.70**	**0.92**	1.12	**1.31**	1.67	**2.07**	2.20						
	1.05	0.23	0.43	**0.70**	**0.92**	1.12	**1.31**	1.67	**2.07**	2.20						
	1.20	0.23	0.43	**0.70**	**0.92**	1.12	**1.31**	1.68	**2.08**	2.21						
	1.50	0.23	0.43	**0.70**	**0.92**	1.13	**1.32**	1.68	**2.09**	2.22						
	3.00	0.23	0.43	**0.71**	**0.92**	1.13	**1.32**	1.69	**2.09**	2.23						
v_{max}	m/s	60														

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – section PK

Power capacity rating P_R (kW) for one rib as a function of the effective diameter of the small pulley d_{bk}, the transmission ratio i, the rpm of the small pulley n_k and the effective lenght L_b = 1610 mm.

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PK — Table 27

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})															
		200	400	**700**	**950**	**1450**	2000	2400	**2850**	3500	5000	5500	6000	6500	7000	7500	8000
	1.00	0.07	0.12	**0.18**	**0.23**	**0.31**	0.40	0.45	**0.50**	0.57	0.70	0.73	0.76	0.78	0.80	0.81	0.81
	1.05	0.07	0.12	**0.19**	**0.24**	**0.33**	0.41	0.47	**0.53**	0.61	0.75	0.78	0.82	0.84	0.86	0.88	0.89
45	1.20	0.07	0.13	**0.20**	**0.26**	**0.35**	0.45	0.51	**0.58**	0.67	0.84	0.88	0.92	0.96	0.99	1.01	1.03
	1.50	0.08	0.13	**0.21**	**0.27**	**0.37**	0.48	0.55	**0.62**	0.72	0.91	0.96	1.01	1.05	1.09	1.12	1.14
	3.00	0.08	0.14	**0.22**	**0.28**	**0.39**	0.50	0.57	**0.65**	0.75	0.96	1.01	1.07	1.11	1.15	1.19	1.22
	1.00	0.08	0.15	**0.23**	**0.29**	**0.40**	0.51	0.59	**0.66**	0.76	0.96	1.01	1.05	1.09	1.12	1.14	1.16
	1.05	0.08	0.15	**0.23**	**0.30**	**0.41**	0.53	0.61	**0.69**	0.80	1.00	1.06	1.11	1.15	1.18	1.21	1.23
50	1.20	0.09	0.16	**0.25**	**0.31**	**0.44**	0.57	0.65	**0.74**	0.86	1.09	1.15	1.21	1.26	1.31	1.34	1.37
	1.50	0.09	0.16	**0.26**	**0.33**	**0.46**	0.59	0.68	**0.78**	0.91	1.16	1.23	1.30	1.35	1.41	1.45	1.48
	3.00	0.09	0.17	**0.26**	**0.34**	**0.48**	0.61	0.71	**0.81**	0.94	1.21	1.29	1.36	1.42	1.47	1.52	1.56
	1.00	0.10	0.18	**0.28**	**0.36**	**0.50**	0.65	0.75	**0.85**	0.99	1.25	1.32	1.39	1.44	1.49	1.52	1.55
	1.05	0.10	0.18	**0.29**	**0.37**	**0.52**	0.67	0.77	**0.88**	1.02	1.30	1.37	1.44	1.50	1.55	1.59	1.62
56	1.20	0.11	0.19	**0.30**	**0.39**	**0.54**	0.70	0.81	**0.93**	1.08	1.39	1.47	1.55	1.62	1.67	1.72	1.76
	1.50	0.11	0.19	**0.31**	**0.40**	**0.56**	0.73	0.85	**0.97**	1.13	1.46	1.55	1.63	1.71	1.77	1.83	1.87
	3.00	0.11	0.20	**0.32**	**0.41**	**0.58**	0.75	0.87	**1.00**	1.17	1.51	1.60	1.69	1.77	1.84	1.90	1.95
	1.00	0.12	0.21	**0.34**	**0.44**	**0.62**	0.81	0.93	**1.07**	1.24	1.59	1.68	1.76	1.83	1.89	1.93	1.97
	1.05	0.12	0.22	**0.35**	**0.45**	**0.64**	0.83	0.96	**1.09**	1.27	1.63	1.73	1.82	1.89	1.95	2.00	2.04
63	1.20	0.12	0.23	**0.36**	**0.47**	**0.66**	0.86	1.00	**1.14**	1.34	1.72	1.83	1.92	2.01	2.08	2.14	2.18
	1.50	0.13	0.23	**0.37**	**0.48**	**0.68**	0.89	1.03	**1.18**	1.39	1.79	1.90	2.01	2.10	2.18	2.24	2.29
	3.00	0.13	0.24	**0.38**	**0.49**	**0.70**	0.91	1.06	**1.21**	1.42	1.84	1.96	2.07	2.16	2.25	2.32	2.37
	1.00	0.14	0.26	**0.41**	**0.53**	**0.76**	0.99	1.14	**1.31**	1.53	1.95	2.07	2.17	2.25	2.32	2.36	2.40
	1.05	0.14	0.26	**0.42**	**0.54**	**0.77**	1.01	1.16	**1.33**	1.56	2.00	2.12	2.22	2.31	2.38	2.43	2.47
71	1.20	0.15	0.27	**0.43**	**0.56**	**0.80**	1.04	1.21	**1.38**	1.62	2.09	2.21	2.33	2.42	2.50	2.57	2.61
	1.50	0.15	0.27	**0.44**	**0.57**	**0.82**	1.07	1.24	**1.42**	1.67	2.16	2.29	2.41	2.51	2.60	2.67	2.72
	3.00	0.15	0.28	**0.45**	**0.58**	**0.83**	1.09	1.26	**1.45**	1.71	2.21	2.35	2.47	2.58	2.67	2.75	2.80
	1.00	0.17	0.30	**0.49**	**0.64**	**0.91**	1.19	1.37	**1.57**	1.84	2.35	2.48	2.59	2.68	2.75	2.79	2.81
	1.05	0.17	0.31	**0.50**	**0.64**	**0.92**	1.20	1.40	**1.60**	1.87	2.39	2.53	2.64	2.74	2.81	2.86	2.88
80	1.20	0.17	0.31	**0.51**	**0.66**	**0.95**	1.24	1.44	**1.65**	1.93	2.48	2.63	2.75	2.85	2.93	2.99	3.02
	1.50	0.18	0.32	**0.52**	**0.68**	**0.97**	1.27	1.47	**1.69**	1.98	2.55	2.70	2.83	2.95	3.03	3.10	3.14
	3.00	0.18	0.32	**0.53**	**0.68**	**0.98**	1.29	1.50	**1.72**	2.02	2.60	2.76	2.89	3.01	3.10	3.17	3.22
	1.00	0.19	0.36	**0.58**	**0.75**	**1.07**	1.40	1.63	**1.86**	2.18	2.76	2.90	3.02	3.11	3.16	3.19	3.17
	1.05	0.20	0.36	**0.58**	**0.76**	**1.09**	1.42	1.65	**1.89**	2.21	2.80	2.95	3.07	3.16	3.23	3.25	3.25
90	1.20	0.20	0.37	**0.59**	**0.77**	**1.11**	1.46	1.69	**1.94**	2.27	2.89	3.05	3.18	3.28	3.35	3.39	3.39
	1.50	0.20	0.37	**0.60**	**0.79**	**1.13**	1.48	1.72	**1.98**	2.32	2.96	3.13	3.26	3.37	3.45	3.49	3.50
	3.00	0.20	0.38	**0.61**	**0.80**	**1.15**	1.50	1.75	**2.01**	2.35	3.01	3.18	3.32	3.44	3.52	3.57	3.58
	1.00	0.22	0.41	**0.66**	**0.86**	**1.23**	1.61	1.87	**2.14**	2.50	3.14	3.28	3.40	3.47	3.50	3.49	3.43
	1.05	0.22	0.41	**0.67**	**0.87**	**1.25**	1.63	1.89	**2.17**	2.53	3.18	3.33	3.45	3.53	3.57	3.56	3.50
100	1.20	0.23	0.42	**0.68**	**0.89**	**1.27**	1.67	1.94	**2.22**	2.59	3.27	3.43	3.56	3.64	3.69	3.69	3.65
	1.50	0.23	0.42	**0.69**	**0.90**	**1.29**	1.70	1.97	**2.26**	2.64	3.34	3.51	3.64	3.74	3.79	3.80	3.76
	3.00	0.23	0.43	**0.70**	**0.91**	**1.31**	1.72	1.99	**2.29**	2.68	3.39	3.56	3.70	3.80	3.86	3.87	3.84
	1.00	0.25	0.47	**0.76**	**0.99**	**1.43**	1.86	2.16	**2.47**	2.87	3.55	3.69	3.78	3.82	3.80	3.72	3.58
	1.05	0.26	0.47	**0.77**	**1.00**	**1.44**	1.88	2.18	**2.50**	2.90	3.60	3.74	3.84	3.88	3.87	3.79	3.65
112	1.20	0.26	0.48	**0.78**	**1.02**	**1.46**	1.92	2.23	**2.55**	2.96	3.69	3.84	3.94	4.00	3.99	3.93	3.80
	1.50	0.26	0.48	**0.79**	**1.03**	**1.48**	1.95	2.26	**2.59**	3.01	3.76	3.92	4.03	4.09	4.09	4.03	3.91
	3.00	0.26	0.49	**0.80**	**1.04**	**1.50**	1.97	2.28	**2.62**	3.05	3.81	3.97	4.09	4.15	4.16	4.11	3.99
	1.00	0.29	0.53	**0.87**	**1.13**	**1.63**	2.13	2.47	**2.81**	3.25	3.94	4.06	4.11	4.08	3.98	3.80	3.53
	1.05	0.29	0.54	**0.88**	**1.14**	**1.64**	2.15	2.49	**2.84**	3.28	3.99	4.11	4.16	4.14	4.05	3.87	3.60
125	1.20	0.29	0.54	**0.89**	**1.16**	**1.67**	2.18	2.53	**2.89**	3.35	4.08	4.21	4.27	4.26	4.17	4.00	3.75
	1.50	0.30	0.55	**0.90**	**1.17**	**1.69**	2.21	2.56	**2.93**	3.40	4.15	4.28	4.35	4.35	4.27	4.11	3.86
	3.00	0.30	0.55	**0.90**	**1.18**	**1.70**	2.23	2.59	**2.96**	3.43	4.20	4.34	4.41	4.41	4.34	4.18	3.94
	1.00	0.33	0.61	**0.99**	**1.29**	**1.86**	2.43	2.80	**3.19**	3.66	4.32	4.38	4.35	4.22	3.98		
	1.05	0.33	0.61	**1.00**	**1.30**	**1.87**	2.45	2.83	**3.21**	3.69	4.36	4.43	4.40	4.28	4.05		
140	1.20	0.33	0.62	**1.01**	**1.32**	**1.90**	2.48	2.87	**3.26**	3.76	4.45	4.53	4.51	4.39	4.17		
	1.50	0.34	0.62	**1.02**	**1.33**	**1.92**	2.51	2.90	**3.30**	3.80	4.52	4.60	4.59	4.48	4.27		
	3.00	0.34	0.63	**1.03**	**1.34**	**1.93**	2.53	2.93	**3.33**	3.84	4.57	4.66	4.65	4.55	4.34		
	1.00	0.38	0.70	**1.15**	**1.51**	**2.16**	2.81	3.24	**3.66**	4.15	4.67	4.62	4.43				
	1.05	0.38	0.71	**1.16**	**1.51**	**2.17**	2.83	3.26	**3.68**	4.19	4.72	4.67	4.48				
160	1.20	0.39	0.71	**1.17**	**1.53**	**2.20**	2.87	3.30	**3.74**	4.25	4.81	4.76	4.59				
	1.50	0.39	0.72	**1.18**	**1.54**	**2.22**	2.89	3.33	**3.78**	4.30	4.88	4.84	4.67				
	3.00	0.39	0.72	**1.19**	**1.55**	**2.24**	2.91	3.36	**3.80**	4.33	4.93	4.90	4.73				
v_{max}	m/s	50															

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PK

Table 27

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})															
		200	400	**700**	**950**	**1450**	2000	2400	**2850**	3500	5000	5500	6000	6500	7000	7500	8000
	1.00	0.43	0.80	**1.31**	**1.71**	**2.46**	3.18	3.64	**4.09**	4.58	4.84	4.61					
	1.05	0.43	0.80	**1.32**	**1.72**	**2.47**	3.20	3.67	**4.12**	4.61	4.89	4.66					
180	1.20	0.44	0.81	**1.33**	**1.74**	**2.49**	3.23	3.71	**4.17**	4.67	4.98	4.76					
	1.50	0.44	0.82	**1.34**	**1.75**	**2.51**	3.26	3.74	**4.21**	4.72	5.05	4.83					
	3.00	0.44	0.82	**1.35**	**1.76**	**2.53**	3.28	3.77	**4.24**	4.76	5.10	4.89					
	1.00	0.48	0.90	**1.47**	**1.92**	**2.74**	3.53	4.02	**4.48**	4.93	4.81						
	1.05	0.48	0.90	**1.48**	**1.93**	**2.75**	3.55	4.05	**4.51**	4.96	4.85						
200	1.20	0.49	0.91	**1.49**	**1.94**	**2.78**	3.59	4.09	**4.56**	5.03	4.94						
	1.50	0.49	0.91	**1.50**	**1.96**	**2.80**	3.62	4.12	**4.60**	5.07	5.01						
	3.00	0.49	0.92	**1.51**	**1.97**	**2.82**	3.64	4.15	**4.63**	5.11	5.06						
	1.00	0.54	1.01	**1.66**	**2.16**	**3.07**	3.93	4.44	**4.89**	5.25							
	1.05	0.55	1.01	**1.66**	**2.17**	**3.09**	3.95	4.47	**4.91**	5.28							
224	1.20	0.55	1.02	**1.67**	**2.18**	**3.11**	3.99	4.51	**4.97**	5.34							
	1.50	0.55	1.03	**1.68**	**2.20**	**3.13**	4.01	4.54	**5.01**	5.39							
	3.00	0.55	1.03	**1.69**	**2.21**	**3.15**	4.03	4.57	**5.03**	5.42							
	1.00	0.61	1.13	**1.85**	**2.41**	**3.42**	4.33	4.85	**5.25**								
	1.05	0.61	1.13	**1.86**	**2.42**	**3.43**	4.35	4.87	**5.28**								
250	1.20	0.61	1.14	**1.87**	**2.44**	**3.46**	4.39	4.91	**5.33**								
	1.50	0.62	1.15	**1.88**	**2.45**	**3.48**	4.42	4.95	**5.37**								
	3.00	0.62	1.15	**1.89**	**2.46**	**3.49**	4.44	4.97	**5.40**								
v_{max}	m/s	50															

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – section PL

Power capacity rating P_R (kW) for one rib as a function of the effective diameter of the small pulley d_{bk}, the transmission ratio i, the rpm of the small pulley n_k and the effective lenght L_b = 2096 mm.

