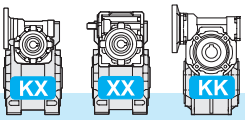

5.0 REDUCTORES TORNILLO SIN FIN COMBINADOS / COMBINED WORM GEARBOXES / RÉDUCTEURS À ROUE ET VIS SANS FIN COMBINÉS

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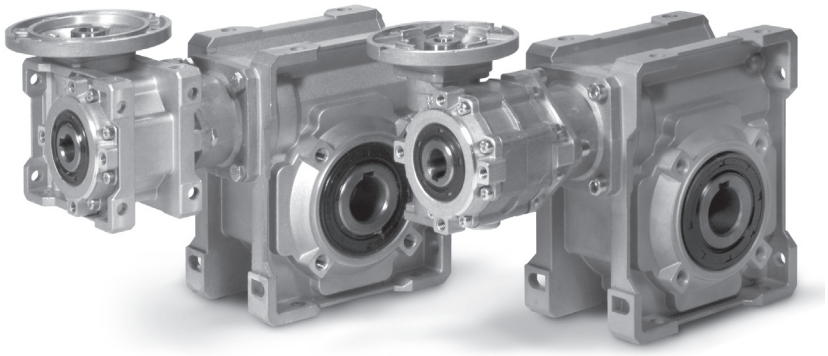
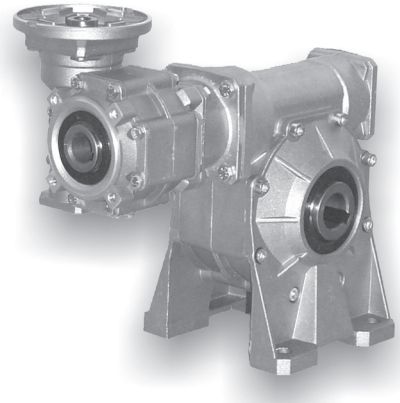


XX **KX**



KK

07/2019

5.1 Características

La combinación de dos reductores de tornillo sin fin comporta rendimientos muy bajos y elevadas reducciones de velocidad, obtenidas en un espacio reducido de tiempo que lo hacen interesante y hasta insustituible en esta condición. Los reductores tornillo sin fin combinados están disponibles en las series KX, XX y KK.

Las series KX y KK están disponibles exclusivamente en las versiones p.a.m.

En cambio la serie XX está disponible en las versiones con eje de entrada saliente XXA y en las dos versiones con predisposición enganche motor de forma compacta XXC o con campana y junta XXF.

Está incluido el eje de salida hueco de serie con una amplia disponibilidad de accesorios:
segunda entrada, cojinetes de bolas sobre el engranaje, brida de salida, eje lento con 1 y 2 salidas, limitador de par con agujero pasante, brazo de reacción.

5.1 Characteristics

The combination of two worm gearboxes provides very low efficiency, however the fact that substantial reduction in speed can be obtained in an extremely reduced space makes this solution very interesting and sometimes irreplaceable. Combined worm gearboxes are available in series: KX , XX and KK.

The KX and KK series are available for IEC version only.

The XX series is available in the XXA version with shaft and in two versions with motor coupling: XXC (compact) and XXF (with bell and joint).

The hollow shaft is supplied as standard. A broad range of accessories is avalable: second input, tapered roller bearings on the worm wheel, output flange, single or double extended output shaft, torque limiter with through hollow shaft, torque arm.

5.1 Caractéristiques

L'utilisation combinée de deux réducteurs à vis sans fin n'offre qu'un très bas rendement. Cependant, l'importante réduction de vitesse obtenue dans un espace limité rend cette solution intéressante et parfois, indispensable. Les réducteurs à roue et vis sans fin combinés sont disponibles dans les séries KX, XX et KK.

Les séries KX et KK sont exclusivement disponibles dans la version p.a.m.

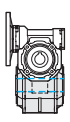
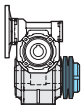
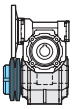
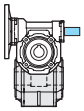
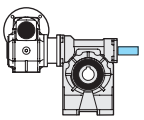
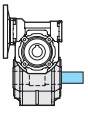
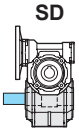
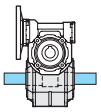
La série XX est disponible dans la version avec arbre XXA et dans les deux versions avec accouplement moteur de forme compacte XXC ou avec cloche et joint XXF.

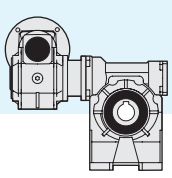
L'arbre de sortie creux est fourni de série. De plus, il existe une vaste gamme d'accessoires : deuxième entrée, roulements coniques sur la roue, bride de sortie, arbre lent avec 1 ou 2 sorties, limiteur de couple creux continu, bras de réaction.

5.2 Nomenclatura

5.2 Designation

5.2 Désignation

REDUCTORES / *GEARBOX* / REDUCTEUR												ACCESORIOS *ACCESSORIES* ACCESSOIRES	
Reductor entrada *Gearbox at input* Réducteur à l'entrée	Maquina salida *Gearbox at output* Réducteur à la sortie	Tipo entrada *Input type* Type d'entrée	Tamaño *Size* Taille	Relación de red. *Ratio* Rapport de réduction	Enganche motor. *Motor coupling* Prédisposition	Versiones *Version* Version	Forma constructiva *Execution* Modèle	Posición de monta. *Mounting position* Position de montage	Eje jueco de salida *Hollow output shaft* Arbre de sortie creux	Limitador de par *Torque limiter* Limiteur de couple	Segunda entrada *Additional input* Deuxième entrée	Eje de salida *Output shaft* Arbre de sortie	Brazo de reacción *Torque arm* Bras de réaction
K	**K**	**C**	**50/110**	**1200**	**P.A.M.**	**F1**	**a**	**B3**	**H42**	**LD**	**SeA1**	**SD**	**BR**
Reductor a rueda y tornillo sin fin combinado *Combined worm gearbox* **Réducteur à roue et vis sans fin combiné**	**C**		**30/30** **30/40** **30/50** **30/63** **40/63** **40/75** **40/89** **40/90** **50/75** **50/89** **50/90** **50/110** **63/110** **63/130**	**150** **200** **300** **450** **600** **900** **1200** **1500** **1950** **2500** **3250** **4000** **5000** **10000**	**56** **63** **71** **80** **90**	**P** **F (1-2-3)** **A (1-2)** **B (1-2)** **V (1-2)**	**ab** **cd** **ef** **gh** **ik** **im** **no** **pq**	**B3** **B6** **B7** **B8** **V5** **V6**	ver tablas *see tables* voir les tableaux 	 **LD**  **LS**	 **SeA1**  **SeA2**	 **SD**  **SS**  **DD**	**BR**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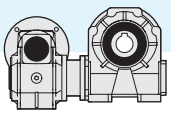
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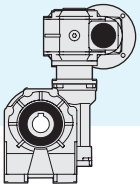
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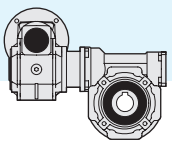
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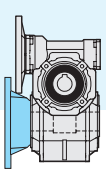
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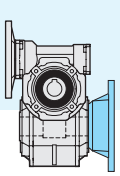
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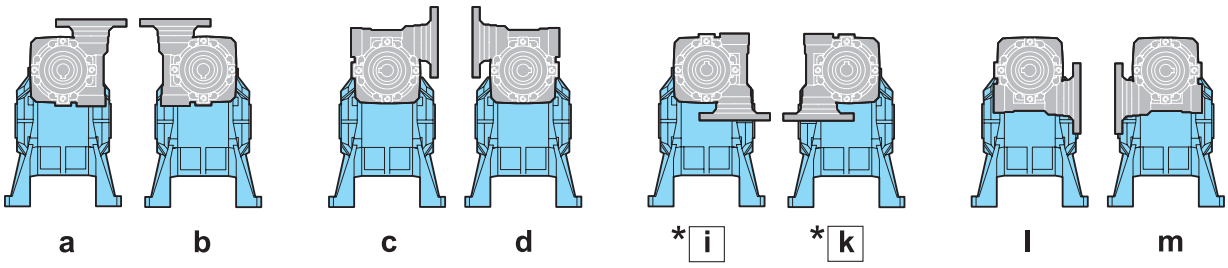
5.2 Nomenclatura — *5.2 Designation* — 5.2 Désignation

Forma constructiva / *version* / Modèle

A



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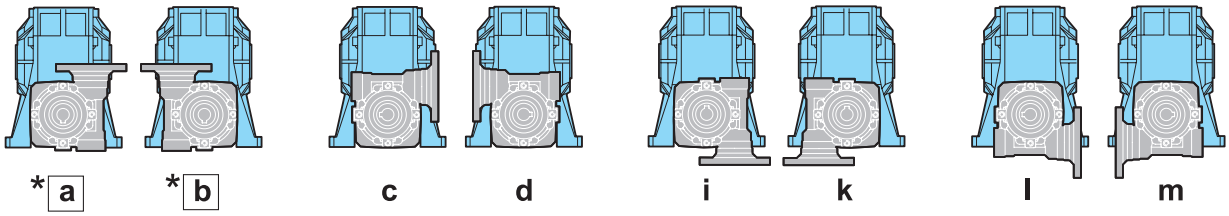

