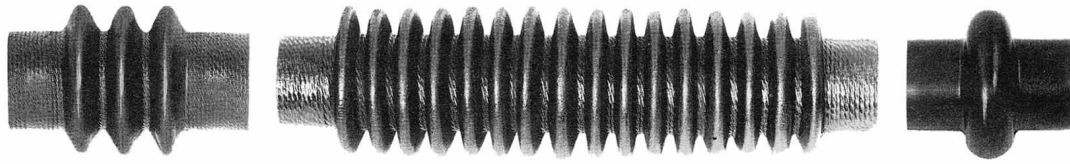


Folding Bellows for Universal Joints and Shaft Joints



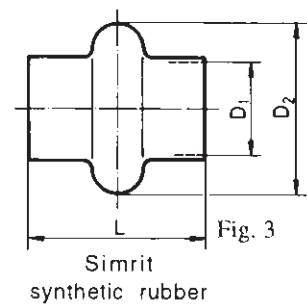
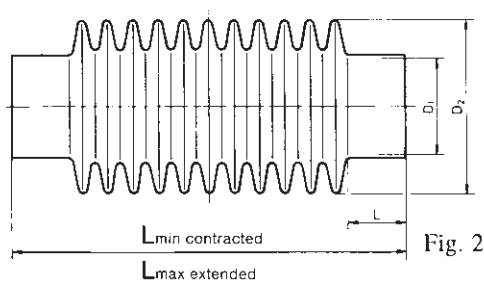
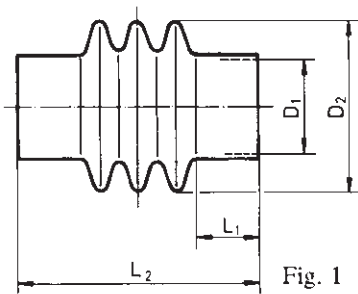
These folding bellows are made of high quality chrome tanned, black impregnated leather. They are resistant to oil, water and weather and serve as a protection for the joints against dust, humidity and acidic vapours. By filling the folding bellows with lubrication grease and then securing them with band clamp fittings, you achieve life-long lubrication.
All dimensions in mm.

for Single Universal Joints (Fig. 1)					
Part No.	Size		Length		No. of Folds
	D1	D2	L1	L2	
20246	13	30	12	42	2
20262	16	32	15	40	2
20247	16	32	15	52	2
20248	20	35	20	62	2
20249	25	40	20	74	3
20250	32	55	20	86	3
20251	40	65	25	108	3
20263	50	75	25	105	3
20252	50	75	25	132	4
20264	63	95	30	130	4
20253	63	95	30	166	5
20265	75	105	40	160	5
20266	90	120	40	190	6

temperature range: from -320°F to +194°F

for Double Universal Joints (Fig. 1)					
Part No.	Size		Length		No. of Folds
	D1	D2	L1	L2	
20254	13	30	12	60	3
20267	16	32	15	62	3
20255	16	32	15	74	3
20256	20	35	20	88	3
20257	25	40	20	104	5
20258	32	55	20	124	5
20259	40	65	25	156	6
20260	50	75	25	188	6
20261	63	95	30	238	9
20268	75	105	40	245	11
20269	90	120	40	290	11

higher temperatures & other designs upon request



for Single Universal Joints - (Fig. 1)					
Part No.	Size		Length		No. of Folds
	D1	D2	L1	L2	
20491	16	32	12	34	2
20270	18	35	12	40	2
20271	22	40	12	48	2
20272	26	45	12	56	2
20273	29	50	12	60	3
20274	32	55	15	68	3
20275	37	65	15	74	3
20276	42	70	20	82	3
20277	47	75	20	95	3
20278	52	80	20	105	3
20279	58	90	25	122	4

temperature range: from -320°F to +194°F

for Universal Joints - extendable (Fig. 2)						
Part No.	Size		Length			No. of Folds
	D1	D2	L1	Lmin	Lmax	
20254	13	30	12	40	80	3
20280	16	32	15	52	102	4
20281	20	35	20	62	122	6
20282	25	40	20	67	137	7
20283	32	55	20	70	150	6
20259	40	65	25	73	175	6
20284	50	75	25	95	245	9
20285	63	95	30	117	317	11
20286	75	105	40	137	337	11
20269	90	120	40	122	360	11

higher temperatures & other designs upon request

for Universal Joints - Simrit (Fig. 3)			
Part No.	Size		Length
	D1	D2	
20287	16	36	32
20288	18	38	38
20289	22	44	40
20290	26	50	45
20291	29	53	50
20292	32	58	60
20293	37	65	65
20294	42	71	75
20295	47	76	90
20296	52	88	95
20297	58	98	95

temperature range: from -22°F to +212°F

All dimensions are subject to change without notice.