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PL — Table 28

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})																	
		200	400	**700**	**950**	1200	**1450**	2000	2400	**2850**	3200	3500	3800	4000	4300	4600	5000	5500	6000
	1.00	0.15	0.26	**0.40**	**0.50**	0.60	**0.68**	0.85	0.95	**1.04**	1.11	1.15	1.18	1.20	1.22	1.23	1.23	1.20	1.13
	1.05	0.16	0.27	**0.42**	**0.52**	0.62	**0.71**	0.89	1.00	**1.10**	1.17	1.22	1.26	1.29	1.31	1.33	1.33	1.31	1.26
75	1.20	0.16	0.29	**0.45**	**0.56**	0.67	**0.77**	0.97	1.10	**1.22**	1.30	1.37	1.42	1.45	1.49	1.52	1.54	1.54	1.51
	1.50	0.17	0.30	**0.47**	**0.59**	0.71	**0.82**	1.04	1.18	**1.31**	1.41	1.48	1.54	1.58	1.63	1.66	1.70	1.72	1.70
	3.00	0.18	0.31	**0.48**	**0.62**	0.74	**0.85**	1.08	1.23	**1.38**	1.48	1.56	1.63	1.67	1.73	1.77	1.81	1.84	1.84
	1.00	0.17	0.30	**0.46**	**0.58**	0.70	**0.80**	1.00	1.13	**1.25**	1.33	1.39	1.43	1.46	1.49	1.51	1.51	1.49	1.43
	1.05	0.18	0.31	**0.48**	**0.60**	0.72	**0.83**	1.04	1.18	**1.31**	1.39	1.46	1.51	1.54	1.58	1.60	1.62	1.60	1.55
80	1.20	0.18	0.32	**0.51**	**0.64**	0.77	**0.89**	1.12	1.28	**1.42**	1.53	1.60	1.67	1.71	1.75	1.79	1.82	1.83	1.80
	1.50	0.19	0.34	**0.53**	**0.67**	0.81	**0.94**	1.19	1.35	**1.52**	1.63	1.72	1.79	1.84	1.89	1.94	1.98	2.01	2.00
	3.00	0.20	0.35	**0.55**	**0.70**	0.84	**0.97**	1.24	1.41	**1.58**	1.70	1.80	1.88	1.93	1.99	2.05	2.10	2.13	2.13
	1.00	0.21	0.37	**0.58**	**0.74**	0.89	**1.03**	1.30	1.48	**1.65**	1.76	1.84	1.91	1.95	2.00	2.03	2.05	2.03	1.96
	1.05	0.21	0.38	**0.60**	**0.76**	0.92	**1.06**	1.34	1.53	**1.71**	1.83	1.92	1.99	2.04	2.09	2.13	2.15	2.14	2.08
90	1.20	0.22	0.40	**0.63**	**0.80**	0.97	**1.12**	1.43	1.63	**1.82**	1.96	2.06	2.15	2.20	2.26	2.31	2.36	2.37	2.33
	1.50	0.23	0.41	**0.65**	**0.83**	1.00	**1.17**	1.49	1.70	**1.92**	2.06	2.17	2.27	2.33	2.40	2.46	2.52	2.55	2.53
	3.00	0.23	0.42	**0.67**	**0.85**	1.03	**1.20**	1.54	1.76	**1.98**	2.14	2.25	2.36	2.42	2.50	2.57	2.63	2.67	2.66
	1.00	0.25	0.44	**0.70**	**0.90**	1.08	**1.26**	1.60	1.82	**2.03**	2.18	2.28	2.37	2.42	2.48	2.51	2.53	2.50	2.41
	1.05	0.25	0.45	**0.72**	**0.92**	1.11	**1.29**	1.64	1.87	**2.09**	2.24	2.35	2.45	2.50	2.57	2.61	2.64	2.62	2.53
100	1.20	0.26	0.47	**0.75**	**0.96**	1.16	**1.35**	1.72	1.97	**2.21**	2.37	2.50	2.60	2.67	2.74	2.80	2.84	2.84	2.78
	1.50	0.27	0.48	**0.77**	**0.99**	1.20	**1.39**	1.79	2.04	**2.30**	2.48	2.61	2.73	2.80	2.88	2.95	3.01	3.02	2.97
	3.00	0.27	0.49	**0.78**	**1.01**	1.22	**1.43**	1.83	2.10	**2.37**	2.55	2.69	2.82	2.89	2.98	3.05	3.12	3.15	3.11
	1.00	0.29	0.53	**0.84**	**1.09**	1.32	**1.53**	1.97	2.26	**2.54**	2.74	2.88	3.01	3.08	3.18	3.24	3.30	3.30	3.23
	1.05	0.29	0.53	**0.86**	**1.10**	1.34	**1.56**	2.01	2.30	**2.60**	2.80	2.95	3.08	3.16	3.26	3.33	3.39	3.41	3.34
106	1.20	0.30	0.55	**0.88**	**1.14**	1.38	**1.62**	2.08	2.39	**2.70**	2.92	3.08	3.22	3.31	3.41	3.50	3.58	3.61	3.57
	1.50	0.31	0.56	**0.90**	**1.17**	1.42	**1.66**	2.14	2.46	**2.79**	3.01	3.18	3.33	3.42	3.54	3.63	3.72	3.77	3.74
	3.00	0.31	0.57	**0.92**	**1.19**	1.44	**1.69**	2.18	2.51	**2.84**	3.08	3.25	3.41	3.51	3.63	3.73	3.83	3.88	3.86
	1.00	0.31	0.57	**0.91**	**1.18**	1.43	**1.67**	2.15	2.46	**2.76**	2.97	3.13	3.26	3.34	3.43	3.50	3.54	3.53	3.42
	1.05	0.32	0.58	**0.93**	**1.20**	1.45	**1.69**	2.18	2.50	**2.82**	3.03	3.20	3.33	3.41	3.51	3.58	3.64	3.63	3.54
112	1.20	0.32	0.59	**0.95**	**1.23**	1.50	**1.75**	2.26	2.59	**2.92**	3.15	3.32	3.47	3.56	3.67	3.75	3.82	3.83	3.76
	1.50	0.33	0.60	**0.97**	**1.26**	1.53	**1.79**	2.32	2.66	**3.01**	3.24	3.43	3.58	3.68	3.80	3.89	3.97	3.99	3.93
	3.00	0.33	0.61	**0.99**	**1.28**	1.56	**1.82**	2.36	2.71	**3.07**	3.31	3.50	3.66	3.76	3.88	3.98	4.07	4.11	4.06
	1.00	0.34	0.61	**0.98**	**1.27**	1.54	**1.80**	2.32	2.65	**2.98**	3.20	3.37	3.50	3.58	3.67	3.74	3.77	3.73	3.58
	1.05	0.34	0.62	**1.00**	**1.29**	1.57	**1.83**	2.35	2.70	**3.03**	3.26	3.43	3.58	3.66	3.75	3.82	3.86	3.83	3.69
118	1.20	0.35	0.63	**1.02**	**1.32**	1.61	**1.88**	2.43	2.78	**3.14**	3.38	3.56	3.72	3.80	3.91	3.99	4.05	4.03	3.91
	1.50	0.35	0.64	**1.04**	**1.35**	1.64	**1.92**	2.49	2.85	**3.22**	3.47	3.66	3.83	3.92	4.04	4.13	4.19	4.19	4.09
	3.00	0.36	0.65	**1.06**	**1.37**	1.67	**1.95**	2.53	2.90	**3.28**	3.54	3.74	3.91	4.00	4.13	4.22	4.30	4.31	4.21
	1.00	0.36	0.66	**1.06**	**1.38**	1.67	**1.95**	2.51	2.87	**3.23**	3.46	3.63	3.77	3.85	3.94	3.99	4.00	3.92	3.72
	1.05	0.37	0.67	**1.08**	**1.40**	1.70	**1.98**	2.55	2.92	**3.28**	3.52	3.70	3.85	3.93	4.02	4.08	4.10	4.02	3.83
125	1.20	0.37	0.68	**1.10**	**1.43**	1.74	**2.03**	2.62	3.01	**3.39**	3.64	3.83	3.99	4.07	4.18	4.25	4.28	4.22	4.05
	1.50	0.38	0.69	**1.12**	**1.46**	1.77	**2.08**	2.68	3.08	**3.47**	3.73	3.93	4.10	4.19	4.30	4.38	4.43	4.39	4.23
	3.00	0.38	0.70	**1.14**	**1.48**	1.80	**2.11**	2.72	3.13	**3.53**	3.80	4.00	4.18	4.27	4.39	4.48	4.53	4.50	4.35
	1.00	0.39	0.71	**1.15**	**1.48**	1.80	**2.10**	2.71	3.09	**3.47**	3.71	3.89	4.03	4.10	4.18	4.22	4.21	4.07	3.80
	1.05	0.39	0.72	**1.16**	**1.50**	1.82	**2.13**	2.74	3.14	**3.52**	3.77	3.95	4.10	4.18	4.26	4.31	4.30	4.17	3.91
132	1.20	0.40	0.73	**1.18**	**1.54**	1.87	**2.18**	2.82	3.23	**3.63**	3.89	4.08	4.24	4.33	4.42	4.48	4.48	4.38	4.13
	1.50	0.41	0.74	**1.20**	**1.56**	1.90	**2.23**	2.88	3.30	**3.71**	3.98	4.18	4.35	4.44	4.55	4.61	4.63	4.54	4.31
	3.00	0.41	0.75	**1.22**	**1.58**	1.93	**2.26**	2.92	3.35	**3.77**	4.05	4.26	4.43	4.52	4.64	4.71	4.73	4.65	4.43
	1.00	0.42	0.76	**1.24**	**1.60**	1.95	**2.27**	2.92	3.34	**3.73**	3.99	4.16	4.30	4.37	4.43	4.45	4.40	4.19	
	1.05	0.42	0.77	**1.25**	**1.62**	1.97	**2.30**	2.96	3.38	**3.79**	4.05	4.23	4.37	4.45	4.52	4.54	4.49	4.30	
140	1.20	0.43	0.79	**1.28**	**1.66**	2.02	**2.36**	3.04	3.47	**3.89**	4.17	4.36	4.51	4.59	4.67	4.71	4.68	4.50	
	1.50	0.44	0.80	**1.30**	**1.68**	2.05	**2.40**	3.09	3.54	**3.97**	4.26	4.46	4.62	4.71	4.80	4.84	4.82	4.66	
	3.00	0.44	0.81	**1.31**	**1.70**	2.07	**2.43**	3.14	3.59	**4.03**	4.32	4.53	4.70	4.79	4.89	4.94	4.92	4.77	
	1.00	0.46	0.83	**1.35**	**1.75**	2.13	**2.49**	3.19	3.63	**4.05**	4.31	4.49	4.61	4.67	4.71	4.69	4.57	4.26	
	1.05	0.46	0.84	**1.36**	**1.77**	2.15	**2.51**	3.23	3.68	**4.10**	4.37	4.55	4.69	4.75	4.79	4.78	4.67	4.37	
150	1.20	0.47	0.86	**1.39**	**1.80**	2.20	**2.57**	3.30	3.77	**4.21**	4.49	4.68	4.83	4.89	4.95	4.95	4.85	4.57	
	1.50	0.47	0.87	**1.41**	**1.83**	2.23	**2.61**	3.36	3.84	**4.29**	4.58	4.78	4.94	5.01	5.07	5.08	5.00	4.73	
	3.00	0.48	0.88	**1.42**	**1.85**	2.26	**2.64**	3.40	3.89	**4.35**	4.65	4.86	5.01	5.09	5.16	5.18	5.10	4.84	
	1.00	0.49	0.90	**1.46**	**1.90**	2.31	**2.69**	3.45	3.92	**4.35**	4.62	4.78	4.89	4.93	4.94	4.87	4.68		
	1.05	0.50	0.91	**1.48**	**1.92**	2.33	**2.72**	3.49	3.97	**4.41**	4.68	4.85	4.96	5.01	5.02	4.96	4.77		
160	1.20	0.50	0.92	**1.50**	**1.95**	2.38	**2.77**	3.56	4.05	**4.51**	4.79	4.98	5.10	5.15	5.18	5.13	4.95		
	1.50	0.51	0.94	**1.52**	**1.98**	2.41	**2.82**	3.62	4.12	**4.60**	4.89	5.08	5.21	5.27	5.30	5.26	5.10		
	3.00	0.51	0.94	**1.54**	**2.00**	2.44	**2.85**	3.66	4.17	**4.65**	4.95	5.15	5.29	5.35	5.39	5.36	5.20		
v_{max}	m/s																		40