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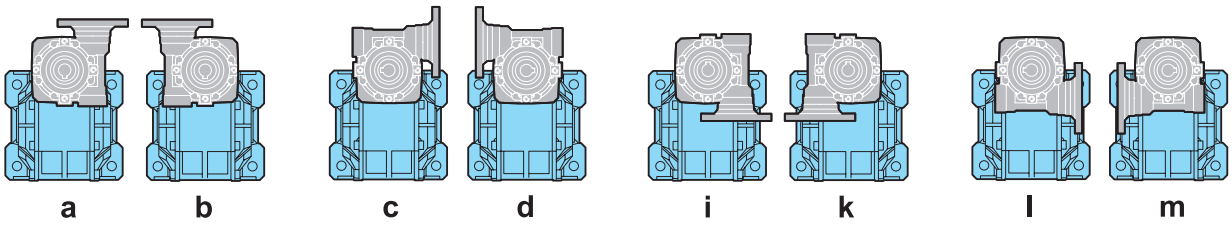

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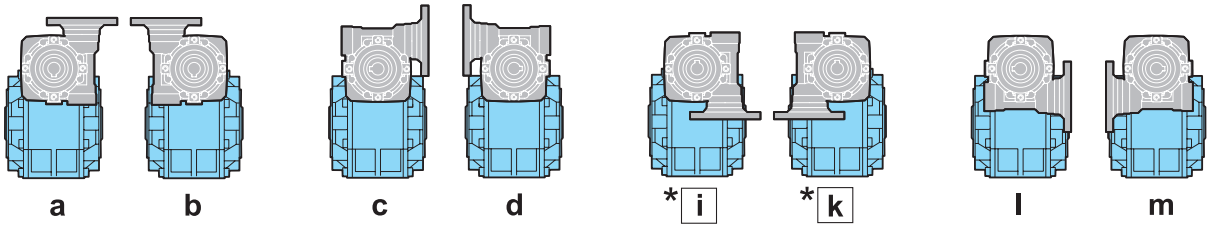

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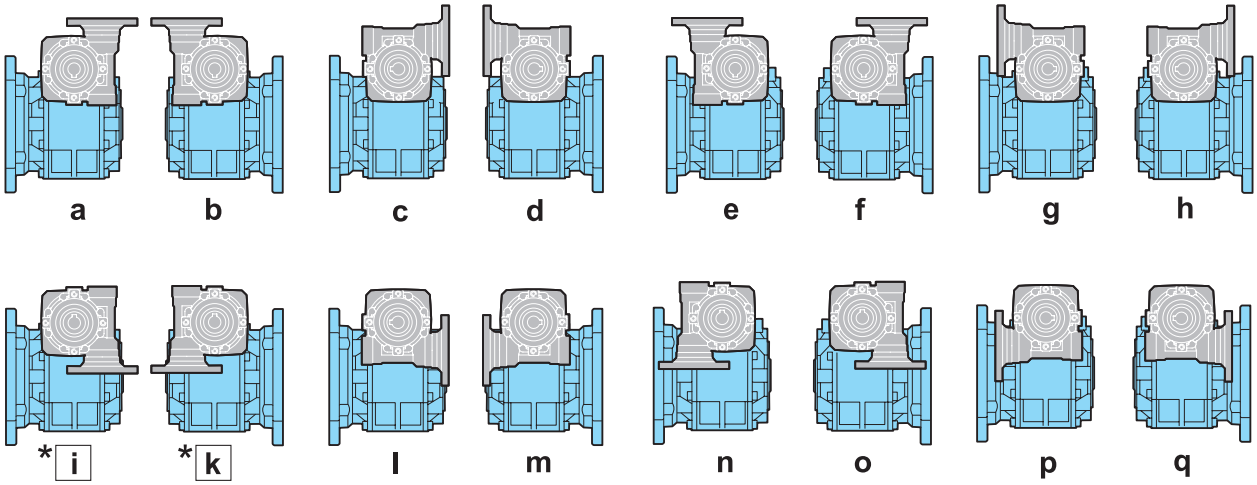
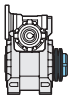
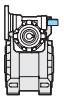
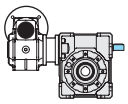
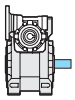
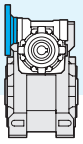


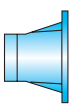
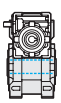
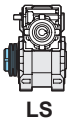
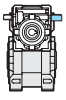
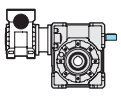
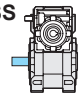
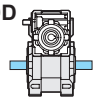
*☐ Forma constructiva no factibles en: / *Version not feasible on:* / Modèle non compatible avec :
30/30, 30/40, 30/50 PAM 63B5 (ø 140), 40/63 PAM 71B5 (ø 160)

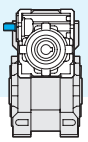
5.2 Nomenclatura — *5.2 Designation* — 5.2 Désignation

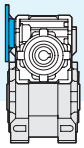
REDUCTORES / *GEARBOX* / REDUCTEUR																		ACCESORIOS *ACCESSORIES* ACCESSOIRES	
Reductor entrada *Gearbox at input* Réducteur à l'entrée	Maquina salida *Gearbox at output* Réducteur à la sortie	Tipo entrada *Input type* Type d'entrée	Tamaño *Size* Taille	Relación de red. *Ratio* Rapport de réduction	Enganche motor. *Motor coupling* Prédisposition	Versiones *Version* Version	Forma constructiva *Execution* Modèle	Posición de monta. *Mounting position* Position de montage	Eje jueco de salida *Hollow output shaft* Arbre de sortie creux	Limitador de par *Torque limiter* Limiteur de couple	Segunda entrada *Additional input* Deuxième entrée	Eje de salida *Output shaft* Arbre de sortie	Brazo de reacción *Torque arm* Bras de réaction
K	**X**	**C**	**50/110**	**1200**	**P.A.M.**	**F1**	**a**	**B3**	**H42**	**LD**	**SeA1**	**SD**	**BR**
Reductor a rueda y tornillo sin fin combinado ***Combined worm gearbox*** **Réducteur à roue et vis sans fin combiné**	**C**	**30/30** **30/40** **30/50** **30/63** **40/63** **40/75** **40/89** **40/90** **50/75** **50/89** **50/90** **50/110** **63/110** **63/130**	**150** **200** **300** **450** **600** **900** **1200** **1500** **1950** **2500** **3250** **4000** **5000** **10000**	**56** **63** **71** **80** **90**	**P** **F** **(1-2-3)**	**ab** **cd** **ef** **gh** **ik** **im** **no** **pq**	**B3** **B6** **B7** **B8** **V5** **V6**	ver tablas *see tables* voir les tableaux	 **LD** **LS**	 **SeA1**  **SeA2**	**SD**  **SS** **DD**	**BR**

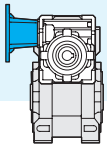
KXC..



REDUCTORES / *GEARBOX* / REDUCTEUR																		ACCESORIOS *ACCESSORIES* ACCESSOIRES	
Reductor entrada *Gearbox at input* Réducteur à l'entrée	Maquina salida *Gearbox at output* Réducteur à la sortie	Tipo entrada *Input type* Type d'entrée	Tamaño *Size* Taille	Relación de red. *Ratio* Rapport de réduction	Enganche motor. *Motor coupling* Prédisposition	Versiones *Version* Version	Forma constructiva *Execution* Modèle	Posición de monta. *Mounting position* Position de montage	Eje jueco de salida *Hollow output shaft* Arbre de sortie creux	Limitador de par *Torque limiter* Limiteur de couple	Segunda entrada *Additional input* Deuxième entrée	Eje de salida *Output shaft* Arbre de sortie	Brazo de reacción *Torque arm* Bras de réaction
X	**X**	**C**	**50/110**	**1200**	**P.A.M.**	**F1**	**a**	**B3**	**H42**	**LD**	**SeA1**	**SD**	**BR**
Reductor a rueda y tornillo sin fin combinado ***Combined worm gearbox*** **Réducteur à roue et vis sans fin combiné**	**A** **C**  **F**	**30/30** **30/40** **30/50** **30/63** **40/63** **40/75** **40/89** **40/90** **50/75** **50/89** **50/90** **50/110** **63/110** **63/130**	**150** **200** **300** **450** **600** **900** **1200** **1500** **1950** **2500** **3250** **4000** **5000** **10000**	**56** **63** **71** **80** **90**	**P** **F** **(1-2-3)**	**ab** **cd** **ef** **gh** **ik** **im** **no** **pq**	**B3** **B6** **B7** **B8** **V5** **V6**	ver tablas *see tables* voir les tableaux 	**LD**  **LS**	 **SeA1**  **SeA2**	**SD** **SS**  **DD** 	**BR**

XXA.. 

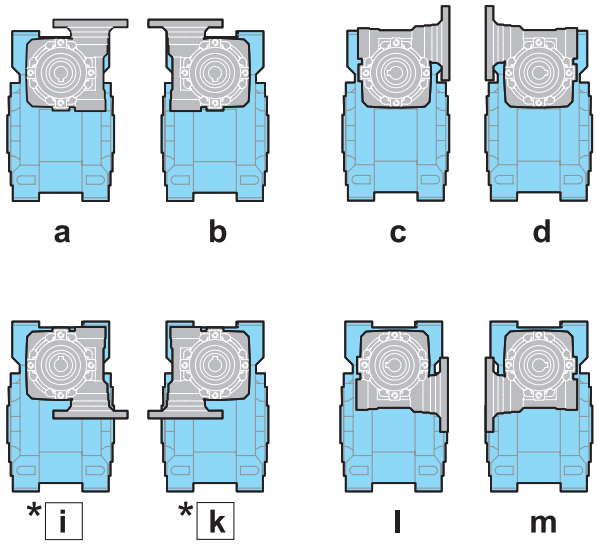
XXC.. 

XXF.. 