Technical Appendix

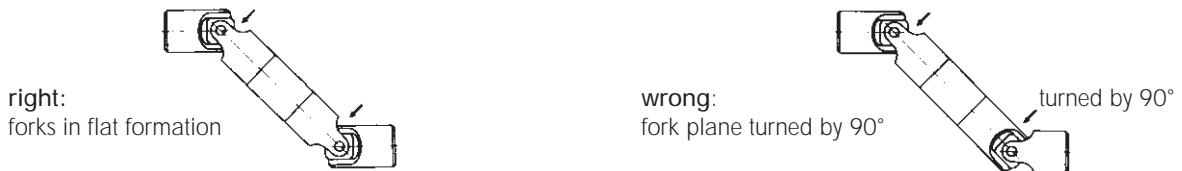
Installation Instructions

These universal joints and telescopic shafts are now, and will be in the future, indispensable and versatile components for transmitting rotary motion.

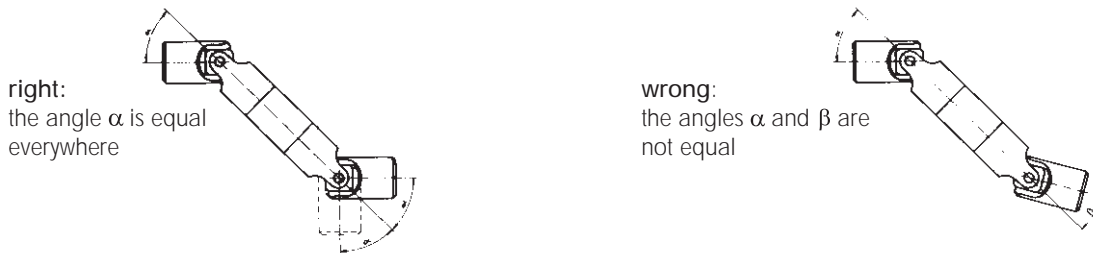
If two shafts, which are inclined towards each other at a given angle, are connected to each other via a universal joint, and if one of the shafts rotates with a constant regular speed, then the other shaft rotates with a variable angular velocity. This irregularity of motion - which is also called gimbal error - causes the rotating angle to advance and lag alternately, thus effecting the second shaft to rotate with sinusoidal fluctuations. The greater the deflection angle α , the greater the non uniformity of the rotating motion.

For this reason, single universal joints are only used when variable rotary motion is permissible. The non uniformity of motion can be compensated by using two single universal joints in sequence or by using a double universal joint. When properly installed, the second universal joint can compensate the irregular motion of the first one under the following conditions as enumerated by DIN 808.

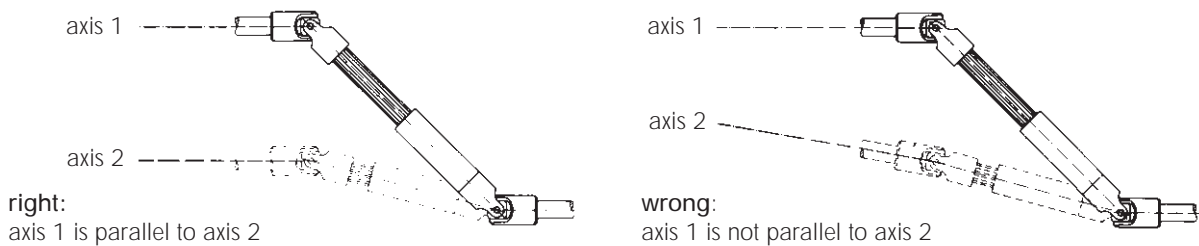
1. Correct fork position: when using two single universal joints make sure that the two inside forks are in flat formation, as in the case of double universal joints.



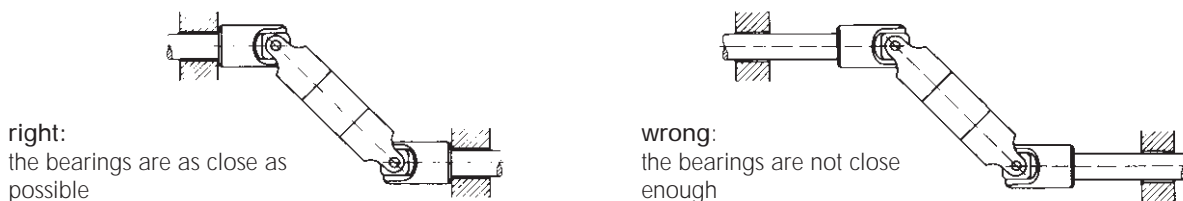
2. The deflection angles at both ends must be equal.



3. The driving and driven shafts may only be shifted in directions parallel to the shafts.



4. The bearings of the shaft joint - or of the double universal joint - should be positioned as close as possible to the universal joints.

