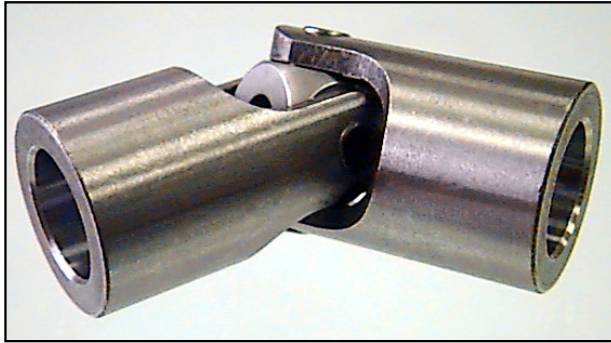


**HU-A
U8R**

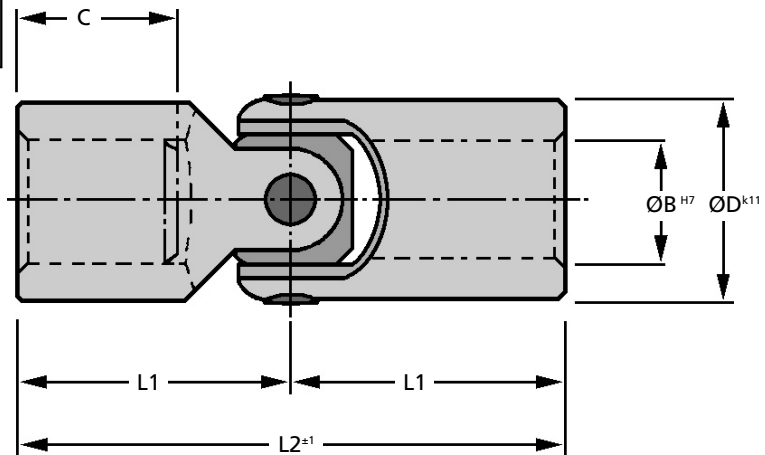
COUPLINGS

Hardened Pin Universal Joints

DIN 808-G (DIN 7551) : 8 - 50mm Bores



HU-A Type Single Steel



Discounts: 11+ -10% | 51+ -20% | 101+ -25% | 200+ -35% | 500+ -45% | 1000+ -48%

Part Number Universal Joint	Rubber Cover	Std. & Max. ØB ^{H7}	ØD ^{k11}	C	L1	L2 ^{±1}	Weight g	Static Axial Load N	Backlash		Price Each 1 - 10	
									at Nm	arc min	Joint	Cover
HU813A	-	8	13	11	21	42	30	45	-	-	£29.58	-
HU816A	U8R-02	10	16	15	26	52	50	75	0.2	1°45'	£31.81	£5.79
HU816A1	U8R-02	6	16	9	17	34	35	40	0.2	1°45'	£31.81	£5.79
HU816A2	U8R-02	8	16	11	20	40	40	40	0.2	1°45'	£31.81	£5.79
HU820A	U8R-04	12	20	18	31	62	95	140	0.4	1°40'	£34.86	£6.12
HU820A1	U8R-04	10	20	12	24	48	75	90	0.4	1°40'	£34.86	£6.12
HU825A	U8R-1	16	25	22	37	74	180	260	1.0	1°32'	£40.40	£6.33
HU825A1	U8R-1	12	25	14	28	56	140	150	1.0	1°32'	£40.40	£6.33
HU832A	U8R-3	20	32	25	43	86	330	485	1.7	1°28'	£47.02	£7.68
HU832A1	U8R-3	16	32	16	34	68	290	300	1.7	1°28'	£47.02	£7.68
HU840A	U8R-5	25	40	32	54	108	650	950	3.4	1°25'	£66.71	£8.62
HU840A1	U8R-5	20	40	20	41	82	530	650	3.4	1°25'	£66.71	£8.62
HU850A	U8R-7	32	50	40	66	132	1,260	1,800	5.4	1°20'	£89.63	£10.78
HU850A1	U8R-7	25	50	25	52	104	1,140	1,200	5.4	1°20'	£89.63	£10.78
HU863A	U8R-9	40	63	48	83	166	2,350	3,750	15.0	1°18'	£208.92	£15.09
HU863A1	U8R-9	32	63	33	65	130	2,080	2,400	15.0	1°18'	£208.92	£15.09
HU875A	U8R-11	40	75	43	80	160	3,500	3,500	22.0	1°16'	£302.94	£18.94
HU890A	U8R-13	50	90	52	95	190	6,150	6,150	28.0	1°14'	£499.87	£53.13

Material

Steel 9SMn Pb36K

Performance

Max. Speed: 800 Rpm Max.

See technical pages for torques at different speed and angles.

Needs to be well lubricated. Recommend fitting PVC rubber cover filled with grease or for adverse conditions high speed and angle forced oil lubrication may be needed. Covers available for size 16 upwards

Options

Smaller bores, keyways (add **K** to end of part number - P.O.A.), squares, hexagons, short length series, rubber covers.

