

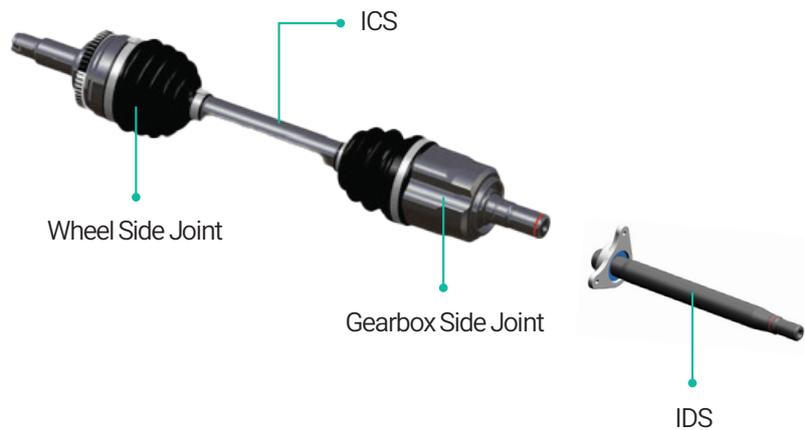
# Driveline



# Driveline

## Halfshaft

- Stable power delivery and enhanced driving feel
- Light weight, High durability & efficiency



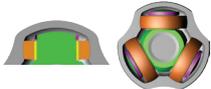
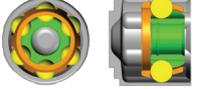
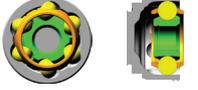
## Wheel Side Joint

Type		Feature	Image
Rz	Rzeppa Joint	<ul style="list-style-type: none"> <li>▪ Standard fixed joint</li> <li>▪ Joint angle : 47°</li> </ul>	6 ball application 
HARz	High Angle Rzeppa Joint	Joint angle : 50°	
UARz	Ultra high Angle Rzeppa Joint	Joint angle : 52°	8 ball application 
HERz	High Efficiency Rzeppa Joint	Excellent torque transmission efficiency	
Face Splined Joint		<ul style="list-style-type: none"> <li>▪ Perfectly prevent clicking noise</li> <li>▪ Weight reduction</li> </ul>	

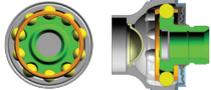
## ICS (Interconnecting Shaft)

Type		Feature	Image
Solid	Solid	Low cost	
WTS	Welded Tubular Shaft	Light weight	
MTS	Monobloc Tubular Shaft	Light weight	
BSS	Ball Splined Shaft	<ul style="list-style-type: none"> <li>▪ Axially movable</li> <li>▪ Innovatively excellent NVH performance</li> </ul>	

## Gearbox Side Joint

Type		Feature	Image	
Tripod Type	TPJ	Tripod Joint	<ul style="list-style-type: none"> <li>▪ Low cost</li> <li>▪ Compact package</li> </ul>	
	V SJ	Vertex roller and Spherical trunnion Joint	Highly stabilized NVH performance	
Ball Type	DOJ	Double Offset Joint	<ul style="list-style-type: none"> <li>▪ Long axial displacement</li> <li>▪ Large angular movement</li> </ul>	
	CGJ	Cross Groove Joint	No take-off-shudder at sudden acceleration	
	CTPJ	Counter Track Plunging Joint	<ul style="list-style-type: none"> <li>▪ Counter ball track</li> <li>▪ Excellent compact package</li> </ul>	
	IR BSJ	Inner Race Ball Splined Joint	Application of stroking function	

## Propeller Driveshaft Joint

Type		Feature	Image
CGJ	Cross Groove Joint	High speed durability	
CTRz	Counter Track Rzeppa Joint	<ul style="list-style-type: none"> <li>▪ Counter ball track</li> <li>▪ Excellent torque transmission efficiency</li> </ul>	

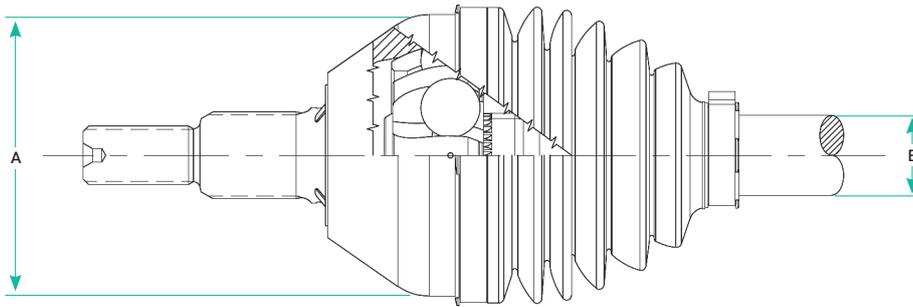
## IDS (Intermediate Drive Shaft)

