CANIMEX

Depuis 1969

ARBRE À CARDANS HAUTE VITESSE / HIGH SPEED PTO DRIVE SHAFT

Mécanique

Électrique

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INTRODUCTION

Informations sur le produit /*Information about the product*

Les arbres de transmission à cardans sont utilisés pour transmettre une puissance mécanique. La transmission à cardans comprend un tube télescopique (rectangulaire HSR ou avec cannelures HSS) ou un tube fixe HSZ et deux joints à cardans comme extrémités.

The HS PTO driveshafts are used to transmit mechanical power. The PTO drive shaft consists of a telescopic tube (rectangular HSR or with HSS splines) or a HSZ fixed tube with two cardan joints at each end.

Diverses applications/ *Miscellaneous applications*

Avertissement / *Warning*

Avertissement

Pour toutes commandes étant constituées de composantes standards absentes de ce catalogue, **la quantité minimum à commander sera de 25 unités**.

Pour toutes autres composantes non standards, contactez Canimex pour plus d'informations.

Warning

For any order made with standard components absent of this catalogue, ***the ordering quantity must be at least 25 units****.*

For any other non-standard components, please contact Canimex for more information*.*

INTRODUCTION

Caractéristiques techniques Canimex / *Technical Specification*

Type *Type*	Dynamique *Dynamic*					Statique *Static*	
	Puissance[1] *Power [1]*			Couple dynamique maximum *Maximum Dynamic Torque*		Couple maximum[2] *Maximum Torque (Nm) [2]*	
	540 RPM	1000 RPM	2000 RPM				
	HP	HP	HP	Nm	lb·po (lb·in)	Nm	lb·po (lb·in)
HS10	10	15	24	280	2478	500	4425
HS20	20	30	49	450	3983	1100	9736

[1] Vie en fatigue pour un angle d'opération de 5° pendant 1000 h
[2] Couple maximum statique selon une distribution normale couvrant 90 % des arbres à cardans haute vitesse

[1] Fatigue life for an operation angle of 5° for 1000h
[2] Maximum static torque according to a normal distribution covering 90% of the HS PTO

Voici les caractéristiques importantes pour la sélection et la sécurité des équipements.

Here are the important characteristics for the selection and safety of the equipment.

Vitesse maximum

Doit être capable de tourner à une vitesse de 2500 rotations par minute avec moins de 1440 g*mm (2 Oz*in) d'effort de balourd (débalancement).

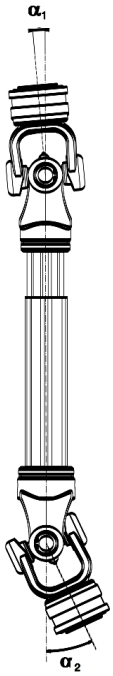
Maximum speed

*Must be able to rotate at 2500 rotations per minute with less than 1440 g*mm (2 Oz*in) of imbalance.*

Irrégularité de rotation de l'arbre à cardan

$\omega = 1000\ (rpm)$
$\alpha_1(max) = 260\ {}^{rad}/_{s^2}$
$\theta_{res} = 8.8°$

θ_1	θ_{2min}	θ_{2max}
1	0.00	8.9
2	0.00	9.0
3	0.00	9.3
4	0.00	9.7
5	0.00	10.1
10	4.7	13.3
15	12.1	17.4
20	17.9	21.9



PTO drive shaft rotation irregularity alignment

$\omega = 2500\ (rpm)$
$\alpha_1(max) = 260\ {}^{rad}/_{s^2}$
$\theta_{res} = 3.5°$

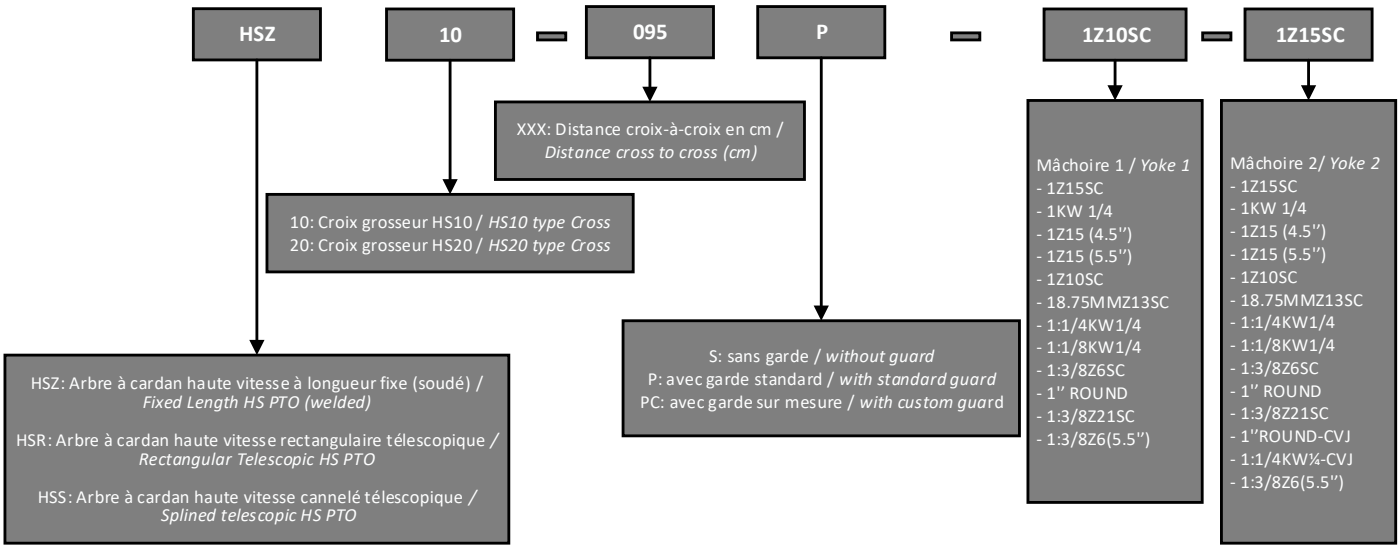
θ_1	θ_{2min}	θ_{2max}
1	0.00	3.7
2	0.00	4.1
3	0.00	4.6
4	1.9	5.3
5	3.5	6.1
10	9.4	10.6
15	14.6	15.4
20	19.7	20.3

Afin d'éviter une vibration sur l'accessoire entraîné par l'arbre à cardan, les joints universels des mâchoires doivent comporter un angle combiné total se situant à l'intérieur des limites permises.