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PL

Table 28

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})																	
		200	400	**700**	**950**	1200	**1450**	2000	2400	**2850**	3200	3500	3800	4000	4300	4600	5000	5500	6000
	1.00	0.53	0.97	**1.58**	**2.04**	2.49	**2.90**	3.71	4.20	**4.64**	4.90	5.05	5.13	5.15	5.11	4.99			
	1.05	0.53	0.98	**1.59**	**2.06**	2.51	**2.93**	3.74	4.24	**4.70**	4.96	5.12	5.21	5.23	5.19	5.08			
170	1.20	0.54	0.99	**1.61**	**2.10**	2.55	**2.98**	3.82	4.33	**4.80**	5.08	5.24	5.35	5.37	5.35	5.25			
	1.50	0.55	1.00	**1.64**	**2.13**	2.59	**3.02**	3.88	4.40	**4.88**	5.17	5.35	5.46	5.49	5.48	5.38			
	3.00	0.55	1.01	**1.65**	**2.14**	2.61	**3.05**	3.92	4.45	**4.94**	5.24	5.42	5.54	5.57	5.57	5.48			
	1.00	0.56	1.04	**1.69**	**2.19**	2.66	**3.10**	3.95	4.46	**4.91**	5.16	5.29	5.34	5.33	5.23	5.05			
	1.05	0.57	1.04	**1.70**	**2.21**	2.68	**3.13**	3.99	4.51	**4.97**	5.22	5.35	5.41	5.40	5.32	5.13			
180	1.20	0.58	1.06	**1.73**	**2.24**	2.73	**3.18**	4.06	4.60	**5.07**	5.33	5.48	5.55	5.55	5.47	5.30			
	1.50	0.58	1.07	**1.75**	**2.27**	2.76	**3.22**	4.12	4.67	**5.15**	5.43	5.58	5.66	5.67	5.60	5.44			
	3.00	0.59	1.08	**1.76**	**2.29**	2.79	**3.25**	4.16	4.72	**5.21**	5.49	5.66	5.74	5.75	5.69	5.53			
	1.00	0.60	1.10	**1.80**	**2.33**	2.83	**3.30**	4.19	4.72	**5.16**	5.39	5.49	5.51	5.46	5.30				
	1.05	0.60	1.11	**1.81**	**2.35**	2.86	**3.33**	4.23	4.76	**5.22**	5.45	5.56	5.58	5.53	5.38				
190	1.20	0.61	1.13	**1.84**	**2.39**	2.90	**3.38**	4.31	4.85	**5.32**	5.57	5.69	5.72	5.68	5.54				
	1.50	0.62	1.14	**1.86**	**2.41**	2.94	**3.42**	4.36	4.92	**5.41**	5.66	5.79	5.83	5.80	5.67				
	3.00	0.62	1.15	**1.87**	**2.43**	2.96	**3.45**	4.41	4.97	**5.47**	5.73	5.86	5.91	5.88	5.75				
	1.00	0.64	1.17	**1.91**	**2.47**	3.00	**3.50**	4.43	4.96	**5.40**	5.60	5.67	5.63	5.54					
	1.05	0.64	1.18	**1.92**	**2.49**	3.03	**3.52**	4.47	5.01	**5.45**	5.66	5.73	5.70	5.62					
200	1.20	0.65	1.19	**1.95**	**2.53**	3.07	**3.58**	4.54	5.10	**5.56**	5.78	5.86	5.84	5.76					
	1.50	0.65	1.21	**1.97**	**2.56**	3.11	**3.62**	4.60	5.17	**5.64**	5.87	5.96	5.95	5.88					
	3.00	0.66	1.21	**1.98**	**2.58**	3.13	**3.65**	4.64	5.22	**5.70**	5.94	6.04	6.03	5.96					
	1.00	0.68	1.25	**2.04**	**2.64**	3.21	**3.73**	4.70	5.24	**5.66**	5.82	5.83	5.72						
	1.05	0.68	1.26	**2.05**	**2.66**	3.23	**3.75**	4.74	5.29	**5.71**	5.88	5.90	5.79						
212	1.20	0.69	1.27	**2.08**	**2.70**	3.27	**3.81**	4.81	5.37	**5.81**	6.00	6.03	5.93						
	1.50	0.70	1.29	**2.10**	**2.72**	3.31	**3.85**	4.87	5.44	**5.90**	6.09	6.13	6.04						
	3.00	0.70	1.29	**2.11**	**2.74**	3.33	**3.88**	4.91	5.49	**5.96**	6.15	6.20	6.12						
	1.00	0.78	1.45	**2.38**	**3.10**	3.77	**4.39**	5.56	6.22	**6.74**	6.95	6.99							
	1.05	0.78	1.46	**2.39**	**3.11**	3.78	**4.40**	5.58	6.25	**6.77**	6.99	7.04							
224	1.20	0.79	1.47	**2.40**	**3.13**	3.81	**4.44**	5.63	6.31	**6.84**	7.07	7.12							
	1.50	0.79	1.47	**2.42**	**3.15**	3.83	**4.47**	5.67	6.35	**6.90**	7.13	7.19							
	3.00	0.80	1.48	**2.43**	**3.16**	3.85	**4.49**	5.70	6.39	**6.94**	7.18	7.24							
	1.00	0.82	1.53	**2.51**	**3.26**	3.96	**4.61**	5.81	6.46	**6.94**	7.09	7.05							
	1.05	0.83	1.54	**2.52**	**3.27**	3.98	**4.63**	5.83	6.49	**6.97**	7.13	7.10							
236	1.20	0.83	1.54	**2.53**	**3.30**	4.01	**4.66**	5.88	6.55	**7.04**	7.21	7.18							
	1.50	0.84	1.55	**2.55**	**3.31**	4.03	**4.69**	5.92	6.60	**7.10**	7.27	7.25							
	3.00	0.84	1.56	**2.56**	**3.33**	4.05	**4.71**	5.95	6.63	**7.13**	7.31	7.30							
	1.00	0.87	1.62	**2.66**	**3.45**	4.19	**4.86**	6.08	6.72	**7.13**	7.19								
	1.05	0.88	1.63	**2.66**	**3.46**	4.20	**4.88**	6.11	6.75	**7.16**	7.23								
250	1.20	0.88	1.64	**2.68**	**3.49**	4.23	**4.91**	6.16	6.81	**7.23**	7.31								
	1.50	0.88	1.64	**2.69**	**3.50**	4.25	**4.94**	6.20	6.85	**7.29**	7.37								
	3.00	0.89	1.65	**2.70**	**3.52**	4.27	**4.96**	6.22	6.89	**7.33**	7.41								
v_{max}	m/s	40																	

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – section PM

Power capacity rating P_R (kW) for one rib as a function of the effective diameter of the small pulley d_{bk}, the transmission ratio i, the rpm of the small pulley n_k and the effective lenght L_b = 4089 mm.

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PM — Table 29

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})																		
		50	100	200	300	400	**700**	**950**	1200	**1450**	1600	1800	2000	2200	2400	**2850**	3200	3600	4000
	1.00	0.35	0.63	1.12	1.57	1.98	**3.10**	**3.92**	4.65	**5.28**	5.62	6.01	6.34	6.60	6.78	**6.89**	6.67	6.04	4.98
	1.05	0.36	0.64	1.14	1.60	2.02	**3.17**	**4.02**	4.77	**5.44**	5.79	6.20	6.55	6.83	7.03	**7.19**	7.01	6.42	5.40
180	1.20	0.37	0.66	1.18	1.66	2.11	**3.32**	**4.22**	5.02	**5.74**	6.12	6.58	6.97	7.28	7.53	**7.78**	7.67	7.16	6.23
	1.50	0.37	0.68	1.22	1.71	2.17	**3.43**	**4.37**	5.22	**5.97**	6.38	6.87	7.29	7.65	7.92	**8.25**	8.19	7.75	6.88
	3.00	0.38	0.69	1.24	1.74	2.22	**3.52**	**4.48**	5.36	**6.14**	6.57	7.08	7.53	7.90	8.20	**8.58**	8.56	8.17	7.35
	1.00	0.38	0.68	1.22	1.71	2.17	**3.41**	**4.32**	5.13	**5.84**	6.21	6.65	7.01	7.29	7.48	**7.57**	7.29	6.53	
	1.05	0.38	0.69	1.24	1.74	2.21	**3.49**	**4.42**	5.26	**5.99**	6.38	6.84	7.22	7.52	7.73	**7.87**	7.62	6.91	
190	1.20	0.39	0.71	1.28	1.81	2.30	**3.63**	**4.62**	5.51	**6.29**	6.71	7.21	7.63	7.97	8.23	**8.46**	8.29	7.65	
	1.50	0.40	0.73	1.32	1.86	2.36	**3.74**	**4.77**	5.70	**6.53**	6.98	7.51	7.96	8.33	8.62	**8.93**	8.81	8.24	
	3.00	0.41	0.74	1.34	1.89	2.41	**3.83**	**4.89**	5.84	**6.70**	7.16	7.71	8.19	8.59	8.90	**9.26**	9.18	8.66	
	1.00	0.41	0.74	1.32	1.86	2.36	**3.72**	**4.72**	5.61	**6.39**	6.79	7.27	7.66	7.95	8.15	**8.20**	7.83	6.91	
	1.05	0.41	0.75	1.34	1.89	2.40	**3.79**	**4.82**	5.74	**6.54**	6.96	7.46	7.87	8.18	8.40	**8.50**	8.17	7.29	
200	1.20	0.42	0.77	1.39	1.95	2.48	**3.94**	**5.02**	5.99	**6.84**	7.29	7.83	8.28	8.64	8.90	**9.09**	8.83	8.03	
	1.50	0.43	0.78	1.42	2.00	2.55	**4.05**	**5.17**	6.18	**7.08**	7.56	8.12	8.61	9.00	9.29	**9.56**	9.35	8.62	
	3.00	0.44	0.80	1.44	2.04	2.60	**4.13**	**5.28**	6.32	**7.25**	7.74	8.33	8.84	9.25	9.57	**9.89**	9.72	9.04	
	1.00	0.60	1.08	1.96	2.76	3.51	**5.57**	**7.09**	8.43	**9.59**	10.19	10.88	11.43	11.82	12.05	**11.90**	11.09		
	1.05	0.60	1.09	1.98	2.80	3.57	**5.66**	**7.21**	8.59	**9.78**	10.40	11.12	11.69	12.11	12.36	**12.28**	11.51		
224	1.20	0.61	1.12	2.03	2.88	3.67	**5.84**	**7.46**	8.90	**10.16**	10.82	11.58	12.21	12.68	12.98	**13.01**	12.33		
	1.50	0.63	1.14	2.07	2.94	3.75	**5.99**	**7.65**	9.14	**10.45**	11.15	11.95	12.62	13.13	13.47	**13.60**	12.99		
	3.00	0.63	1.16	2.10	2.98	3.81	**6.09**	**7.79**	9.32	**10.66**	11.38	12.21	12.91	13.45	13.82	**14.01**	13.45		
	1.00	0.69	1.25	2.28	3.22	4.11	**6.55**	**8.33**	9.90	**11.24**	11.92	12.67	13.23	13.59	13.72	**13.14**			
	1.05	0.69	1.27	2.30	3.26	4.17	**6.64**	**8.46**	10.06	**11.43**	12.13	12.90	13.49	13.88	14.04	**13.52**			
250	1.20	0.71	1.29	2.36	3.34	4.27	**6.82**	**8.70**	10.37	**11.80**	12.54	13.37	14.01	14.44	14.66	**14.25**			
	1.50	0.72	1.31	2.40	3.40	4.35	**6.96**	**8.90**	10.62	**12.10**	12.87	13.74	14.42	14.89	15.15	**14.84**			
	3.00	0.72	1.33	2.43	3.45	4.41	**7.06**	**9.04**	10.79	**12.31**	13.10	14.00	14.71	15.21	15.50	**15.25**			
	1.00	0.79	1.45	2.65	3.75	4.80	**7.65**	**9.73**	11.53	**13.03**	13.76	14.53	15.05	15.29	15.23				
	1.05	0.80	1.46	2.67	3.79	4.85	**7.74**	**9.86**	11.69	**13.22**	13.97	14.77	15.31	15.58	15.54				
280	1.20	0.81	1.49	2.72	3.87	4.95	**7.92**	**10.10**	12.00	**13.59**	14.38	15.24	15.83	16.15	16.16				
	1.50	0.82	1.51	2.77	3.93	5.04	**8.07**	**10.30**	12.25	**13.89**	14.71	15.60	16.24	16.60	16.65				
	3.00	0.83	1.52	2.79	3.98	5.09	**8.17**	**10.43**	12.42	**14.10**	14.94	15.86	16.53	16.92	17.00				
	1.00	0.91	1.68	3.07	4.36	5.59	**8.91**	**11.31**	13.34	**14.96**	15.71	16.42	16.79	16.77					
	1.05	0.92	1.69	3.10	4.40	5.64	**9.00**	**11.43**	13.50	**15.15**	15.92	16.66	17.05	17.06					
315	1.20	0.93	1.72	3.15	4.48	5.74	**9.18**	**11.68**	13.81	**15.52**	16.33	17.13	17.57	17.63					
	1.50	0.94	1.74	3.19	4.54	5.82	**9.33**	**11.87**	14.05	**15.82**	16.66	17.50	17.98	18.08					
	3.00	0.95	1.75	3.22	4.59	5.88	**9.43**	**12.01**	14.23	**16.03**	16.89	17.76	18.27	18.40					
	1.00	1.05	1.93	3.55	5.05	6.47	**10.31**	**13.03**	15.26	**16.93**	17.63	18.17	18.23						
	1.05	1.06	1.95	3.58	5.09	6.53	**10.40**	**13.16**	15.42	**17.13**	17.85	18.41	18.49						
355	1.20	1.07	1.97	3.63	5.17	6.63	**10.58**	**13.40**	15.73	**17.50**	16.26	18.88	19.01						
	1.50	1.08	1.99	3.67	5.23	6.71	**10.73**	**13.60**	15.98	**17.80**	18.59	19.25	19.42						
	3.00	1.09	2.01	3.70	5.28	6.77	**10.83**	**13.73**	16.15	**18.01**	18.82	19.51	19.71						
	1.00	1.20	2.22	4.08	5.82	7.45	**11.84**	**14.87**	17.24	**18.85**	19.39	19.57							
	1.05	1.21	2.23	4.11	5.86	7.51	**11.93**	**14.99**	17.40	**19.04**	19.60	19.80							
400	1.20	1.22	2.26	4.16	5.94	7.61	**12.11**	**15.24**	17.71	**19.41**	20.01	20.27							
	1.50	1.23	2.28	4.20	6.00	7.69	**12.26**	**15.43**	17.96	**19.71**	20.34	20.64							
	3.00	1.24	2.29	4.23	6.04	7.75	**12.36**	**15.57**	18.13	**19.92**	20.57	20.90							
	1.00	1.37	2.53	4.67	6.66	8.52	**13.47**	**16.78**	19.19	**20.54**	20.77								
	1.05	1.37	2.54	4.70	6.69	8.58	**13.56**	**16.90**	19.35	**20.73**	20.98								
450	1.20	1.39	2.57	4.75	6.77	8.68	**13.75**	**17.15**	19.66	**21.11**	21.40								
	1.50	1.40	2.59	4.79	6.83	8.76	**13.89**	**17.34**	19.90	**21.40**	21.72								
	3.00	1.40	2.61	4.82	6.88	8.82	**13.99**	**17.48**	20.08	**21.61**	21.95								
	1.00	1.53	2.84	5.25	7.48	9.57	**15.04**	**18.53**	20.84	**21.74**									
	1.05	1.54	2.86	5.27	7.52	9.63	**15.13**	**18.66**	21.00	**21.93**									
500	1.20	1.55	2.88	5.33	7.60	9.73	**15.31**	**18.90**	21.31	**22.31**									
	1.50	1.56	2.90	5.37	7.66	9.81	**15.45**	**19.10**	21.56	**22.60**									
	3.00	1.57	2.92	5.40	7.70	9.87	**15.55**	**19.23**	21.73	**22.81**									
	1.00	1.90	3.53	6.53	9.30	11.88	**18.49**	**22.45**	24.64										
	1.05	1.91	3.55	6.55	9.34	11.94	**18.59**	**22.59**	24.82										
560	1.20	1.92	3.57	6.61	9.43	12.05	**18.79**	**22.86**	25.16										
	1.50	1.94	3.60	6.66	9.49	12.14	**18.95**	**23.07**	25.43										
	3.00	1.94	3.61	6.69	9.54	12.21	**19.06**	**23.22**	25.62										
v_{max}	m/s	35																	

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PM

Table 29

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})																	
		50	100	200	300	400	**700**	**950**	1200	**1450**	1600	1800	2000	2200	2400	**2850**	3200	3600	4000
630	1.00	2.15	4.00	7.39	10.52	13.42	**20.62**	**24.51**											
	1.05	2.16	4.01	7.42	10.57	13.48	**20.72**	**24.65**											
	1.20	2.17	4.04	7.48	10.65	13.59	**20.92**	**24.92**											
	1.50	2.18	4.06	7.52	10.72	13.68	**21.07**	**25.13**											
	3.00	2.19	4.08	7.56	10.77	13.75	**21.19**	**25.28**											
710	1.00	2.43	4.53	8.37	11.89	15.13	**22.82**	**26.34**											
	1.05	2.44	4.54	8.40	11.94	15.18	**22.92**	**26.47**											
	1.20	2.46	4.57	8.46	12.02	15.30	**23.12**	**26.74**											
	1.50	2.47	4.59	8.50	12.09	15.39	**23.28**	**26.96**											
	3.00	2.48	4.61	8.53	12.14	15.45	**23.39**	**27.11**											
800	1.00	2.75	5.11	9.45	13.40	16.97	**24.99**												
	1.05	2.76	5.13	9.48	13.44	17.03	**25.09**												
	1.20	2.77	5.16	9.54	13.53	17.14	**25.29**												
	1.50	2.78	5.18	9.58	13.59	17.23	**25.45**												
	3.00	2.79	5.20	9.61	13.64	17.29	**25.56**												
1000	1.00	3.44	6.40	11.78	16.59	20.77	**28.47**												
	1.05	3.44	6.41	11.81	16.63	20.82	**28.57**												
	1.20	3.46	6.44	11.87	16.72	20.94	**28.77**												
	1.50	3.47	6.46	11.91	16.78	21.03	**28.93**												
	3.00	3.48	6.48	11.95	16.83	21.09	**29.04**												
v_{max}	m/s	35																	

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – section PL, ZAR type

Power capacity rating P_R (kW) for one rib as a function of the effective diameter of the small pulley d_{bk}, the transmission ratio i, the rpm of the small pulley n_k and the effective lenght L_b = 2096 mm.

