FUTURE MACHINERY

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Quality is a measure of success



YUCHENG FUTURE AGRICULTURE MACHINERY CO. LTD.

禹城未来农业机械有限公司

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All types of PTO shafts of Yucheng Future Agriculture Machinery Co. Ltd. brand guarantee quality and long-term reliability.

Yucheng Future Agriculture Machinery Co. Ltd. is a modern brand focused on the needs of the market. Our goal is to provide customers with products of the highest quality, professional service from the moment of placing the order
to its final implementation.

To meet the expectations of our Customers, we are constantly expanding our offer and introducing new products.

We offer our clients after-sales service and the ability to modify already purchased PTO shafts.

When buying this type of product, it is worth considering whether there is an after-sales service, what will be the waiting time and the cost of spare parts. The wide range of spare parts that we offer to our Customers allows us to efficiently make any repairs and modifications of PTO shafts.

In our warehouse we have a wide selection of articulated PTO shaft components:

- Universal Joints
- Inner profile yokes
- Outer spline yokes
- Wide angle joints
- Ratchet torque limiter, shear bolt, overrunning, friction and automatic clutches
- PTO adapters
- Profile tubes

We have the widest range of products related to PTO shafts and their elements. We guarantee a wide offer, convenient payment terms and favorable discounts and the lowest prices on the market.
Goods for customers across the country is delivered within 24 hours from the moment of ordering.

You didn't find your shaft in the catalog? No problem!

**We build individual and custom shafts based on the submitted specifications.
Contact our adviser!**

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Website: www.ujgmg.com

EN

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PTO SHAFT FOR AGRICULTURE MACHINERY

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The PTO drive shaft for agricultural applications consists of two cardan joints and a telescopic coupling. The cardan joint, consisting of two yokes and a cross, is the element used to transmit the motion between two tilted axles. The cardan joint construction is designed so that during rotation, the speed of the output shaft is not always equal to that of the input shaft and this difference in speed depends on the articulation angle of the joint (Fig. 1). The transmission ratio versus the articulation angle and the rotation angle is represented in Fig. 2. The more the ratio deviates from 1 the greater becomes the irregularity of the motion, thus generating undesirable effects (vibrations, noise, inertial stress).