To prevent implement vibration caused by speed variation, driveline u-joint angle difference should remain within prescribed limits.

INTRODUCTION

Nomenclature / *Coding*



Attention: L'identification de la Mâchoire 1 (Mâle) et Mâchoire 2 (femelle) vendus chez Canimex sont à l'inverse du standard agricole en ce qui a trait aux arbre à cardan haute vitesse.

S'il s'agit d'un demi-arbre à cardan haute vitesse:

- HSR20-022PS3-1''ROUND- 1/2 FEMALE-CVJ
- HSR20-021PS2-1Z15SC-1/2 MALE

Si l'arbre à cardan haute vitesse sort du contenu du catalogue:

- Mettre –1 à la fin de la nomenclature
- Mettre en note le client et la raison

Warning: The identification of Yoke 1 (Male) and Yoke 2 (female) sold by Canimex are at the opposite of the agricole standard for the High Speed PTO

If it is a half-shaft High Speed PTO:

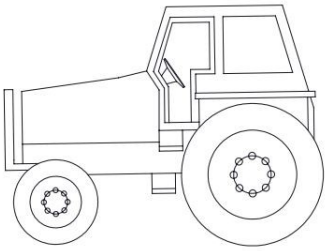
- *HSR20-022PS3-1''ROUND-1/2 FEMALE-CVJ*
- *HSR20-021PS2-1Z15SC-1/2 MALE*

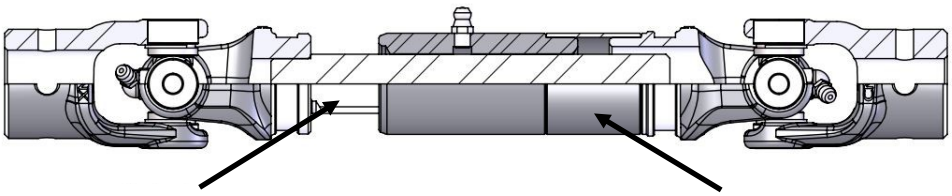
If the High Speed PTO is not contain in this catalog:

- *Write –1 at the end of the Bill of Material*
- *Put the customer name and the reason in the note*

Identification des mâchoires

Yokes identification





Mâchoire 1 / *Yoke 1*

Côté arbre mâle / *Male shaft side*

Mâchoire 2 / *Yoke 2*

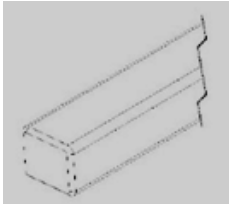
Côté tube femelle / *Female tube side*

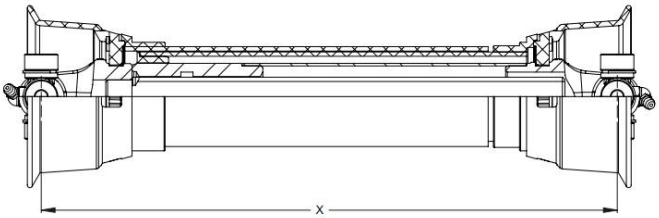
SELECTION

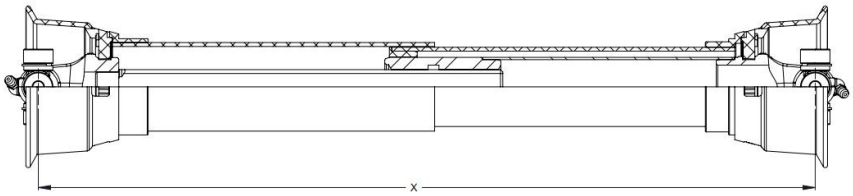
HSR10 Arbre télescopique rectangulaire / *Rectangular telescopic PTO*

Voici les longueurs standard croix-à-croix des arbres télescopiques de transmission haute vitesse avec profil rectangulaire pour les modèles HSR10. Les longueurs fermées et maximums y sont affichées.

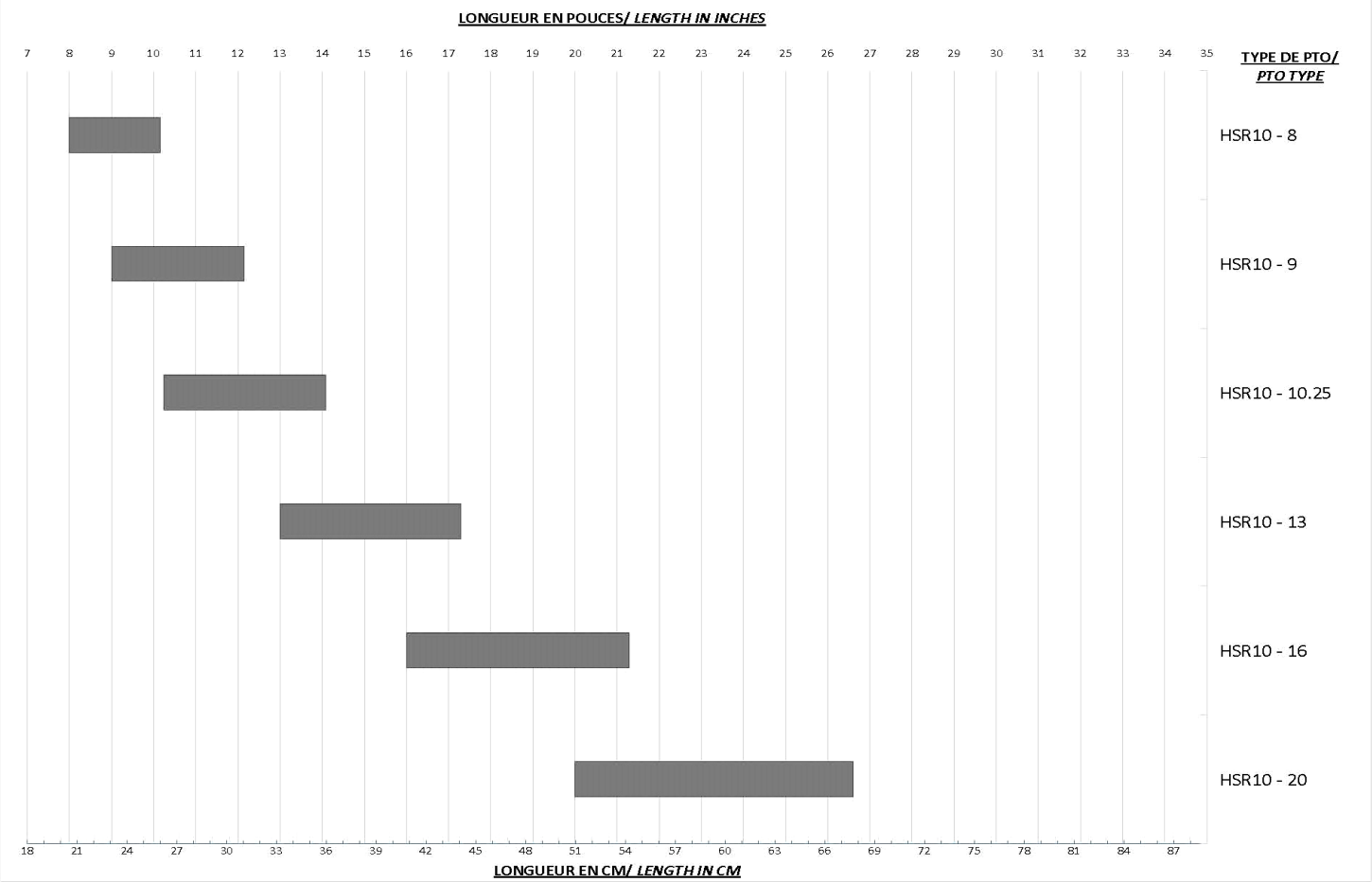
This is the standard cross-to-cross length of the telescopic high-speed driveshaft with a rectangular profile for the model HSR10. The closed and the maximum lengths are shown.







