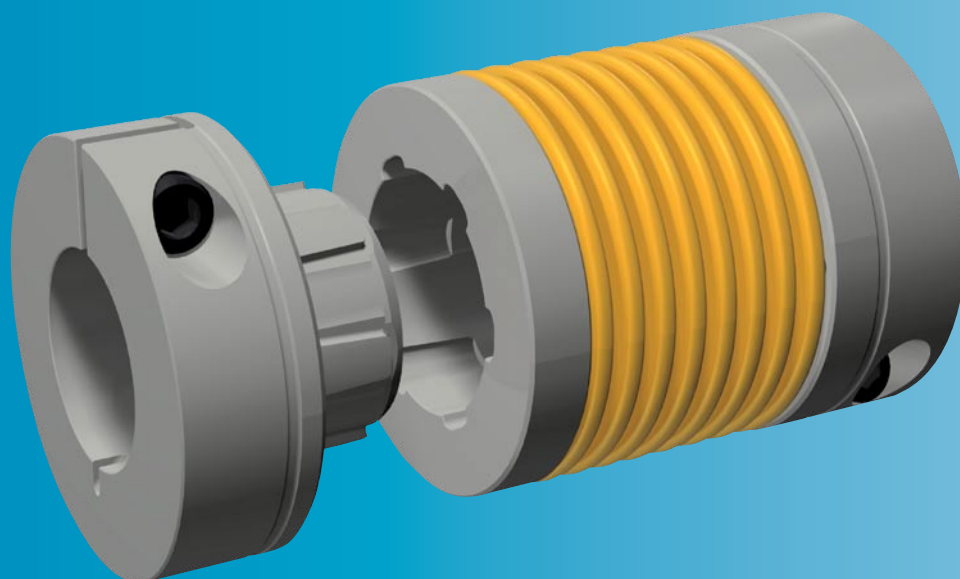


primeflex[®]

The new, top-quality steel bellows coupling



www.mayr.de

- *Plug-in connection*
- *Backlash-free*
- *Easy to de-install*
- *Cost-effective*

P.933.V02.GB

mayr[®]
your reliable partner

primeflex®

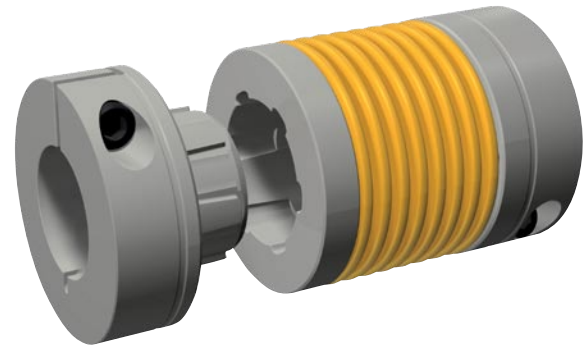
the new, top-quality steel bellows coupling

If innovative and market-leading shaft coupling technology designed to secure your future is important to you, have a closer look at our new primeflex®.

This product contains all the qualities you should expect from a “first-class“ steel bellows coupling - at an exceptionally favourable price.

● **Can be de-installed even after longer operating periods without damaging the steel bellows**

- Plug-in connection
- Backlash-free
- Extremely compact and very high performance density
- Easy to install via clamping or shrink disk connections
- Frictionally-locking and positive-locking shaft-hub connections
- Excellent misalignment capability
- Can be variably dimensioned via the modular system
- Cost-effective