Please ask for a quote

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COUPLINGS

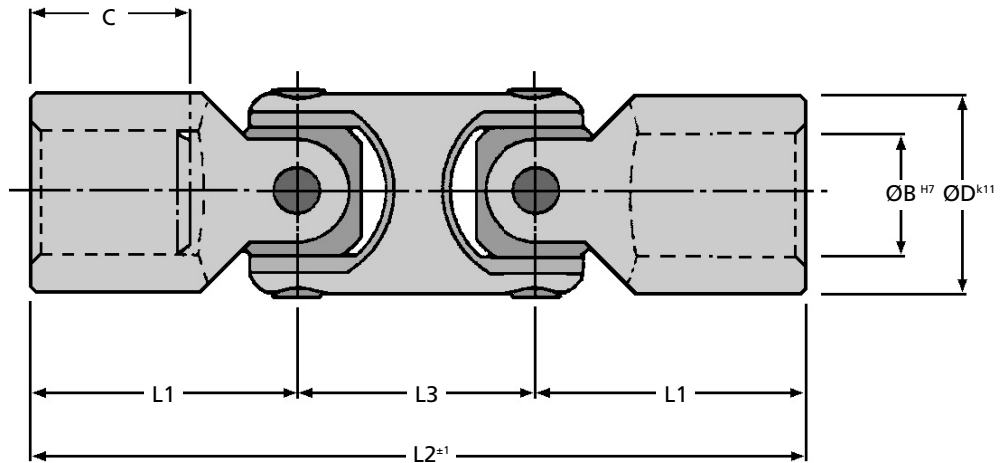
**HU-C
U8R**

Hardened Pin Universal Joints

DIN 808-G (DIN 7551) : 8 - 50mm Bores



HU-C Type Double Steel



Discounts: 11+ -10% | 51+ -20% | 101+ -25% | 200+ -35% | 500+ -45% | 1000+ -48%

Part Number Universal Joint	Rubber Cover	Std. & Max. ØB ^{H7}	ØD ^{k11}	C	L1	L2 ^{±1}	L3	Weight g	Static Axial Load N	Backlash		Price Each 1 - 10	
										at Nm	arc min	Joint	Cover
HU813C	-	8	13	11	21	60	18	45	-	-	-	£59.13	-
HU816C	U8R-19	10	16	15	26	74	22	75	-	0.2	1°30'	£63.79	£10.17
HU816C1	U8R-19	6	16	9	17	56	22	55	40	0.2	1°30'	£63.79	£10.17
HU816C2	U8R-19	8	16	11	20	62	22	80	40	0.2	1°30'	£63.79	£10.17
HU820C	U8R-20	12	20	18	31	88	26	140	-	0.4	1°20'	£70.11	£11.09
HU820C1	U8R-20	10	20	12	24	74	26	145	90	0.4	1°20'	£70.11	£11.09
HU825C	U8R-21	16	25	22	37	104	30	260	-	1.0	1°04'	£80.57	£12.88
HU825C1	U8R-21	12	25	14	28	86	30	240	150	1.0	1°04'	£80.57	£12.88
HU832C	U8R-23	20	32	25	43	124	37	485	-	1.7	0°56'	£94.38	£15.40
HU832C1	U8R-23	16	32	16	34	104	37	445	300	1.7	0°56'	£94.38	£15.40
HU840C	U8R-25	25	40	32	54	156	47	950	-	3.4	0°50'	£133.21	£17.54
HU840C1	U8R-25	20	40	20	41	128	47	860	650	3.4	0°50'	£133.21	£17.54
HU850C	U8R-27	32	50	40	66	188	56	1,800	-	5.4	0°40'	£215.59	£22.36
HU850C1	U8R-27	25	50	25	52	160	56	1,680	1,200	5.4	0°40'	£179.66	£22.36
HU863C	-	40	63	48	83	236	70	3,750	-	15.0	0°36'	£417.84	-
HU863C1	-	32	63	33	65	200	70	3,280	2,400	15.0	0°36'	£417.84	-
HU875C	-	40	75	43	80	245	85	5,280	3,500	22.0	0°32'	£605.89	-
HU890C	-	50	90	52	90	290	100	9,400	6,150	28.0	0°28'	£999.73	-

Material

Steel 9SMn Pb36K

Performance

Max. Speed: 800 Rpm Max.

See technical pages for torques at different speed and angles.

Needs to be well lubricated. Recommend fitting PVC rubber cover filled with grease or for adverse conditions high speed and angle forced oil lubrication may be needed. Covers available for size 16 upwards

Options

Smaller bores, keyways (add **K** to end of part number - P.O.A.), squares, hexagons, short length series, rubber covers.