- Improvement of driving stability and emotion
- Solid / Tubular shaft



## Wheel Side Joint

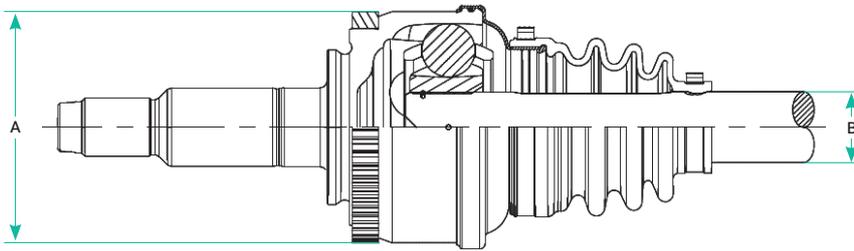
▪ Rzeppa | HARz | UARz | HERz



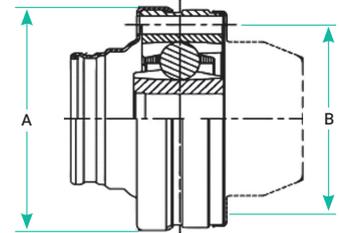
Type	Size	Torque Capacity (Nm)		Balls	A (mm)	B (mm)	Max. Angle
		Ultimate	JAEL				
Rzeppa	13	1,950	1,300	6	69.0	19.3	47°
	16	2,400	1,600		73.3	20.6	
	19	2,850	1,900		78.0	21.8	
	21	3,150	2,100		80.0	22.6	
	23	3,450	2,300		84.2	23.4	
	26	3,900	2,600		86.0	24.6	
	29	4,350	2,900		90.0	25.1	
	32	4,800	3,200		93.0	26.1	
	37	5,550	3,700		100.0	27.2	
	45	6,750	4,500	109.0	29.1		
HARz	26	3,900	2,600	6	86.0	24.6	50°
	29	4,350	2,900		89.0	25.1	
	32	4,800	3,200		90.9	26.1	
	37	5,550	3,700		99.7	27.2	
	41	6,150	4,100		104.0	28.2	
	45	6,750	4,500		109.4	29.1	
	51	7,650	5,100	111.0	31.5		
	80	12,000	8,000	8	126.8.0	35.2	
UARz	32	4,800	3,200	6	94.0	26.1	52°
	41	6,150	4,100		106.0	28.2	
HERz	41	6,150	4,100	8	95.0	28.2	50°
	51	7,650	5,100		106.0	31.5	
	60	9,000	6,000		112.0	32.0	

## Gearbox Side Joint (Ball Type)

▪ CGJ | CTPJ



<CGJ & CTPJ>

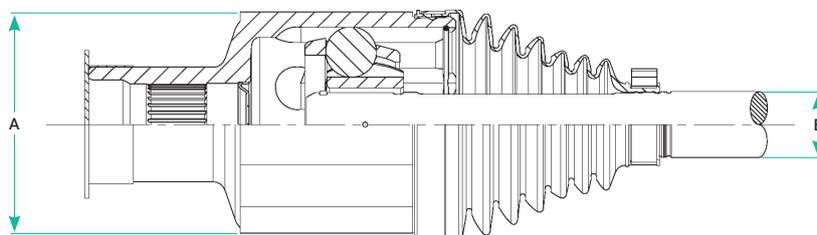


<CGJ (P/shaft)>

Type	Size	Torque Capacity (Nm)		Balls	A (mm)	B (mm)	Max. Angle
		Ultimate	JAEL				
CGJ	16	2,400	1,600	6	73.6	20.6	23°
	19	2,850	1,900		79.1	21.8	
	21	3,150	2,100		84.0	22.6	
	26	3,900	2,600		87.0	24.6	
	32	4,800	3,200		91.4	26.1	
	37	5,550	3,700		99.0	27.2	
CTPJ	41	6,150	4,100	6	102.0	28.2	23°
	45	6,750	4,500		96.5	29.1	

Type	Size	Torque Capacity (Nm)		Balls	A (mm)	B (mm)	Max. Angle
		Ultimate	JAEL				
CGJ (P/shaft)	16	2,400	1,600	6	86.0	74.0	23°
	21	3,150	2,100		99.7	86.0	
	32	4,800	3,200		104.5	90.8	

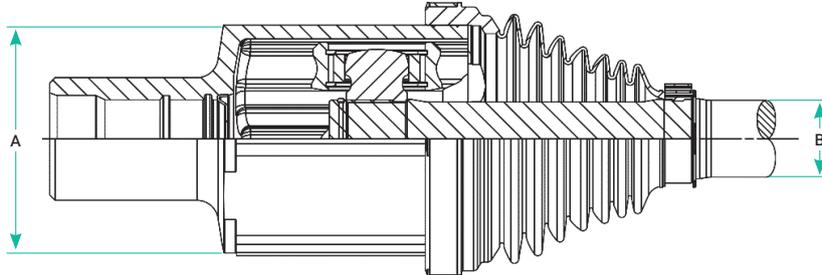
▪ DOJ (Double Offset Joint)