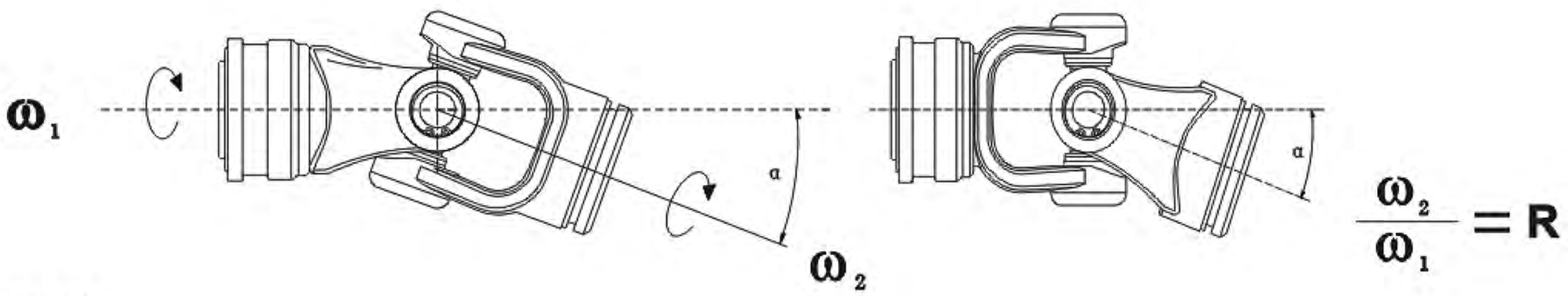


Fig.1

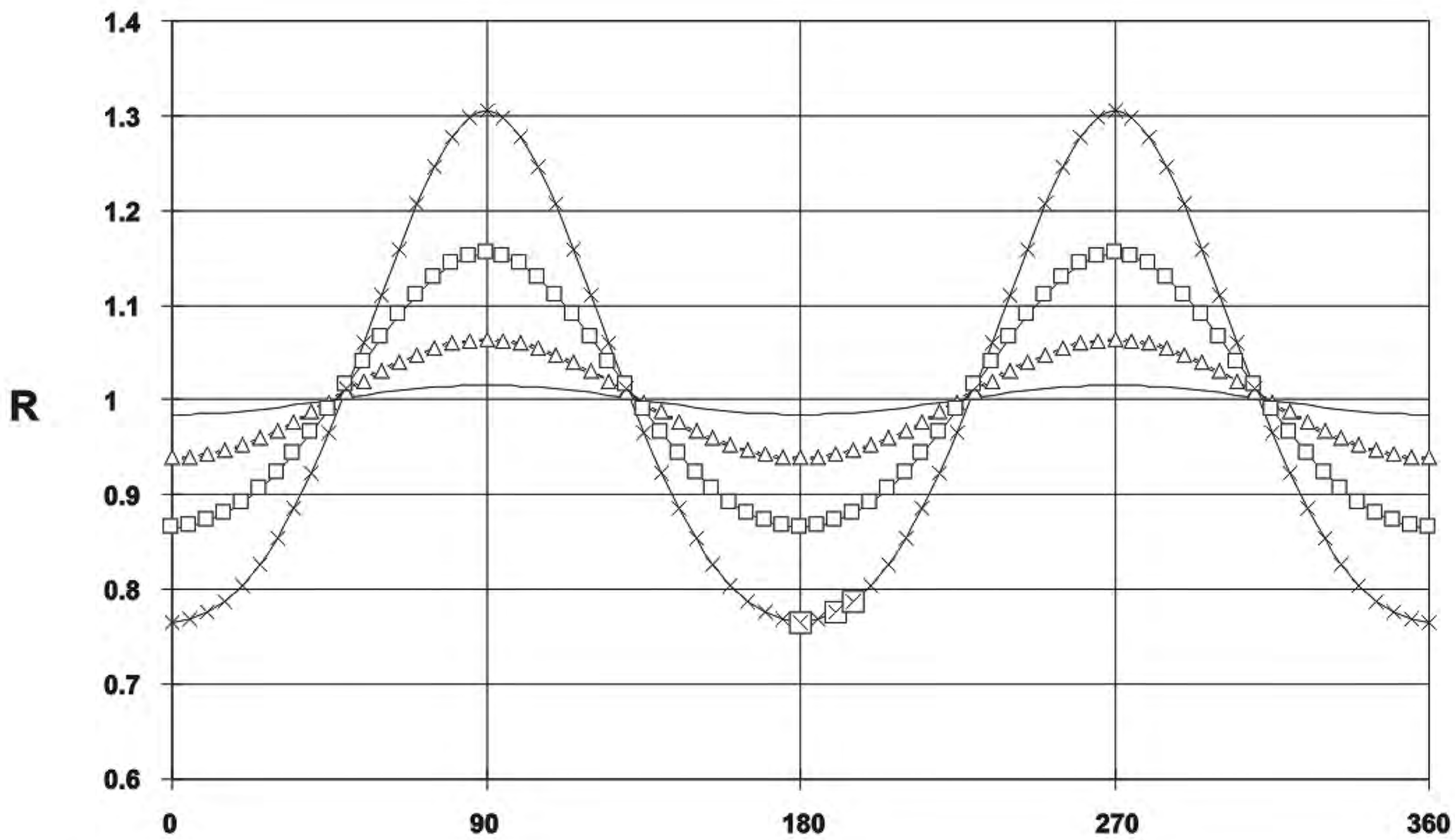
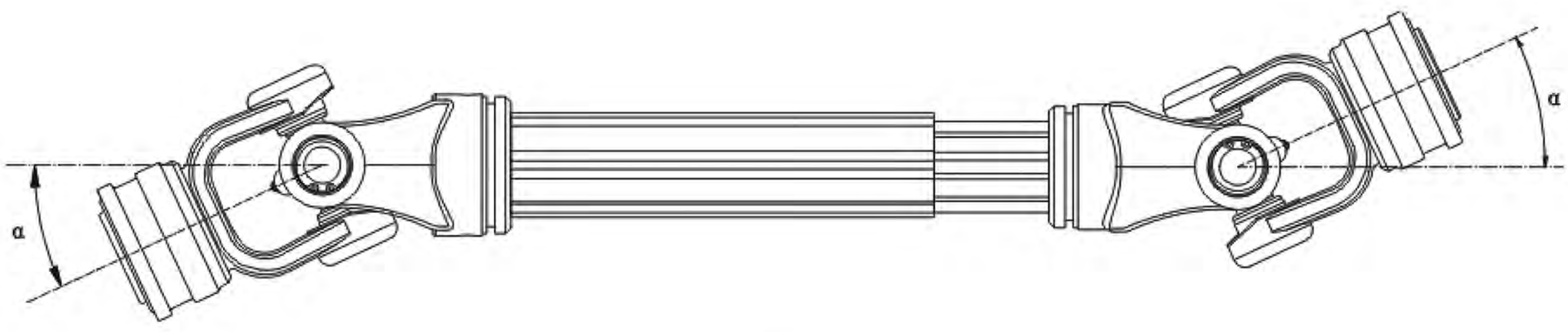