5.2 Nomenclatura — *5.2 Designation* — 5.2 Désignation

Forma constructiva / *version* / Modèle

P

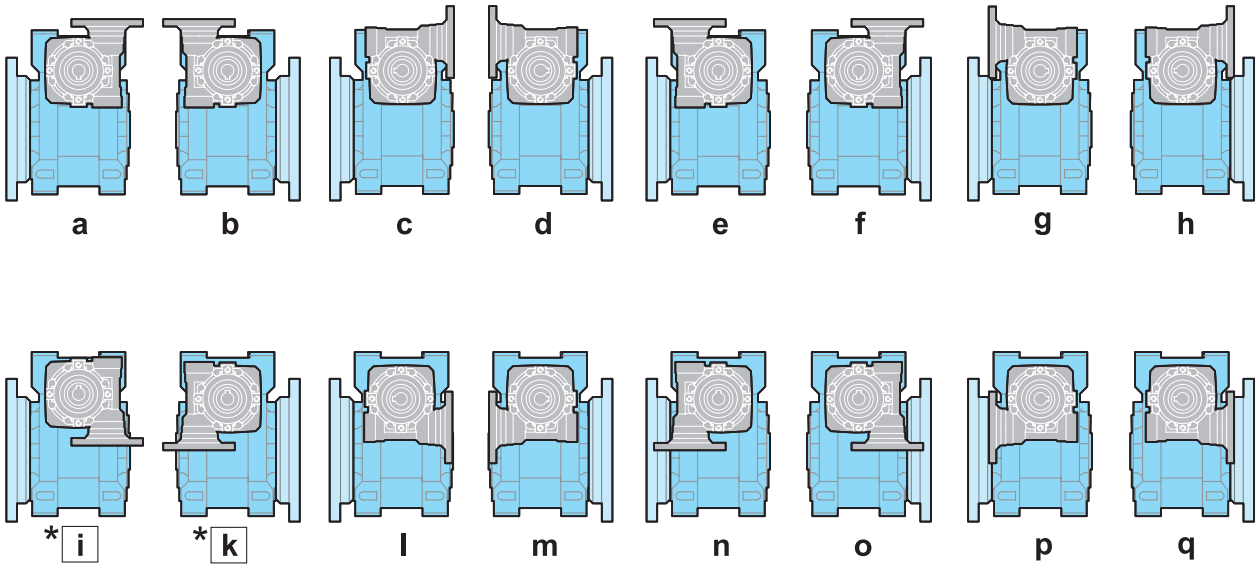


*□

Forma constructiva no factibles en:
Version not feasible on:
Modèle non compatible avec :

30/30, 30/40, 30/50 PAM 63B5 (ø 140),
40/63 PAM 71B5 (ø 160)

F



5.3 Lubricación y posición de montaje

Los reductores tornillos sin fin combinados se entregan completos de lubricante sintético a base PAG con viscosidad ISO VG320. Se recomienda de modo ordenado precisar las fases de la posición de trabajo deseada y la forma constructiva.

Para obtener más detalles, consulte el apartado 1.13 en la pág. 12.

5.3 Lubrication and mounting position

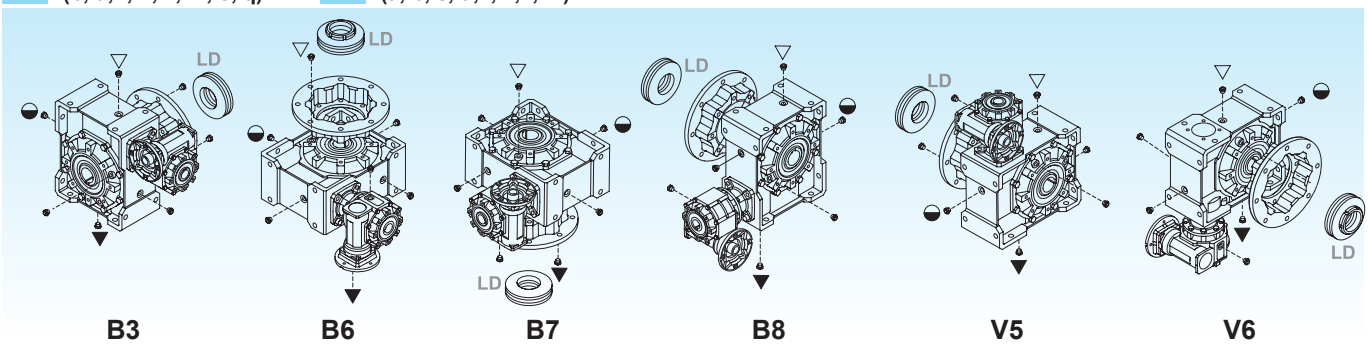
Combined worm gearboxes are supplied with synthetic lubricant, PAG base, viscosity index ISO VG320.
Required version and mounting position always to be specified when ordering.

For more details, see page 12, paragraph 1.13.

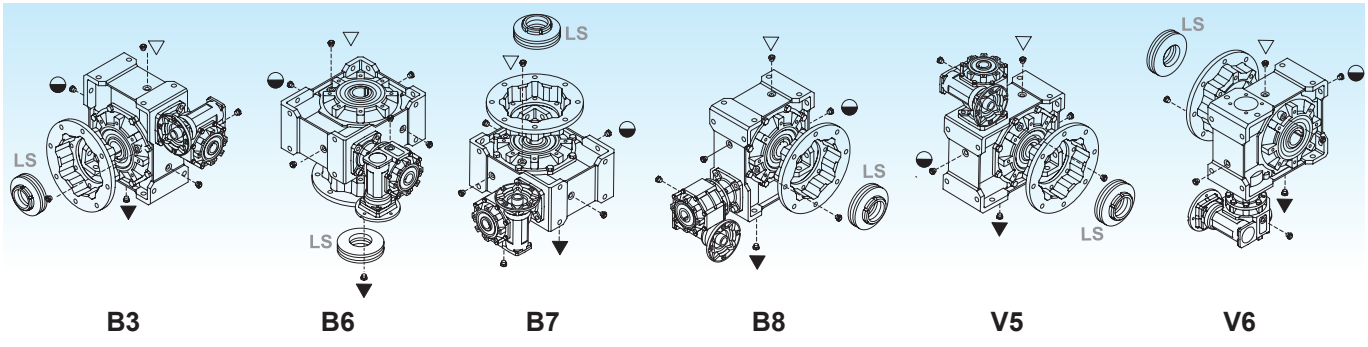
5.3 Lubrification et positions de montage

Les réducteurs à vis sans fin combinés sont livrés avec un lubrifiant synthétique de type PAG ayant un indice de viscosité ISO VG320.
Lors de toute commande, il est recommandé de préciser le modèle et la position de montage désirés.
Pour plus de détails, consulter le paragraphe 1.13 à la page 12.

F **(b, d, f, h, k, m, o, q)** **P** **(a, b, c, d, i, k, l, m)**



F **(a, c, e, g, i, l, n, p)**



▽ Carga y respiradero / *Filling and breather* / Remplissage
◒ Nivel / *Level* / Niveau
▼ Descarga / *Drain* / Vidange

Los cuerpos de aluminio 30, 40, 50, 63, 75 y 89 tiene solamente un tapón de llenado para aceite.

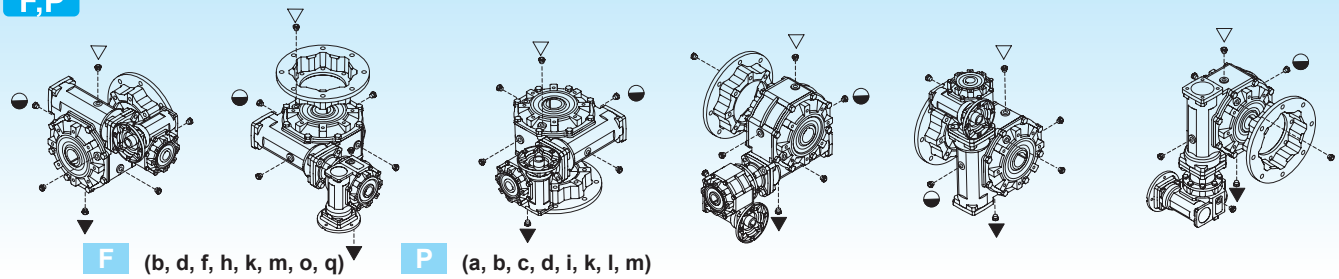
Aluminium housings size 30, 40, 50, 63, 75 and 89 have one filling plug only.

Les carters en aluminium 30, 40, 50, 63, 75 et 89 ont un seul bouchon de remplissage pour l'huile.

