

DRIVE SHAFT AND COUPLING SOLUTIONS

Your first choice supplier for industry and test beds.





UNION
SHAFTS

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Union Shafts is the first choice supplier for drive shaft and coupling solutions for industry and test beds.

The optimized product design allows an universal and robust application which is cost effective and reliable with short order lead times.

The unique design of the couplings with arced spiral springs makes them exceptionally robust and resistant to high operating temperatures. A further advantage is the very low stiffness in relation to the nominal torque. This enables significantly better isolation of vibrations when compared to other products.



Operating range

USC-200

Torque: up to 160 Nm
Speed: up to 8.000 rpm

USC-315

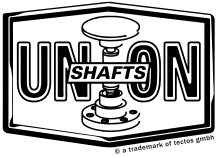
Torque: up to 295 Nm
Speed: up to 8.000 rpm

USC-500

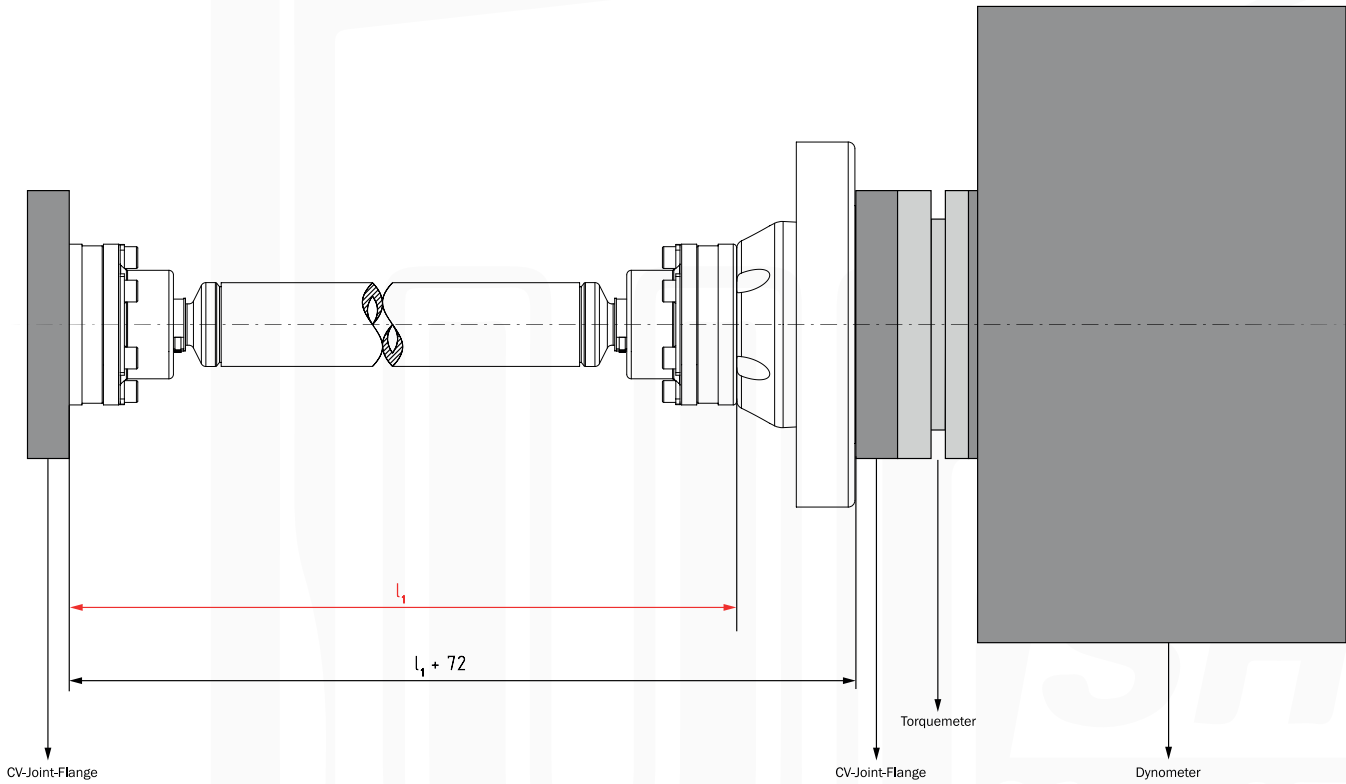
Torque: up to 460 Nm
Speed: up to 8.000 rpm