Longueurs minimum et maximum des PTO standards ***Minimum and maximum lengths for the standard PTO***

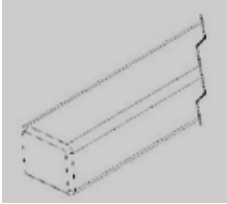


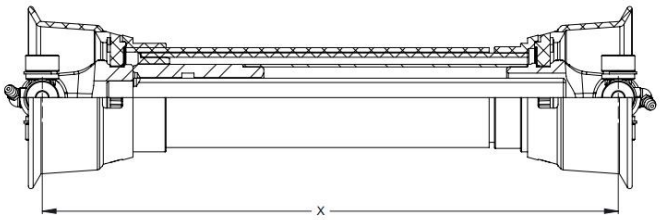
SELECTION

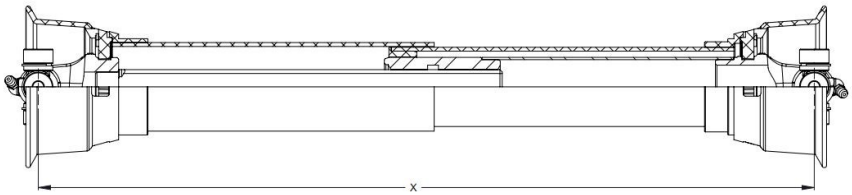
HSR20 Arbre télescopique rectangulaire / *Rectangular telescopic PTO*

Voici les longueurs standard croix-à-croix des arbres télescopiques de transmission haute vitesse avec profil rectangulaire pour les modèles HSR20. Les longueurs fermées et maximums y sont affichées.

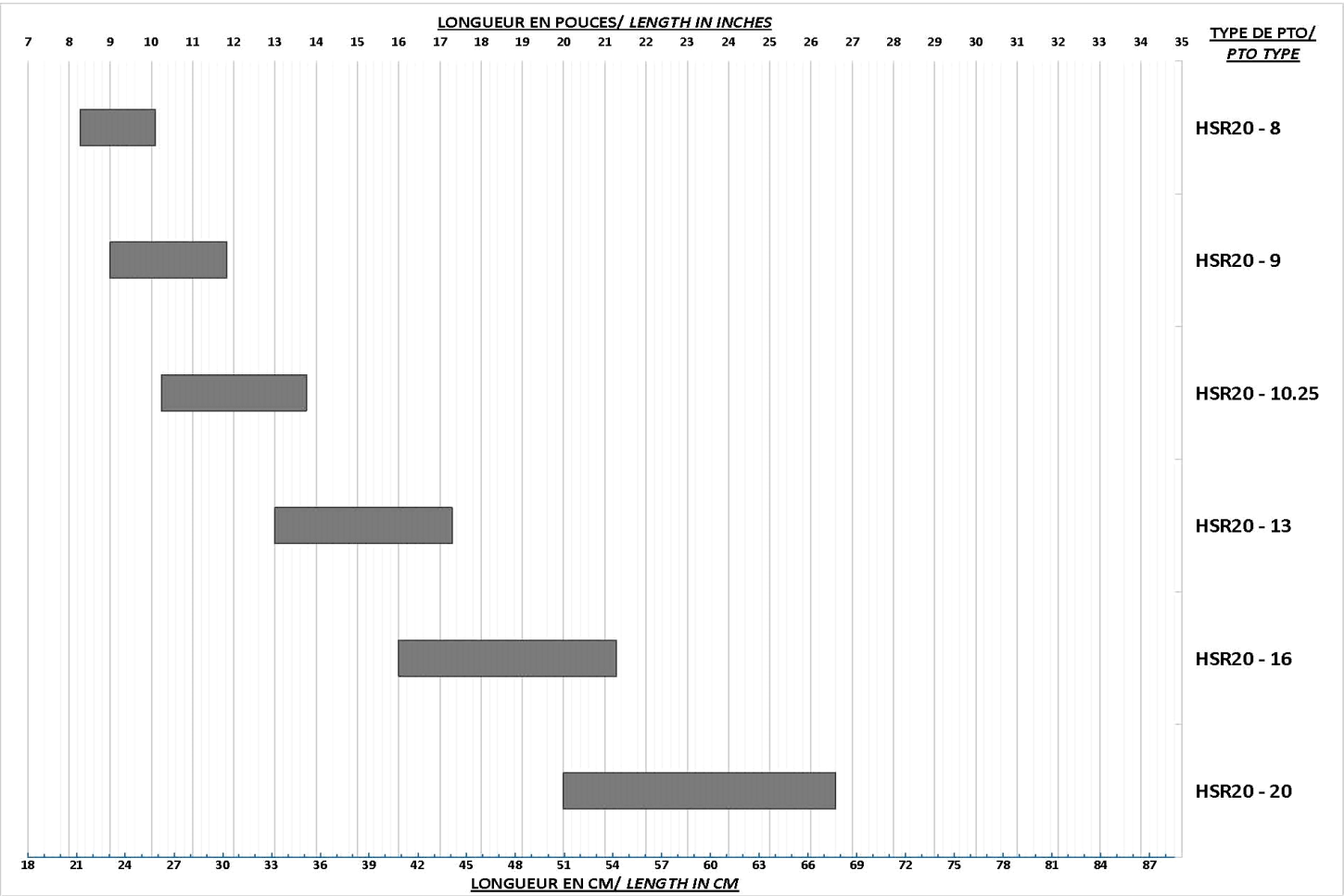
This is the standard cross-to-cross length of the telescopic high-speed driveshaft with a rectangular profile for the model HSR10. The closed and the maximum lengths are shown.