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PL, ZAR type — Table 30

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})																	
		200	400	**700**	**950**	1200	**1450**	2000	2400	**2850**	3200	3500	3800	4000	4300	4600	5000	5500	6000
	1.00	0.23	0.39	**0.60**	**0.76**	0.90	**1.03**	1.27	1.42	**1.57**	1.66	1.72	1.78	1.80	1.83	1.84	1.84	1.79	1.70
	0.05	0.23	0.41	**0.63**	**0.79**	0.93	**1.07**	1.33	1.50	**1.66**	1.76	1.83	1.89	1.93	1.97	1.99	2.00	1.97	1.89
75	1.20	0.25	0.43	**0.67**	**0.85**	1.01	**1.16**	1.46	1.65	**1.83**	1.96	2.05	2.13	2.17	2.23	2.27	2.30	2.31	2.26
	1.50	0.26	0.45	**0.70**	**0.89**	1.07	**1.23**	1.56	1.76	**1.97**	2.11	2.22	2.31	2.37	2.44	2.50	2.55	2.57	2.55
	3.00	0.26	0.46	**0.73**	**0.92**	1.11	**1.28**	1.62	1.85	**2.07**	2.22	2.34	2.45	2.51	2.59	2.66	2.72	2.76	2.76
	1.00	0.26	0.45	**0.69**	**0.88**	1.04	**1.20**	1.50	1.69	**1.87**	1.99	2.08	2.15	2.19	2.23	2.26	2.27	2.23	2.14
	1.05	0.26	0.46	**0.72**	**0.91**	1.08	**1.24**	1.56	1.77	**1.96**	2.09	2.19	2.27	2.31	2.37	2.40	2.43	2.41	2.33
80	1.20	0.28	0.49	**0.76**	**0.97**	1.16	**1.33**	1.69	1.91	**2.14**	2.29	2.40	2.50	2.56	2.63	2.69	2.73	2.74	2.70
	1.50	0.29	0.51	**0.79**	**1.01**	1.21	**1.40**	1.78	2.03	**2.28**	2.45	2.57	2.69	2.75	2.84	2.91	2.98	3.01	2.99
	3.00	0.29	0.52	**0.82**	**1.04**	1.26	**1.45**	1.85	2.11	**2.37**	2.56	2.69	2.82	2.89	2.99	3.07	3.15	3.20	3.20
	1.00	0.32	0.56	**0.87**	**1.11**	1.34	**1.54**	1.95	2.21	**2.47**	2.64	2.76	2.87	2.93	3.00	3.04	3.07	3.04	2.94
	1.05	0.32	0.57	**0.90**	**1.14**	1.37	**1.59**	2.02	2.29	**2.56**	2.74	2.87	2.99	3.05	3.13	3.19	3.23	3.21	3.13
90	1.20	0.33	0.59	**0.94**	**1.20**	1.45	**1.68**	2.14	2.44	**2.73**	2.94	3.09	3.22	3.30	3.40	3.47	3.54	3.55	3.50
	1.50	0.34	0.61	**0.97**	**1.25**	1.51	**1.75**	2.24	2.55	**2.87**	3.09	3.26	3.41	3.49	3.61	3.70	3.78	3.82	3.79
	3.00	0.35	0.63	**1.00**	**1.28**	1.55	**1.80**	2.31	2.64	**2.97**	3.20	3.38	3.54	3.63	3.76	3.86	3.95	4.01	4.00
	1.00	0.37	0.66	**1.05**	**1.35**	1.62	**1.88**	2.40	2.73	**3.05**	3.26	3.42	3.55	3.63	3.71	3.77	3.80	3.75	3.61
	1.05	0.38	0.68	**1.07**	**1.38**	1.66	**1.93**	2.46	2.80	**3.14**	3.36	3.53	3.67	3.75	3.85	3.92	3.96	3.93	3.80
100	1.20	0.39	0.70	**1.12**	**1.44**	1.74	**2.02**	2.58	2.95	**3.31**	3.56	3.75	3.91	4.00	4.11	4.20	4.26	4.26	4.17
	1.50	0.40	0.72	**1.15**	**1.48**	1.79	**2.09**	2.68	3.07	**3.45**	3.72	3.92	4.09	4.19	4.32	4.42	4.51	4.53	4.46
	3.00	0.41	0.73	**1.18**	**1.52**	1.84	**2.14**	2.75	3.15	**3.55**	3.83	4.04	4.22	4.33	4.47	4.58	4.68	4.72	4.67
	1.00	0.44	0.79	**1.26**	**1.63**	1.98	**2.30**	2.96	3.39	**3.82**	4.11	4.33	4.52	4.63	4.76	4.87	4.95	4.95	4.85
	1.05	0.44	0.80	**1.28**	**1.66**	2.01	**2.34**	3.02	3.46	**3.90**	4.20	4.43	4.62	4.74	4.88	5.00	5.09	5.11	5.02
106	1.20	0.45	0.82	**1.32**	**1.71**	2.08	**2.42**	3.13	3.59	**4.05**	4.37	4.62	4.83	4.96	5.12	5.25	5.36	5.41	5.35
	1.50	0.46	0.84	**1.35**	**1.75**	2.13	**2.49**	3.21	3.69	**4.18**	4.51	4.77	5.00	5.13	5.31	5.45	5.58	5.65	5.61
	3.00	0.47	0.85	**1.37**	**1.78**	2.16	**2.53**	3.28	3.77	**4.27**	4.61	4.88	5.12	5.26	5.44	5.59	5.74	5.82	5.80
	1.00	0.47	0.85	**1.37**	**1.77**	2.15	**2.50**	3.22	3.68	**4.15**	4.46	4.69	4.89	5.01	5.15	5.25	5.32	5.29	5.14
	1.05	0.48	0.86	**1.39**	**1.80**	2.18	**2.54**	3.28	3.75	**4.23**	4.55	4.79	5.00	5.12	5.27	5.38	5.46	5.45	5.30
112	1.20	0.49	0.89	**1.43**	**1.85**	2.25	**2.62**	3.39	3.88	**4.38**	4.73	4.99	5.21	5.34	5.51	5.63	5.73	5.75	5.64
	1.50	0.50	0.90	**1.46**	**1.89**	2.30	**2.69**	3.47	3.99	**4.51**	4.87	5.14	5.38	5.52	5.69	5.83	5.95	5.99	5.90
	3.00	0.50	0.92	**1.48**	**1.92**	2.33	**2.73**	3.54	4.06	**4.60**	4.97	5.25	5.50	5.64	5.83	5.97	6.11	6.16	6.08
	1.00	0.50	0.92	**1.47**	**1.91**	2.31	**2.70**	3.48	3.98	**4.47**	4.80	5.05	5.26	5.37	5.51	5.60	5.65	5.59	5.37
	1.05	0.51	0.93	**1.49**	**1.93**	2.35	**2.74**	3.53	4.04	**4.55**	4.89	5.15	5.36	5.49	5.63	5.73	5.79	5.74	5.54
118	1.20	0.52	0.95	**1.53**	**1.99**	2.41	**2.82**	3.64	4.18	**4.71**	5.07	5.34	5.57	5.71	5.87	5.99	6.07	6.05	5.87
	1.50	0.53	0.97	**1.56**	**2.03**	2.47	**2.88**	3.73	4.28	**4.83**	5.21	5.50	5.74	5.88	6.06	6.19	6.29	6.29	6.13
	3.00	0.54	0.98	**1.59**	**2.06**	2.50	**2.93**	3.79	4.36	**4.92**	5.31	5.60	5.86	6.01	6.19	6.33	6.44	6.46	6.32
	1.00	0.54	0.99	**1.60**	**2.07**	2.51	**2.93**	3.77	4.31	**4.84**	5.19	5.45	5.66	5.78	5.91	5.99	6.00	5.88	5.57
	1.05	0.55	1.00	**1.62**	**2.09**	2.54	**2.97**	3.83	4.38	**4.92**	5.28	5.55	5.77	5.89	6.03	6.12	6.14	6.03	5.74
125	1.20	0.56	1.02	**1.65**	**2.15**	2.61	**3.05**	3.94	4.51	**5.08**	5.46	5.74	5.98	6.11	6.27	6.37	6.42	6.34	6.08
	1.50	0.57	1.04	**1.69**	**2.19**	2.66	**3.11**	4.02	4.62	**5.20**	5.60	5.90	6.14	6.28	6.45	6.57	6.64	6.58	6.34
	3.00	0.58	1.05	**1.71**	**2.22**	2.70	**3.16**	4.09	4.69	**5.29**	5.70	6.00	6.26	6.41	6.59	6.71	6.79	6.75	6.52
	1.00	0.58	1.06	**1.72**	**2.22**	2.70	**3.16**	4.06	4.64	**5.20**	5.57	5.83	6.04	6.15	6.27	6.33	6.31	6.11	5.70
	1.05	0.59	1.07	**1.74**	**2.25**	2.74	**3.20**	4.12	4.71	**5.28**	5.66	5.93	6.15	6.27	6.39	6.46	6.45	6.26	5.87
132	1.20	0.60	1.10	**1.78**	**2.30**	2.80	**3.28**	4.23	4.84	**5.44**	5.84	6.12	6.36	6.49	6.63	6.71	6.73	6.57	6.20
	1.50	0.61	1.11	**1.81**	**2.35**	2.86	**3.34**	4.31	4.94	**5.56**	5.98	6.28	6.53	6.66	6.82	6.92	6.94	6.81	6.46
	3.00	0.61	1.13	**1.83**	**2.37**	2.89	**3.38**	4.38	5.02	**5.65**	6.08	6.39	6.64	6.79	6.95	7.06	7.10	6.98	6.65
	1.00	0.63	1.15	**1.86**	**2.40**	2.92	**3.41**	4.39	5.00	**5.60**	5.98	6.25	6.45	6.56	6.65	6.68	6.60	6.29	
	1.05	0.63	1.16	**1.87**	**2.43**	2.96	**3.45**	4.44	5.07	**5.68**	6.07	6.35	6.56	6.67	6.77	6.81	6.74	6.45	
140	1.20	0.64	1.18	**1.91**	**2.48**	3.02	**3.53**	4.55	5.21	**5.84**	6.25	6.54	6.77	6.89	7.01	7.06	7.01	6.75	
	1.50	0.65	1.20	**1.94**	**2.53**	3.08	**3.60**	4.64	5.31	**5.96**	6.39	6.69	6.94	7.06	7.20	7.26	7.23	6.99	
	3.00	0.66	1.21	**1.97**	**2.55**	3.11	**3.64**	4.70	5.38	**6.05**	6.49	6.80	7.05	7.19	7.33	7.41	7.39	7.16	
	1.00	0.68	1.25	**2.03**	**2.63**	3.19	**3.73**	4.79	5.45	**6.08**	6.47	6.73	6.92	7.01	7.06	7.04	6.86	6.39	
	1.05	0.69	1.26	**2.05**	**2.65**	3.23	**3.77**	4.84	5.52	**6.16**	6.56	6.83	7.03	7.12	7.19	7.17	7.00	6.55	
150	1.20	0.70	1.28	**2.08**	**2.71**	3.29	**3.85**	4.95	5.65	**6.31**	6.74	7.02	7.24	7.34	7.42	7.42	7.28	6.65	
	1.50	0.71	1.30	**2.11**	**2.75**	3.35	**3.91**	5.04	5.76	**6.44**	6.88	7.18	7.40	7.51	7.61	7.62	7.50	7.09	
	3.00	0.71	1.31	**2.14**	**2.78**	3.38	**3.96**	5.10	5.83	**6.53**	6.97	7.28	7.52	7.64	7.74	7.77	7.65	7.26	
	1.00	0.74	1.35	**2.20**	**2.85**	3.46	**4.04**	5.18	5.88	**6.53**	6.92	7.17	7.34	7.40	7.40	7.31	7.01		
	1.05	0.74	1.36	**2.22**	**2.88**	3.50	**4.08**	5.23	5.95	**6.61**	7.01	7.27	7.45	7.51	7.53	7.44	7.15		
160	1.20	0.75	1.39	**2.25**	**2.93**	3.56	**4.16**	5.34	6.08	**6.77**	7.19	7.47	7.66	7.73	7.76	7.69	7.43		
	1.50	0.76	1.40	**2.28**	**2.97**	3.62	**4.22**	5.43	6.19	**6.89**	7.33	7.62	7.82	7.91	7.95	7.89	7.65		
	3.00	0.77	1.42	**2.31**	**3.00**	3.65	**4.27**	5.49	6.26	**6.98**	7.43	7.73	7.94	8.03	8.08	8.04	7.80		
v_{max}	m/s																		40