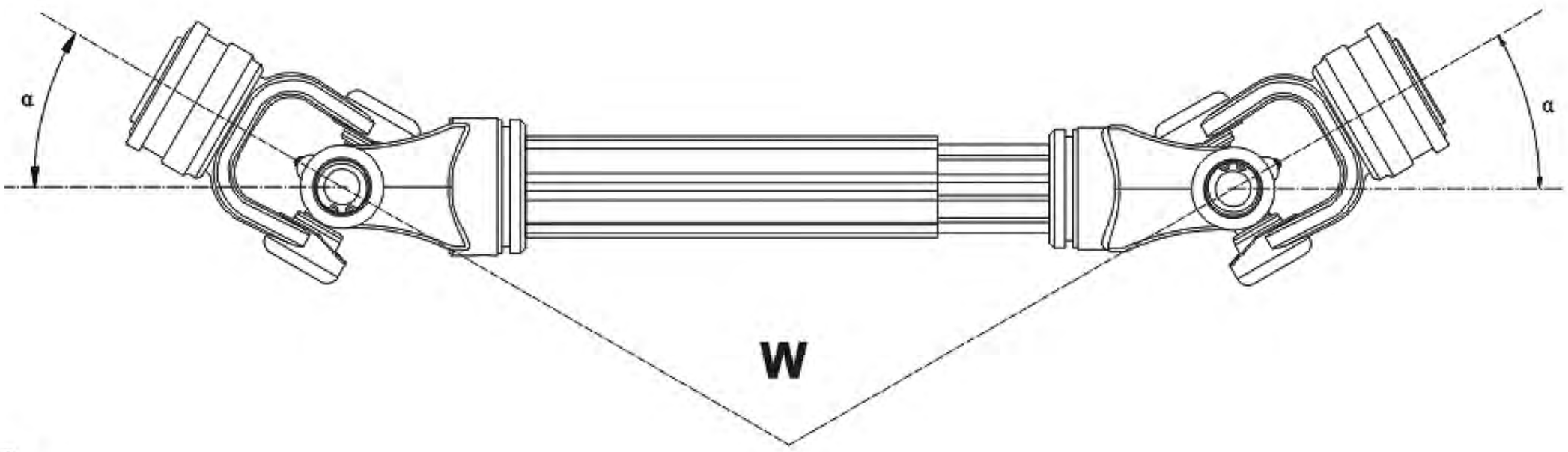
Fig.2

α =articulation angle β =rotation angle

The standard PTO drive shaft consists of two cardan joints. The irregularities of the single joints thus can be cancelled or mutually combined. When the articulation angles of the two joints are equal (see configuration W or Z in Fig. 3) the transmission is uniform, i.e. The speed of the output yoke is always equal to the speed of the input yoke, thus eliminating the undesirable effects. In all the other angulations (Fig. 4), an irregularity always remains that can be evaluated with the graph on the following page (Fig. 5).



Z



W

Fig.3

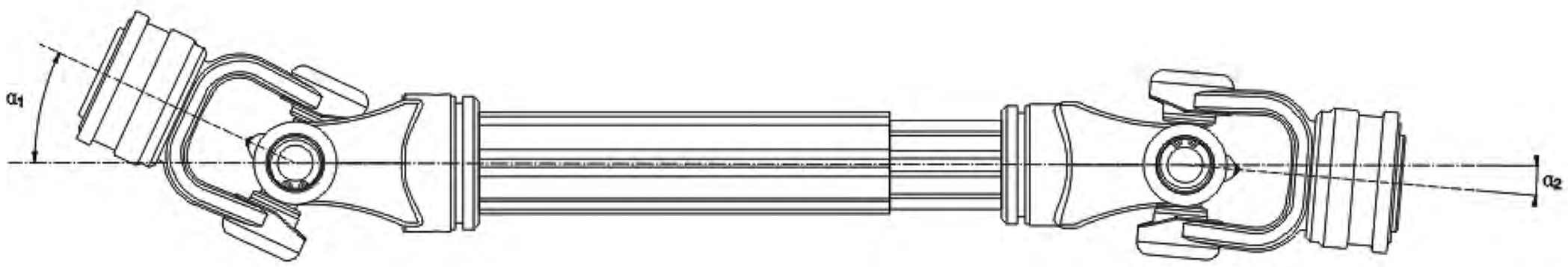
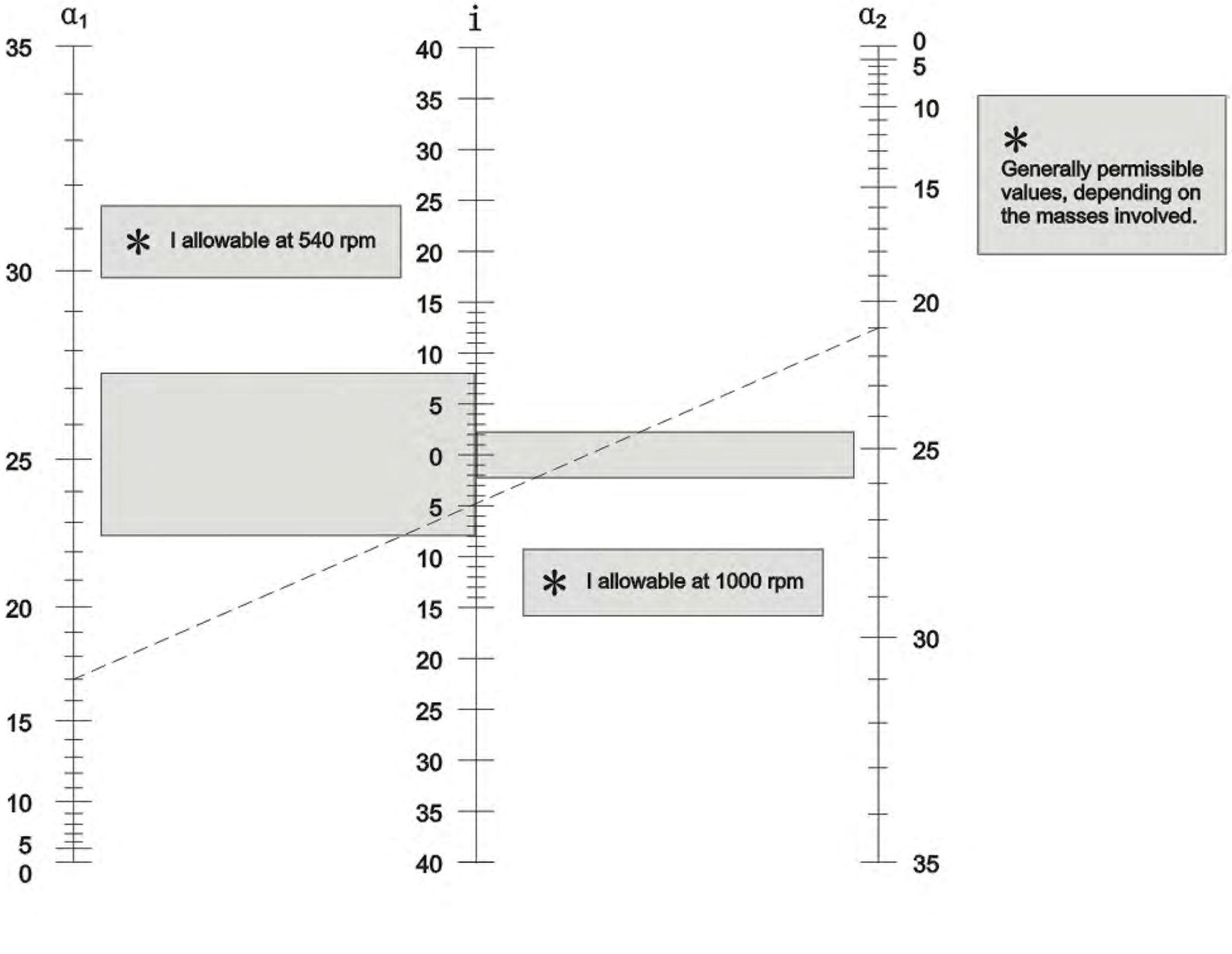