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**HNU-A
U8R**

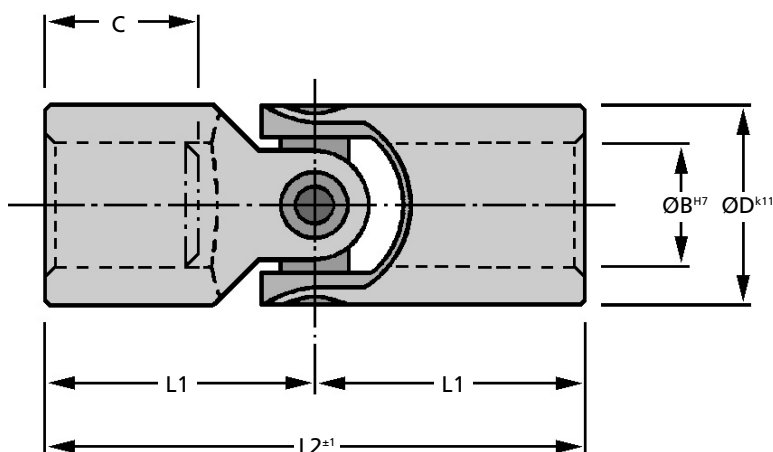
COUPLINGS

Needle Roller Universal Joints

DIN808-W (DIN 7751) Low Backlash : 12 - 50mm Bores



HNU-A Type Single Steel



Discounts: 11+ -10% 51+ -20% 101+ -25% 200+ -35% 500+ -45% 1000+ -48%

Part Number Universal Joint	Rubber Cover	Std. & Max. ØB ^{H7}	ØD ^{k11}	C	L1	L2 ^{±1}	Weight g	Price Each 1 - 10	
								Joint	Cover
HNU820A	U8R-04	12	20	18	31	62	80	£104.60	£6.12
HNU820A1	U8R-04	10	20	12	24	48	85	£104.60	£6.12
HNU825A	U8R-1	16	25	22	37	74	150	£111.55	£6.33
HNU825A1	U8R-1	12	25	14	28	56	130	£111.55	£6.33
HNU832A	U8R-3	20	32	25	43	86	275	£117.58	£7.68
HNU832A1	U8R-3	16	32	16	34	68	235	£117.58	£7.68
HNU840A	U8R-5	25	40	32	54	108	545	£133.81	£8.62
HNU840A1	U8R-5	20	40	20	41	82	455	£133.81	£8.62
HNU850A	U8R-7	32	50	40	66	132	1,100	£175.26	£10.78
HNU850A1	U8R-7	25	50	25	52	104	975	£175.26	£10.78
HNU863A	U8R-9	30	63	38	83	166	2,850	£234.87	£15.09
HNU870A	U8R-11	35	70	35	70	140	3,150	£396.95	£18.94
HNU880A	U8R-12	40	80	50	90	180	3,900	£579.55	£27.96
HNU895A	U8R-13	50	95	54	95	190	4,800	£794.01	£53.13

Material

Steel 9SMn Pb36K

Forged centre cross with hard ground ends for needle bearings. (Needle bearings sealed).

Performance

Max. Speed: 4,000 Rpm Max.

See technical pages for torques at different speed and angles.

Options

Smaller bores, keyways (add **K** to end of part number - P.O.A.),

squares, hexagons, short length series, quick release types, rubber covers.

Please ask for a quote.

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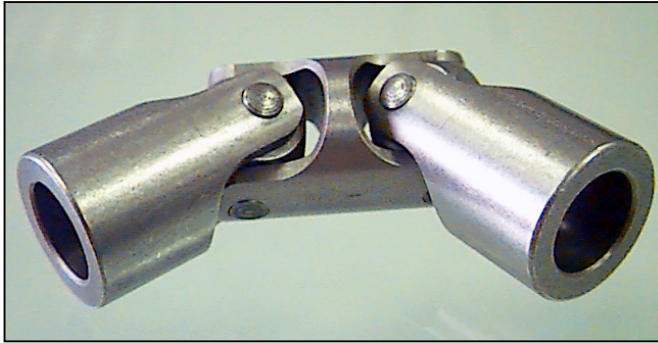
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COUPLINGS