Fields of application:





HOW TO MEASURE YOUR DRIVE SHAFT LENGTH



For ordering a Union Shafts Solution you need to measure your required drive shaft length. The shaft is available in a length **from 240mm up to 900mm**.

The shaft length is marked in the drawing as l_1 and is defined in **mm**.

For example:

Measured length from flange to flange = 550mm

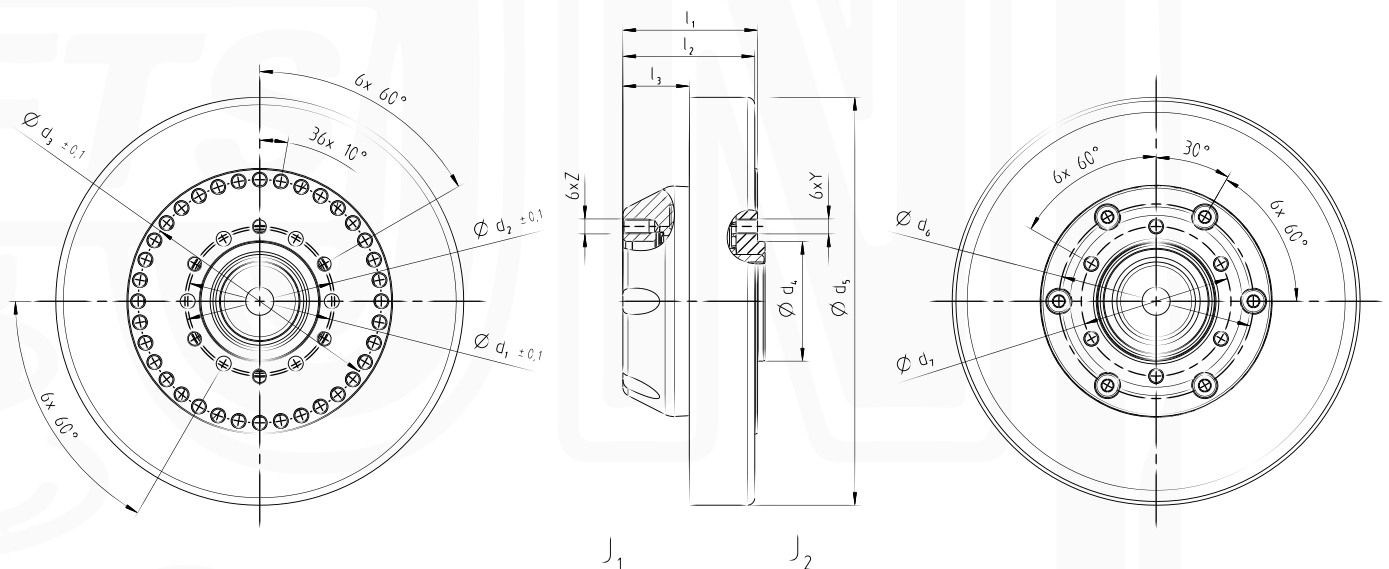
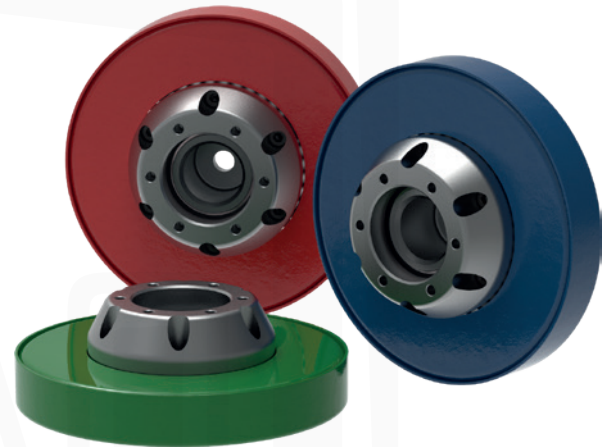
Your required shaft length l_1 would be 478mm (550mm - 72mm (Coupling) = 478mm).