Fig.4

Irregularity "i" of the motion depends on the articulation of the two cardan joints and on the difference between the articulations of the two joints (see the example: with angular difference being equal, the irregularity is greater if the articulations of the single joints are greater).



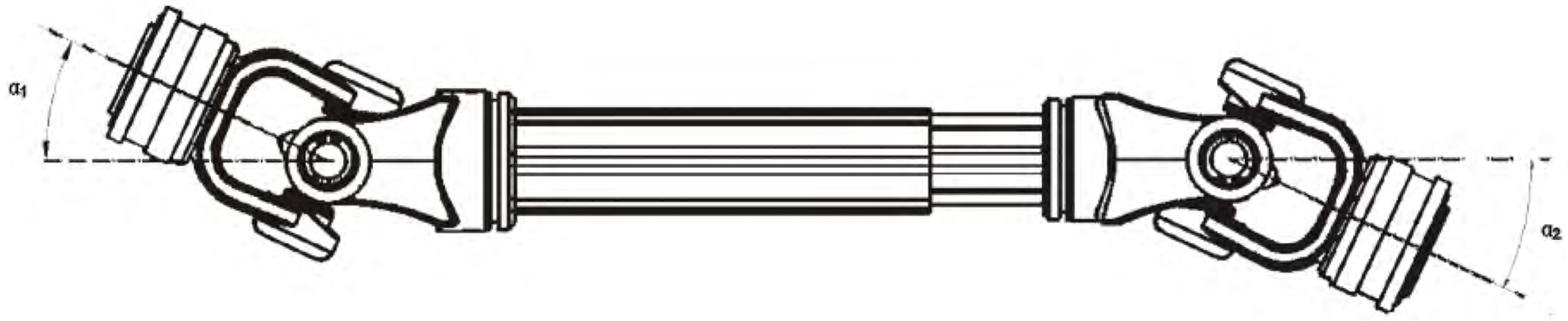


Fig.5

Example:
a1=0° , a2=4° , a1-a2=4°
i=0,5%
a1=21° , a2=25° , a1-a2=4°
i=6%

The CvJ (Constant Velocity Joint) is a double universal joint with a centering system that equally divides the articulation angle between the two yokes (W configuration). The speed of the output yoke is always equal to the input speed and there are no rotation irregularities. In a PTO drive shaft with a CvJ joint and a standard joint (Fig. 6), the total irregularity is caused only by the standard joint, that therefore must work with small articulation angles. For high work angles at the two ends of the shaft, two CvJ joints must be used (Fig. 7). The CvJ joint can work with high articulation angles only for brief periods (ex: while steering). Absolute quality and reliability of the CvJ construction are ensured by the ball bridge welded to the yoke which considerably reduces stress and consequently wears in the ball-cylinder contact zone and in the splined coupling between the shaft and the yoke.