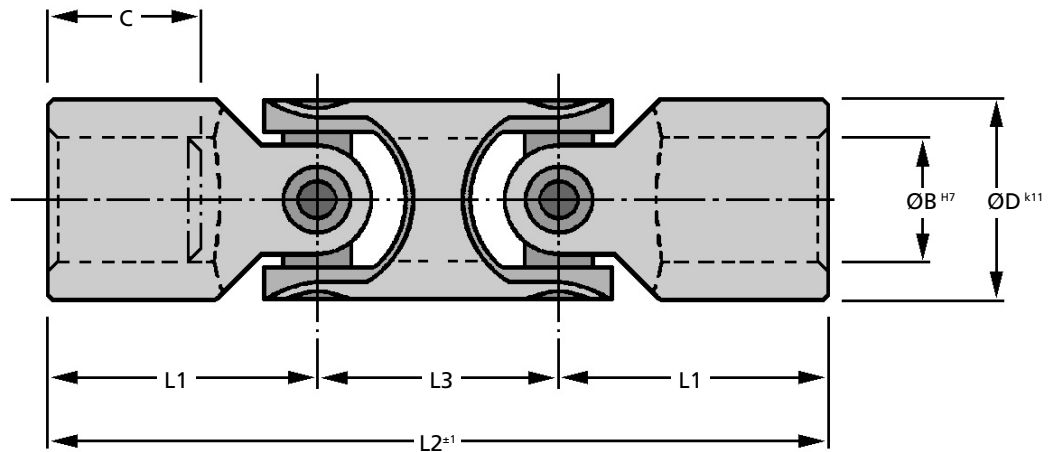
**HNU-C
U8R**

Needle Roller Universal Joints

DIN808-W (DIN 7751) Low Backlash : 12 - 50mm Bores



HNU-C Type Double Steel



Discounts: 11+ -10% | 51+ -20% | 101+ -25% | 200+ -35% | 500+ -45% | 1000+ -48%

Part Number Universal Joint	Rubber Cover	Std. & Max. ØB ^{H7}	ØD ^{k11}	C	L1	L2 ^{±1}	L3	Weight g	Price Each 1 - 10	
									Joint	Cover
HNU820C	U8R-20	12	20	18	31	88	26	110	£209.02	£11.09
HNU820C1	U8R-20	10	20	12	24	74	26	115	£209.02	£11.09
HNU825C	U8R-21	16	25	22	37	104	30	200	£223.03	£12.88
HNU825C1	U8R-21	12	25	14	28	86	30	180	£223.03	£12.88
HNU832C	U8R-23	20	32	25	43	124	37	375	£235.32	£15.40
HNU832C1	U8R-23	16	32	16	34	104	37	335	£235.32	£15.40
HNU840C	U8R-25	25	40	32	54	156	47	740	£267.59	£17.54
HNU840C1	U8R-25	20	40	20	41	128	47	650	£267.59	£17.54
HNU850C	U8R-27	32	50	40	66	188	56	1,470	£350.71	£22.36
HNU850C1	U8R-27	25	50	25	52	160	56	1,350	£350.71	£22.36
HNU863C	-	30	63	38	83	238	72	4,100	£469.95	-
HNU870C	-	35	70	35	70	212	72	4,500	£794.25	-
HNU880C	-	40	80	50	90	290	110	5,200	£1159.62	-
HNU895C	-	50	95	54	95	290	100	6,000	£1588.69	-

Material

Steel 9SMn Pb36K

Forged centre cross with hard ground ends for needle bearings. (Needle bearings sealed).

Performance

Max. Speed: 4,000 Rpm Max.

See technical pages for torques at different speed and angles.

Options

Smaller bores, keyways (add **K** to end of part number - P.O.A.), squares, hexagons, short length series, quick release types, rubber covers.

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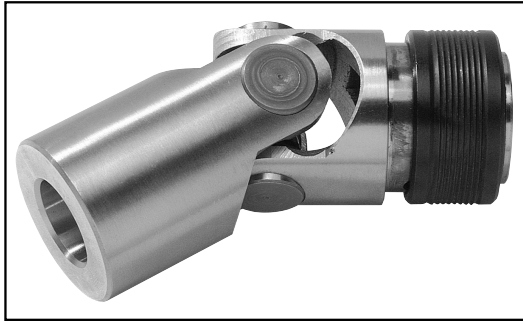
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COUPLINGS

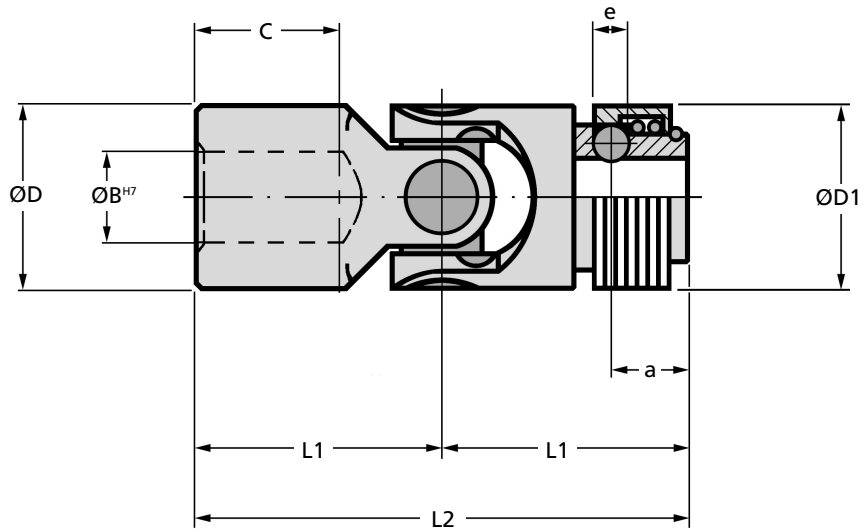
HNUQ-A

Quick Release Needle Roller Universal Joints

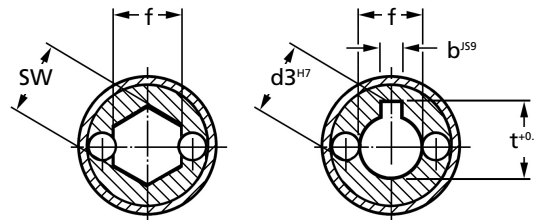
DIN808-W Low Backlash : 10 - 25mm Bores



HNUQ-A Type Single Steel



Quick Release End



Discounts: 11+ -10% 51+ -20% 101+ -25% 200+ -35% 500+ -45% 1000+ -48%

Part Number Universal Joint	Rubber Cover	ØB ^{H7}	ØD	ØD1	C	L1	L2	Quick Release			Weight g	Hex A/F SW	Ød ^{3H7}	b ^{J59}	t ^{+0.2}	Price Each 1 - 10	
								a	f	e						Joint	Cover
HNUQ820A1	U8R-04	10	20	19.8	18	31	62	11.5	8.7	3.95	80	-	10	3	11.0	£104.60	£6.12
HNUQ820A2	U8R-04	10	20	19.8	18	31	62	11.5	8.0	3.50	80	9.06	-	-	-	£104.60	£6.12
HNUQ825A1	U8R-1	14	25	24.5	22	37	74	13.5	13.0	4.00	160	-	14	5	15.3	£111.55	£6.33
HNUQ825A2	U8R-1	14	25	24.0	22	37	74	13.5	10.5	4.00	160	11.15	-	-	-	£111.55	£6.33
HNUQ825A3	U8R-1	14	25	24.5	22	37	74	13.5	10.5	4.00	160	14.04	-	-	-	£111.55	£6.33
HNUQ832A1	U8R-3	16	32	31.5	25	43	86	14.0	14.8	6.35	295	-	16	5	17.3	£117.58	£7.68
HNUQ832A2	U8R-3	16	32	31.5	25	43	86	14.0	14.8	6.35	295	16.00	-	-	-	£117.58	£7.68
HNUQ832A3	U8R-3	16	32	24.5	25	43	86	14.0	12.8	6.35	295	-	14	5	15.3	£117.58	£7.68
HNUQ832A4	U8R-3	16	32	24.5	25	43	86	14.0	12.8	6.35	295	14.04	-	-	-	£117.58	£7.68
HNUQ840A1	U8R-5	20	40	39.5	32	54	108	19.0	18.0	8.00	570	-	20	6	21.7	£133.81	£8.62
HNUQ840A2	U8R-5	20	40	39.5	32	54	108	19.0	18.0	8.00	570	20.00	-	-	-	£133.81	£8.62
HNUQ850A1	U8R-7	25	50	49.5	40	66	132	20.5	23.0	10.00	1,150	-	25	8	26.7	£175.26	£10.78
HNUQ850A2	U8R-7	25	50	49.5	40	66	132	20.5	23.0	10.00	1,150	25.00	-	-	-	£175.26	£10.78