Longueurs minimum et maximum des PTO standards ***Minimum and maximum lengths for the standard PTO***

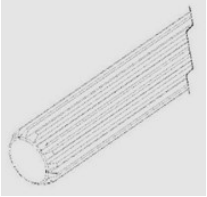


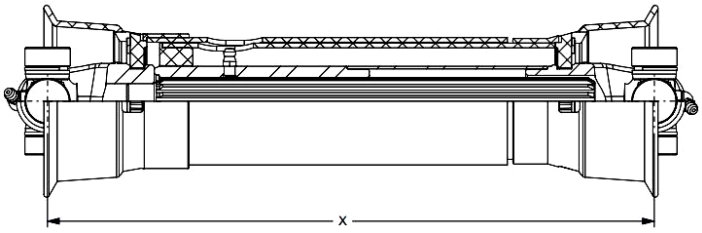
SELECTION

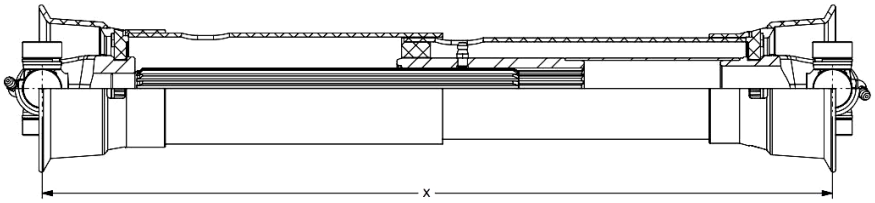
HSS20 Arbre télescopique cannelé / *Spline telescopic PTO*

Voici les longueurs standard croix-à-croix des arbres télescopiques de transmission haute vitesse avec profil cannelé pour les modèles HSS20. Les longueurs fermées et maximums y sont affichées.

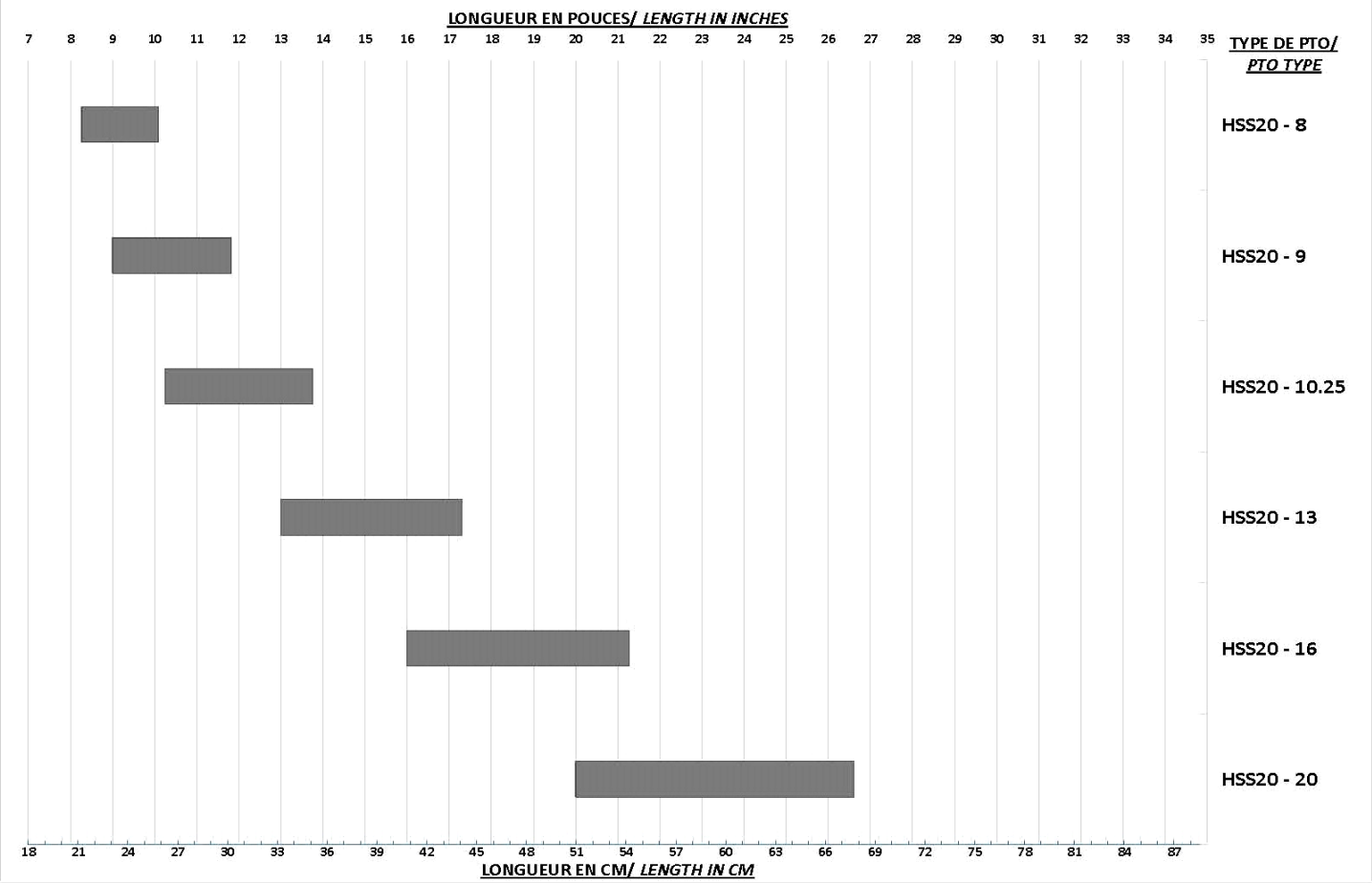
This is the standard cross-to-cross length of the telescopic high-speed driveshaft with a spline profile for the model HSS20. The closed and the maximum lengths are shown.