UNION SHAFTS COUPLINGS - USC

The „Union Shafts“ Couplings are based on a unique concept with a robust and cost effective design. The USC is available at different stiffness configurations, which are clearly recognizable by the colour.

Benefits:

- › suitable for high dynamic loads
- › high damping and long lifetime
- › low maintenance service
- › low danger of misuse
- › outstanding vibration decoupling
- › precise concentricity



	T_{KN} [Nm]	C_{Tdyn} [Nm/rad]	n_{max} [rpm]	J_1 [kgm ²]	J_2 [kgm ²]	T [°C]	d_1 [mm]	d_2 [mm]
USC - 200	160	200	8000	2,22E-02	8,20E-03	-40 to +80	77	80
USC - 315	295	315	8000	2,34E-02	9,50E-03	-40 to +80	77	80
USC - 500	460	500	8000	2,37E-02	8,46E-03	-40 to +80	77	80

d_3 [mm]	d_4 (g6) [mm]	d_5 [mm]	d_6 [mm]	d_7 [mm]	l_1 [mm]	l_2 [mm]	l_3 [mm]	Y	Z
130	64	218	104	80	72	70,5	35,5	M8	M8
130	64	218	104	80	72	70,5	35,5	M8	M8
130	64	218	104	80	72	70,5	35,5	M8	M8

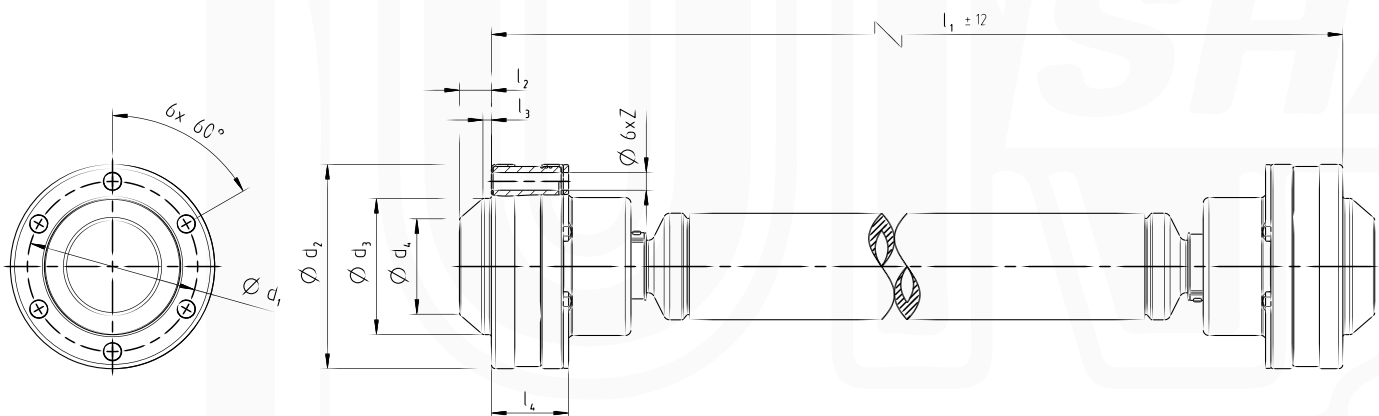
UNION SHAFTS SHAFTS - USS

The „Union Shafts“ Shaft with CV-joints provides a large amount of longitudinal, angular and axial displacement. The shaft is available at all lengths between 240mm and 900mm and can be used with every „Union Shafts“ Coupling and „Union Shafts“ Adapter.