Material

Steel 9SMn Pb36K

Forged centre cross with hard ground ends for needle bearings. (Needle bearings sealed).

Performance

Max. Speed: 4,000 Rpm Max.

See technical pages for torques at different speed and angles.

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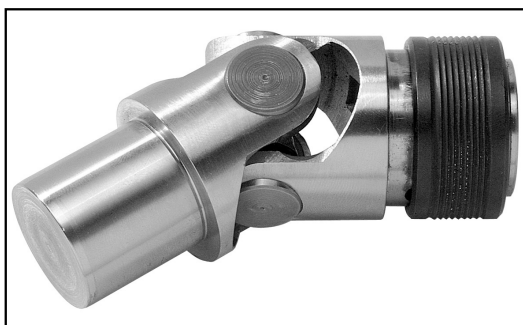
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COUPLINGS

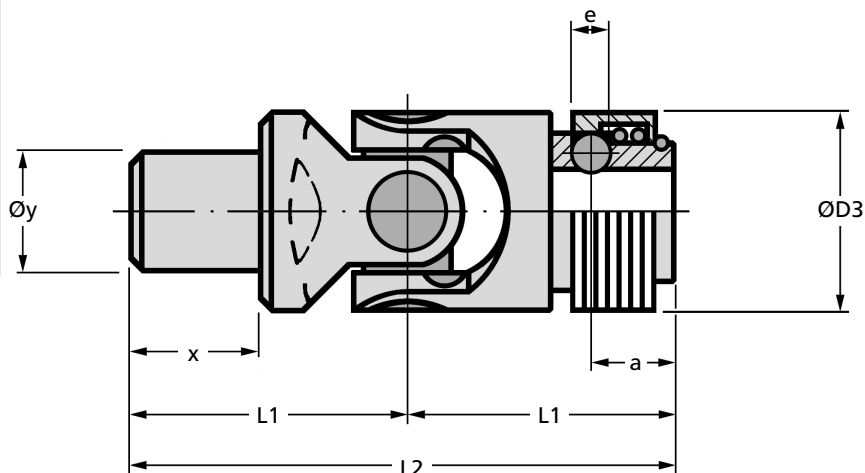
Quick Release Needle Roller Universal Joints

DIN808-W Low Backlash : 10 - 25mm Bores

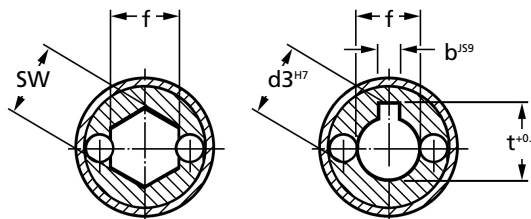
HNUQ-A



HNUQ-A Type Single Steel



Quick Release End



Discounts: 11+ -10% 51+ -20% 101+ -25% 200+ -35% 500+ -45% 1000+ -48%

Part Number	Universal Joint	Rubber Cover	ØB ^{H7}	ØD	ØD1	C	L1	L2	Quick Release			Weight g	Hex A/F SW	Ød3 ^{H7}	b ^{JS9}	t ^{+0.2}	Øy	x	Price Each 1 - 10	
									a	f	e								Joint	Cover
HNUQ820A3	U8R-04		10	20	19.8	18	31	62	11.5	8.7	3.95	80	-	10	3	11.0	20	L1	£104.60	£6.12
HNUQ820A4	U8R-04		10	20	19.8	18	31	62	11.5	8.0	3.50	80	9.06	-	-	20	L1	£104.60	£6.12	
HNUQ825A4	U8R-1		14	25	24.5	22	37	74	13.5	13.0	4.00	160	-	14	5	15.3	25	L1	£111.55	£6.33
HNUQ825A5	U8R-1		14	25	24.0	22	37	74	13.5	10.5	4.00	160	11.15	-	-	25	L1	£111.55	£6.33	
HNUQ825A6	U8R-1		14	25	24.5	22	37	74	13.5	10.5	4.00	160	14.04	-	-	25	L1	£111.55	£6.33	
HNUQ832A5	U8R-3		16	32	31.5	25	43	86	14.0	14.8	6.35	295	-	16	5	17.3	32	L1	£117.58	£7.68
HNUQ832A6	U8R-3		16	32	31.5	25	43	86	14.0	14.8	6.35	295	16.00	-	-	32	L1	£117.58	£7.68	
HNUQ832A7	U8R-3		16	32	24.5	25	43	86	14.0	12.8	6.35	295	-	14	5	15.3	32	L1	£117.58	£7.68
HNUQ832A8	U8R-3		16	32	24.5	25	43	86	14.0	12.8	6.35	295	14.04	-	-	32	L1	£117.58	£7.68	
HNUQ840A3	U8R-5		20	40	39.5	32	54	108	19.0	18.0	8.00	570	-	20	6	21.7	40	L1	£133.81	£8.62
HNUQ840A4	U8R-5		20	40	39.5	32	54	108	19.0	18.0	8.00	570	20.00	-	-	40	L1	£133.81	£8.62	
HNUQ850A3	U8R-7		25	50	49.5	40	66	132	20.5	23.0	10.00	1,150	-	25	8	26.7	50	L1	£175.26	£10.78
HNUQ850A4	U8R-7		25	50	49.5	40	66	132	20.5	23.0	10.00	1,150	25.00	-	-	50	L1	£175.26	£10.78	