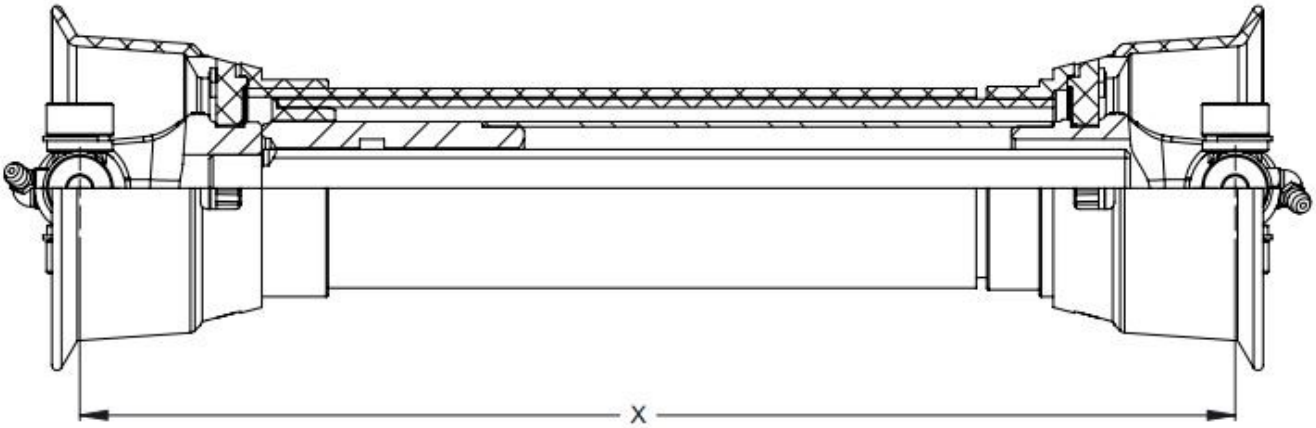


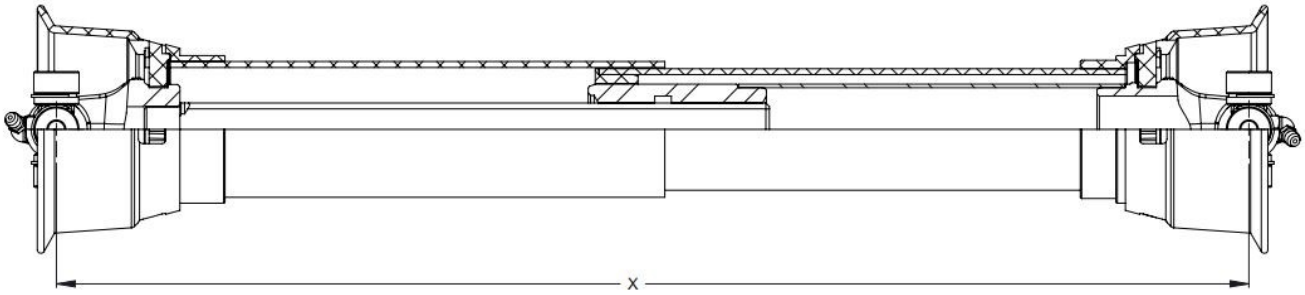
Longueurs minimum et maximum des PTO standards ***Minimum and maximum lengths for the standard PTO***