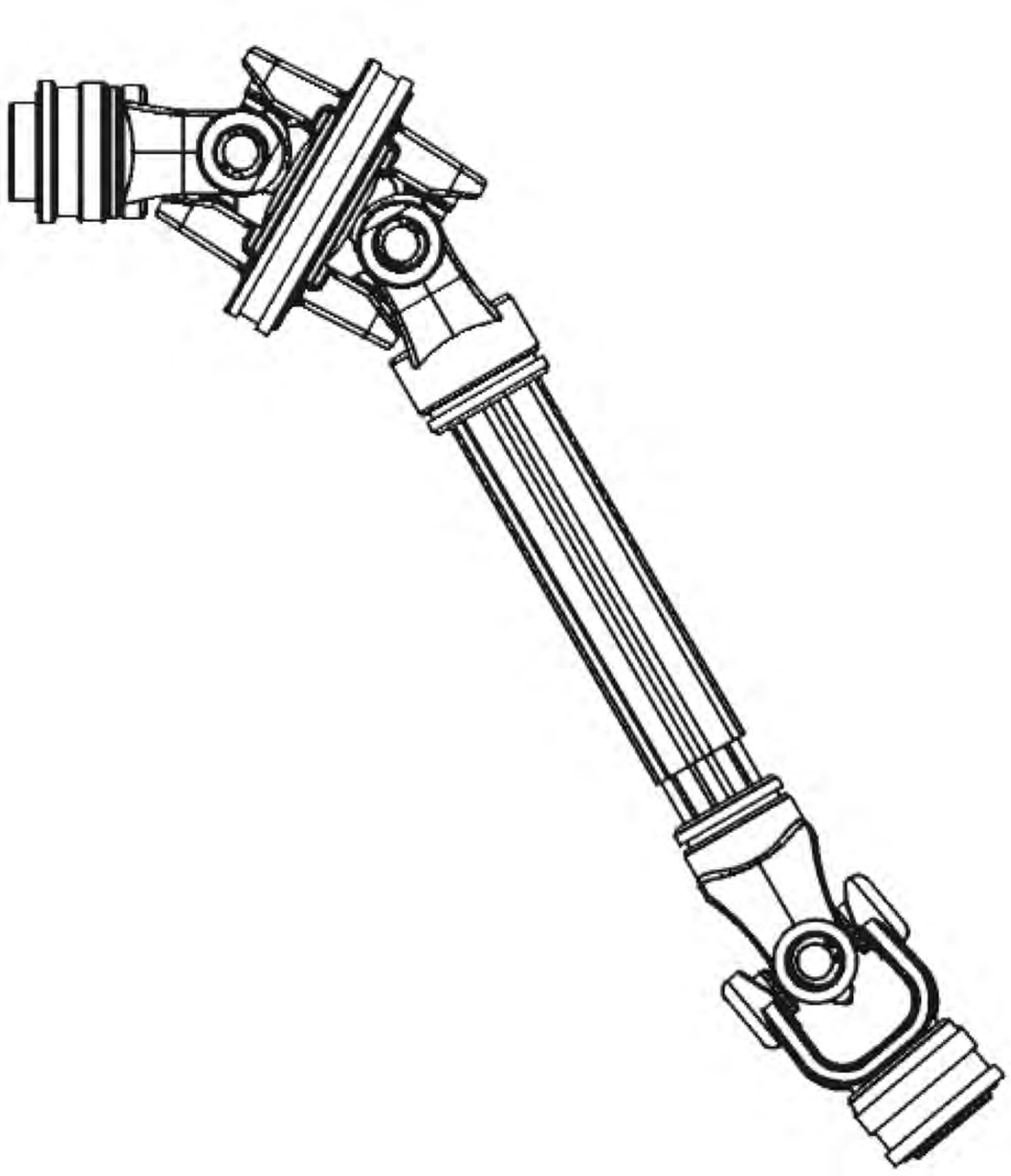


Fig.6

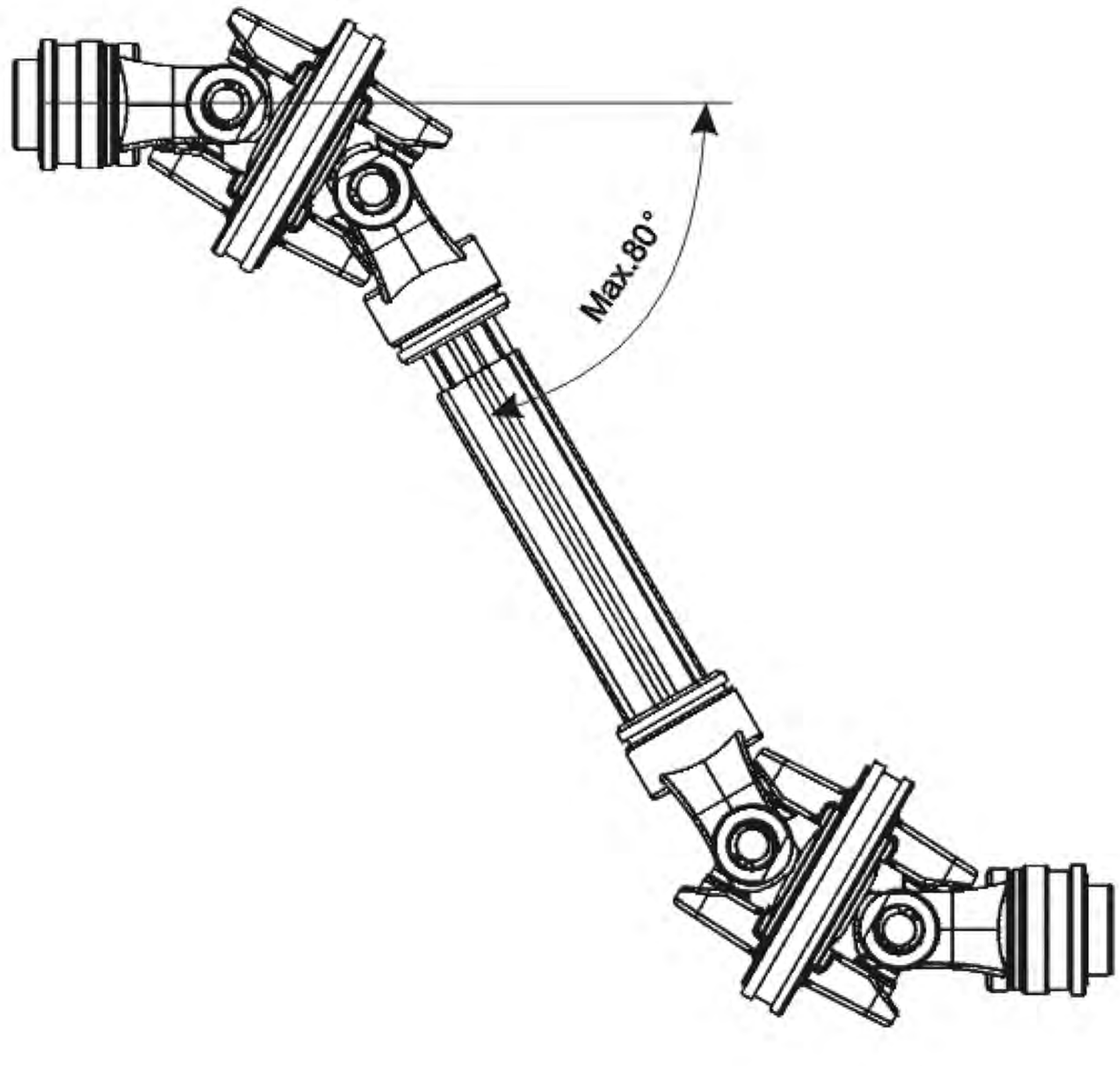


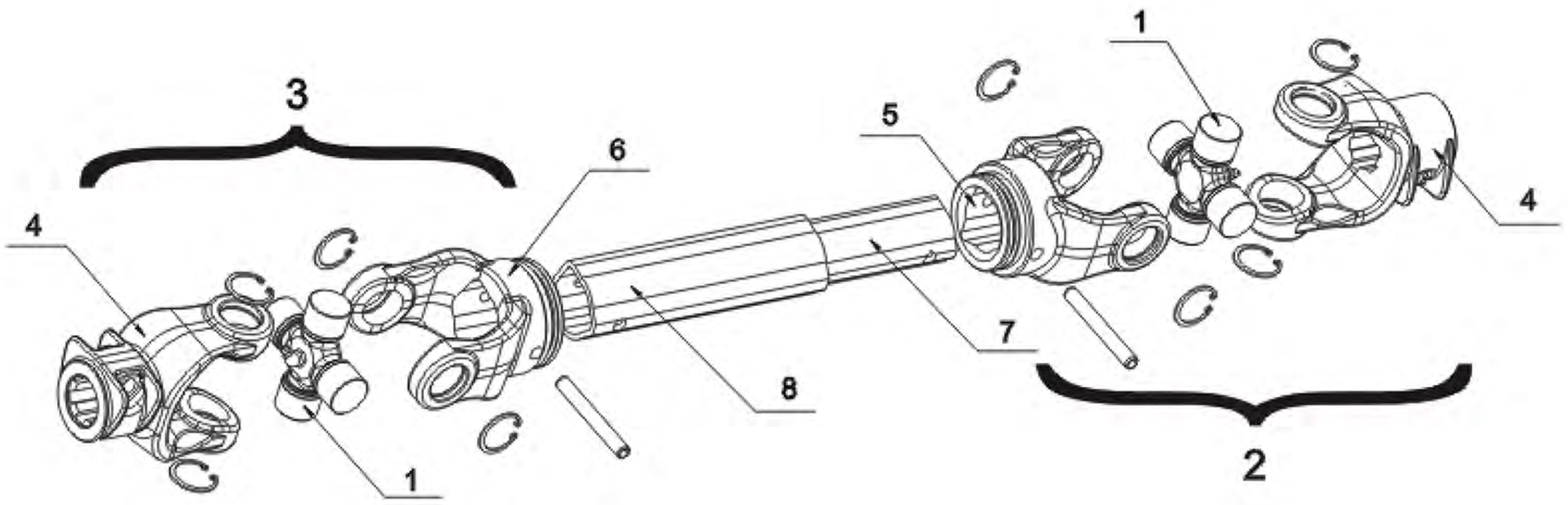
Fig.7

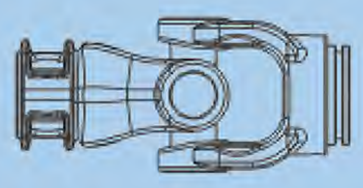
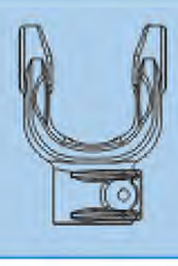