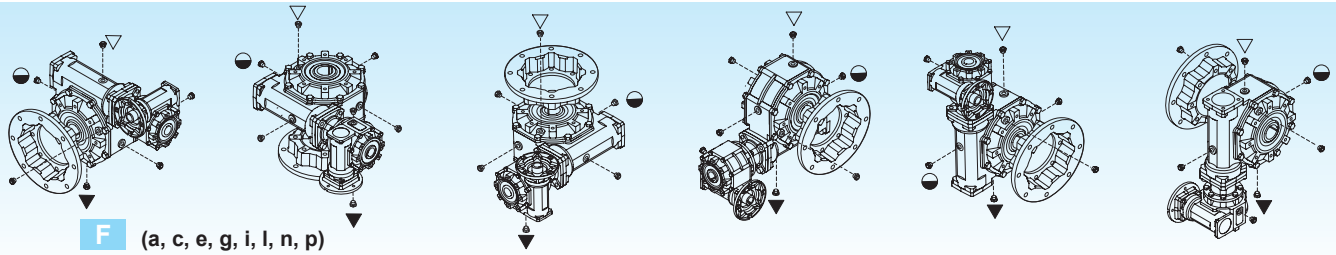
			Cant. de aceite / *Oil quantity* / Q.té d'huile [lt]													
			XXA - XXC - KXC - XXF													
			30/30	**30/40**	**30/50**	**30/63**	**40/63**	**40/75**	**40/89**	**40/90**	**50/75**	**50/89**	**50/90**	**50/110**	**63/110**	**63/130**
Posición de montaje *Mounting positions* Positions de montage	**B3**	**IN**	0.015				0.04				0.08				0.16	0.4
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.45	1.1	0.26	0.45	1.1	2.2	2.2	3.6
	B6	**IN**	0.015				0.04				0.08				0.16	0.4
		OUT	0.030	0.060	0.120	0.220	0.220	0.34	0.75	0.9	0.26	0.75	0.9	1.8	1.8	3.0
	B7	**IN**	0.015				0.04				0.08				0.16	0.4
		OUT	0.030	0.060	0.120	0.220	0.220	0.34	0.75	0.9	0.26	0.75	0.9	1.8	1.8	3.0
	B8	**IN**	0.015				0.04				0.08				0.16	0.4
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.45	1	0.26	0.45	1	1.6	1.6	2.5
	V5	**IN**	0.030				0.06				0.12				0.22	0.22
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.45	1.5	0.26	0.45	1.5	2.6	2.6	3.8
	V6	**IN**	0.030				0.06				0.12				0.22	0.22
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.45	1.5	0.26	0.45	1.5	2.6	2.6	3.8

IN = Reductor en entrada / *Gearbox at input* / Réducteur à l'entrée
OUT = Reductor en salida / *Gearbox at output* / Réducteur à la sortie

F,P

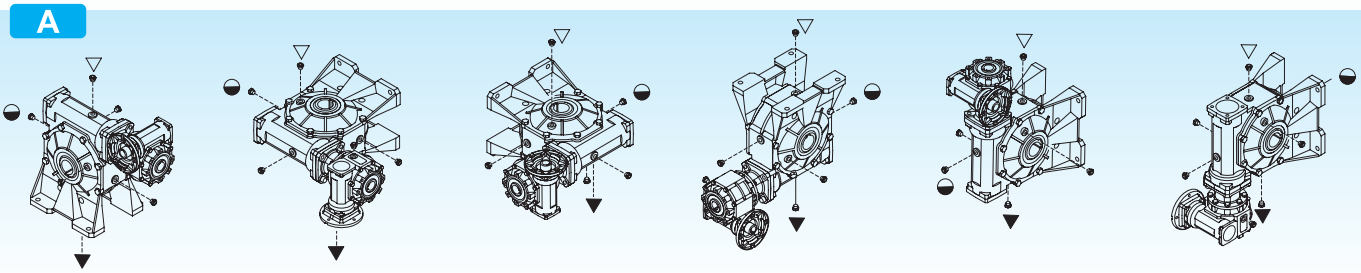


F (b, d, f, h, k, m, o, q) **P** (a, b, c, d, i, k, l, m)

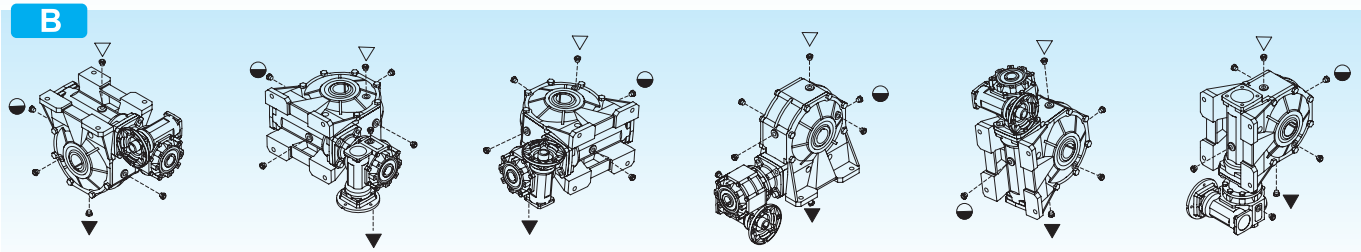


F (a, c, e, g, i, l, n, p)

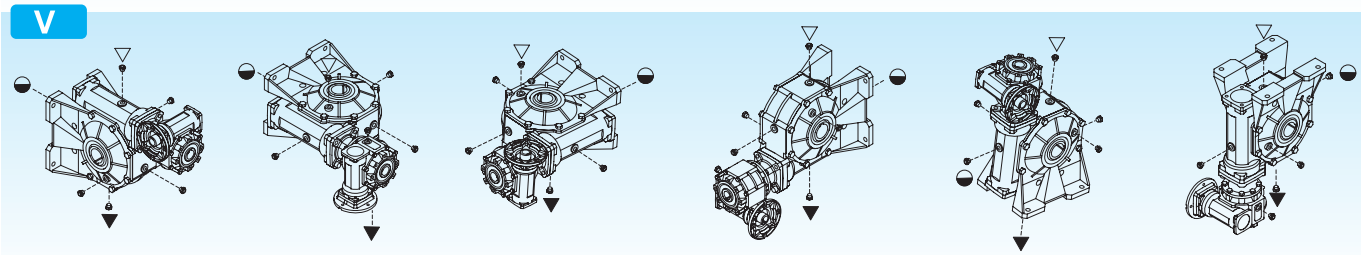
A



B



V



B3 **B6** **B7** **B8** **V5** **V6**

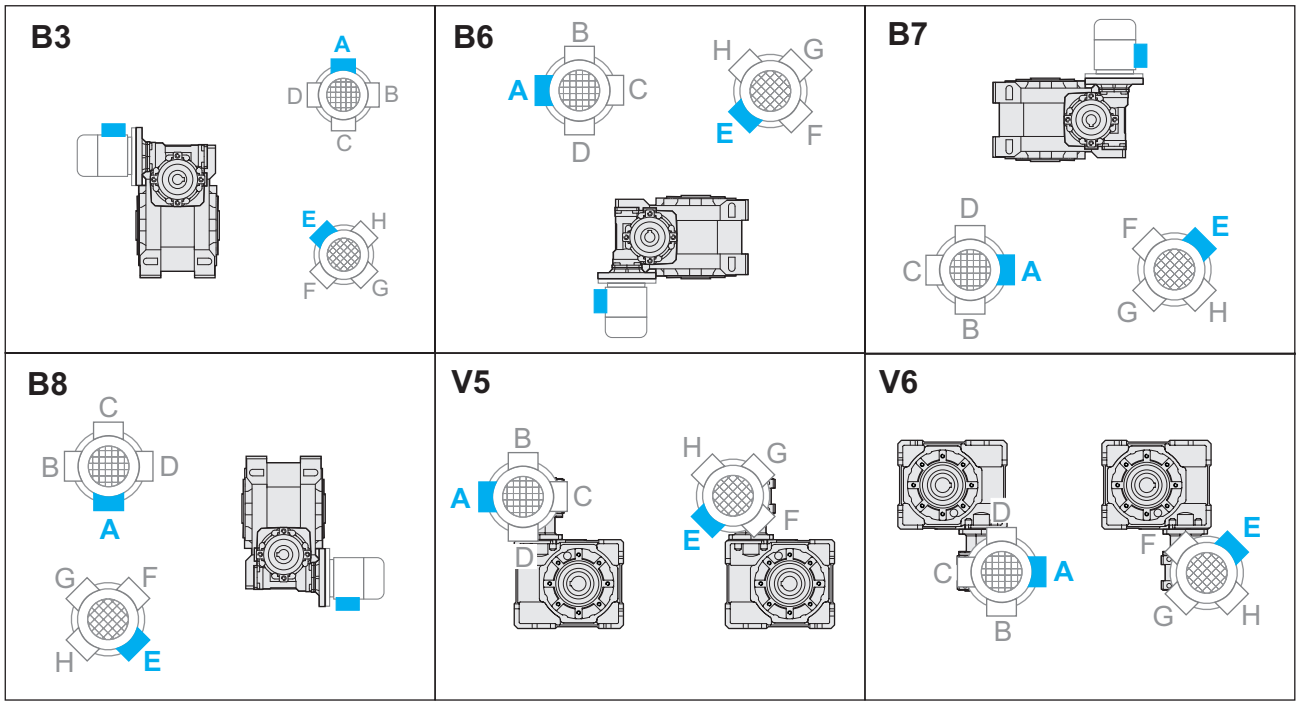
			Cant. de aceite / *Oil quantity* / Q.té d'huile [lt]													
			KKC													
			30/30	**30/40**	**30/50**	**30/63**	**40/63**	**40/75**	**40/89**	**40/90**	**50/75**	**50/89**	**50/90**	**50/110**	**63/110**	**63/130**
Posición de montaje *Mounting positions* Positions de montage	**B3**	**IN**	0.015				0.04				0.08				0.16	0.16
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.60	1	0.26		1	2	2	3
	B6	**IN**	0.015				0.04				0.08				0.16	0.4
		OUT	0.030	0.060	0.120	0.220	0.220	0.340	0.70	0.9	0.26		0.9	1.8	1.8	3.0
	B7	**IN**	0.015				0.04				0.08				0.16	0.4
		OUT	0.030	0.060	0.120	0.220	0.220	0.340	0.70	0.9	0.26		0.9	1.8	1.8	3.0
	B8	**IN**	0.015				0.04				0.08				0.16	0.16
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.60	0.8	0.26		0.8	2	2	2.1
	V5	**IN**	0.030				0.060				0.120				0.220	0.220
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.60	1.5	0.26		1.5	2.6	2.6	3.8
	V6	**IN**	0.030				0.060				0.120				0.220	0.220
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.60	1.5	0.26		1.5	2.6	2.6	3.8

IN = Reductor en entrada / *Gearbox at input* / Réducteur à l'entrée **OUT =** Reductor en salida / *Gearbox at output* / Réducteur à la sortie