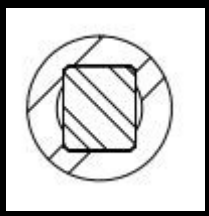


SELECTION

HSR10 Assemblage complet / *Complete Assembly*

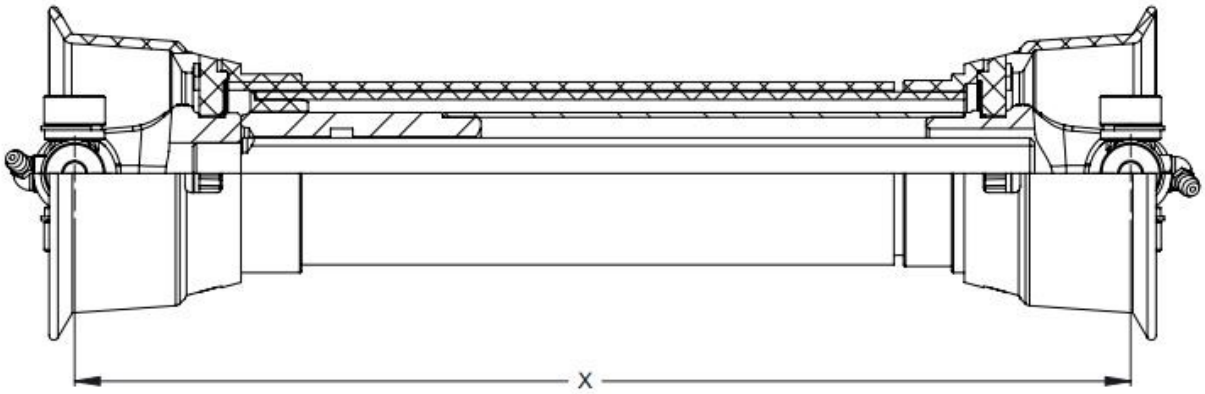


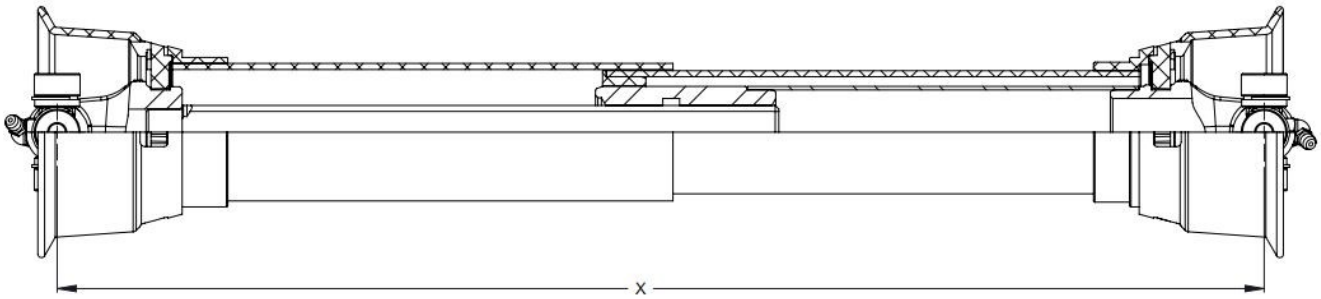


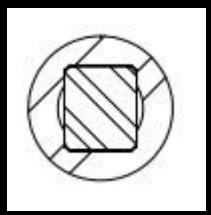
	Longueur croix à croix (X) *Cross to cross length (X)*		
	Modèle ***Model***	**Longueur fermée X** ***Close length X***	**Longueur ouverte X** ***Open Length X***
HSR10 	**HSR10-20CM C/C**	203.2 mm 8''	258 mm 10.15''
	HSR10-23CM C/C	228.6 mm 9''	309 mm 12.15''
	HSR10-25CM C/C	260.4 mm 10.25''	358 mm 14.08''
	HSR10-33CM C/C	330.2 mm 13.0''	439 mm 17.30''
	HSR10-41CM C/C	406.4 mm 16''	541 mm 21.28''
	HSR10-50CM C/C	508 mm 20.0''	676 mm 26.598 ''

SELECTION

HSR20 Assemblage complet / *Complete Assembly*

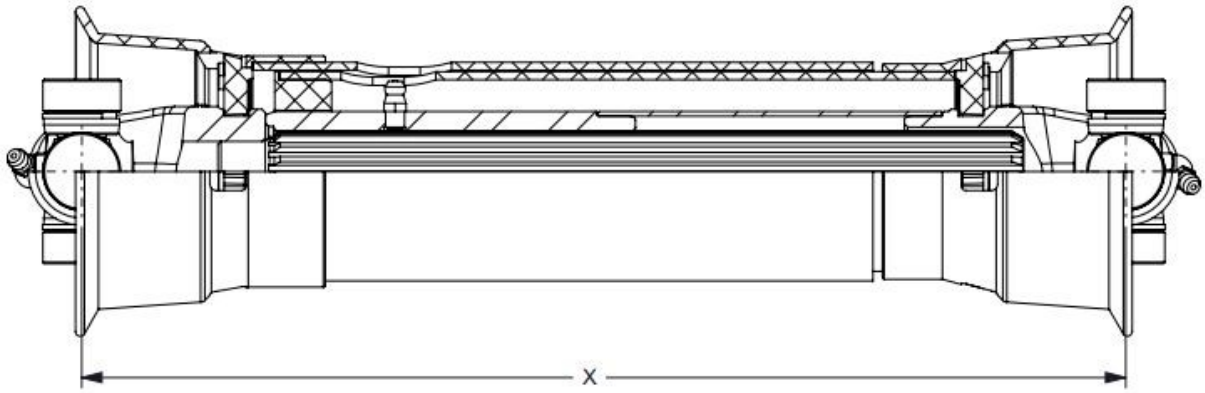


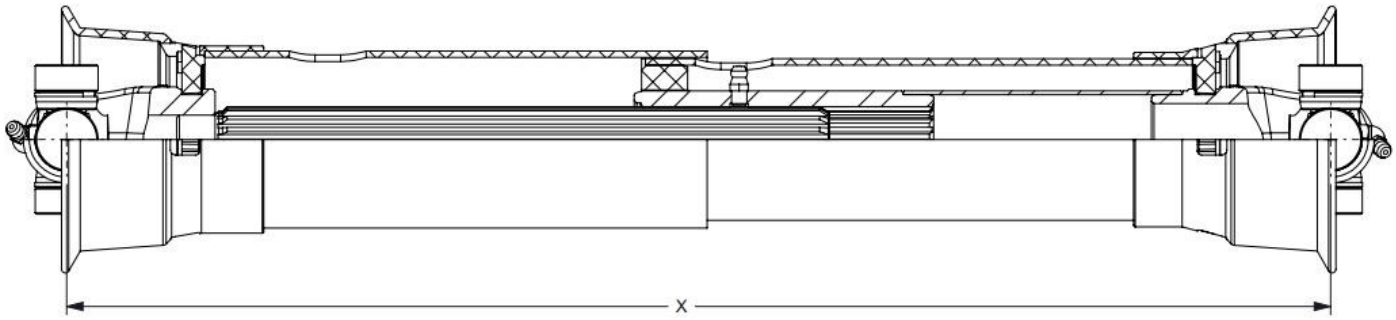


	Longueur croix à croix (X) *Cross to cross length (X)*		
	Modèle ***Model***	**Longueur fermée** ***Closed Length***	***Longueur ouverte (X)*** ***Open Length (X)***
HSR20 	**HSR20-20CM C/C**	210 mm 8.27’’	256 mm 10.09"
	HSR20-23CM C/C	228.6mm 9’’	300mm 11.82"
	HSR20-25CM C/C	260.4 mm 10.25’’	350 mm 13.76"
	HSR20-33CM C/C	330.2 mm 13.0’’	439 mm 17.29"
	HSR20-41CM C/C	406.4 mm 16’’	540.5 mm 21.28"
	HSR20-50CM C/C	508 mm 20.0’’	675.6 mm 26.6"