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PL, ZAR type

Table 30

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})																	
		200	400	**700**	**950**	1200	**1450**	2000	2400	**2850**	3200	3500	3800	4000	4300	4600	5000	5500	6000
	1.00	0.79	1.45	**2.36**	**3.07**	3.73	**4.35**	5.56	6.30	**6.96**	7.35	7.57	7.70	7.73	7.67	7.49			
	1.05	0.80	1.47	**2.38**	**3.09**	3.76	**4.39**	5.62	6.36	**7.04**	7.44	7.67	7.81	7.84	7.79	7.62			
170	1.20	0.81	1.49	**2.42**	**3.15**	3.83	**4.47**	5.73	6.50	**7.20**	7.61	7.87	8.02	8.06	8.03	7.87			
	1.50	0.82	1.51	**2.45**	**3.19**	3.88	**4.53**	5.81	6.60	**7.32**	7.75	8.02	8.19	8.24	8.22	8.07			
	3.00	0.82	1.52	**2.47**	**3.22**	3.92	**4.58**	5.88	6.68	**7.41**	7.85	8.13	8.30	8.36	8.35	8.22			
	1.00	0.85	1.56	**2.53**	**3.28**	3.99	**4.65**	5.93	6.70	**7.37**	7.74	7.93	8.01	7.99	7.85	7.57			
	1.05	0.85	1.57	**2.55**	**3.31**	4.02	**4.69**	5.99	6.76	**7.45**	7.83	8.03	8.12	8.10	7.97	7.70			
180	1.20	0.86	1.59	**2.59**	**3.36**	4.09	**4.77**	6.10	6.90	**7.61**	8.00	8.22	8.33	8.32	8.21	7.96			
	1.50	0.87	1.61	**2.63**	**3.42**	4.16	**4.86**	6.21	7.04	**7.77**	8.19	8.43	8.55	8.56	8.46	8.22			
	3.00	0.88	1.62	**2.64**	**3.43**	4.18	**4.88**	6.25	7.08	**7.82**	8.24	8.48	8.61	8.62	8.53	8.30			
	1.00	0.90	1.66	**2.70**	**3.50**	4.25	**4.95**	6.29	7.08	**7.75**	8.09	8.24	8.26	8.19	7.95				
	1.05	0.91	1.67	**2.72**	**3.53**	4.28	**4.99**	6.35	7.15	**7.83**	8.18	8.34	8.36	8.30	8.07				
190	1.20	0.92	1.69	**2.75**	**3.58**	4.35	**5.07**	6.46	7.28	**7.98**	8.35	8.53	8.57	8.52	8.31				
	1.50	0.93	1.71	**2.79**	**3.62**	4.40	**5.13**	6.55	7.38	**8.11**	8.49	8.69	8.74	8.70	8.50				
	3.00	0.93	1.72	**2.81**	**3.65**	4.44	**5.18**	6.61	7.46	**8.20**	6.59	8.79	8.86	8.82	8.63				
	1.00	0.95	1.76	**2.86**	**3.71**	4.51	**5.24**	6.64	7.45	**8.10**	8.40	8.50	8.44	8.31					
	1.05	0.96	1.77	**2.88**	**3.74**	4.54	**5.28**	6.70	7.51	**8.18**	8.49	8.60	8.55	8.42					
200	1.20	0.97	1.79	**2.92**	**3.79**	4.61	**5.36**	6.81	7.65	**8.34**	8.67	8.79	8.76	8.65					
	1.50	0.98	1.81	**2.95**	**3.83**	4.66	**5.43**	6.90	7.75	**8.46**	8.81	8.95	8.93	8.82					
	3.00	0.99	1.82	**2.97**	**3.86**	4.70	**5.47**	6.96	7.82	**8.55**	8.91	9.06	9.05	8.94					
	1.00	1.02	1.88	**3.06**	**3.97**	4.81	**5.59**	7.05	7.86	**8.48**	8.73	8.75	8.58						
	1.05	1.02	1.89	**3.08**	**3.99**	4.84	**5.63**	7.11	7.93	**8.56**	8.82	8.85	8.69						
212	1.20	1.04	1.91	**3.12**	**4.04**	4.91	**5.71**	7.22	8.06	**8.72**	8.99	9.04	8.90						
	1.50	1.04	1.93	**3.15**	**4.09**	4.96	**5.77**	7.30	8.17	**8.85**	9.13	9.19	9.07						
	3.00	1.05	1.94	**3.17**	**4.12**	5.00	**5.82**	7.37	8.24	**8.93**	9.23	9.30	9.18						
	1.00	1.17	2.18	**3.57**	**4.64**	5.65	**6.58**	8.34	9.33	**10.11**	10.43	10.49							
	1.05	1.18	2.18	**3.58**	**4.66**	5.67	**6.61**	8.38	9.38	**10.16**	10.49	10.56							
224	1.20	1.18	2.20	**3.61**	**4.70**	5.71	**6.66**	8.45	9.46	**10.26**	10.61	10.68							
	1.50	1.19	2.21	**3.63**	**4.72**	5.75	**6.70**	8.51	9.53	**10.35**	10.70	10.78							
	3.00	1.19	2.22	**3.64**	**4.74**	5.77	**6.73**	8.55	9.58	**10.40**	10.76	10.86							
	1.00	1.24	2.30	**3.76**	**4.89**	5.94	**6.91**	8.71	9.69	**10.41**	10.63	10.58							
	1.05	1.24	2.30	**3.77**	**4.91**	5.97	**6.94**	8.75	9.74	**10.46**	10.69	10.64							
236	1.20	1.25	2.32	**3.80**	**4.94**	6.01	**6.99**	8.82	9.82	**10.56**	10.81	10.77							
	1.50	1.25	2.33	**3.82**	**4.97**	6.04	**7.03**	8.88	9.89	**10.64**	10.90	10.87							
	3.00	1.26	2.34	**3.83**	**4.99**	6.07	**7.06**	8.92	9.94	**10.70**	10.97	10.94							
	1.00	1.31	2.43	**3.98**	**5.18**	6.28	**7.29**	9.13	10.08	**10.69**	10.79	10.58							
	1.05	1.31	2.44	**4.00**	**5.19**	6.30	**7.32**	9.16	10.12	**10.75**	10.85								
250	1.20	1.32	2.45	**4.02**	**5.23**	6.35	**7.37**	9.24	10.21	**10.85**	10.96								
	1.50	1.33	2.47	**4.04**	**5.26**	6.38	**7.41**	9.29	10.28	**10.93**	11.06								
	3.00	1.33	2.47	**4.06**	**5.27**	6.40	**7.44**	9.33	10.33	**10.99**	11.12								
v_{max}	m/s	40																	

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – section PM, ZAR type

Power capacity rating P_R (kW) for one rib as a function of the effective diameter of the small pulley d_{bk}, the transmission ratio i, the rpm of the small pulley n_k and the effective lenght L_b = 4098 mm.

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PM, ZAR type — Table 31

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})																		
		50	100	200	300	400	**700**	**950**	1200	**1450**	1600	1800	2000	2200	2400	**2850**	3200	3600	4000
	1.00	0.53	0.94	1.68	2.35	2.97	**4.65**	**5.88**	6.97	**7.93**	8.43	9.02	9.51	9.90	10.17	**10.34**	10.00	9.06	7.47
	1.05	0.53	0.96	1.71	2.40	3.04	**4.76**	**6.03**	7.16	**8.16**	8.69	9.31	9.83	10.25	10.55	**10.79**	10.51	9.63	8.10
180	1.20	0.55	0.99	1.77	2.49	3.16	**4.98**	**6.33**	7.53	**8.61**	9.18	9.86	10.45	10.93	11.29	**11.67**	11.50	10.75	9.34
	1.50	0.56	1.01	1.82	2.56	3.26	**5.15**	**6.56**	7.83	**8.96**	9.57	10.31	10.94	11.47	11.88	**12.37**	12.29	11.63	10.32
	3.00	0.57	1.03	1.86	2.62	3.33	**5.27**	**6.72**	8.04	**9.21**	9.85	10.62	11.29	11.85	12.30	**12.87**	12.84	12.26	11.02
	1.00	0.57	1.02	1.83	2.57	3.26	**5.12**	**6.48**	7.70	**8.76**	9.32	9.97	10.51	10.93	11.22	**11.36**	10.93	9.79	
	1.05	0.58	1.04	1.86	2.62	3.32	**5.23**	**6.63**	7.89	**8.99**	9.57	10.26	10.83	11.28	11.60	**11.81**	11.44	10.36	
190	1.20	0.59	1.07	1.93	2.71	3.44	**5.45**	**6.93**	8.26	**9.44**	10.07	10.82	11.45	11.96	12.35	**12.70**	12.43	11.48	
	1.50	0.60	1.09	1.98	2.78	3.54	**5.62**	**7.16**	8.56	**9.80**	10.46	11.26	11.94	12.50	12.93	**13.40**	13.21	12.36	
	3.00	0.61	1.11	2.01	2.84	3.61	**5.74**	**7.33**	8.76	**10.05**	10.74	11.57	12.29	12.88	13.35	**13.89**	13.77	12.99	
	1.00	0.61	1.10	1.98	2.79	3.54	**5.58**	**7.08**	8.42	**9.58**	10.19	10.90	11.48	11.93	12.22	**12.30**	11.74	10.36	
	1.05	0.62	1.12	2.02	2.83	3.60	**5.69**	**7.23**	8.61	**9.81**	10.45	11.19	11.80	12.27	12.60	**12.75**	12.25	10.93	
200	1.20	0.63	1.15	2.08	2.93	3.73	**5.91**	**7.53**	8.98	**10.26**	10.94	11.75	12.42	12.96	13.35	**13.64**	13.24	12.05	
	1.50	0.65	1.18	2.13	3.00	3.82	**6.08**	**7.76**	9.27	**10.62**	11.33	12.19	12.91	13.50	13.94	**14.34**	14.03	12.93	
	3.00	0.66	1.19	2.16	3.05	3.89	**6.20**	**7.93**	9.48	**10.87**	11.61	12.50	13.26	13.88	14.35	**14.83**	14.59	13.56	
	1.00	0.89	1.62	2.93	4.14	5.27	**8.36**	**10.63**	12.64	**14.38**	15.29	16.32	17.14	17.73	18.07	**17.85**	16.63		
	1.05	0.90	1.64	2.97	4.20	5.35	**8.50**	**10.82**	12.88	**14.67**	15.61	16.68	17.53	18.16	18.54	**18.41**	17.26		
224	1.20	0.92	1.68	3.05	4.31	5.50	**8.77**	**11.19**	13.35	**15.23**	16.23	17.37	18.31	19.01	19.47	**19.52**	18.50		
	1.50	0.94	1.71	3.11	4.41	5.63	**8.98**	**11.48**	13.71	**15.68**	16.72	17.93	18.92	19.69	20.21	**20.39**	19.48		
	3.00	0.95	1.73	3.16	4.47	5.71	**9.13**	**11.68**	13.98	**15.99**	17.07	18.32	19.36	20.17	20.73	**21.01**	20.18		
	1.00	1.03	1.88	3.42	4.83	6.17	**9.82**	**12.50**	14.85	**16.85**	17.87	19.00	19.84	20.38	20.58	**19.71**			
	1.05	1.04	1.90	3.46	4.89	6.25	**9.96**	**12.69**	15.09	**17.14**	18.19	19.36	20.24	20.81	21.06	**20.28**			
250	1.20	1.06	1.94	3.53	5.01	6.41	**10.23**	**13.06**	15.55	**17.70**	18.81	20.05	21.01	21.67	21.99	**21.38**			
	1.50	1.07	1.97	3.60	5.10	6.53	**10.44**	**13.35**	15.92	**18.15**	19.30	20.61	21.63	22.34	22.73	**22.26**			
	3.00	1.09	1.99	3.64	5.17	6.62	**10.60**	**13.55**	16.18	**18.46**	19.65	21.00	22.06	22.82	23.25	**22.88**			
	1.00	1.19	2.17	3.97	5.63	7.20	**11.48**	**14.60**	17.30	**19.54**	20.64	21.80	22.57	22.93	22.84				
	1.05	1.20	2.19	4.01	5.69	7.28	**11.61**	**14.78**	17.54	**19.83**	20.96	22.16	22.97	23.37	23.31				
280	1.20	1.22	2.23	4.09	5.81	7.43	**11.88**	**15.15**	18.00	**20.39**	21.58	22.85	23.74	24.22	24.24				
	1.50	1.23	2.26	4.15	5.90	7.55	**12.10**	**15.44**	18.37	**20.83**	22.07	23.41	24.36	24.90	24.98				
	3.00	1.24	2.29	4.19	5.96	7.64	**12.25**	**15.65**	18.63	**21.15**	22.42	23.80	24.79	25.37	25.50				
	1.00	1.37	2.51	4.61	6.55	8.38	**13.36**	**16.96**	20.01	**22.43**	23.56	24.64	25.19	25.16					
	1.05	1.38	2.53	4.65	6.61	8.46	**13.50**	**17.15**	20.24	**22.72**	23.88	24.99	25.58	25.59					
315	1.20	1.40	2.57	4.72	6.72	8.61	**13.77**	**17.52**	20.71	**23.28**	24.50	25.69	26.36	26.45					
	1.50	1.41	2.60	4.79	6.81	8.74	**13.99**	**17.81**	21.08	**23.73**	24.99	26.24	26.97	27.12					
	3.00	1.42	2.63	4.83	6.88	8.82	**14.14**	**18.01**	21.34	**24.04**	25.34	26.64	27.41	27.60					
	1.00	1.57	2.90	5.33	7.58	9.71	**15.47**	**19.55**	22.89	**25.40**	26.45	27.26	27.34						
	1.05	1.58	2.92	5.37	7.64	9.79	**15.61**	**19.73**	23.13	**25.69**	26.77	27.62	27.73						
355	1.20	1.60	2.96	5.44	7.76	9.94	**15.88**	**20.10**	23.60	**26.25**	27.39	28.32	28.51						
	1.50	1.62	2.99	5.50	7.85	10.07	**16.09**	**20.39**	23.97	**26.70**	27.88	28.87	29.12						
	3.00	1.63	3.01	5.55	7.91	10.15	**16.24**	**20.60**	24.23	**27.01**	28.23	29.26	29.56						
	1.00	1.80	3.33	6.13	8.73	11.18	**17.76**	**22.30**	25.86	**28.27**	29.08	29.35							
	1.05	1.81	3.35	6.17	8.79	11.26	**17.90**	**22.49**	26.10	**28.56**	29.40	29.70							
400	1.20	1.83	3.39	6.24	8.90	11.41	**18.17**	**22.86**	26.57	**29.12**	30.02	30.40							
	1.50	1.85	3.42	6.30	8.99	11.54	**18.38**	**23.15**	26.93	**29.56**	30.51	30.96							
	3.00	1.86	3.44	6.35	9.06	11.62	**18.54**	**23.36**	27.20	**29.88**	30.86	31.35							
	1.00	2.05	3.80	7.00	9.98	12.78	**20.21**	**25.16**	28.78	**30.81**	31.16								
	1.05	2.06	3.82	7.04	10.04	12.86	**20.35**	**25.35**	29.02	**31.10**	31.47								
450	1.20	2.08	3.86	7.12	10.16	13.02	**20.62**	**25.72**	29.48	**31.66**	32.09								
	1.50	2.10	3.89	7.18	10.25	13.14	**20.83**	**26.01**	29.85	**32.10**	32.58								
	3.00	2.11	3.91	7.23	10.32	13.23	**20.99**	**26.22**	30.11	**32.42**	32.93								
	100	2.30	4.26	7.87	11.22	14.36	**22.55**	**27.79**	31.26	**32.61**									
	1.05	2.31	4.28	7.91	11.28	14.44	**22.69**	**27.98**	31.50	**32.90**									
500	1.20	2.33	4.32	7.99	11.40	14.59	**22.96**	**28.35**	31.97	**33.46**									
	1.50	2.34	4.35	8.05	11.49	14.72	**23.18**	**28.64**	32.34	**33.90**									
	3.00	2.36	4.37	8.09	11.55	14.80	**23.33**	**28.85**	32.60	**34.22**									
	1.00	2.85	5.30	9.79	13.94	17.82	**27.74**	**33.67**	36.96										
	1.05	2.86	5.32	9.83	14.01	17.91	**27.89**	**33.88**	37.22										
560	1.20	2.89	5.36	9.92	14.14	18.08	**28.19**	**34.29**	37.73										
	1.50	2.90	5.39	9.98	14.24	18.22	**28.42**	**34.61**	38.14										
	3.00	2.91	5.42	10.03	14.31	18.31	**28.59**	**34.83**	38.43										
v_{max}	m/s	35																	

Power capacity rating P_R for CONTI-V MULTIRIB® Belt – Section PM, ZAR type

Table 31

d_{bk} mm	i or 1: i	Rpm of the small pulley n_k (min^{-1})																	
		50	100	200	300	400	**700**	**950**	1200	**1450**	1600	1800	2000	2200	2400	**2850**	3200	3600	4000
630	1.00	3.23	6.00	11.09	15.78	20.13	**30.92**	**36.76**											
	1.05	3.24	6.02	11.13	15.85	20.22	**31.08**	**36.97**											
	1.20	3.26	6.06	11.22	15.98	20.39	**31.38**	**37.37**											
	1.50	3.28	6.10	11.29	16.08	20.52	**31.61**	**37.69**											
	3.00	3.29	6.12	11.33	16.15	20.62	**31.78**	**37.92**											
710	1.00	3.65	6.79	12.55	17.84	22.69	**34.23**	**39.51**											
	1.05	3.66	6.81	12.60	17.91	22.77	**34.38**	**39.71**											
	1.20	3.68	6.85	12.68	18.03	22.95	**34.68**	**40.12**											
	1.50	3.70	6.89	12.75	18.14	23.08	**34.92**	**40.44**											
	3.00	3.71	6.91	12.80	18.21	23.18	**35.09**	**40.67**											
800	1.00	4.12	7.67	14.17	20.10	25.45	**37.48**												
	1.05	4.13	7.69	14.22	20.16	25.54	**37.63**												
	1.20	4.15	7.74	14.30	20.29	25.71	**37.93**												
	1.50	4.17	7.77	14.37	20.39	25.85	**38.17**												
	3.00	4.18	7.79	14.42	20.46	25.94	**38.34**												
1000	1.00	5.15	9.59	17.68	24.88	31.15	**42.70**												
	1.05	5.16	9.61	17.72	24.95	31.24	**42.85**												
	1.20	5.19	9.66	17.80	25.07	31.41	**43.15**												
	1.50	5.20	9.69	17.87	25.18	31.54	**43.39**												
	3.00	5.21	9.71	17.92	25.25	31.64	**43.56**												
v_{max}	m/s	35																	

Examples of design procedure steps Drive with two pulleys

Driver:	Three-phase AC motor	$P = 3.70$ kW
	with normal starting torque	$n_1 = 2850$ min^{-1}
Driven machine:	Grinder	$n_2 = 8550$ min^{-1}
Sevice contitions:	Effective diameter of large pulley	$d_{bg} \leqq 125$
	Centre distance as required.	
	Operations for 16 hours per day.	