Material

Steel 9SMn Pb36K

Forged centre cross with hard ground ends for needle bearings. (Needle bearings sealed).

Performance

Max. Speed: 4,000 Rpm Max.

See technical pages for torques at different speed and angles.

Other Info.

Dimensions **x** and **Øy** supplied blank as standard but can be made to your specific requirements - P.O.A.

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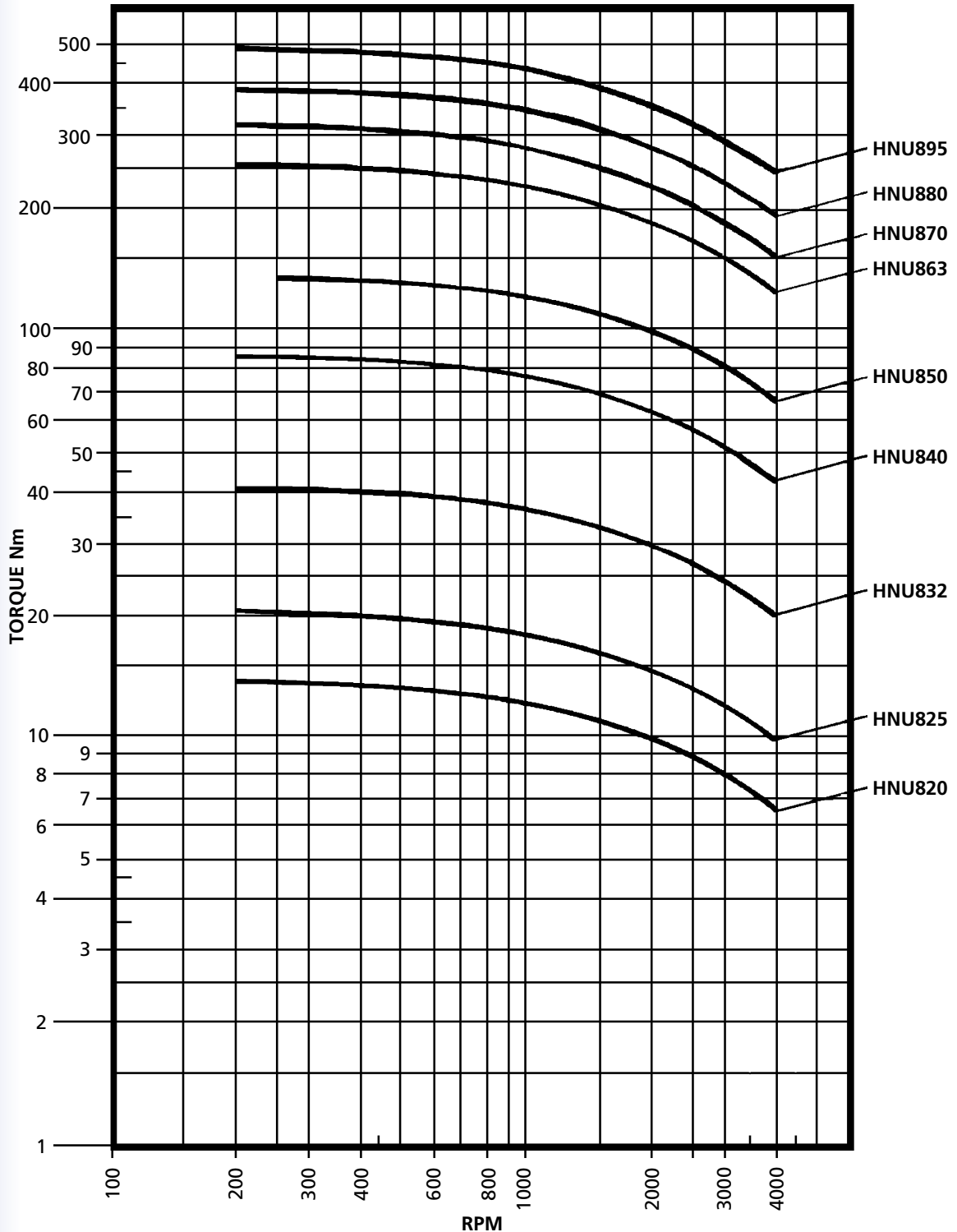
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COUPLINGS