Size	Torque Capacity (Nm)		Balls	A (mm)	B (mm)	Max. Angle
	Ultimate	JAEL				
32	4,800	3,200	6	88.5	27.2	30.5°
37	5,550	3,700		98.0	28.2	
45	6,750	4,500		101.0	29.1	
65	9,750	6,500		117.0	33.0	

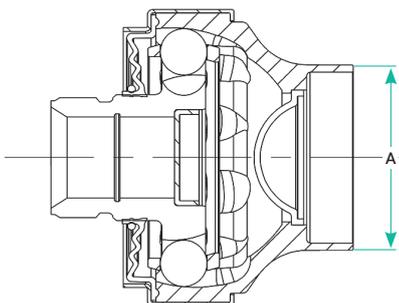
## Gearbox Side Joint (Tripod Type)

▪ TPJ | VSJ



Type	Size	Torque Capacity (Nm)		A (mm)	B (mm)	Max. Angle
		Ultimate	JAEL			
TPJ	13	1,950	1,300	64.2	19.3	23°
	16	2,400	1,600	71.0	20.6	
	21	3,150	2,100	73.0	22.6	
	26	3,900	2,600	79.8	24.6	
	29	4,350	2,900	80.0	25.1	
	32	4,800	3,200	86.2	26.1	
	37	5,550	3,700	91.0	27.2	
VSJ	26	3,900	2,600	85.0	24.6	26°
	29	4,350	2,900	88.0	25.1	
	32	4,800	3,200	91.0	26.1	
	37	5,550	3,700	94.5	27.2	

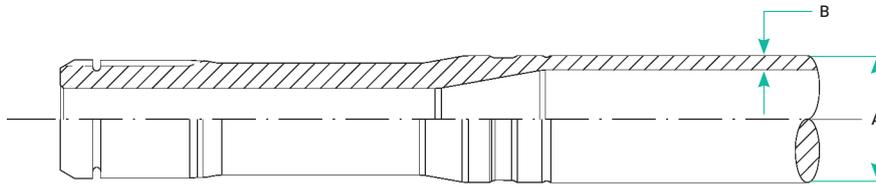
## Counter Track Rzeppa Joint for Propeller Shaft (CTRz)



Size	Torque Capacity (Nm)		Balls	A (mm)	Max. Angle
	Ultimate	JAEL			
21	3,150	2,100	8	81.4	5°
29	4,350	2,900	10	96.4	

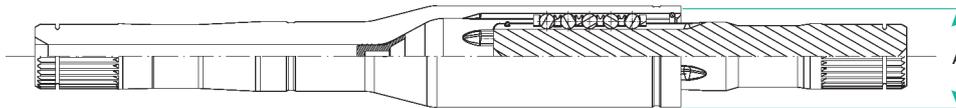
## Interconnecting Shaft

### ▪ Monobloc Tubular Shaft (MTS)



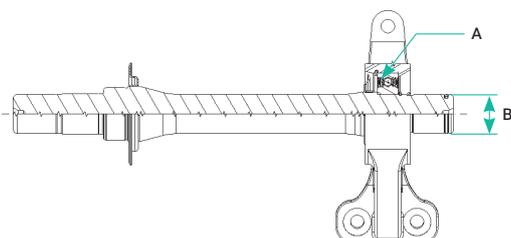
Size	Torque Capacity (Nm)		A (mm)	B (mm)
	Ultimate	JAEL		
23	3,450	2,300	30.0	3.4
26	3,900	2,600	32.0	3.4
32	4,800	3,200	34.0	3.6
37	5,550	3,700	34.0	4.1
45	6,750	4,500	37.0	4.2

### ▪ Ball Spline Shaft (BSS)



Size	Torque Capacity (Nm)		A (mm)	Stroke (mm)
	Ultimate	JAEL		
41	6,150	4,100	48.6	65
51	7,650	5,100	52.5	50
60	9,000	6,000	56.4	50

## Intermediate Drive Shaft (IDS)



A (Bearing Dim.)	B (mm)	Running Temp. (Max)	Shaft Type
62x30x16	36	150°C (175°C)	Solid
72x35x25	46	120°C (145°C)	Tubular
68x40x15	43	150°C (175°C)	Tubular

FOR TECHNOLOGY, QUALITY & VALUE  
**START WITH HANSAE MOBILITY**



e-book Brochure



[www.hansaemobility.com](http://www.hansaemobility.com)

**Driveline for America**

**Driveline for Europe**

**Driveline for Asia & other regions**

**Korea Domestic**

**T. +1 248 770 0136**

**T. +49 1609 313 0328**

**T. +82 10 9505 0515**

**T. +82 10 5208 5449**

**E. [todd.mccallum@hansaemobility.com](mailto:todd.mccallum@hansaemobility.com)**

**E. [michal.szymkowiak@hansaemobility.com](mailto:michal.szymkowiak@hansaemobility.com)**

**E. [yungkeun.yang@hansaemobility.com](mailto:yungkeun.yang@hansaemobility.com)**

**E. [heekook.choi@hansaemobility.com](mailto:heekook.choi@hansaemobility.com)**