Service factor

c_2 from Table 20, page 25

$c_2 = 1.2$

Belt section

Fig. 5, page 26

selected: CONTI-V MULTIRIB® Belt – section PJ

Transmission ratio

$$i = \frac{n_1}{n_2}$$

$$i = \frac{2850}{8550} = 0.3\overline{3}$$

Effective diameter of pulleys

$d_{b1} = d_{bg}$

$d_{b2} = d_{bk} = d_{bg} \cdot i + 2 \cdot h_b \cdot (i - 1)$

h_b from Table 6, page 14

selected: $d_{bg} = 125$ mm

$d_{bk} = 125 \cdot 0.3\overline{3} + 2 \cdot 1.20 \cdot (0.3\overline{3} - 1) = 40$ mm

Centre distance

$a_{max} \leqq 2 \cdot (d_{bg} + d_{bk})$

$a_{min} \geqq 0.7 \cdot (d_{bg} + d_{bk})$

$a_{max} \leqq 2 \cdot (124 + 40) = 330$ mm

$a_{min} \geqq 0.7 \cdot (124 + 40) = 115.5$ mm

selected: $a \approx 220$ mm

Effective length

$$L_b \approx 2 \cdot a + \frac{\pi}{2}(d_{bg} + d_{bk}) + \frac{(d_{bg} - d_{bk})^2}{4 \cdot a}$$

$$L_b \approx 2 \cdot 220 + \frac{\pi}{2}(125 + 40) + \frac{(125 - 40)^2}{4 \cdot 220} \approx 707 \text{ mm}$$

selected: $L_b = 711$ mm

See Table 2, page 8
to determine the available effective length

Centre distance

This is determined according to the selected effective length

$$a \approx \frac{1}{4} \cdot \left(L_b - \frac{d_{bg} + d_{bk}}{2} \cdot \pi\right) + \frac{1}{4} \cdot \sqrt{\left(L_b - \frac{d_{bg} + d_{bk}}{2} \cdot \pi\right)^2 - 2 \cdot (d_{bg} - d_{bk})^2}$$

$$a \approx \frac{1}{4} \cdot \left(711 - \frac{125 + 40}{2} \cdot \pi\right) + \frac{1}{4} \cdot \sqrt{\left(711 - \frac{125 + 40}{2} \cdot \pi\right)^2 - 2 \cdot (125 - 40)^2}$$

$= 221.84$ mm

Arc of contact around the small pulley

$$\beta = 2 \cdot \arccos\left(\frac{d_{bg} - d_{bk}}{2 \cdot a}\right)$$

$$\beta = 2 \cdot \arccos\left(\frac{125 - 40}{2 \cdot 221.84}\right) = 157.91°$$

Take-up and installation allowances x und y

$$x = \frac{0.008 \cdot L_b}{\sin\frac{\beta}{2}}$$

$$x = \frac{0.008 \cdot 711}{\sin\frac{157.91}{2}} \approx 6 \text{ mm}$$

$$y = \frac{0{,}005 \cdot L_b + \pi \cdot h_f \cdot \frac{\beta}{360}}{\sin\frac{\beta}{2}}$$

$$y = \frac{0.005 \cdot 711 + \pi \cdot 2.5 \cdot \frac{157.91}{360}}{\sin\frac{157.91}{2}} \approx 7 \text{ mm}$$

h_f from Table 22, page 28

Belt speed

$$v = \frac{\pi \cdot (d_b + 2 \cdot h_b) \cdot n}{60 \cdot 10^3}$$

$$v = \frac{\pi \cdot (125 + 2 \cdot 1.2) \cdot 2850}{60 \cdot 10^3} = 19 \text{ m/s}$$

Flex frequency

$$f_B = \frac{10^3 \cdot v \cdot k}{L_b + 2 \cdot \pi \cdot h_b}$$

$$f_B = \frac{10^3 \cdot 19 \cdot 2}{711 + 2 \cdot \pi \cdot 1.2} = 52.9 \text{ s}^{-1}$$

Power correction factor for arc of contact

c_1 from Table 19, page 24

$c_1 = 0.94$

Length factor

c_3 from Table 21, page 25

$c_3 = 0.92$

Power capacaty rating per rib

P_R from Table 26, page 34/35

$P_R = 0.88$ kW

Number of ribs required

$$z_{er} = \frac{P \cdot c_2}{P_R \cdot c_1 \cdot c_3}$$

$$z_{er} = \frac{3.7 \cdot 1.2}{0.88 \cdot 0.94 \cdot 0.92} = 5{,}8$$

design choice:
CONTI-V MULTIRIB® Belt 6 PJ 711

Check the service factor

$$c_{2er} = z \cdot \frac{P_R \cdot c_1 \cdot c_3}{P}$$

$$c_{2er} = 6 \cdot \frac{0.88 \cdot 0.94 \cdot 0.92}{3.7} = 1.23$$

Effective pull

$$F_u = \frac{P \cdot 10^3}{v}$$

$$F_u = \frac{3700}{19} = 195 \text{ N}$$

Total span tension

$$F_v = (k_1 \cdot F_u + 2 \cdot k_2 \cdot v_2 \cdot z) \cdot \sin\frac{\beta}{2}$$

$$F_v = (1.84 \cdot 195 + 2 \cdot 0.009 \cdot 19^2 \cdot 6) \cdot \sin\frac{157.91}{2}$$

$F_v = 390.4$ N

k_1 from Table 23, page 30

$k_1 = 1.84$

k_2 from Table 24, page 30

$k_2 = 0.009$

Check the installation tension of the Multiple V-Ribbed Belt

Static tension per rib

$$F = \frac{F_v}{2 \cdot z \cdot \sin\frac{\beta}{2}}$$

See Fig. 7, page 31 for force applied per rib

$$F_{eges} = z \cdot F_e$$

Installation tension value from Fig. 7, page 31

$$\frac{t_e}{L_f} \cdot 100$$

Free span length

$$L_f = a \cdot \sin\frac{\beta}{2}$$

Deflection of the belt

$$t_e = \frac{L_f}{100} \cdot \text{installation tension value}$$

$$F = \frac{390.4}{2 \cdot 6 \cdot \sin\frac{157.91}{2}} = 33.2 \text{ N}$$

$F_e = 10$ N

$F_{eges} = 6 \cdot 10 = 60$ N

$$\frac{t_e}{L_f} \cdot 100 = 5.2$$

$$L_f = 221.84 \cdot \sin\frac{157.91}{2} = 217.73 \text{ mm}$$

$$t_e = \frac{217.73}{100} \cdot 5.2 = 11.3 \text{ mm}$$

With this deflection, the belt installation tension is in conformity with the theoretical desired value.

Calculation of a multi-grooved/flat pulley drive

For drives with a transmission ratio of $i \geq 3$ and with an arc of contact of 120° to 150° around the small pulley it is possible to use a non-grooved pulley, i.e. a flat pulley, as the larger pulley.

The belt adhesion on a flat or on a grooved pulley is similar for an arc of contact of 133°. For a greater arc of contact the adhesion on the flat pulley is greater than on the grooved pulley.

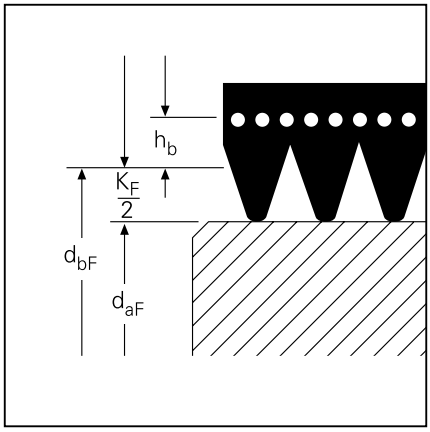
When selecting the centre distance the following value is recommended:

$$a \approx \frac{d_{bF} - d_{bk}}{0.85} \qquad a_{min} = d_{bF}$$

For drive calculations the same power ratings and service factors apply as to drives with two grooved pulleys. The power correction factors c_{1F} for arc of contact to be considered for multi-grooved/flat pulley drives are shown in Table 32 below.

Power correction factor c_{1F} for arc of contact — Table 32

Arc of contact β °(degrees)	Power correction factor c_{1F}	Arc of contact β °(degrees)	Power correction factor c_{1F}
150	0.82	133	0.86
148	0.83	130	0.86
145	0.83	127	0.85
142	0.84	123	0.84
139	0.85	120	0.82
136	0.85		



Effective diameter of a flat pulley Fig. 9

Effective length

The length is calculated taking account of the effective diameter concerned. For multi-grooved/flat pulley drives the actual effective diameter of the flat driven pulley has to be determined by adding the section – dependent adjustment value K_F to the outside diameter. The adjustment values concerned are shown in Table 33 below.

The effective diameter of the flat pulley is:

$$d_{bF} = d_{aF} + K_F$$

Adjustment value for effective diameter — Table 33

Section code	PH	PJ	PK	PL	PM
Adjustment value K_F	1.8	3.5	5.2	9.7/6.3*	15.3
Effective line differential h_b	0.8	1.2	1.5	3.0	4.0

*Values for truncated type.

The effective length is calculated using the following formula:

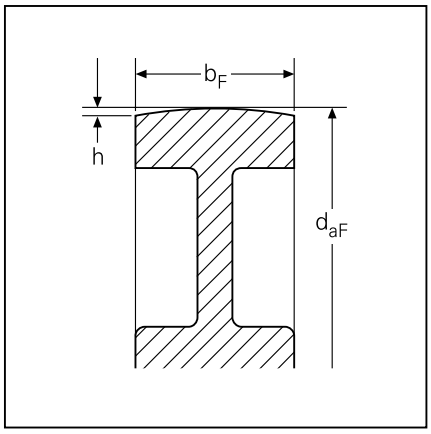
$$L_b \approx 2 \cdot a + \frac{\pi}{2}(d_{bF} + d_{bk}) + \frac{(d_{bF} - d_{bk})^2}{4 \cdot a}$$

Flat pulley width
The flat pulley should be wider than the Multiple V-Ribbed Belt.
The following recommendation applies:

$$b_F = (z + 2) \cdot s$$

z ____ number of ribs

s ____ rib spacing



Curvature on a flat pulley Fig. 10

Flat pulley shape
The flat pulley may be cylindrical or slightly convex (barrel-shaped). The curvature should not exceed 1 mm per 100 mm of outside diameter. Notes on flat pulleys are contained in DIN 111.

Curvature h (measurements in mm) Table 34

Outside diameter d_{aF}	Curvature h for pulley face width	
	< 250	> 250
≤ 112	0.3	0.3
> 112–140	0.4	0.4
> 140–180	0.5	0.5
> 180–224	0.6	0.6
> 224–335	0.8	0.8
> 335–500	1.0	1.0
> 500–710	1.2	1.2
> 710–1000	1.2	1.5
> 1000–1400	1.5	2.0
> 1400–2000	1.8	2.5

Examples of design procedure steps
Drive with multi-groove/flat pulleys

Driver:	Electric motor	P = 10 kW
	with normal starting torque	n_1 = 700 min^{-1}
Driven machine:	Excentric press	n_2 = 135 min^{-1}
Servise conditions:	Diamter of flywheel	d_{aF} = 600
	Operations for 16 hours per day	

Service factor

c_2 from Table 20, page 25

$c_2 = 1.3$

Belt section

Fig. 5, page 26

selected: CONTI-V MULTIRIB® Belt
section PL ZAR type

Transmission ratio

$$i = \frac{n_1}{n_2} = \frac{d_{w2}}{d_{w1}}$$

$$i = \frac{700}{135} = 5.2$$

Pitch diameter of pulleys

$d_{wF} = d_{aF} + K_F + 2 \cdot h_b$

$d_{wF} = 600 + 5.5 + 2 \cdot 3 = 611.5$ mm

K_F and h_b from Table 33, page 49

$$d_{wK} = \frac{d_{wF}}{i}$$

$$d_{wK} = \frac{611.5}{5.2} = 117.6 \text{ mm}$$

Effective diameter of pulleys

$d_{bF} = d_{aF} + K_F$

$d_{bF} = 600 + 5.5 = 605.5$ mm

$d_{bK} = d_{wK} - 2 \cdot h_b$

$d_{bK} = 117.6 - 2 \cdot 3 = 111.6$ mm

selected: $d_{bK} = 112$ mm
$d_{wK} = 118$ mm

Centre distance recommendation

$$a = \frac{d_{bF} - d_{bk}}{0.85}$$

$$a = \frac{605.5 - 112}{0.85} = 581 \text{ mm}$$

$a_{min} = d_{bF}$

selected: $a = a_{min} = d_{bF} \approx 606$ mm

Effective length

$$L_b \approx 2 \cdot a + \frac{\pi}{2}(d_{bF} + d_{bk}) + \frac{(d_{bF} - d_{bk})^2}{4 \cdot a}$$

$$L_b \approx 2 \cdot 606 + \frac{\pi}{2}(605.5 + 112) + \frac{(605.5 - 112)^2}{4 \cdot 606}$$