Benefits:

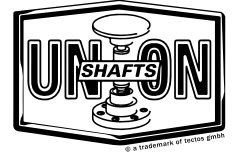
- › no default installation direction
- › low weight
- › longitudinal, angular and axial compensation
- › outstanding vibration decoupling



	T_{max} [Nm]	n_{max} [rpm]	α [°]	ϑ_{min} [°C]	ϑ_{max} [°C]	d_1 [mm]
USS - XXX	1300	8000	± 10	-40	+110	80

d_2 [mm]	d_3 [mm]	d_4 [mm]	l_1 [mm]	l_2 [mm]	l_3 [mm]	l_4 [mm]	Z
96	64	45	240 to 900	15	4	36,3	8,3

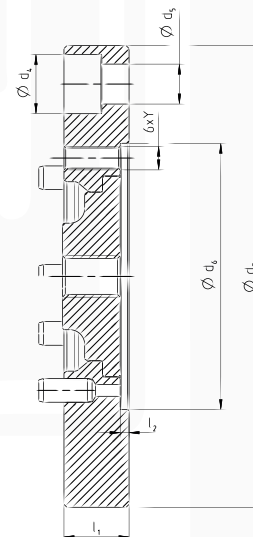
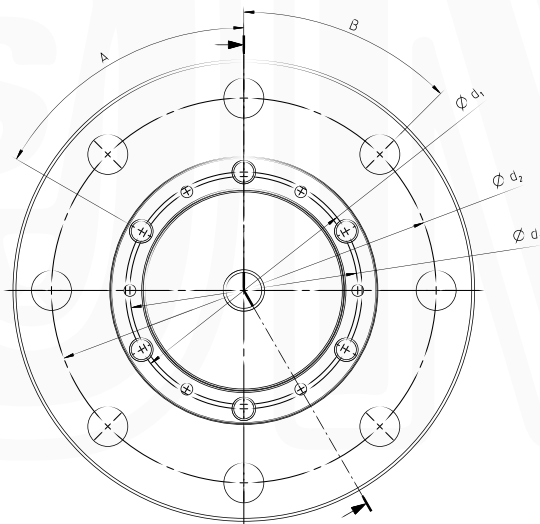
For ordering the shaft, please replace the XXX in „USS - XXX“ by the required length l_1 .
 For example: Installation length l_1 (without „Union Shafts“ Adapter) = 560mm leads to „USS - 560“.



UNION SHAFTS FLANGES - USF

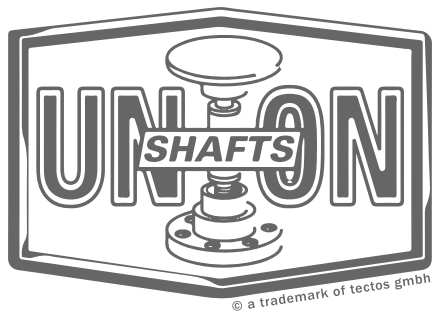
The „Union Shafts“ Flange is suitable for the most torque-meter angles.

The preferred installation direction is to mount the damper to the engine.



	d_1 [mm]	d_2 [mm]	d_3 [mm]	d_4 [mm]	d_5 [mm]
USF - D10	-	84	77	15	9
USF - D20	80	101,5	77	16,5	10,5
USF - D30	80	130	77	20	13,5
USF - D40	80	155,5	77	23	15

d_6 [mm]	d_7 [mm]	l_1 [mm]	l_2 [mm]	Y	A [°]	B [°]
57 H6	104 g6	19	3	M8	6 x 60	6 x 60
75 H6	124 g6	22	3	M8	6 x 60	8 x 45
90 H6	156 g6	22	3	M8	6 x 60	8 x 45
110 H6	184 g6	22	3	M8	6 x 60	8 x 45



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