5.4 Posición del tablero de borne

5.4 Terminal board position

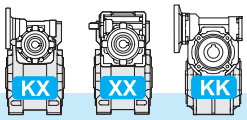
5.4 Position de la boîte à bornes



Especificar siempre y ordenadamente la posición de montaje con su forma constructiva.
Posición del tablero de borne v. pàg. 107-108
(PM=1; PM=2)

Mounting position always to be specified when ordering.
Terminal board position see page 107-108 (PM=1; PM=2)

Lors de toute commande, il est recommandé de préciser la position de montage et le modèle désirés.
Position de la boîte à bornes v. pag.107-108 (PM=1; PM=2)



5.5 Datos técnicos — *5.5 Technical data* — 5.5 Données techniques

30/30

Kg 3.0

n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
	30	30	n_2		T_{2M}	P	T_2	P_1		Input - IEC								
in	i_1	i_2	[min^{-1}]	Rd	[Nm]	[kW]	[Nm]	[kW]	FS'	KC - XC			XF					
										B5/B14			B5			B14		
150		15	9.3	0.51	**37**	0.070	32	0.06	1.2									
200	10	20	7.0	0.47	**32**	0.050	39	0.06	0.8									
300			4.7	0.42	**39**	0.045	52*	0.06	0.8*									
450	15		3.1	0.40	**39**	0.032	73*	0.06	0.5*		**63**							
600	20		2.3	0.37	**39**	0.026	91*	0.06	0.4*									
900	30	30	1.6	0.34	**39**	0.019	125*	0.06	0.3*									
1200	40		1.2	0.30	**39**	0.016	149*	0.06	0.3*									
1500	50		0.9	0.28	**39**	0.014	173*	0.06	0.2*	—		**56**	—	**63**	**56**	—	**63**	**56**
1950	65		0.7	0.26	**39**	0.011	209*	0.06	0.2*		—							
2500	50		0.6	0.23	**30**	0.008	235*	0.06	0.1*		**63**							
3250	65	50	0.4	0.21	**30**	0.006	283*	0.06	0.11*									
4000	80		0.4	0.20	**30**	0.005	328*	0.06	0.09*		—							
5000	100		0.3	0.19	**30**	0.005	385*	0.06	0.08*									
10000		100	0.1	0.15	**17**	0.002	609*	0.06	0.03*									

30/40

Kg 4.0

n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
	30	40	n_2		T_{2M}	P	T_2	P_1		Input - IEC								
in	i_1	i_2	[min^{-1}]	Rd	[Nm]	[kW]	[Nm]	[kW]	FS'	KC - XC			XF					
										B5/B14			B5			B14		
150		15	9.3	0.54	**82**	0.148	72	0.13	1.1									
200	10	20	7.0	0.51	**76**	0.110	76	0.11	1.0									
300			4.7	0.43	**82**	0.094	79	0.09	1.0									
450	15		3.1	0.40	**82**	0.067	74	0.06	1.1		**63**							
600	20		2.3	0.37	**82**	0.054	92	0.06	0.9									
900	30	30	1.6	0.34	**82**	0.039	126*	0.06	0.6*									
1200	40		1.2	0.31	**82**	0.033	151*	0.06	0.5*									
1500	50		0.9	0.29	**82**	0.028	176*	0.06	0.5*	—		**56**	—	**63**	**56**	—	**63**	**56**
1950	65		0.7	0.27	**82**	0.023	212*	0.06	0.4*		—							
2500	50		0.6	0.23	**68**	0.017	236*	0.06	0.3*		**63**							
3250	65	50	0.4	0.21	**68**	0.014	285*	0.06	0.24*									
4000	80		0.4	0.20	**68**	0.012	330*	0.06	0.21*		—							
5000	100		0.3	0.19	**68**	0.011	387*	0.06	0.18*									
10000		100	0.1	0.15	**35**	0.003	626*	0.06	0.06*									

30/50

Kg 6.0

n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
	30	50	n_2		T_2	P	T_2	P_1		Input - IEC								
in	i_1	i_2	[min^{-1}]	Rd	[Nm]	[kW]	[Nm]	[kW]	FS'	KC - XC			XF					
										B5/B14			B5			B14		
150		15	9.3	0.55	**149**	0.265	124	0.22	1.2									
200	10	20	7.0	0.52	**144**	0.201	129	0.18	1.1									
300			4.7	0.44	**150**	0.166	118	0.13	1.3									
450	15		3.1	0.42	**150**	0.118	140	0.11	1.1		**63**							
600	20		2.3	0.39	**150**	0.094	143	0.09	1.0									
900	30	30	1.6	0.36	**150**	0.069	131	0.06	1.1									
1200	40		1.2	0.32	**150**	0.058	156	0.06	1.0									
1500	50		0.9	0.30	**150**	0.049	182	0.06	0.8	—		**56**	—	**63**	**56**	—	**63**	**56**
1950	65		0.7	0.28	**150**	0.041	220*	0.06	0.7*		—							
2500	50		0.6	0.25	**125**	0.030	253*	0.06	0.5*		**63**							
3250	65	50	0.4	0.23	**125**	0.025	305*	0.06	0.41*									
4000	80		0.4	0.22	**125**	0.021	354*	0.06	0.35*		—							
5000	100		0.3	0.20	**125**	0.018	414*	0.06	0.30*									
10000		100	0.1	0.16	**69**	0.006	645*	0.06	0.11*									

*** ATENCION:** el par máximo utilizable [T_{2M}] deberá calcularse con respecto al factor de servicio: $T_{2M} = T_2 \times FS'$

**** WARNING:** Maximum allowable torque [T_{2M}] must be calculated using the following service factor : $T_{2M} = T_2 \times FS'$*

*** ATTENTION :** le couple maximum admissible [T_{2M}] se calcule en utilisant le facteur de service suivant : $T_{2M} = T_2 \times FS'$

5.5 Datos técnicos — *5.5 Technical data* — 5.5 Données techniques

30/63

Kg 8.5

in	30 i_1	63 i_2	n_2 [min^{-1}]	Rd	XXA T_{2M} [Nm]	XXA P [kW]	KXC - XXC - XXF - KKC T_2 [Nm]	P_1 [kW]	FS'	Input - IEC: KC - XC B5/B14	XF B5	XF B14
150	10	15	9.3	0.56	**228**	0.400	126	0.22	1.8	—	**63**	**56**	—	**63**	**56**	—	**63**	**56**
200		20	7.0	0.54	**279**	0.378	162	0.22	1.7									
300		30	4.7	0.46	**268**	0.285	207	0.22	1.3									
450	15		3.1	0.43	**268**	0.202	238	0.18	1.1									
600	20		2.3	0.40	**268**	0.162	215	0.13	1.2									
900	30		1.6	0.37	**268**	0.118	250	0.11	1.1									
1200	40		1.2	0.33	**268**	0.099	243	0.09	1.1									
1500	50		0.9	0.31	**268**	0.085	189	0.06	1.4									
1950	65		0.7	0.29	**268**	0.071	228	0.06	1.2		—							
2500	50	50	0.6	0.26	**222**	0.050	265	0.06	0.8		**63**							
3250	65		0.4	0.24	**222**	0.042	319*	0.06	0.70*									
4000	80		0.4	0.23	**222**	0.036	369*	0.06	0.60*		—							
5000	100		0.3	0.21	**222**	0.031	433*	0.06	0.51*									
10000		100	0.1	0.16	**138**	0.012	663*	0.06	0.21*									

40/63

Kg 9.5

in	40 i_1	63 i_2	n_2 [min^{-1}]	Rd	XXA T_{2M} [Nm]	XXA P [kW]	KXC - XXC - XXF - KKC T_2 [Nm]	P_1 [kW]	FS'	Input - IEC: KC - XC B5/B14	XF B5	XF B14
150	10	15	9.3	0.56	**261**	0.452	214	0.37	1.2	**71**	—	**63**	**71**	**63**	**56**	**71**	**63**	—
200		20	7.0	0.55	**279**	0.373	277	0.37	1.0									
300		30	4.7	0.46	**268**	0.282	238	0.25	1.1									
450	15		3.1	0.44	**268**	0.197	244	0.18	1.1									
600	20		2.3	0.43	**268**	0.154	226	0.13	1.2									
900	30		1.6	0.38	**268**	0.115	257	0.11	1.0									
1200	40		1.2	0.36	**268**	0.091	264	0.09	1.0									
1500	50		0.9	0.33	**268**	0.079	203	0.06	1.3	—		**56**						
1950	65		0.7	0.30	**268**	0.067	241	0.06	1.1									
2500	50	50	0.6	0.28	**222**	0.047	284	0.06	0.8									
3250	65		0.4	0.25	**222**	0.039	338*	0.06	0.66*									
4000	80		0.4	0.24	**222**	0.033	400*	0.06	0.55*									
5000	100		0.3	0.23	**222**	0.028	471*	0.06	0.47*									
10000		100	0.1	0.18	**138**	0.011	722*	0.06	0.19*									