≈ 2440 mm

See Table 2, page 8
to determine the available effective length

selected: $L_b = 2477$ mm

Centre distance

This is determined according to the selected effective length

$$a = \frac{1}{4} \cdot \left(L_b - \frac{d_{bF} + d_{bk}}{2} \cdot \pi \right) + \frac{1}{4} \cdot \sqrt{\left(L_b - \frac{d_{bF} + d_{bk}}{2} \cdot \pi \right)^2 - 2 \cdot (d_{bF} - d_{bk})^2}$$

$$a = \frac{1}{4} \cdot \left(2477 - \frac{605.5 + 112}{2} \cdot \pi \right) + \frac{1}{4} \cdot \sqrt{\left(2477 - \frac{605.5 + 112}{2} \cdot \pi \right)^2 - 2 \cdot (605.5 - 112)^2}$$

$$= 626.38 \text{ mm}$$

Arc of contact around the small pulley

$$\beta = 2 \cdot \arccos \left(\frac{d_{bF} - d_{bk}}{2 \cdot a} \right)$$

$$\beta = 2 \cdot \arccos \left(\frac{605.5 - 112}{2 \cdot 626.38} \right) = 133.6°$$

Take-up and installation allowances x and y

$$x = \frac{0.008 \cdot L_b}{\sin \frac{\beta}{2}}$$

$$y = \frac{0.005 \cdot L_b + \pi \cdot h_f \cdot \frac{\beta}{360}}{\sin \frac{\beta}{2}}$$

h_f from Table 22, page 28

$$x = \frac{0.008 \cdot 2477}{\sin \frac{133.6}{2}} \approx 22 \text{ mm}$$

$$y = \frac{0.005 \cdot 2477 + \pi \cdot 6 \cdot \frac{133.6}{360}}{\sin \frac{133.6}{2}} \approx 21 \text{ mm}$$

Belt speed

$$v = \frac{\pi \cdot d_{wF} \cdot n}{60 \cdot 10^3}$$

$$v = \frac{\pi \cdot 118 \cdot 700}{60 \cdot 10^3} = 4.32 \text{ m/s}$$

Flex frequency

$$f_B = \frac{10^3 \cdot v \cdot k}{L_b + 2 \cdot \pi \cdot h_b}$$

$$f_B = \frac{10^3 \cdot 4.32 \cdot 2}{2477 + 2 \cdot \pi \cdot 3} = 3.46 \text{ s}^{-1}$$

Power correction factor for arc of contact

c_{1F} from Table 32, page 49

$$c_{1F} = 0.86$$

Length factor

c_3 from Table 21, page 25

$$c_3 = 1.03$$

Power capacity

P_R from Table 30, page 42

$$P_R = 1.48 \text{ kW}$$

Number of ribs required

$$z_{er} = \frac{P \cdot c_2}{P_R \cdot c_{1F} \cdot c_3}$$

$$z_{er} = \frac{10 \cdot 1.3}{1.48 \cdot 0.86 \cdot 1.03} = 9.92$$

design choice:
1 CONTI-V MULTIRIB® Belt 10 PL 2477 ZAR
1 multi-groove pulley P 10 PL 112
1 flywheel d_a = 600 mm

Check the service factor

$$c_{2er} = z \cdot \frac{P_R \cdot c_{1F} \cdot c_3}{P}$$

$$c_{2er} = 10 \cdot \frac{1.48 \cdot 0.86 \cdot 1.03}{10} = 1.31$$

Effective pull

$$F_u = \frac{P \cdot 10^3}{v}$$

$$F_u = \frac{10 \cdot 10^3}{4.32} = 2315 \text{ N}$$

Total span tension

$$F_v = (k_1 \cdot F_u + 2 \cdot k_2 \cdot v^2 \cdot z) \cdot \sin \frac{\beta}{2}$$

$$F_v = (2.09 \cdot 2315 + 2 \cdot 0.037 \cdot 4.32^2 \cdot 10) \cdot \sin \frac{133.6}{2}$$

$$F_v = 4460 \text{ N}$$

k_1 from Table 23, page 30

$$k_1 = 2.09$$

k_2 from Table 24, page 30

$$k_2 = 0.037$$

Check the installation tension of the Multiple V-Ribbed Belt

Static tension per rib

$$F = \frac{F_v}{2 \cdot z \cdot \sin \frac{\beta}{2}}$$

$$F = \frac{4460}{2 \cdot 10 \cdot \sin \frac{133.6}{2}} = 242.6 \text{ N}$$

See Fig. 8, page 31 for force applied per rib

$$F_e = 20 \text{ N}$$

$$F_{eges} = z \cdot F_e$$

$$F_{eges} = 10 \cdot 20 = 200 \text{ N}$$

Installation tension value from Fig. 8, page 31

$$\frac{t_e}{L_f} \cdot 100$$

$$\frac{t_e}{L_f} \cdot 100 = 1.9$$

Free span length

$$L_f = a \cdot \sin \frac{\beta}{2}$$

$$L_f = 626.38 \cdot \sin \frac{133.6}{2} = 575.73 \text{ mm}$$

Deflection of the belt

$$t_e = \frac{L_f}{100} \cdot \text{Installation tension value}$$

$$t_e = \frac{575.73}{100} \cdot 1.9 \approx 11 \text{ mm}$$

With this deflection, the belt installation tension is in conformity with the theoretical desired value.

ContiTech drive design service

Designers of complicated and series drives are recommendet to contact the Application Engineers of ContiTech Power Transmission Systems Ltd.

Computer-aided design calculations are carried out competently and reliably in close cooperation with customers.

Fig. 11 shows the computer printout for the two-pulley drive given as an example on page 46.

ContiTech Power Transmission Systems
ContiTech Group of Continental AG

CONTITECH®

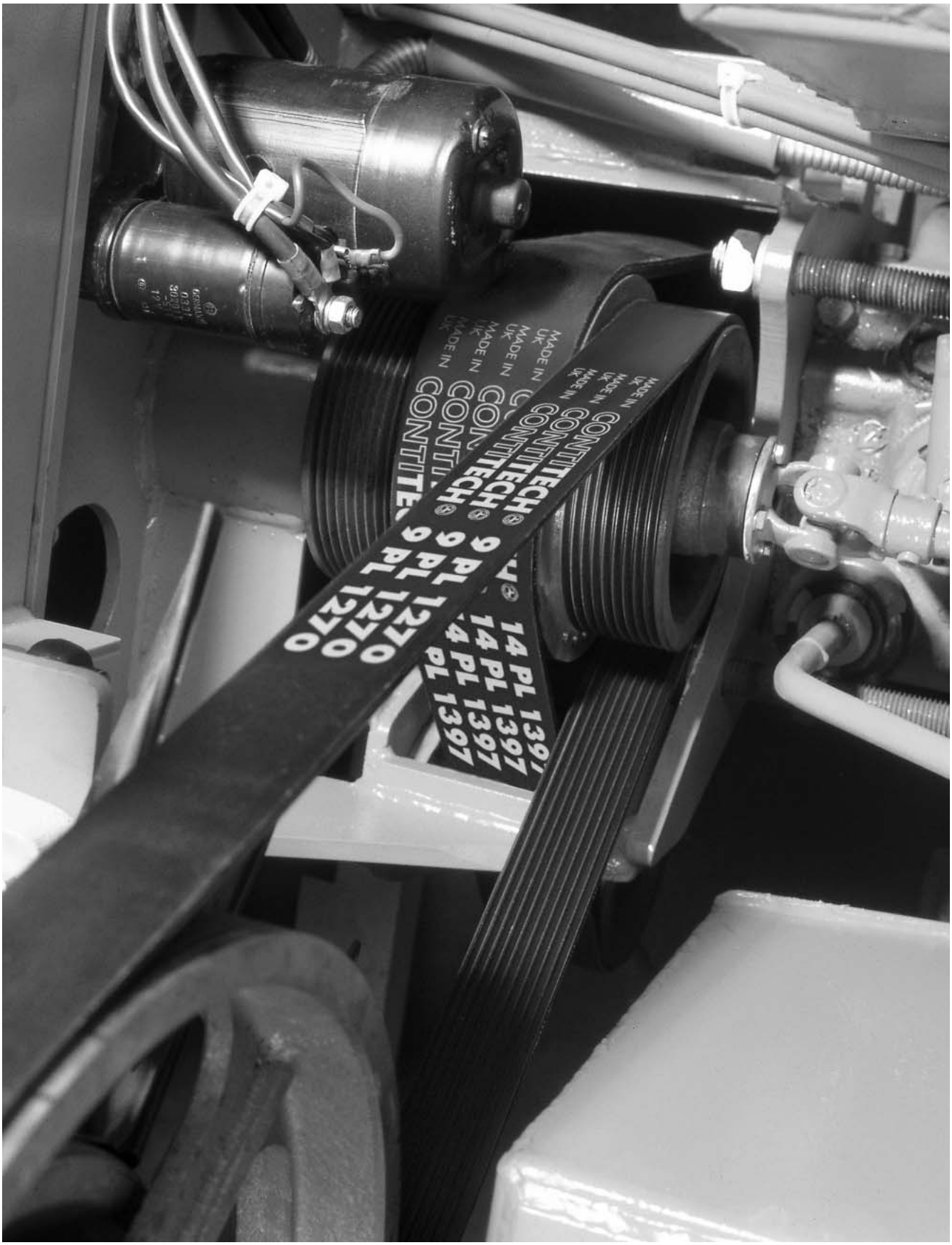
CONTI-V MULTIRIB® DRIVE CALCULATION 04.12.2001 15:38:31

Customer : Example of calculation			Company : ContiTech	
Reference : Grinder			Telephone : 0511-938 - 71	
:			Fax : 0511-938-5232	
:			Designer : H.Menssen	
Belt Type:			**CONTI-V MULTIRIB®**	
Section:			**PJ**	
Effective Diameter Of Small Pulley:		DBK	= 40,00	mm
Pitch Diameter Of Small Pulley:		DWK	= 42,40	mm
Effective Diameter Of Large Pulley:		DBG	= 125,00	mm
Pitch Diameter Of Large Pulley:		DWG	= 127,40	mm
Speed Of Small Pulley:		NK	= 8550,00	rpm
Speed Of Large Pulley:		NG	= 2845,53	rpm
Drive Ratio:	I or 1/I		= 3,00	
Belt Effective Length:		LBER	= 711,00	mm
Calculated Centre Distance:		AER	= 221,84	mm
Arc of Contact:		BETA	= 157,51	degree
Take Up:		X	+ 5,80	mm
Slack Off:		Y	- 7,13	mm
Belt Speed:		V	= 18,98	m/s
Belt Flex Frequency:		FB	= 52,83	Hz
Power To Be Transmitted:		P	= 3,700	kW
Given Service Factor:		C2	= 1,20	
Arc Of Contact Factor:		C1	= 0,94	
Belt Length Correction Factor:		C3	= 0,92	
Power Rating Per Rib:		PR	= 0,88	kW
Calculated Number Of Ribs:		ZER	= 5,76	
Recommended Number Of Ribs:		Z	= 6	
Calculated Service Factor:		C2ER	= 1,25	
Min. Pulley Face Width:		B2	= 15,30	mm
Belt Tension Factor:		K1	= 1,85	
Belt Rotational Force:		FU	= 194,93	N
Static Tension Per Belt:		FGES	= 200,16	N
Static Axle Load:		FV	= 392,63	N
Dynamic Axle Load:		FDYN	= 353,19	N
Test Force Per V-Ribbed Belt:		FEGES	= 60	N
Belt Tension Test Deflection:		TE	= 11	mm
Natural Frequency Of Belt Span:		EIF	= 141,70	Hz
Service Life:		LH	> 25000	Hrs

Result:
1 CONTI-V MULTIRIB(r) Belt **6 PJ 711**
Small Pulley **P6 PJ 40,00**
Large Pulley **P6 PJ 125,00**

Computer printout for calculating a drive with a CONTI-V MULTIRIB® Multiple V-Ribbed Belt Fig. 11

Notes on design



CONTI-V MULTIRIB® Multiple V-Ribbed Belt in a lane-marking machine

Notes on design

The following notes are intended to help drive designers make the best possible use of the various product properties of CONTI-V MULTIRIB® Multiple V-Ribbed Belts. Designers of complicated and series drives are recommended to contact ContiTech's Application Engineers for technical advice, without any obligation.

Tensioning idlers

The high flexural strength of CONTI-V MULTIRIB® Multiple V-Ribbed Belts allows drives with fixed centre distances to make easy use of back-tensioning or inner tensioning idlers. The inclusion of low-weight spring and damper units or hydraulic tension systems enables maintenance-free drive types with high smooth-running properties to be achievecl even with varying loads.

The tensioning rollers should have the largest feasible diameter. The minimum diameters for inner and outer tensioning idlers are shown in Table 35.

Tensioning idlers should, if possible, be positioned in the slack side of the drive. Exact lateral alignment must be ensured to prevent belt mistracking.

For applications involving a shaking motion – e.g. vibrators or drives with clutch functions – the tensioning idlers should be provided with flanges to prevent the belt from slipping off.

Inner tensioning idlers
Tensioning idlers acting from the inside outwards decrease the arc of contact. So they should always be placed near the large pulley.

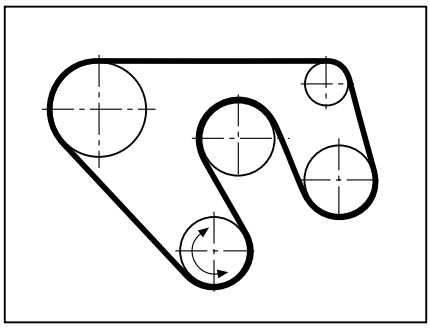
Inner tensioning idlers must be designed with the matching rib profile.

Reverse-tensioning idlers
Tensioning idlers acting on the back of the belt increase the arc of contact and boost the tensioning capacity of the drive. The use of reverse-tensioning idlers is hence particularly recommended for drives with large transmission ratios and short centre distances. They should be positioned in the slack side near the small pulley.

Reverse-tensioning idlers should be smooth and cylindrical with diameters not smaller than the following:

Minimum diameter for tensioning idlers — Table 35

Section code		PH	PJ	PK	PL	PM
inner tensioning idler	mm	13	20	45	75	180
back-tensioning idler	mm	40	50	75	150	360



Serpentine drives
The very high flexibility and flexural strength of CONTI-V MULTIRIB® Multiple V-Ribbed Belts allows counter-flexing and the use of pulleys with small diameters. This in turn allows compact and economical configurations, e.g. serpentine drives with several driven pulleys.

At the same time, the smooth back of CONTI-V MULTIRIB® Multiple V-Ribbed Belts can also be used for power transmission.

Speed increasing drives

When calculating speed increasing drives the crucial factor is not the power rating of the drive pulley, but the power rating P_R as well as the rpm n_k for the effective diameter d_{bk} of the small driven pulley.

Crossed drives

CONTI-V MULTIRIB® Multiple V-Ribbed Belts are also suitable for drive configurations with non-parallel arranged shafts. They do not require the use of special pulleys.

Crossed drives inevitably involve a twisting of the Multiple V-Ribbed belts. The optimum design of the belt arrangement of the pulleys can frequently only be determined by experimentation.

The following notes and illustrations explain examples of half-crossed Multiple V-Ribbed belt drives with or without tensioning rollers.

Half-crossed Multiple V-Ribbed belt drives with back-tensioning rollers
Half-crossed Multiple V-Ribbed belt drives with back-tensioning rollers allow large transmission ratios with relatively small centre distances without any extra step-down gears or intermediate shafts. A reverse operation is also possible provided there is an appropriate design of back-tensioning rollers.