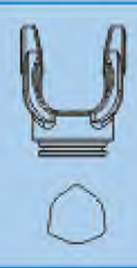
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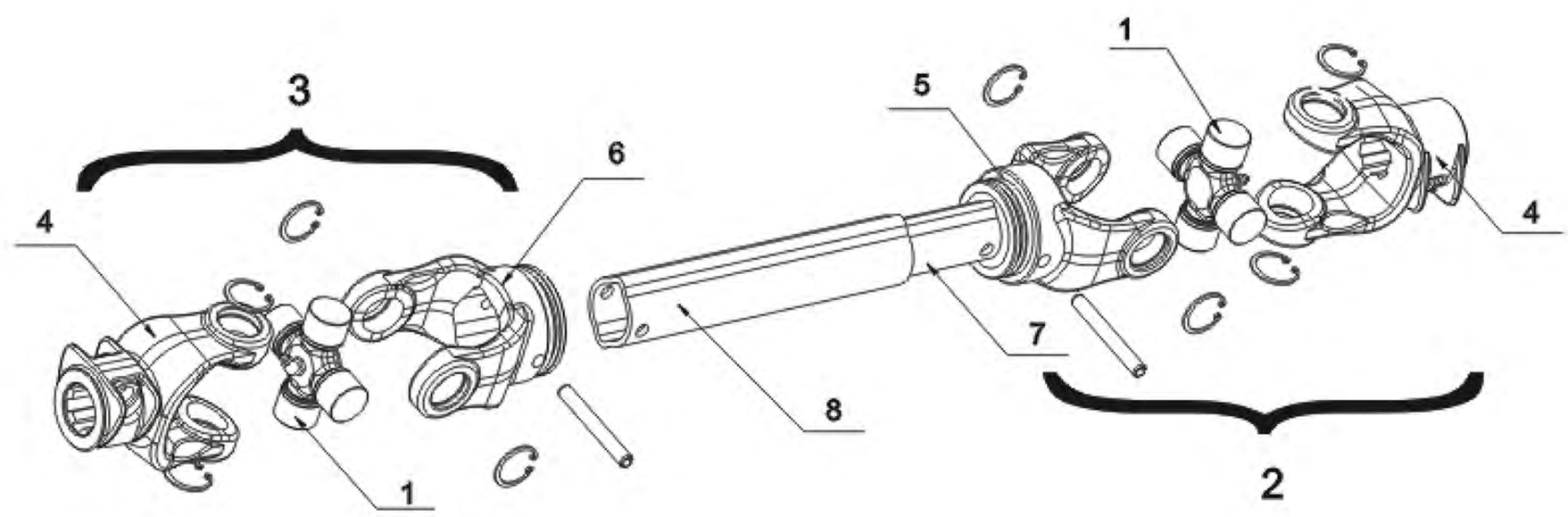
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		Inner	Outer		Inner	Outer	Inner	Outer
								