40/75

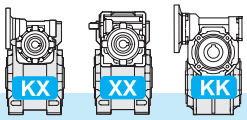
Kg 14.5

in	40 i_1	75 i_2	n_2 [min^{-1}]	Rd	XXA T_{2M} [Nm]	XXA P [kW]	KXC - XXC - XXF - KKC T_2 [Nm]	P_1 [kW]	FS'	Input - IEC: KC - XC B5/B14	XF B5	XF B14
150	10	15	9.3	0.57	**409**	0.698	322	0.55	1.3	**71**	—	**63**	**71**	**63**	**56**	**71**	**63**	—
200		20	7.0	0.56	**442**	0.583	417	0.55	1.1									
300		30	4.7	0.47	**418**	0.432	358	0.37	1.2									
450	15		3.1	0.45	**418**	0.302	346	0.25	1.2									
600	20		2.3	0.43	**418**	0.236	390	0.22	1.1									
900	30		1.6	0.39	**418**	0.176	309	0.13	1.4									
1200	40		1.2	0.36	**418**	0.140	388	0.13	1.1									
1500	50		0.9	0.34	**418**	0.121	379	0.11	1.1	—		**56**						
1950	65		0.7	0.31	**418**	0.102	368	0.09	1.1									
2500	50	50	0.6	0.29	**381**	0.077	296	0.06	1.3									
3250	65		0.4	0.26	**381**	0.065	352	0.06	1.08									
4000	80		0.4	0.25	**381**	0.055	417	0.06	0.91									
5000	100		0.3	0.24	**381**	0.047	491*	0.06	0.78*									
10000		100	0.1	0.19	**232**	0.018	762*	0.06	0.30*									

*** ATENCION:** el par máximo utilizable [T_{2M}] deberá calcularse con respecto al factor de servicio: $T_{2M} = T_2 \times FS'$

**** WARNING:** Maximum allowable torque [T_{2M}] must be calculated using the following service factor : $T_{2M} = T_2 \times FS'$*

*** ATTENTION :** le couple maximum admissible [T_{2M}] se calcule en utilisant le facteur de service suivant : $T_{2M} = T_2 \times FS'$



5.5 Datos técnicos — *5.5 Technical data* — 5.5 Données techniques

50/75

Kg 16.5

n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
in	50	75	n_2	Rd	T_{2M}	P	T_2	P_1	FS'	Input - IEC								
	i_1	i_2	[min^{-1}]		[Nm]	[kW]	[Nm]	[kW]		KC - XC			XF					
										B5/B14			B5			B14		
150	10	15	9.3	0.57	**409**	0.750	409	0.75	1.0	**80**	**71**	—	**80**	**71**	**63**	**80**	**71**	—
200		20	7.0	0.56	**442**	0.576	422	0.55	1.0									
300		30	4.7	0.48	**418**	0.427	363	0.37	1.2									
450	15		3.1	0.46	**418**	0.299	350	0.25	1.2									
600	20		2.3	0.42	**418**	0.250	418	0.25	1.0									
900	30		1.6	0.40	**418**	0.180	418	0.18	1.0									
1200	40		1.2	0.38	**418**	0.134	406	0.13	1.0									
1500	50		0.9	0.35	**418**	0.116	470	0.13	0.9	—		63						
1950	65		0.7	0.33	**418**	0.095	572*	0.13	0.7*									
2500	50	50	0.6	0.30	**381**	0.074	674*	0.13	0.6*									
3250	65		0.4	0.28	**381**	0.060	819*	0.13	0.47*									
4000	80		0.4	0.26	**381**	0.053	939*	0.13	0.41*									
5000	100		0.3	0.25	**381**	0.045	1108*	0.13	0.34*									
10000		100	0.1	0.19	**232**	0.018	1719*	0.13	0.13*									

40/89

Kg 15.4

n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
in	40	90	n_2	Rd	T_{2M}	P	T_2	P_1	FS'	Input - IEC								
	i_1	i_2	[min^{-1}]		[Nm]	[kW]	[Nm]	[kW]		KC - XC			XF					
										B5/B14			B5			B14		
150	10	15	9.3	0.58	**392**	0.659	327	0.55	1.2	**71**	**63**	—	**71**	**63**	**56**	**71**	**63**	—
200		20	7.0	0.56	**504**	0.654	424	0.55	1.2									
300		30	4.7	0.48	**606**	0.615	542	0.55	1.1									
450	15		3.1	0.46	**606**	0.430	520	0.37	1.2									
600	20		2.3	0.44	**606**	0.336	457	0.25	1.3									
900	30		1.6	0.39	**606**	0.250	605	0.25	1.0									
1200	40		1.2	0.37	**606**	0.199	668	0.22	0.9									
1500	50		0.9	0.34	**594**	0.169	630	0.18	0.9	—		56						
1950	65		0.7	0.31	**558**	0.134	542	0.13	1.0									
2500	50	50	0.6	0.30	**571**	0.112	564	0.11	1.0									
3250	65		0.4	0.28	**571**	0.094	549	0.09	1.0									
4000	80		0.4	0.27	**571**	0.079	651	0.09	0.88									
5000	100		0.3	0.25	**571**	0.067	767*	0.09	0.74*									
10000		100	0.1	0.19	**361**	0.028	1173*	0.09	0.31*									

40/90

Kg 27

n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
in	40	90	n_2	Rd	T_{2M}	P	T_2	P_1	FS'	Input - IEC								
	i_1	i_2	[min^{-1}]		[Nm]	[kW]	[Nm]	[kW]		KC - XC			XF					
										B5/B14			B5			B14		
150	10	15	9.3	0.58	**435**	0.732	327	0.55	1.3	**71**	**63**	—	**71**	**63**	**56**	**71**	**63**	—
200		20	7.0	0.56	**560**	0.727	424	0.55	1.3									
300		30	4.7	0.48	**673**	0.683	542	0.55	1.2									
450	15		3.1	0.46	**673**	0.478	520	0.37	1.3									
600	20		2.3	0.44	**673**	0.373	668	0.37	1.0									
900	30		1.6	0.39	**673**	0.278	605	0.25	1.1									
1200	40		1.2	0.37	**673**	0.221	668	0.22	1.0									
1500	50		0.9	0.34	**660**	0.188	630	0.18	1.0	—		56						
1950	65		0.7	0.31	**620**	0.149	542	0.13	1.1									
2500	50	50	0.6	0.30	**634**	0.124	564	0.11	1.1									
3250	65		0.4	0.28	**634**	0.104	549	0.09	1.2									
4000	80		0.4	0.27	**634**	0.088	651	0.09	0.97									
5000	100		0.3	0.25	**634**	0.074	767	0.09	0.83									
10000		100	0.1	0.19	**401**	0.031	1173*	0.09	0.34*									

*** ATENCION:** el par máximo utilizable [T_{2M}] deberá calcularse con respecto al factor de servicio: $T_{2M} = T_2 \times FS'$

**** WARNING:** Maximum allowable torque [T_{2M}] must be calculated using the following service factor : $T_{2M} = T_2 \times FS'$*

*** ATTENTION :** le couple maximum admissible [T_{2M}] se calcule en utilisant le facteur de service suivant : $T_{2M} = T_2 \times FS'$

5.5 Datos técnicos — *5.5 Technical data* — 5.5 Données techniques

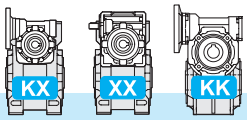
	n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
		50	90	n_2		T_{2M}	P	T_2	P_1		Input - IEC								
	in	i_1	i_2	[min^{-1}]	Rd	[Nm]	[kW]	[Nm]	[kW]	FS'	KC - XC			XF					
											B5/B14			B5			B14		
50/89	150	10	15	9.3	0.59	590	0.980	541	0.90	1.1	80	71	—	80	71	63	80	71	—
	200		20	7.0	0.57	638	0.819	584	0.75	1.1									
	300		30	4.7	0.49	606	0.608	548	0.55	1.1									
	450	15		3.1	0.46	606	0.426	527	0.37	1.1									
	600	20		2.3	0.45	606	0.327	463	0.25	1.3									
	900	30		1.6	0.41	606	0.239	632	0.25	1.0									
	1200	40		1.2	0.39	606	0.191	573	0.18	1.1									
	1500	50		0.9	0.36	606	0.165	662	0.18	0.9	—		63						
Kg	1950	65		0.7	0.34	606	0.135	582	0.13	1.0									
	2500	50	50	0.6	0.32	571	0.106	701	0.13	0.8									
17	3250	65		0.4	0.30	571	0.087	853*	0.13	0.67*									
	4000	80		0.4	0.28	571	0.076	977*	0.13	0.58*									
	5000	100		0.3	0.26	571	0.064	1153*	0.13	0.49*									
	10000		100	0.1	0.20	361	0.027	1764*	0.13	0.20*									

	n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
		50	90	n_2		T_{2M}	P	T_2	P_1		Input - IEC								
	in	i_1	i_2	[min^{-1}]	Rd	[Nm]	[kW]	[Nm]	[kW]	FS'	KC - XC			XF					
											B5/B14			B5			B14		
50/90	150	10	15	9.3	0.59	655	1.089	541	0.90	1.2	80	71	—	80	71	63	80	71	—
	200		20	7.0	0.57	709	0.910	584	0.75	1.2									
	300		30	4.7	0.49	673	0.675	548	0.55	1.2									
	450	15		3.1	0.46	673	0.473	527	0.37	1.3									
	600	20		2.3	0.45	673	0.363	463	0.25	1.5									
	900	30		1.6	0.41	673	0.266	632	0.25	1.1									
	1200	40		1.2	0.39	673	0.212	573	0.18	1.2									
	1500	50		0.9	0.36	673	0.183	662	0.18	1.0	—		63						
Kg	1950	65		0.7	0.34	673	0.150	582	0.13	1.2									
	2500	50	50	0.6	0.32	634	0.118	701	0.13	0.9									
29	3250	65		0.4	0.30	634	0.097	853*	0.13	0.74*									
	4000	80		0.4	0.28	634	0.084	977*	0.13	0.65*									
	5000	100		0.3	0.26	634	0.071	1153*	0.13	0.55*									
	10000		100	0.1	0.20	401	0.030	1764*	0.13	0.23*									

*** ATENCION:** el par máximo utilizable [T_{2M}] deberá calcularse con respecto al factor de servicio: $T_{2M} = T_2 \times FS'$

**** WARNING:** Maximum allowable torque [T_{2M}] must be calculated using the following service factor : $T_{2M} = T_2 \times FS'$*