Needle Roller Universal Joints DIN808-W *Low Backlash, sealed bearings*

Table HNU - A/C



For use in Calculation 1) on previous page : Ultimate Static Torque (must go through derating on previous page) (Nm)

U/HNU813 = 25 / 30
U/HNU816 = 35 / 40
U/HNU820 = 80 / 90
U/HNU825 = 140 / 150
U/HNU832 = 280 / 300

U/HNU840 = 600 / 650
U/HNU850 = 1100 / 1200
HNU863 = 2400
HNU875 = 3400
HNU890 = 4600

D/SUJ-13 = 17
D/SUJ-16 = 24
D/SUJ-20 = 63
D/SUJ-25 = 126
D/SUJ-32 = 224
D/SUJ-40 = 500

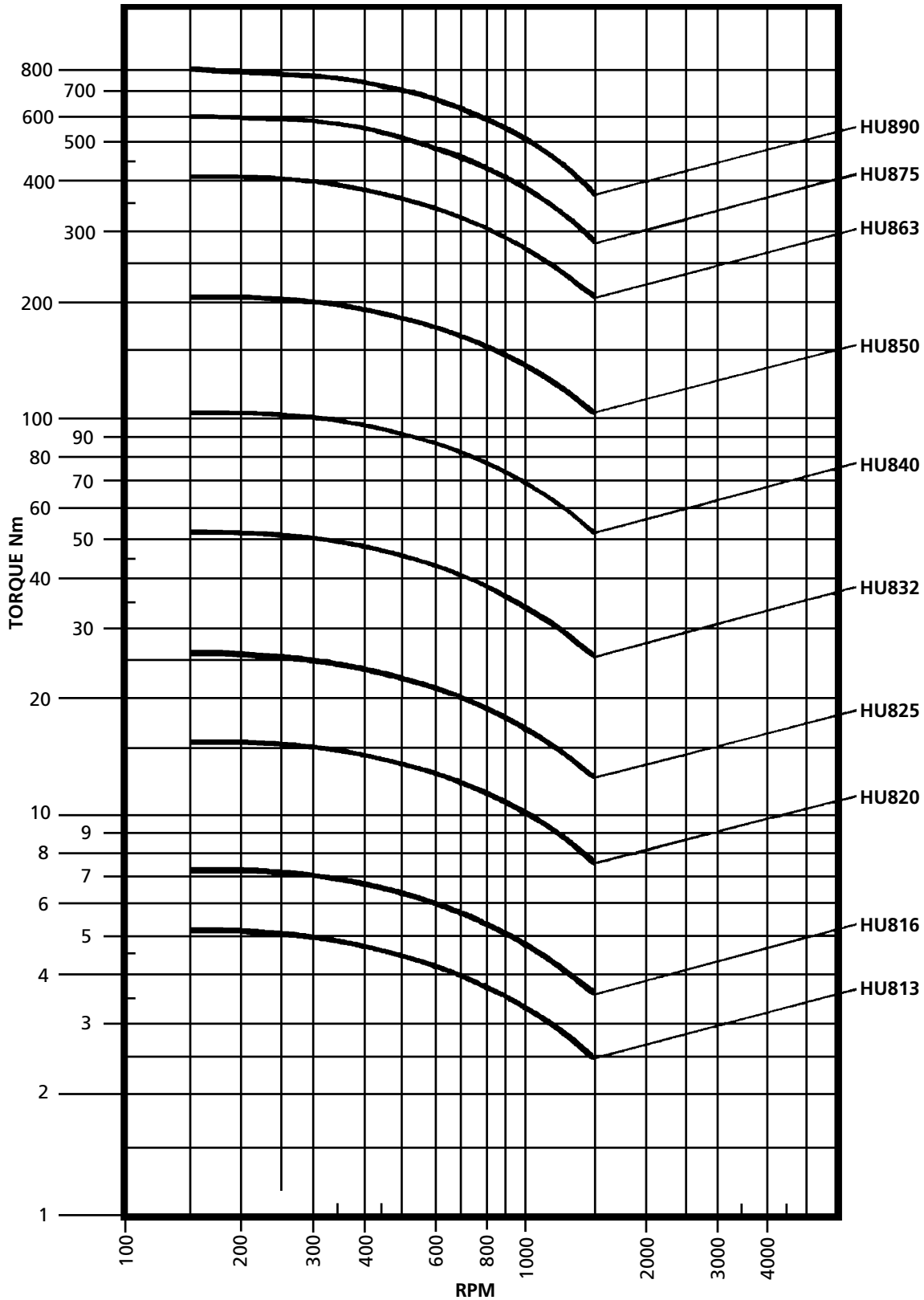
TECHNICAL

COUPLINGS

Hardened Pin Universal Joints

DIN 808-G

Table HU - A/C



For use in Calculation 1) 2 pages previous : Ultimate Static Torque (must go through derating 2 pages previous) (Nm)

HU820 = 80
 HU825 = 120
 HU832 = 250

HU840 = 500
 HU850 = 800
 HU863 = 1500

HU870 = 2200
 HU880 = 2900
 HU895 = 3700

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COUPLINGS

Universal Joints

HU & HNU Cardan Joints

Determining the joint size:

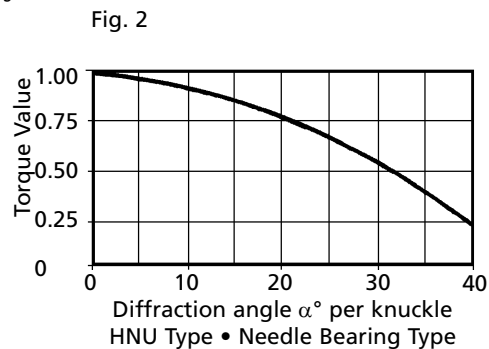
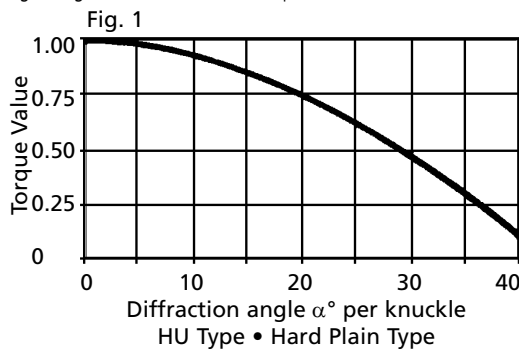
Cardan joints are particularly suitable for transmission of power in the case of higher number of revolutions. The limit of revolutions depends on the operating angle. The greatest operating angle for all types of joint is 45° for single joints and 90° for double joints. For angles over 20° (single joints) or 40° (double joints) only very low revolutions should be used. Standard cardan joints can be used up to 2000 rpm, joints with needle roller bearings up to 4000 rpm. Joints with needle bearings are usually only used for revolutions above 1000 rpm. The ultimate torques given as well as the mechanical characteristics are to be used for determining joint size.

1) If the joint rpm x operating angle is less than 300, please use the figures given for static ultimate torque. For every degree of the operating angle deduct a percentage from that amount. (For 18° angle therefore 18%). This gives you the permissible torque, by taking 1/5 in the case of short operation joints, 1/6 for continuous operating joints, of the maximum value reduced by the angle measurement.

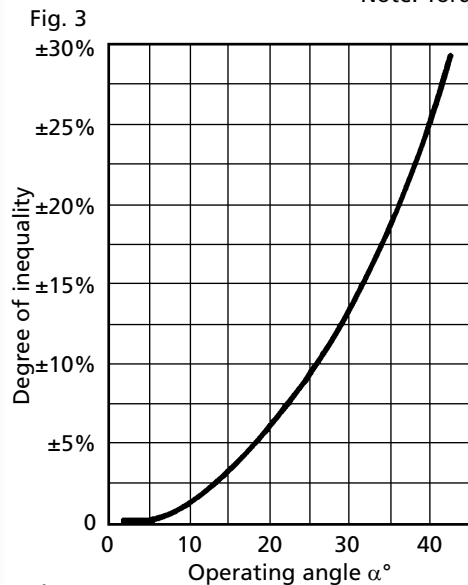
Example: HU813A Ultimate Static Torque 25 Nm : 10 Rpm x 5° = 50 (<300) : 25 Nm - 5% = 23.75 Nm
Continuous Duty (1/6) = 4.75 Nm, Intermittent Duty (1/5) = 5.70 Nm

2) For driving where the rpm x operating angle is greater than 300 the torque mechanical characteristics given in Table HU - A/C and Table HNU - A/C are to be used for determining the joint size. These show the transferable torque dependent on number of revolutions and operating angle. They apply to joints in sustained continuous operation. For joints in short operation the values for permissible torque are 20% higher.

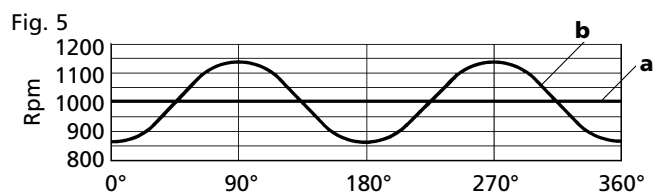
The values given in Table HU-A and Table HNU-A are applicable to a single universal joint operating up to an angle of 5°. With larger angles the transferable torque decreases. Please refer to figs. 1 & 2 for the correction value.



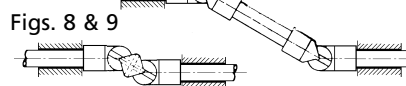
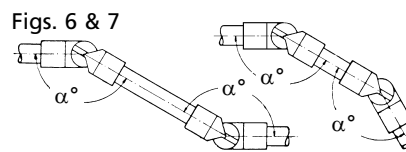
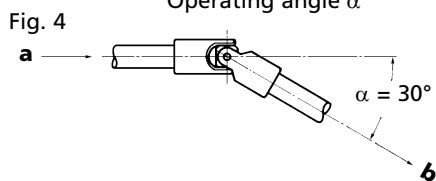
Note: Torque M (Nm) = $9550 \times \frac{P \text{ (KW)}}{n \text{ Rpm}}$



The simple joints transfer the initial uniform motion unequally. The rotation between the driving shaft and the driven shaft constitutes a double acceleration and deceleration. The size of the inequality depends upon the operating angle (see fig. 3 & 4)



To get a regular motion two single or one double ended joint has to be used. If small inequalities of the rotation can be tolerated a single joint can be used. For uniform transmission the angular displacement of both the input and output shafts to the intermediate connecting shaft must be equal (see fig. 6 & 7)



Please note that the bearings have to be installed as close as possible to the joints (see fig. 8 & 9). If used in continuous operation, the joints should be lubricated at least once a day. We recommend enclosing the joints with protective covers.