The smooth and cylindrical back-tensioning roller should be approx. 75 mm wider than the Multiple V-Ribbed belts used. The values shown in Table 35 apply to the minimum roller diameter. The back-tensioning roller should be arranged on the slack side near the small pulley.

The following points should be observed when designing and installing:

The centre distance ① should not be less than the value calculated by the following formula.

a_{min} = 22.5 · width of the Multiple V-Ribbed belt in mm.

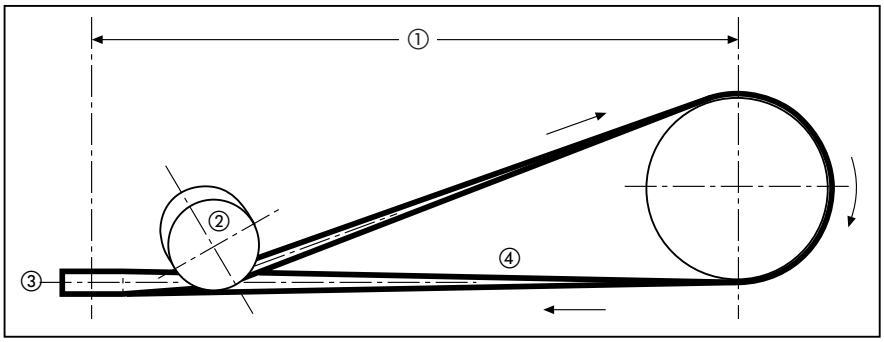
The back-tensioning roller ② should be installed with the following angle of inclination:

$$\psi = 112 \cdot \frac{d_{bk}}{a} \text{ in °(degrees)}$$

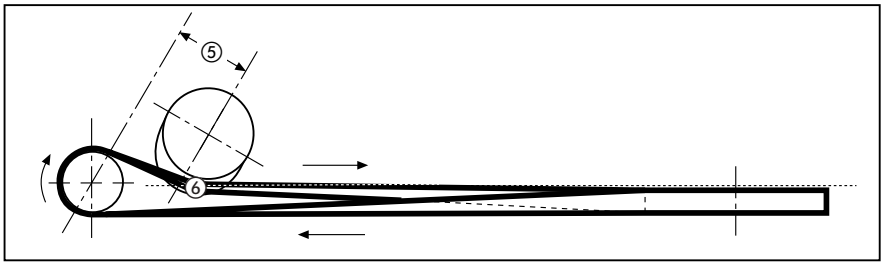
For drives with a constant direction of motion the tension roller is to be designed so that the belt centre line ③ is situated at right angles to the axis and in the middle of the cylindrical surface.

Drives with a reversal in the direction of motion must include a tensioning roller adjustable both in the direction of the inclination and in the cross direction. The optimum position must be determined by experimentation.

The taut side ④ runs twisted by 90° to the drive pulley.



Top view



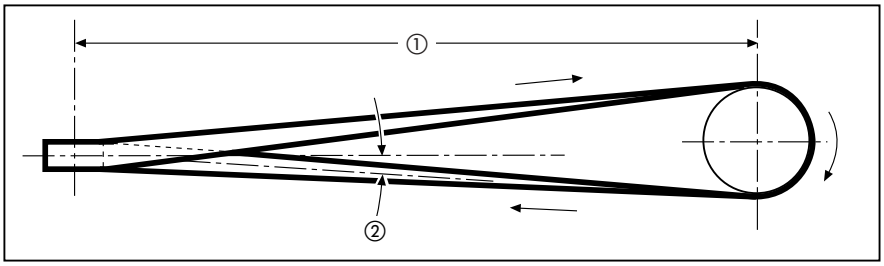
Side view

The distance a ⑤ between the drive pulley and the tensioning roller should not be less than e, where

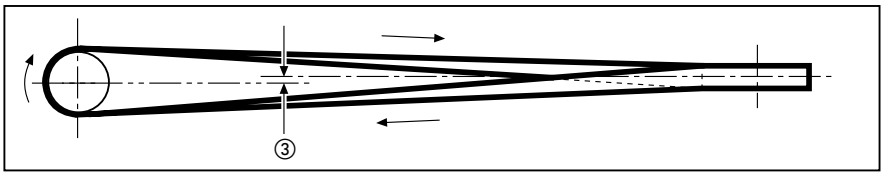
e = 4 · b + 75 mm

The back-tensioning roller is correctly arranged when the point of contact ⑥ of the belt centre line on the tensioning roller lies in the same plane or slightly higher than the outside of the driven pulley.

Half-crossed Multiple V-Ribbed belt drives without tensioning rollers
Half-crossed Multiple V-Ribbed belt drives without tensioning rollers are not suitable for reverse operations.



Top view



Side view

The following points should be observed when designing and installing:

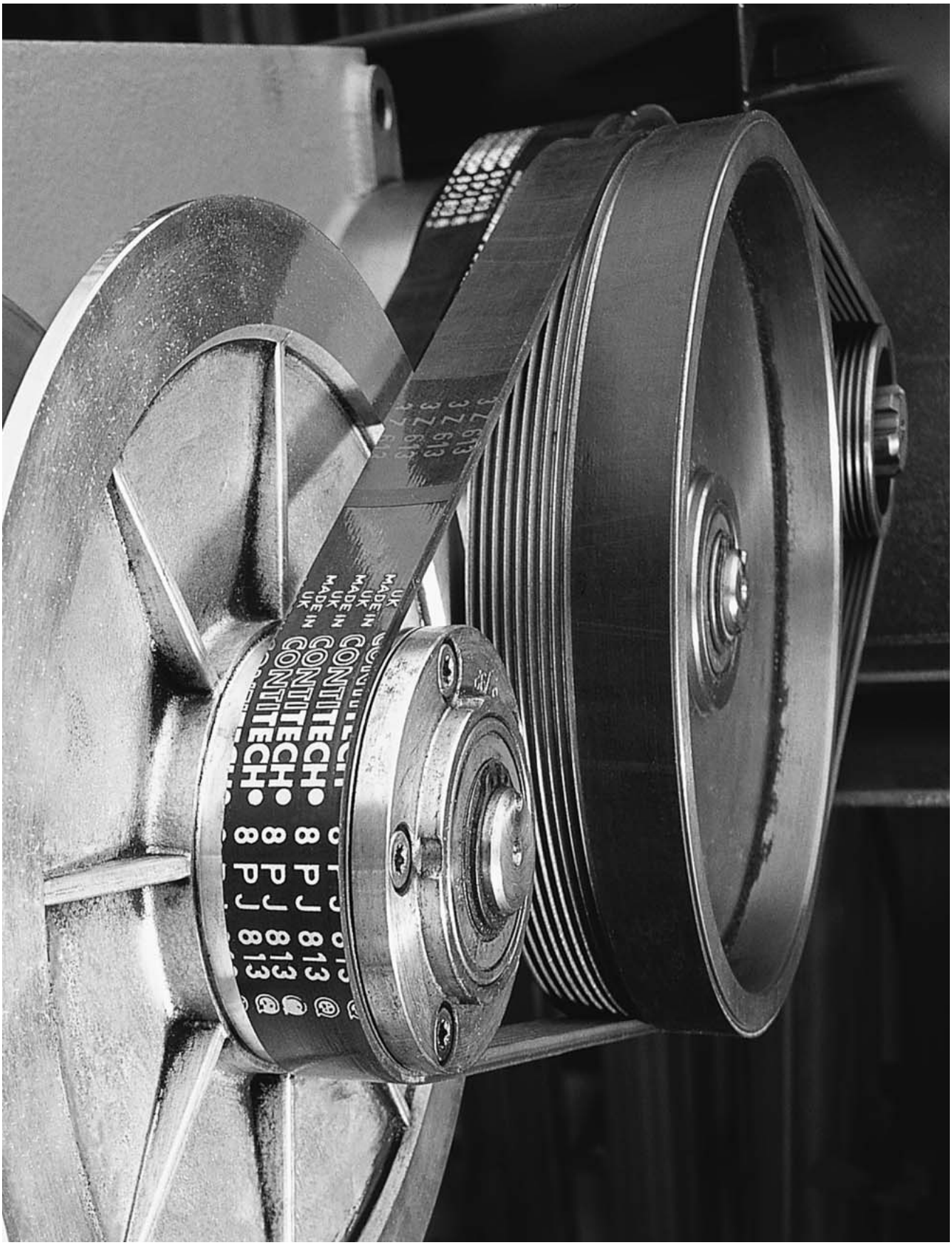
For the minimum centre distance ① the larger of the following two values is to be chosen:

$a_{min} = 13 \cdot d_{bk}$ or $a_{min} = 5{,}5 \cdot (d_{bg} + 1.5 \cdot b)$

The angle ② between the belt centre fine in the run and the horizontal should not exceed 2°.

The driven pulley must lie in the same plane or only slightly higher than the centre of the drive pulley ③. The initial tension should be adjusted for maximum load so as to avoid a sag in the slack side.

Installation and storage of Multiple V-Ribbed belts



CONTI-V MULTIRIB® Multiple V-Ribbed Belts in a tooling machine

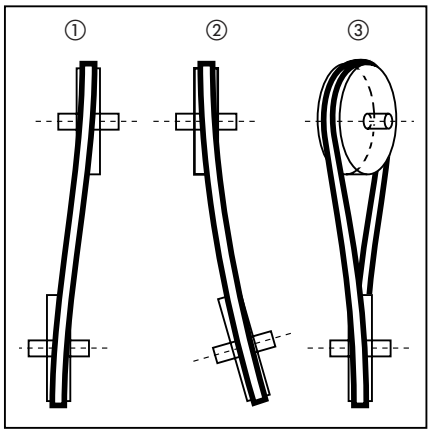
Installation and storage of Multiple V-Ribbed Belts

Long belt life and reliable performance are ensured by CONTI-V MULTIRIB® Multiple V-Ribbed Belts provided that
– the drive is correctly designed using the right belt section and the right number of ribs and
– the instructions for storage and installation are observed.

Installation

The following recommendations will help you to fully utilise all the advantages of CONTI-V MULTIRIB® Multiple V-Ribbed Belts.

1. Pulleys must conform to the data given in the Section on "multi-grooved pulleys". Wrong selection of the pulleys or the belt section will lead to poor drive performance.



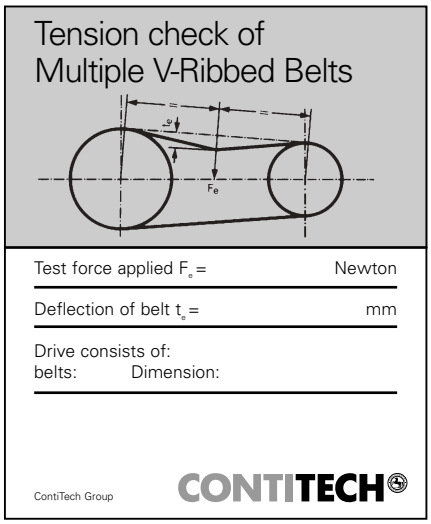
2. All pulleys are to be correctly aligned and installed parallel to the axis. Pulley misalignment can result in belt mistracking, rib jumping, extreme belt edge wear and excessive drive noise.

   Failures that can occur are:
   – Pulley misalignment ① – Move one of the pulleys along the shaft until both pulleys are properly aligned.
   – Shafts not parallel ② – Turn engine or drive unit until the pulleys are aligned.
   – Shafts not in one plane ③ – Realign units both shafts. Then check pulley alignment. Ensure compliance with notes in Section 4. The design notes contained on Page 57 are particularly important for crossed drives.

3. Pulleys must be free from burr, rust and dirt. Contaminated or damaged pulleys lead to premature belt damage.

4. On Installation, the belt should never be forced or prised over the pulley edges using a lever. This would cause imperceptile damage to the tension member and ribs and would shorten the belt life. Reduction of the centre distance will permit the belt to slide onto the pulley easily. In the untensioned state both slack and tight side should have the same sag.

5. Multiple V-Ribbed Belt drives must be tensioned with great care. Insufficient tensioning leads to inadequate power transmission and premature wear on the belt due to slippage. Overtensioning causes excessive stretch, thereby reducing belt life, and gives rise to unnecessarily high wear on the bearings. See Page 48 on how to calculate and check the belt tension for new drives. All relevant data should be entered on the sticker shown in Fig. 12 and attached to the drive in a place that is easily visible.



Sticker for entering tension data Fig. 12

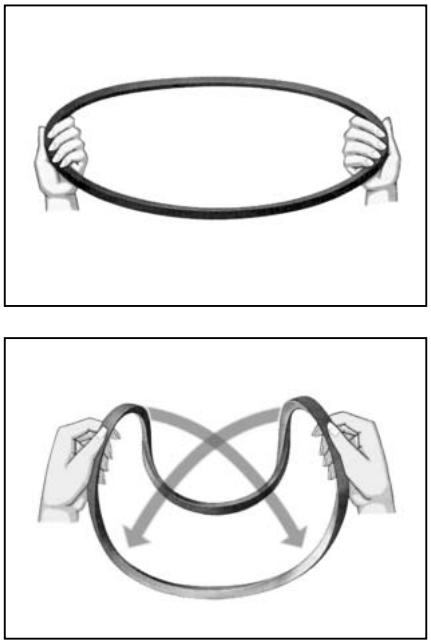
6. After an initial running period of approx. 30 minutes under full load, installation tension must be checked and adjusted if necessary. If the belt is insufficiently tensioned, the slack side can sag, wobble or even slip off the pulley. Incorrectly tensioned Multiple V-Ribbed Belts are subject to premature wear.

7. It is important that no foreign matter, such as stones, metal fragments or sticky materials (e.g. tar), is allowed to become lodged between the pulley and the belt. If the service conditions make such lodging seem likely, the drive should be suitably protected. Otherwise, belt damage and premature failure may arise.

8. Multiple V-Ribbed Belts must be protected from oil spray, dripping oil and other chemicals. Constant exposure to such media would lead to swelling or other structural changes in the belt and consequently to premature failure.

9. If tensioning idlers are used, the design notes on Page 56 should be observed.

If these instructions are followed CONTI-V MULTIRIB® Multiple V-Ribbed Belts will reward you with reliable operation.



Coiling long Multiple V-Ribbed Belts Fig. 13

Storage

General guidelines on the storage, cleaning and maintenance of rubber and plastic products are contained in DIN 7716.

How to store belts
Multiple V-Ribbed Belts are best stored by suspending them in cantilever type shelves or on large-diameter tubular brackets. The diameter should be at least 10 times the height ot the belt cross section.

Long belts may be stacked to save space. However they must be coiled correctly as shown in Fig. 13.

Short belts may be stored on shelves, but stacks should not be more than 300 mm high to avoid deformation of the bottom belts.

Multiple V-Ribbed Belts for precision engineering applications are best stored on reels.

Hooks and nails are unsuitable for suspending Multiple V-Ribbed Belts.

Where to store belts
The storage room should be cool, dry, well ventilated and free from draughts. Storage temperature should be between 15 and 25 °C.

Keep Multiple V-Ribbed Belts away from direct heat.

Avoid direct sunlight and strong artificial light with a high UV content.

Ozone-generating equipment, e.g. sparking electrical switchgear, should not be in constant operation in the storage room.

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