

DIN 808 W

Universal joints with needle bearing

- **Material**

Hardened steel.

- **Standard executions available**

- Execution **EW**: steel single body with needle bearing.
- Execution **DW**: double body with needle bearing.

- **Assembly**

- Execution **B**: plain holes.
- Execution **K**: holes with DIN 6885 keyway.

Special executions on request (For sufficient quantities)

- Execution **V**: square holes.

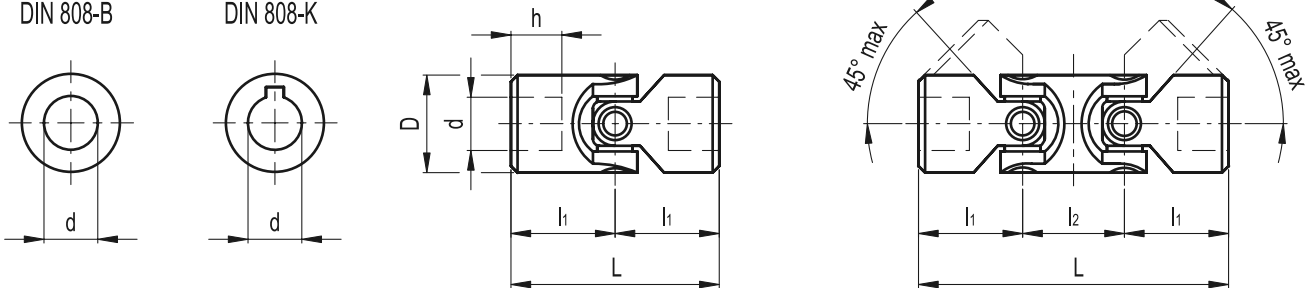


DIN 808-EW

DIN 808-DW

DIN 808-B

DIN 808-K



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Joins

Standard Elements	Main dimensions						Δ	Δ
Description	D	d h7	L	l ₁	l ₂	h	g	
DIN 808-22-B10-48-EW	22	10	48	24	-	12	95	
DIN 808-22-B10-74-DW	22	10	74	24	26	12	145	
DIN 808-22-B12-62-EW	22	12	62	31	-	18	118	
DIN 808-22-B12-88-DW	22	12	88	31	26	18	117	
DIN 808-25-B12-56-EW	25	12	56	28	-	13	145	
DIN 808-25-B12-86-DW	25	12	86	28	30	13	216	
DIN 808-25-B16-74-EW	25	16	74	37	-	21	235	
DIN 808-25-B16-104-DW	25	16	104	37	30	21	165	
DIN 808-28-B14-60-EW	28	14	60	30	-	13	183	
DIN 808-28-B14-96-DW	28	14	96	30	36	13	287	
DIN 808-32-B16-68-EW	32	16	68	34	-	16	424	
DIN 808-32-B16-104-DW	32	16	104	34	36	16	284	
DIN 808-32-B20-86-EW	32	20	86	43	-	24	461	
DIN 808-32-B20-124-DW	32	20	124	43	38	24	320	
DIN 808-36-B18-74-EW	36	18	74	37	-	17	554	
DIN 808-36-B18-114-DW	36	18	114	37	40	17	378	
DIN 808-42-B20-82-EW	42	20	82	41	-	18	898	
DIN 808-42-B20-128-DW	42	20	128	41	46	18	599	
DIN 808-42-B25-108-EW	42	25	108	54	-	31	718	
DIN 808-42-B25-156-DW	42	25	156	54	48	31	1025	
DIN 808-45-B22-95-EW	45	22	95	47.5	-	22	1125	
DIN 808-45-B22-145-DW	45	22	145	47.5	50	22	771	
DIN 808-50-B25-108-EW	50	25	108	54	-	26	1095	
DIN 808-50-B25-163-DW	50	25	163	54	55	26	1594	
DIN 808-50-B30-132-EW	50	30	132	66	-	38	1234	
DIN 808-50-B30-188-DW	50	30	188	66	56	38	1751	
DIN 808-58-B30-122-EW	58	30	122	61	-	29	1653	
DIN 808-58-B30-190-DW	58	30	190	61	68	29	2496	
DIN 808-58-B32-130-EW	58	32	130	65	-	33	1723	
DIN 808-58-B32-198-DW	58	32	198	65	68	33	2552	

