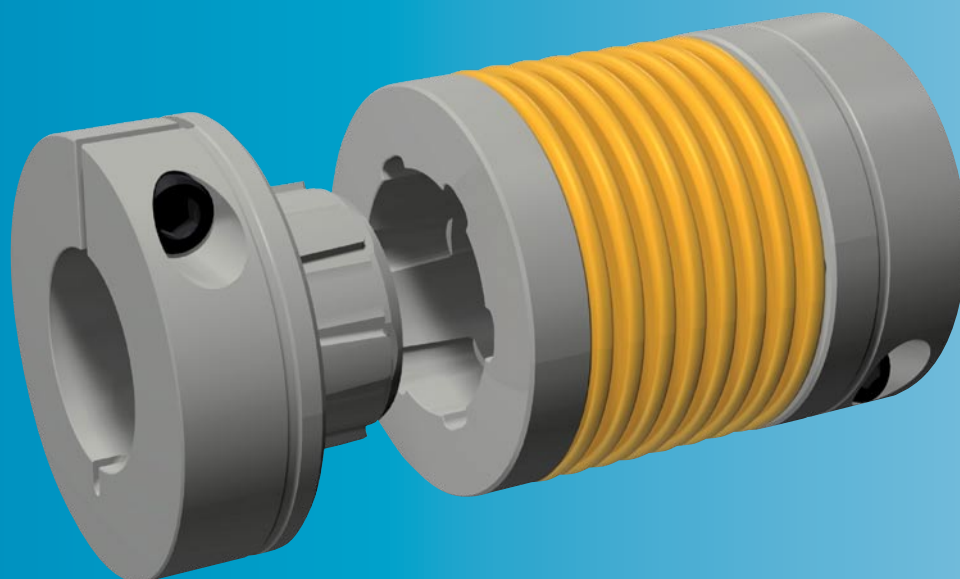


primeflex[®]

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®

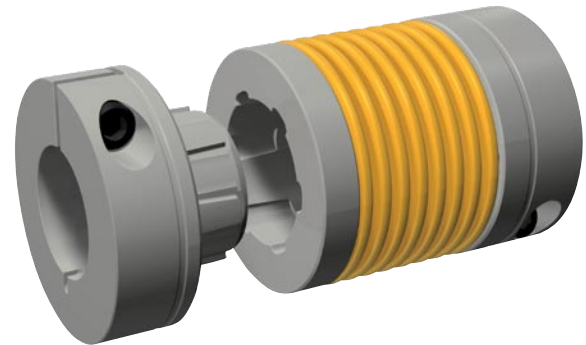
the new, top-quality steel bellows coupling

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



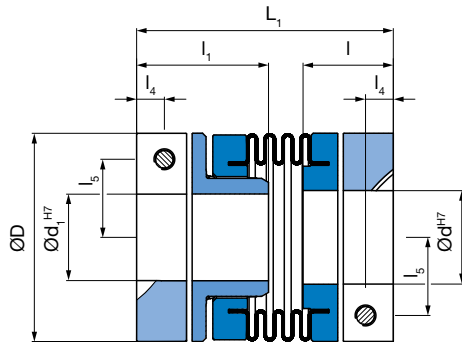
Technical Data				Size			
				1	2	3	
Nominal torque ¹⁾		T_{KN}	[Nm]	24	60	120	
Hub bore $\varnothing d$	Minimum	d_{min}	[mm]	12	19	25	
	Maximum without keyway	d_{max}	[mm]	25	35	45	
	Maximum with keyway	d_{max}	[mm]	21	30	38	
Hub bore $\varnothing d_1$	Minimum	d_{min}	[mm]	12	19	25	
	Maximum without 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.

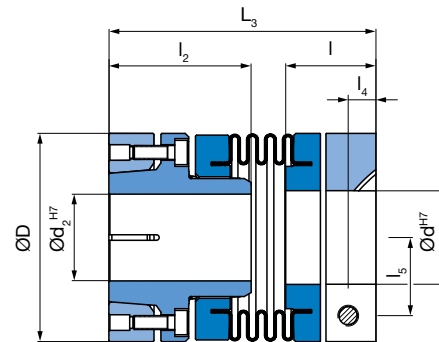
Smaller bores than the finish bores d , d_1 and d_2 mentioned here are available on request.

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

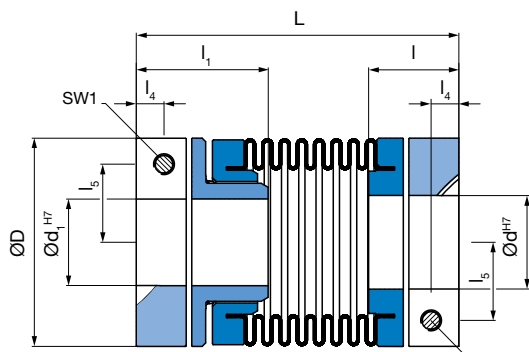
2) The permitted misalignments must not simultaneously reach their maximum value.



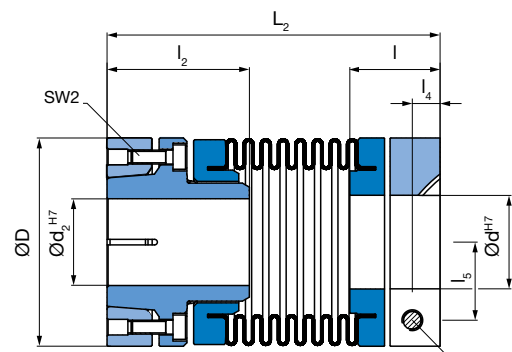
Type 933.333.1 without keyway
Type 933.366.1 with keyway



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.

$$M = M_{max} \times f_t \times f_B \quad [Nm]$$

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.



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