SELECTION

HSS20 Assemblage complet / *Complete Assembly*

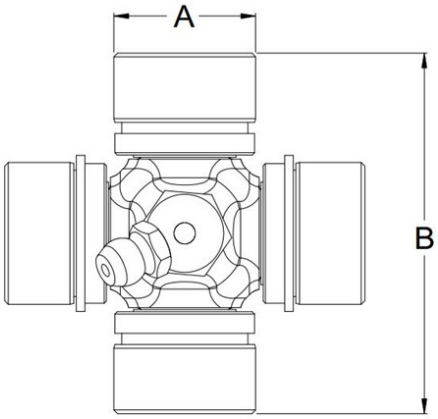


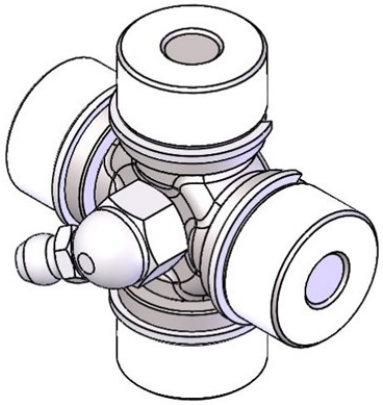


	Longueur croix à croix (X) *Cross to cross length (X)*		
	Modèle ***Model***	**Longueur fermée X** ***Close length X***	**Longueur ouverte X** ***Open Length X***
HSS20	**HSS20-20CM C/C**	210 mm 8.27"	256.2 mm 10.09"
	HSS20-23CM C/C	228.6 mm 9’’	300.3 mm 11.82"
	HSS20-25CM C/C	260.4 mm 10.25’’	350 mm 13.76"
	HSS20-33CM C/C	330.2 mm 13.0’’	439.1 mm 17.3"
	HSS20-41CM C/C	406.4 mm 16’’	540.5 mm 21.28"
	HSS20-50CM C/C	508 mm 20.0’’	675.6 mm 26.6"

SELECTION

Croix / *Cross*





Modèle *Model*	**Description**	**Code d'article (Dessin)** *Part number (Drawing)*	**A**	**B**
HS10	HS10-CROSS(BRG 19.10 X 48.50)	220932 (P-26453)	19.1 mm 0.75''	48.5mm 1.9''
HS20	HS20-CROSS(BRG 24.60 X 58.20)	220933 (P-26454)	24.6mm 0.969''	58.2mm 2.29''

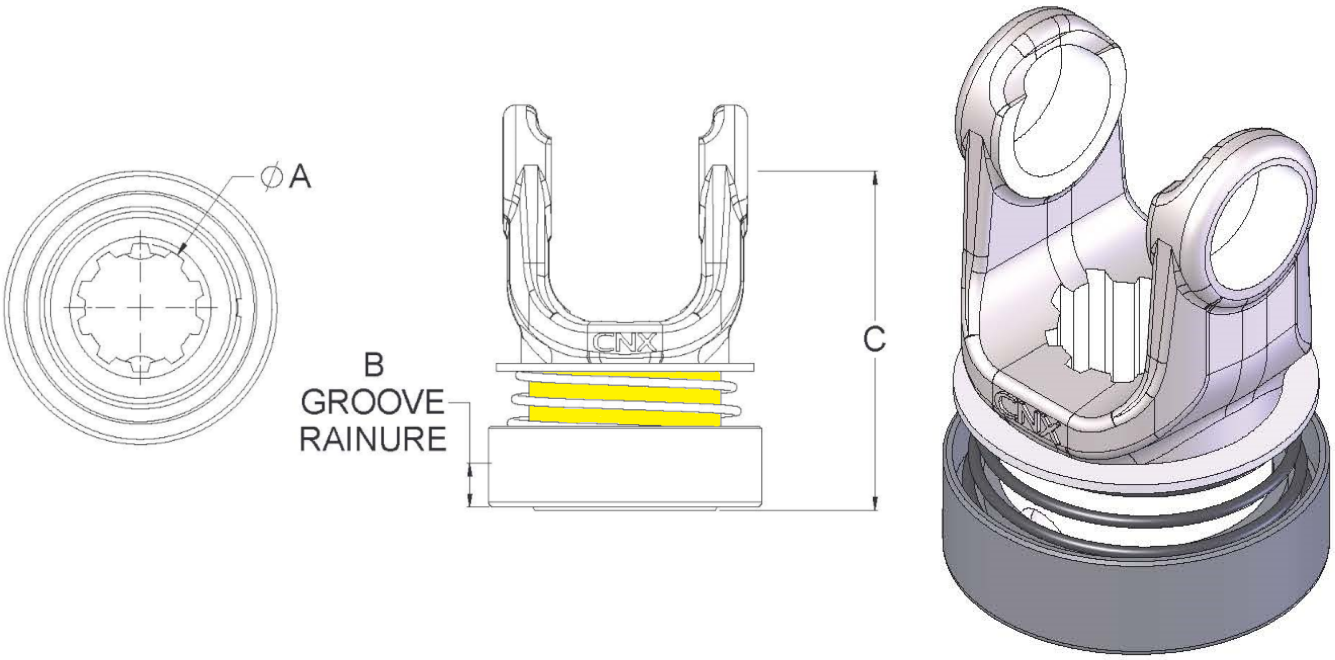
Graisseur sur la croix: filetage conique M10x1 avec une orientation de 65°

Grease fitting on the cross: M10x1 taper thread with an orientation of 65°

SELECTION

Mâchoires extérieures / *Outer Yokes*

Collet / *Slide collar*

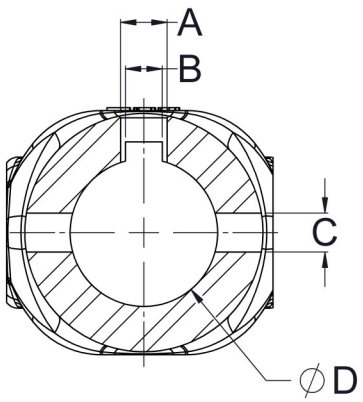


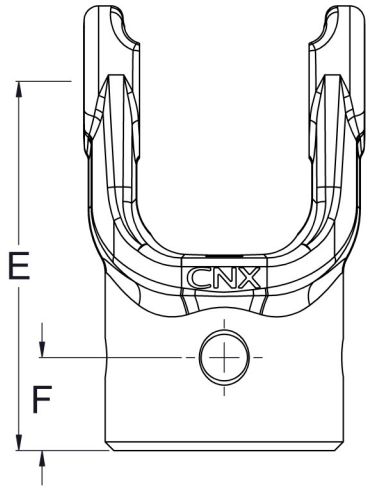
N.B La partie en jaune (sous le ressort) a un fini phosphate zinc. *The yellow zone (under the spring) has a zonc phosphate finish.*