*** ATTENTION :** le couple maximum admissible [T_{2M}] se calcule en utilisant le facteur de service suivant : $T_{2M} = T_2 \times FS'$



5.5 Datos técnicos — *5.5 Technical data* — 5.5 Données techniques

50/110

n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
in	50	110	n_2	Rd	T_{2M}	P	T_2	P_1	FS'	Input - IEC								
	i_1	i_2	[min^{-1}]		[Nm]	[kW]	[Nm]	[kW]		KC - XC			XF					
										B5/B14			B5			B14		
150		15	9.3	0.60	785	1.269	557	0.9	1.4									
200	10	20	7.0	0.58	1000	1.265	712	0.9	1.4									
300			4.7	0.50	1165	1.130	928	0.9	1.3									
450	15		3.1	0.48	1165	0.791	1105	0.75	1.1	80		—						
600	20		2.3	0.47	1165	0.608	1054	0.55	1.1									
900	30	30	1.6	0.43	1165	0.445	968	0.37	1.2									
1200	40		1.2	0.40	1165	0.354	823	0.25	1.4									
1500	50		0.9	0.37	1165	0.306	952	0.25	1.2		71		80	71	63	80	71	—
1950	65		0.7	0.35	1150	0.248	1018	0.22	1.1									
2500	50		0.6	0.33	1119	0.200	1009	0.18	1.1									
3250	65	50	0.4	0.31	1119	0.164	886	0.13	1.26	—		63						
4000	80		0.4	0.29	1119	0.143	1015	0.13	1.10									
5000	100		0.3	0.27	1119	0.121	1198	0.13	0.93									
10000		100	0.1	0.21	727	0.051	1854*	0.13	0.39*									

Kg 49

63/110

n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
in	63	110	n_2	Rd	T_{2M}	P	T_2	P_1	FS'	Input - IEC								
	i_1	i_2	[min^{-1}]		[Nm]	[kW]	[Nm]	[kW]		KC - XC			XF					
										B5/B14			B5			B14		
150		15	9.3	0.61	1123	1.793	939	1.5	1.2									
200	10	20	7.0	0.59	1229	1.536	1200	1.5	1.0									
300			4.7	0.51	1165	1.116	1148	1.1	1.0									
450	15		3.1	0.49	1165	0.781	1119	0.75	1.0	90		—						
600	20		2.3	0.48	1165	0.593	1081	0.55	1.1									
900	30	30	1.6	0.44	1165	0.433	995	0.37	1.2									
1200	40		1.2	0.40	1165	0.370	1165	0.37	1.0									
1500	50		0.9	0.39	1165	0.292	998	0.25	1.2		80		90	80	71	90	80	—
1950	65		0.7	0.37	1165	0.239	1217	0.25	1.0									
2500	50		0.6	0.34	1119	0.190	1469	0.25	0.8									
3250	65	50	0.4	0.32	1119	0.156	1792*	0.25	0.62*	—		71						
4000	80		0.4	0.31	1119	0.133	2097*	0.25	0.53*									
5000	100		0.3	0.28	1119	0.117	2395*	0.25	0.47*									
10000		100	0.1	0.22	727	0.049	3706*	0.25	0.20*									

Kg 52

63/130

n_1 = 1400					XXA		KXC - XXC - XXF - KKC											
in	63	130	n_2	Rd	T_{2M}	P	T_2	P_1	FS'	Input - IEC								
	i_1	i_2	[min^{-1}]		[Nm]	[kW]	[Nm]	[kW]		KC - XC			XF					
										B5/B14			B5			B14		
150		15	9.3	0.64	1438	2.2	1176	1.8	1.2									
200	10	20	7	0.61	1831	2.2	1498	1.8	1.2									
300			4.7	0.53	1890	1.7	1627	1.5	1.2									
450	15		3.1	0.49	1890	1.3	1655	1.1	1.1	90		—						
600	20		2.3	0.47	1890	0.98	1731	0.9	1.1									
900	30	30	1.6	0.42	1890	0.73	1934	0.75	1									
1200	40		1.2	0.39	1890	0.59	1756	0.55	1.1									
1500	50		0.9	0.36	1890	0.51	2026	0.55	0.9		80		90	80	71	90	80	—
1950	65		0.7	0.34	1890	0.42	1673	0.37	1.1									
2500	50		0.6	0.33	1920	0.34	2082	0.37	0.9									
3250	65	50	0.4	0.3	1920	0.29	1663	0.25	1.2	—		71						
4000	80		0.4	0.29	1920	0.24	1978	0.25	1.1									
5000	100		0.3	0.26	1920	0.22	2217	0.25	0.9									
10000		100	0.1	0.2	1276	0.09	3411	0.25	0.4									

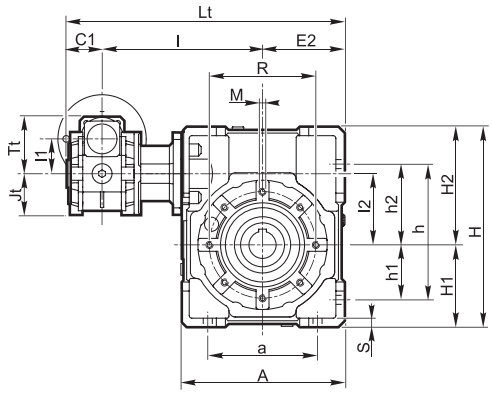
Kg 63

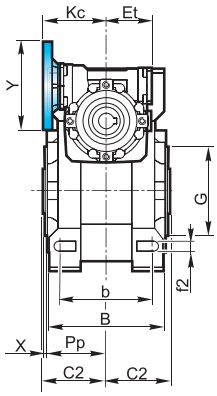
*** ATENCION:** el par máximo utilizable [T_{2M}] deberá calcularse con respecto al factor de servicio: $T_{2M} = T_2 \times FS'$

**** WARNING:** Maximum allowable torque [T_{2M}] must be calculated using the following service factor : $T_{2M} = T_2 \times FS'$*

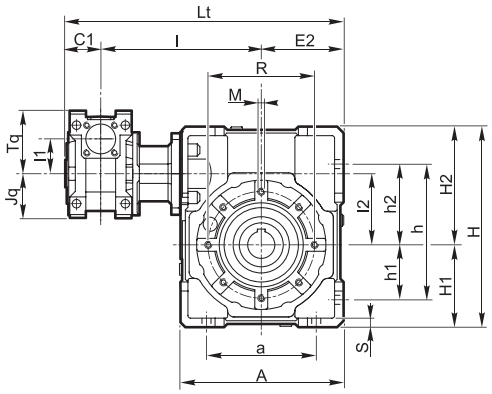
*** ATTENTION :** le couple maximum admissible [T_{2M}] se calcule en utilisant le facteur de service suivant : $T_{2M} = T_2 \times FS'$

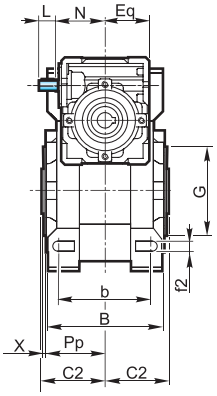
KXC



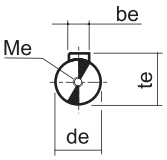


XXA

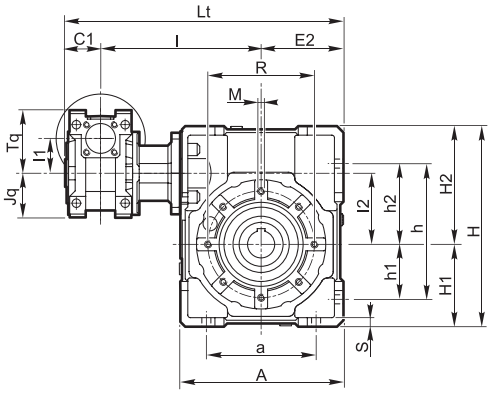


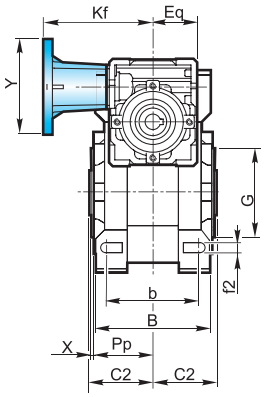


Eie de entrada
Input shaft
Arbre d'entrée

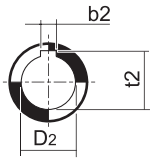


XXF

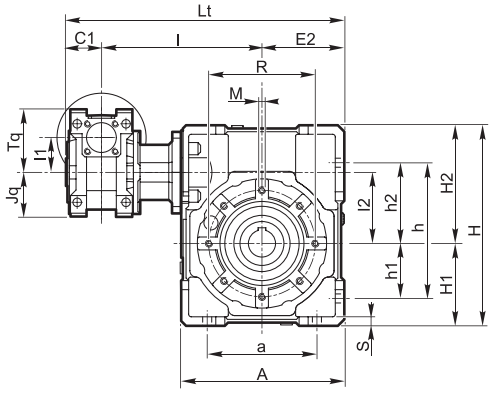


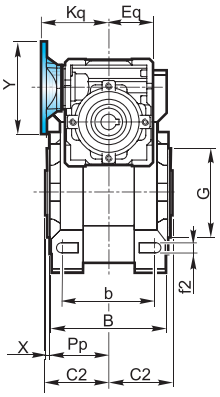


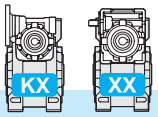
Eie jueco de consulte
Output hollow shaft
Arbre de sortie creux