	1	2	3	4	5	6	7	8
3	32 X 89	4001001	4001002	101G110138	102T1226	103T1233	301T263	302T332
12	26 X 79	4002001	4002002	101G220138	102T2229	103T2236	301T293	301T363
20	32 X 92	4003001	4003002	101G311138	102T3236	103T3243	301T363	302T433
21	29 X 78	4004001	4004002	101G421138	102T4236	103T4243	301T364	302T433
29	28 X 80	4005001	4005002	101G500138	102T5245	103T5252	301T454	302T523
60	30.22 X 92	4006001	4006002	101G622138	102T6245	103T6254	301T454	301T544
70	30.22 X 106.3	4007001	4007002	101G723138	102T7245	103T7254	301T455	301T544
35 X 98	35 X 98	4007N001	4007N002	101G7N138	102T7N245	103T7N254	301T455	301T544
39 X 118	39 X 118	4008001	4008002	101G824138	102T8245	103T8263	301T544	302T634
1780	27 X 80	4009001	4009002	101G900138	102T9254	103T9263	301T546	302T634

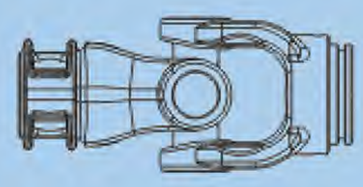
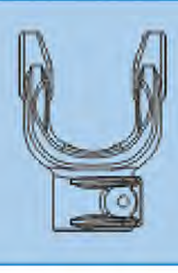
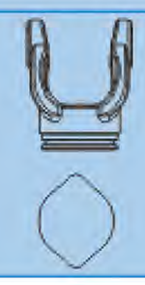
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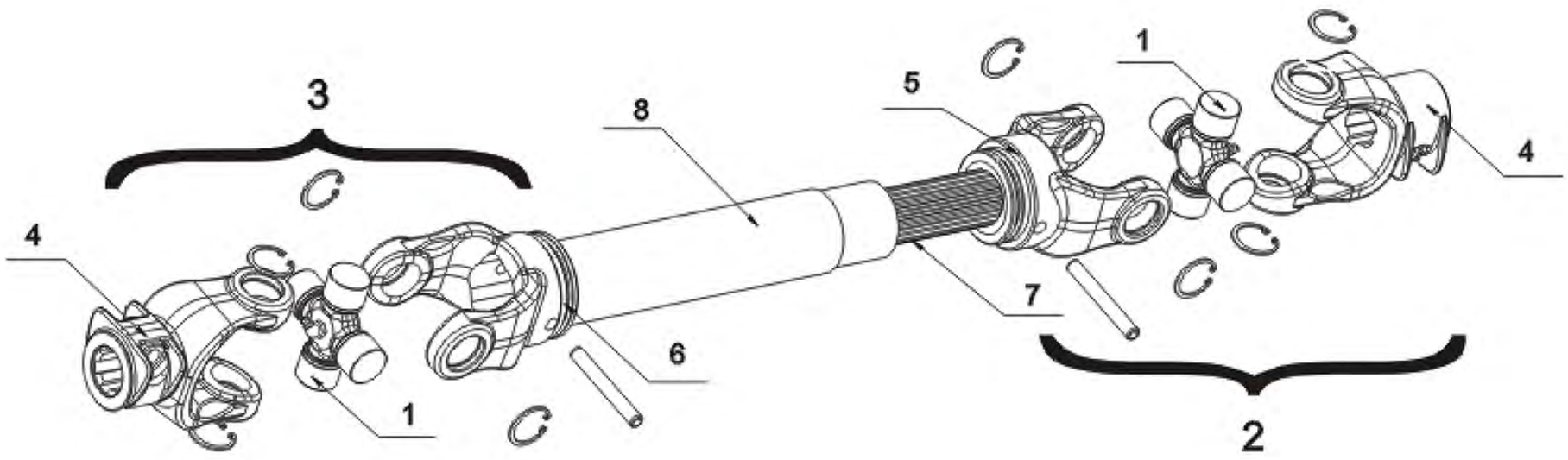
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		Inner	Outer		Inner	Outer	Inner	Outer
								