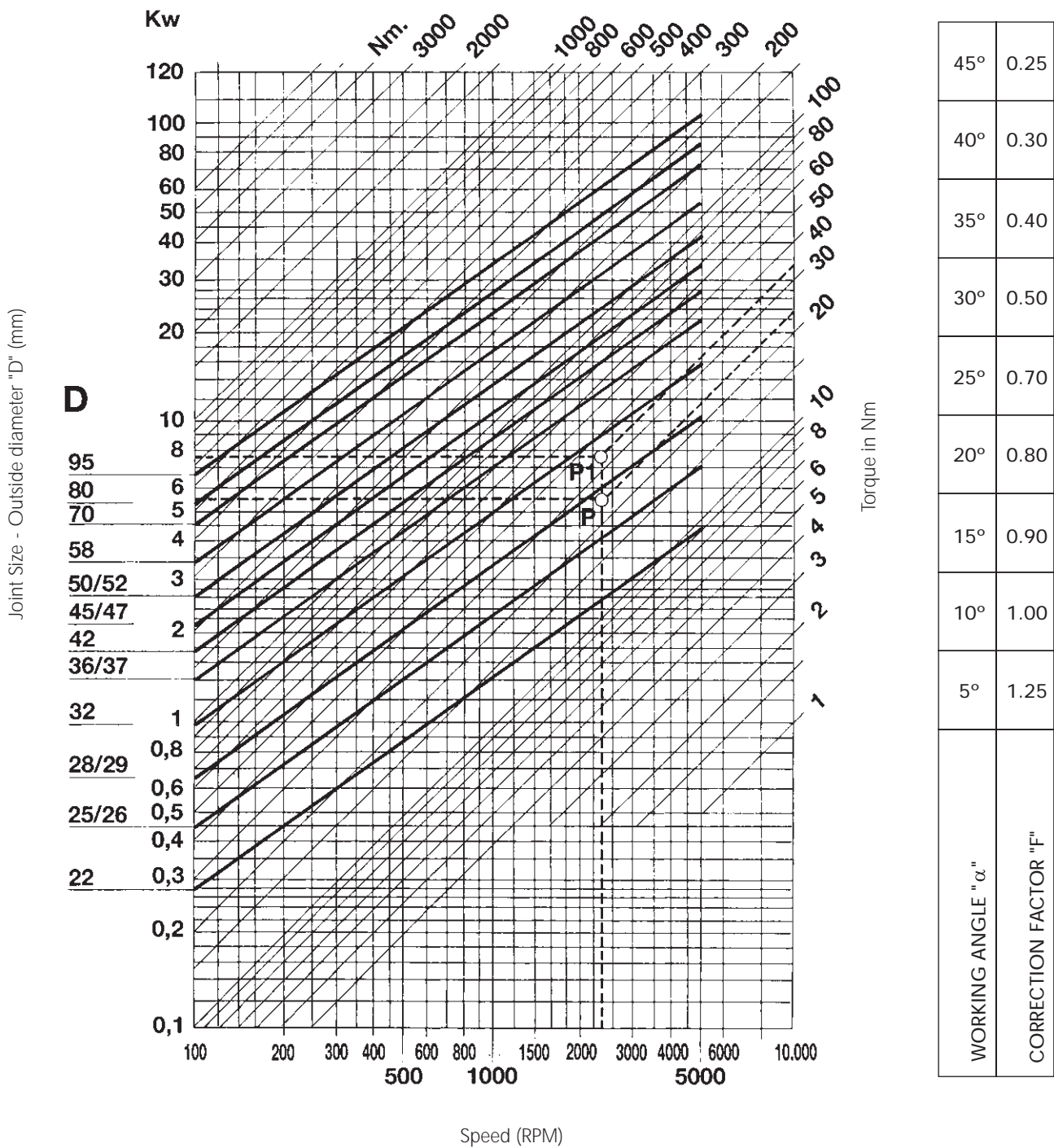


The shaft joints are delivered without pinholes and clamping studs. The length of the dowel pins is determined by the outer diameter of the universal joint; it must be flush when set.

We recommend dowel pins DIN 1481.

Diam of bore	\emptyset	6	8	10	12	16	20	25	32	40	50
Diam of dowel Pin	\emptyset	2	3	4	5	6	8	10	12	14	16

Diagram for Joints - Series "H" & "HD" High Speed on page 4



Example

- Power: 0.65 kW
- rpm: 2300
- With working angle α 10° Factor F = 1 we get point P. Torque = 23 Nm corresponding to joint size "D" = 28/29 mm. = Type 05H
- With working angle α 25° Factor F = 0.45 (kW 5.5 : 0.70 = 7.85 kW) we get point P1 Torque = 33 Nm corresponding to joint size "D" = 32 mm. = Type 1H

Consider that: $Torque\ in\ Nm. = 9550 \times \frac{Power\ (kW)}{Speed\ (RPM)}$

$Torque\ in\ Nm. = 7020 \times \frac{Power\ (CV)}{Speed\ (RPM)}$

N° 1 kW = 1.35 CV - N° 1 CV = 0.736 kW
 N° 1 Kgm = 9.81 Nm - N° 1 Nm = 0.102 Kgm

Conversion Formulas

1Nm = 0.737561 (lbf.ft.)
 1kW = 1.341022 (HP)



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