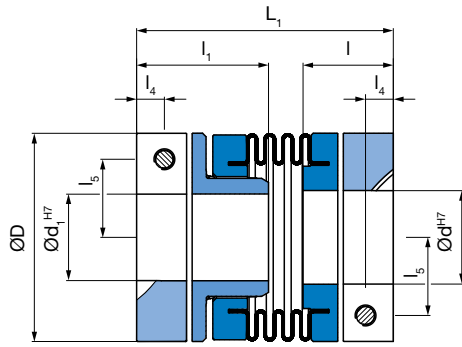
Technical Data				Size			
				1	2	3	
Nominal torque ¹⁾		T_{KN}	[Nm]	24	60	120	
Hub bore $\varnothing d$	Minimum	d_{min}	[mm]	12	19	25	
	Maximum without keyway	d_{max}	[mm]	25	35	45	
	Maximum with keyway	d_{max}	[mm]	21	30	38	
Hub bore $\varnothing d_1$	Minimum	d_{min}	[mm]	12	19	25	
	Maximum without keyway	d_{max}	[mm]	20	30	40	
	Maximum with keyway	d_{max}	[mm]	17	25	35	
Hub bore $\varnothing d_2$	Minimum	d_{min}	[mm]	10	15	18	
	Maximum without keyway	d_{max}	[mm]	20	30	40	
	Maximum with keyway	d_{max}	[mm]	17	25	35	
Maximum speed		n_{max}	[rpm]	8 000	6 000	4 000	
Screws	Tightening torque $\pm 5\%$	T_{A1}	[Nm]	10	17	40	
	Key width, screw 1	SW1	[mm]	4	5	6	
	Tightening torque $\pm 5\%$	T_{A2}	[Nm]	1,8	4,1	8,1	
	Key width, screw 2	SW2	[mm]	2,5	3	4	
Permitted misalignments ²⁾	Permitted axial displacement	Type 933.3__1	ΔK_a	[mm]	$\pm 0,1$	$\pm 0,15$	$\pm 0,15$
		Type 933.5__1	ΔK_a	[mm]	$\pm 0,2$	$\pm 0,25$	$\pm 0,25$
	Permitted radial misalignment	Type 933.3__1	ΔK_r	[mm]	0,1	0,1	0,1
		Type 933.5__1	ΔK_r	[mm]	0,2	0,3	0,3
	Permitted angular misalignment	Type 933.3__1	ΔK_w	[°]	1	1	1
		Type 933.5__1	ΔK_w	[°]	1	1	1
Spring rigidities	Axial spring rigidity	Type 933.3__1	C_{ax}	[N/mm]	140	180	240
		Type 933.5__1	C_{ax}	[N/mm]	70	90	120
	Torsion	Type 933.3__1	C_T	[Nm/rad]	18 000	44 000	100 000
		Type 933.5__1	C_T	[Nm/rad]	9 000	22 000	50 000

We reserve the right to make dimensional and constructional changes.

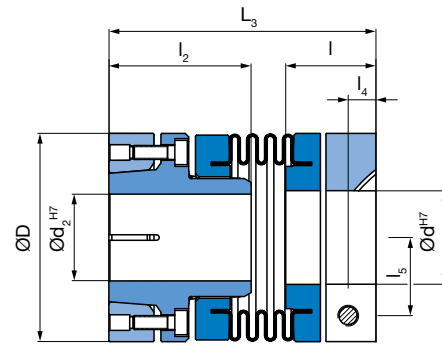
Smaller bores than the finish bores d , d_1 and d_2 mentioned here are available on request.

1) The nominal torque may be temporarily exceeded by 50 %. Please contact the manufacturers for details.

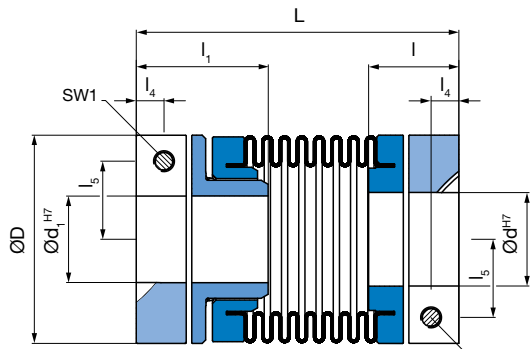
2) The permitted misalignments must not simultaneously reach their maximum value.