Modèle *Model*	Description	Code d'article (Dessin) *Part number (Drawing)*	" Ø A"	"B"	"C"
HS10	18.75MMZ13	220939 (P-29020)	18.75MMZ13	11 mm 0.43"	67 mm 2.64"
	1Z10SC	220938 (P-29019	1''Z10	11 mm 0.43''	67 mm 2.64"
	1Z15SC	220934 (P-29016)	1''Z15	11 mm 0.43"	67 mm 2.64"
HS20	1Z10SC	220942 (P-29048)	1''Z10	11 mm 0.43"	70 mm 2.75"
	1Z15SC	220940 (P-29046)	1''Z15	11 mm 0.43"	67 mm 2.64"
	1:3/8Z6SC	220948 (P-29053)	1 3/8'' Z6	25.4 mm 1"	98 mm 3.86"
	1:3/8Z21SC	220950 (P-29055)	1 3/8'' Z21	25.4 mm 1"	98 mm 3.86"

SELECTION

Mâchoires extérieures / *Outer Yokes*



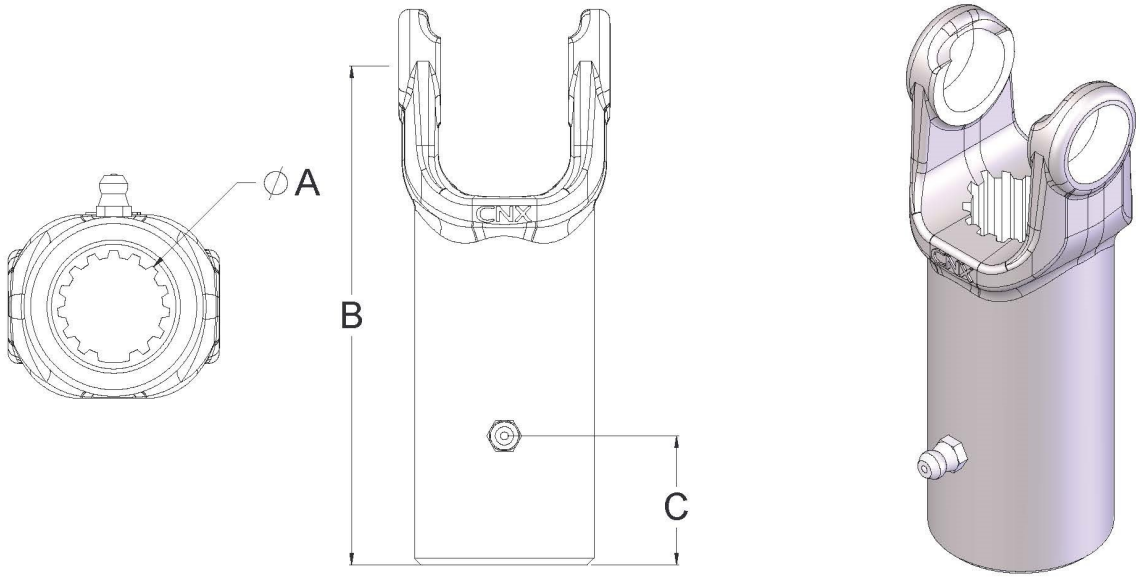


Modèle *Model*	Description	Code d'article (Dessin) *Part number (Drawing)*	" Ø A"	"B"	"C"	" Ø D"	"E"	"F"
HS10	1KW1/4	220935 (P-29017)	3/8-16 UNC	6.35mm 1/4''	7mm 9/32''	25.4 1''	63.5mm 2.5''	16mm 0.63''
HS20	1 KW1/4	220945 (P-29050)	3/8-16 UNC	6.35mm 1/4''	7mm 9/32''	25.4 1''	63.5mm 2.5''	16mm 0.63''
	1:1/8 KW1/4	220946 (P-29051)	3/8-16 UNC	6.35mm 1/4''	7mm 9/32''	28.6mm 1 1/8''	63.5mm 2.5''	16mm 0.63''
	1:1/4KW1/4	220941 (P-29047)	3/8-16 UNC	6.35mm 1/4''	7mm 9/32''	28.6mm 1 1/8''	63.5mm 2.5''	16mm 0.63''

SELECTION

Mâchoires extérieurs / *Outer Yokes*

Mâchoire longue / Long yoke

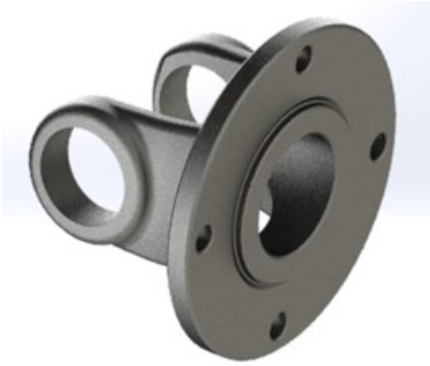


Modèle *Model*	Description	Code d'article (Dessin) *Part number (Drawing)*	" Ø A"	"B"	"C"
HS10	1Z15 (4.5'')	220934 (P-29018)	1''Z15	115mm 4 1/2'	30 mm 5/32''
HS20	1Z15 (4.5'')	220947 (P-29052)	1''Z15	115mm 4 1/2'	25.4mm 1''
	1Z15 (5.5'')	229979 (P-31419)	1''Z15	138mm 5.43''	25.4mm 1''
	1:3/8Z6(5.5'')	229980 (P-31418)	1 3/8''Z6	138mm 5.43''	38.1mm 1 1/2''

Graisseur : Filetage conique M6x1 avec une orientation droite

Grease fitting: M6x1 taper with a straight orientation.

Options



C04

Assemblage tube fixe et mâchoires soudées

Fixed tube and welded yoke assembly

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