Standard Elements	Main dimensions						Δ	Δ
Description	D	d h7	L	l ₁	l ₂	h	g	
DIN 808-22-K10-48-EW	22	10	48	24	-	12	96	
DIN 808-22-K10-74-DW	22	10	74	24	26	12	141	
DIN 808-22-K12-62-EW	22	12	62	31	-	18	116	
DIN 808-22-K12-88-DW	22	12	88	31	26	18	163	
DIN 808-25-K12-56-EW	25	12	56	28	-	13	165	
DIN 808-25-K12-86-DW	25	12	86	28	30	13	213	
DIN 808-25-K16-74-EW	25	16	74	37	-	21	231	
DIN 808-25-K16-104-DW	25	16	104	37	30	21	162	
DIN 808-28-K14-60-EW	28	14	60	30	-	13	184	
DIN 808-28-K14-96-DW	28	14	96	30	36	13	280	
DIN 808-32-K16-68-EW	32	16	68	34	-	16	417	
DIN 808-32-K16-104-DW	32	16	104	34	36	16	279	
DIN 808-32-K20-86-EW	32	20	86	43	-	24	453	
DIN 808-32-K20-124-DW	32	20	124	43	38	24	313	
DIN 808-36-K18-74-EW	36	18	74	37	-	17	558	
DIN 808-36-K18-114-DW	36	18	114	37	40	17	373	
DIN 808-42-K20-82-EW	42	20	82	41	-	18	889	
DIN 808-42-K20-128-DW	42	20	128	41	46	18	595	
DIN 808-42-K25-108-EW	42	25	108	54	-	31	703	
DIN 808-42-K25-156-DW	42	25	156	54	48	31	1006	
DIN 808-45-K22-95-EW	45	22	95	47.5	-	22	1117	
DIN 808-45-K22-145-DW	45	22	145	47.5	50	22	771	
DIN 808-50-K25-108-EW	50	25	108	54	-	26	1085	
DIN 808-50-K25-163-DW	50	25	163	54	55	26	1590	
DIN 808-50-K30-132-EW	50	30	132	66	-	38	1229	
DIN 808-50-K30-188-DW	50	30	188	66	56	38	1714	
DIN 808-58-K30-122-EW	58	30	122	61	-	29	1631	
DIN 808-58-K30-190-DW	58	30	190	61	68	29	2513	
DIN 808-58-K32-130-EW	58	32	130	65	-	33	1718	
DIN 808-58-K32-198-DW	58	32	198	65	68	33	2541	



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Features and applications

DIN 808 W universal joints with needle bearing are known for their precision. They have minimal play and are long lasting. The r.p.m. of universal joints with needle bearing is higher than the level achieved by the joints with friction bearing, but still it is dependent on the type of application, load, duration of use and angular position. Ideal applications allow speeds up to 4000 r.p.m. If they are angled between 3° and 5° they can reach a considerably high degree of efficiency.

Needle bearings have a permanent lubrication and thus do not require servicing.

Technical data

The table shows the transferable output N and/or torques M of universal joints DIN 808, type EW (single needle bearing) in relation to the r.p.m. (n). The values are only applicable to a constant speed of rotation, constant load and an operating inclination angle of max 10°.