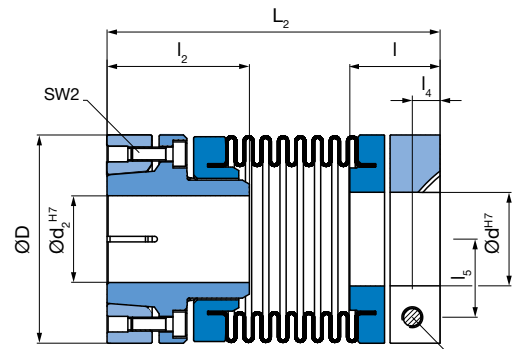
Type 933.333.1 without keyway
Type 933.366.1 with keyway



Type 933.335.1 without keyway
Type 933.367.1 with keyway



Type 933.533.1 without keyway
Type 933.566.1 with keyway SW1



Type 933.535.1 without keyway
Type 933.567.1 with keyway SW2

Dimensions	Size		
	1	2	3
D	47	60	79
L	77	93	117
L ₁	62	74	92
L ₂	78	96	118
L ₃	63	77	93
l	23	26	32
l ₁	30	38	47
l ₂	31	41	48
l ₄	6,5	8	10,5
l ₅	16,7	22,5	29,5

Mass moments of inertia [10 ⁻⁶ kgm ²]	Size		
	1	2	3
Type 933.533.1	73,9	267	983
Type 933.333.1	63,6	219	810
Type 933.535.1	95,6	341	1231
Type 933.335.1	85,3	293	1058

Weights [kg]	Size		
	1	2	3
Type 933.533.1	0,234	0,487	1,031
Type 933.333.1	0,203	0,407	0,865
Type 933.535.1	0,292	0,607	1,259
Type 933.335.1	0,261	0,527	1,093

Size selection

The coupling is dimensioned via the maximum torque M_{max} occurring in the system and the appropriate service and temperature factors. The calculated torque M must be smaller than the nominal torque on the selected coupling.

M	=	M_{max} × f_t × f_B	[Nm]
M_{max}	=	Maximum occurring torque	
f_t	=	Temperature factors	
f_B	=	Service factors	

	Temperature			
	50 °C	80 °C	100 °C	120 °C
Temperature factor f_t	1	1,1	1,2	1,5

	Load		
	Even	Uneven	Impacts
Service factor f_B	1,5	2	2,5 - 4

In our experience, f_B values of 1,5 should be calculated for drives in machine tools (servo motors).

Installation Guidelines

The coupling must be pre-tensioned to pressure between 0,5 and 1,0 mm during installation, based on the non-tensioned installation dimensions L , L_1 , L_2 and L_3 . Both hubs are to be mounted onto the shafts so that this pre-tension is achieved after the components are plugged together. Only with this pre-tensioning can the coupling work permanently backlash-free and with full torsional rigidity.



Headquarters

Chr. Mayr GmbH + Co. KG
Eichenstrasse 1, D-87665 Mauerstetten
Tel.: 0 83 41/8 04-0, Fax: 0 83 41/80 44 21
www.mayr.de, E-Mail: info@mayr.de



mayr®

Service Germany

Baden-Württemberg

Esslinger Straße 7
 70771 Leinfelden-Echterdingen
 Tel.: 07 11/45 96 01 0
 Fax: 07 11/45 96 01 10

Bavaria

Eichenstrasse 1
 87665 Mauerstetten
 Tel.: 0 83 41/80 41 04
 Fax: 0 83 41/80 44 23

Chemnitz

Bornaer Straße 205
 09114 Chemnitz
 Tel.: 03 71/4 74 18 96
 Fax: 03 71/4 74 18 95

Franken

Unterer Markt 9
 91217 Hersbruck
 Tel.: 0 91 51/81 48 64
 Fax: 0 91 51/81 62 45

Hagen

Im Langenstück 6
 58093 Hagen
 Tel.: 0 23 31/78 03 0
 Fax: 0 23 31/78 03 25

Kamen

Lünener Strasse 211
 59174 Kamen
 Tel.: 0 23 07/23 63 85
 Fax: 0 23 07/24 26 74

North

Schiefer Brink 8
 32699 Extertal
 Tel.: 0 57 54/9 20 77
 Fax: 0 57 54/9 20 78

Rhine-Main

Jägerstrasse 4
 64739 Höchst
 Tel.: 0 61 63/48 88
 Fax: 0 61 63/46 47

Branch office

China

Mayr Zhangjiagang
 Power Transmission Co., Ltd.
 Changxing Road No. 16,
 215600 Zhangjiagang
 Tel.: 05 12/58 91-75 65
 Fax: 05 12/58 91-75 66
 info@mayr-ptc.cn