	1	2	3	4	5	6	7	8
100 2100	2000010 22 X 55	40010001	40010002	101G010138	102W10223	103W10230	301L235	302L303
200 2200	2000220 23.8 X 61.3	40020001	40020002	101G220138	102W20234	103W20241	301L344	302L413
W1	2000311 27 X 70	40011001	40011002	101G311138	102W11234	103W11241	301L344	302L413
210 2300	2000421 27 X 74.6	40021001	40021002	101G421138	102W21234	103W21241	301L344	302L413
2300S	2000421 27 X 74.6	-	-	101G421138	102W21239	103W21248	301L395	302L484
220	2000622 30.18 X 92	40022001	40022002	101G622138	102W22239	103W22248	301L395	302L484
2400 (035)	2000036 32 X 76	-	-	101G035138	102W35239	103W35248	301L395	302L484

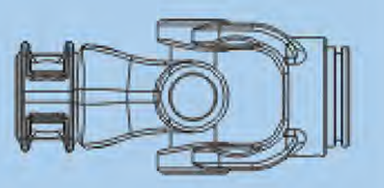
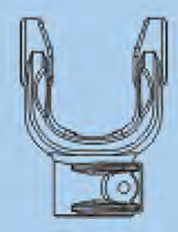
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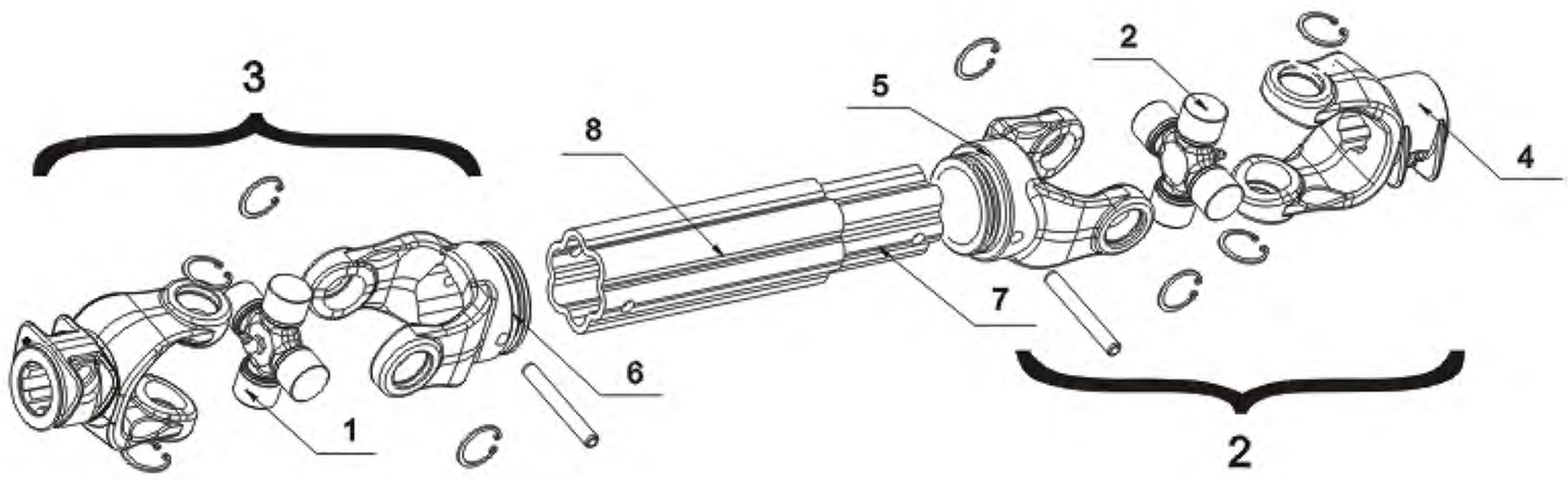
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		Inner	Outer		Inner	Outer	Inner	Outer
								
	1	2	3	4	5	6	7	8
50	2000500 30.22 X 80	4005001	4005002	101500138	102G35012	312G35Z12 ***	301G35Z12 ***	300C553
60	2000600 30.22 X 92	4006001	4006002	101622138	102G35012	312G35Z12 ***	301G35Z12 ***	300C553
70	20007N 35 X 98	4007001	4007002	1017N138	102G35012	312G40Z14 ***	301G40Z14 ***	300C613
80	2000824 34.9 X 106.3	4008001	4008002	101824138	102G35012	312G45Z16 ***	301G45Z16 ***	300C613
90	2000900 39 X 118	4009001	4009002	101900138	102G35012	312G45Z16 ***	301G45Z16 ***	300C695

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Type	U-joint	Joint Simple		Splined Yoke	Tube Yoke		Tube	
		Inner	Outer		Inner	Outer	Inner	Outer
								
	1	2	3	4	5	6	7	8
230	2000723 30.18 X 106.3	40023001	40023002	101G723138	102S23251	103S23261	301S510	301S614
240	2000824 34.9 X 106.3	40024001	40024002	101G824138	102S24251	103S24261	301S510	301S614
2500 **(036)**	2000036 36 X 89	40036001	40036002	101G036138	102S036251	103S036261	301S510	301S614
2600 **(026)**	2000026 42 X 104	40026001	40026002	101G026138	102S026261	103S026271	301S614	302S715



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