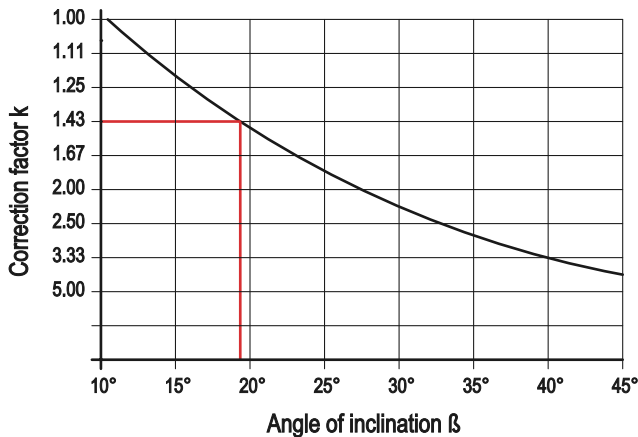
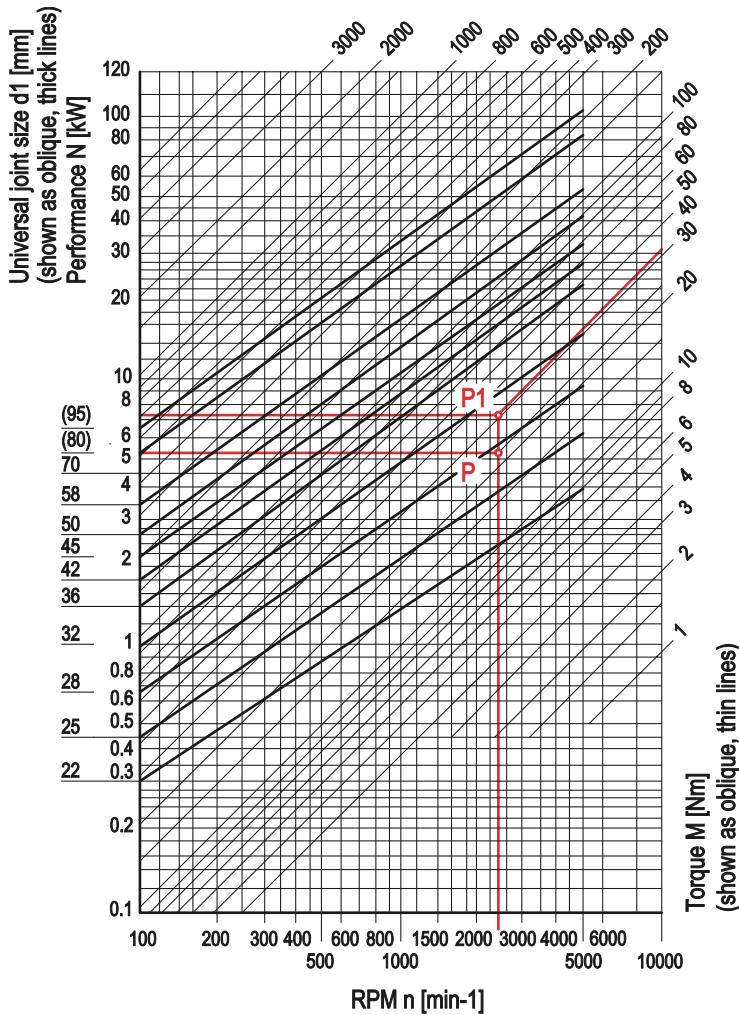
For larger inclination angles β a nominal output N' increased by the correction coefficient k and/or a nominal torque M' has to be selected (see example below).

Conversion formulae:

$$\text{Torque } M \text{ [Nm]} = 9550 \frac{N \text{ [kW]}}{n \text{ [min}^{-1}\text{]}}$$

$$\text{Output } N \text{ [kW]} = \frac{M \text{ [Nm]} \times n \text{ [min}^{-1}\text{]}}{9550}$$

$$1 \text{ kW} = 1.36 \text{ PS} \quad 1 \text{ PS} = 0.736 \text{ kW}$$



Example 1

Output to be transferred N = 5.5 kW
 R.p.m. n = 2300 min⁻¹
 Angle of inclination β = 10°

Correction coefficient k = 1
 Indicative output N' = Nominal output N

Intersection point P is arrived at from 5.5 kW and 2300 min⁻¹ (which corresponds to a torque of 23 Nm).

The next size up universal joint corresponding to point P is in the model with a diameter d₁ = 28.

Example 2

Torque to be transferred M = 23 Nm
 R.p.m. n = 2300 min⁻¹
 Angle of inclination β = 18°

Correction coefficient k = 1.43
 Indicative torque M' = 1.43 x 23 Nm = 33 Nm

Intersection point P1 is arrived at from 33 Nm and 2300 min⁻¹ (which is equivalent to an indicative output N' = 7.9 kW).

The next size up universal joint corresponding to P1 is the model with a diameter d₁ = 32.