Great Britain

Mayr Transmissions Ltd.
 Valley Road, Business Park
 Keighley, BD21 4LZ
 West Yorkshire
 Tel.: 0 15 35/66 39 00
 Fax: 0 15 35/66 32 61
 sales@mayr.co.uk

France

Mayr France S.A.
 Z.A.L. du Minopole
 BP 16
 62160 Bully-Les-Mines
 Tel.: 03.21.72.91.91
 Fax: 03.21.29.71.77
 contact@mayr.fr

Italy

Mayr Italia S.r.l.
 Viale Veneto, 3
 35020 Saonara (PD)
 Tel.: 0 49/8 79 10 20
 Fax: 0 49/8 79 10 22
 info@mayr-italia.it

Singapore

Mayr Transmission (S) PTE Ltd.
 No. 8 Boon Lay Way Unit 03-06,
 TradeHub 21
 Singapore 609964
 Tel.: 00 65/65 60 12 30
 Fax: 00 65/65 60 10 00
 info@mayr.com.sg

Switzerland

Mayr Kupplungen AG
 Tobelackerstrasse 11
 8212 Neuhausen am Rheinfall
 Tel.: 0 52/6 74 08 70
 Fax: 0 52/6 74 08 75
 info@mayr.ch

USA

Mayr Corporation
 4 North Street
 Waldwick
 NJ 07463
 Tel.: 2 01/4 45-72 10
 Fax: 2 01/4 45-80 19
 info@mayrcorp.com

Representatives

Australia

Transmission Australia Pty. Ltd.
 22 Corporate Ave,
 3178 Rowville, Victoria
 Australien
 Tel.: 0 39/7 55 44 44
 Fax: 0 39/7 55 44 11
 info@transaus.com.au

China

Mayr Power Transmission Co., Ltd.
 Shanghai Representative Office
 Room 2206, No. 888 Yishan Road
 200233 Shanghai, VR China
 Tel.: 0 21/64 32 01 60
 Fax: 0 21/64 57 56 21
 Trump.feng@mayr.de

India

National Engineering
 Company (NENCO)
 J-225, M.I.D.C.
 Bhosari Pune 411026
 Tel.: 0 20/27 47 45 29
 Fax: 0 20/27 47 02 29
 nenco@nenco.org

Japan

MATSUI Corporation
 2-4-7 Azabudai
 Minato-ku
 Tokyo 106-8641
 Tel.: 03/35 86-41 41
 Fax: 03/32 24 24 10
 k.goto@matsui-corp.co.jp

South Africa

Torque Transfer
 Private Bag 9
 Elandsfontein 1406
 Tel.: 0 11/3 45 80 00
 Fax: 0 11/9 74 05 24
 torque@bearings.co.za

South Korea

Mayr Korea Co. Ltd.
 Room No.1002, 10th floor,
 Nex Zone, SK TECHNOPARK,
 77-1, SungSan-Dong,
 SungSan-Gu, Changwon, Korea
 Tel.: 0 55/2 62-40 24
 Fax: 0 55/2 62-40 25
 info@mayrkorea.com

Taiwan

German Tech Auto Co., Ltd.
 No. 162, Hsin sheng Road,
 Taishan Hsiang,
 Taipei County 243, Taiwan R.O.C.
 Tel.: 02/29 03 09 39
 Fax: 02/29 03 06 36
 steve@zfgta.com.tw

Machine tools

Applications in China
 Dynamic Power Transmission Co., Ltd.
 Block 5th, No. 1699, Songze Road,
 Xujing Industrial Zone
 201702 Shanghai, China
 Tel.: 021/59883978
 Fax: 021/59883979
 dtcshanghai@online.sh.cn

22/10/2010 SC

More representatives:

Austria, Benelux States, Brazil, Canada, Czech Republic, Denmark, Finland, Greece, Hongkong, Hungary, Indonesia, Israel, Malaysia, New Zealand, Norway, Philippines, Poland, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Thailand, Turkey

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