XXC



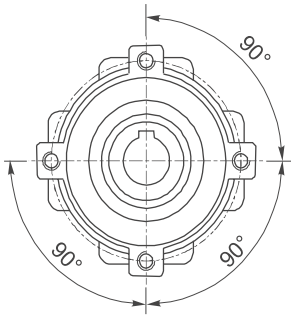




5.6 Tamaño — *5.6 Dimensions* — 5.6 Dimensions

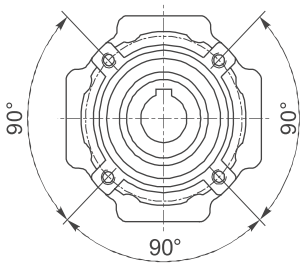
Brida pendular / *Side cover for shaft mounting* / Bride pendulaire

30/30



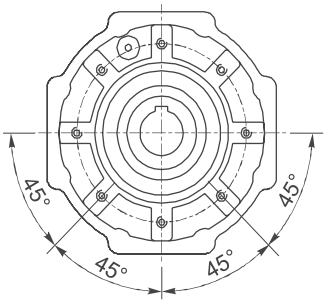
4 Agujeros / *Holes* / Trous

30/40 - 30/50



4 Agujeros / *Holes* / Trous

30/63 - 40/63 - 40/75 - 40/89 - 40/90
50/75 - 50/89 - 50/90 - 50/110
63/110 - 63/130

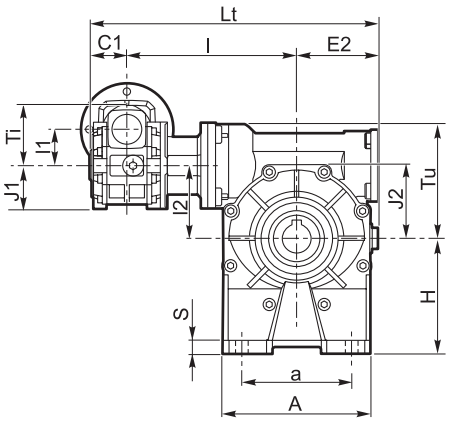


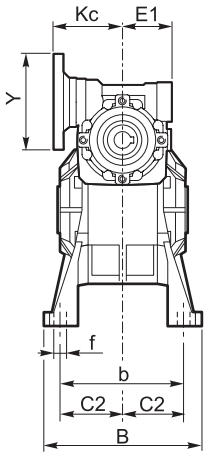
8 Agujeros / *Holes* / Trous

	KXC - XXC - XXF -XXA																				
	a	A	b	be	b_2		B	C_1	C_2	de	D_2 H8		Et	Eq	E_2	f_2	G h8	h	h_1	h_2	H	H_1	H_2
30/30	54	80	44	3	**5**	—	56	31.5	31.5	9	**14**	—	41	40	40	6.5	55	71	27	44	97	40	57
30/40	70	105	60		**6**	6	71		39		**18**	19			50	6.5	60	90	35	55	125	50	75
30/50	80	125	70		**8**	8	85		46		**25**	24			60	8.5	70	104	40	64	150	60	90
30/63	100	147	85			—	103		56			—			72	9	80	130	50	80	182	72	110
40/63				4				39		11			51	50									
40/75	120	176	90		**8**	8	112		60		**28**	30			86	11	95	153	60	93	219.5	86	133.5
50/75				5				46		14			60	60									
40/89 **40/90**	140	203	100	4	**10**	—	130	39	70	11	**35**	—	51	50	103	13	110	172	70	102	248.5	103	145.5
50/89 **50/90**				5				46		14			60	60									
50/110	170	252.5	115		**12**	—	143		77.5		**42**	—			127.5	14	130	210	85	125	310.5	127.5	183
63/110				6				56		19			71	72									
63/130	200	292.5	120	6	**14**	14	155	56	85	19	**45**	48	—	72	147.5	15	180	240	100	140	355	147.5	207.5

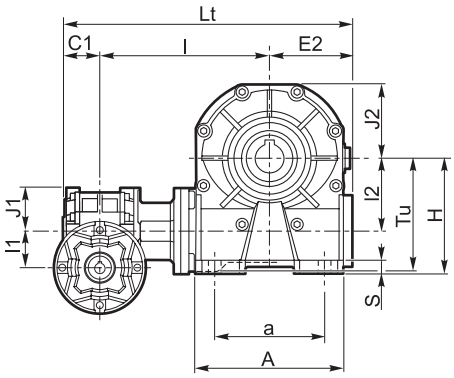
	KXC - XXC - XXF -XXA																				
	l	l_1	l_2	Jt	Jq	K_c	K_q	L	L_t	M	Me	N	P_P	R	S	Tt	Tq	t_e	t_2		X
30/30	100	31.5	31.5	37.5	40	57	57	15	171.5	M6x8	M4x10	44.5	29	65	5.5	52.5	57	10.2	16.3	—	1.5
30/40	122		40						203.5	M6x10			36.5	75	6				20.8	21.8	1.5
30/50	132		50						223.5	M8x10			43.5	85	7				28.3	27.3	1.5
30/63	145		63						248.5	M8x14			53	95	8					—	2
40/63	150	40		43.5	50	75	75	20	261		M4x12	57.5				68.5	75	12.5			
40/75	174.5		75						299.5	M8x14			57	115	10				31.3	33.3	2
50/75	190	50		53.5	60	82	82	25	322		M5x13	67.5				82.5	90	16			
40/89 **40/90**	184.5	40	90	43.5	50	75	75	20	326.5	M10x18	M4x12	57.5	67	130	12	68.5	75	12.2	38.3	—	2
50/89 **50/90**	200	50		53.5	60	82	82	25	349		M5x13	67.5				82.5	90	16			
50/110	226	63	110	64	72	97	95	30	399.5	M10x18	M8x20	77.5	74	165	14	100.5	110	21.5	45.3	—	2.5
63/110	236								419.5												
63/130	256	63	130	—	72	97	95	30	459.5	M12x20	M8x20	77.5	81	215	15	—	110	21.5	48.8	51.8	3

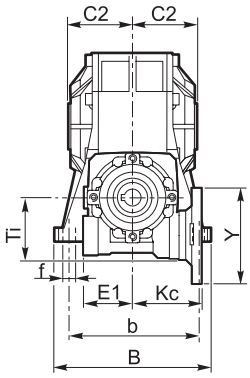
KKC_A

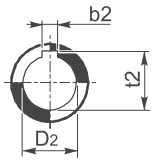




KKC_B

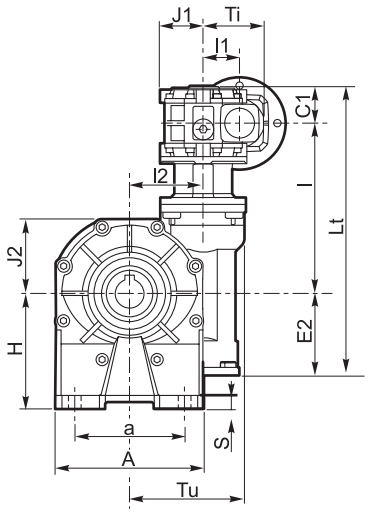


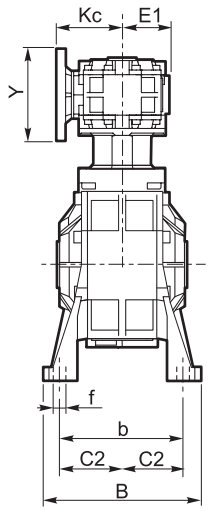




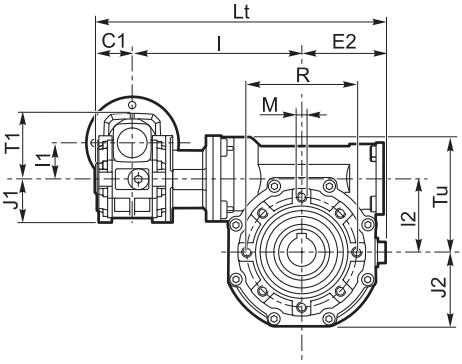
Eie jueco de consulte
Output hollow shaft
Arbre de sortie creux

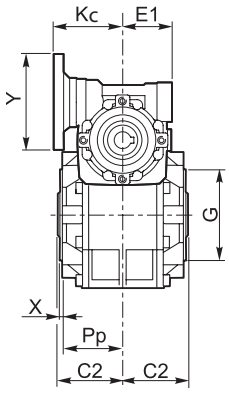
KKC_V





KKC_P

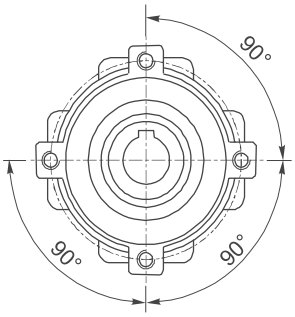




5.6 **Tamaño** *5.6* ***Dimensions*** 5.6 **Dimensions**

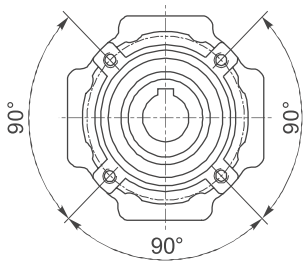
Brida pendular / *Side cover for shaft mounting* / Bride pendulaire

30/30



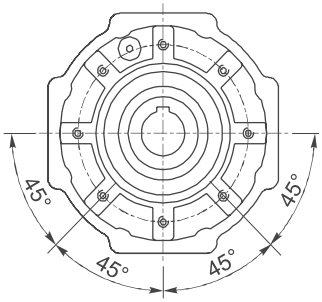
4 Agujeros / *Holes* / Trous

30/40 - 30/50



4 Agujeros / *Holes* / Trous

30/63 - 40/63 - 40/75 - 40/90 - 50/75
50/90 - 50/110 - 63/110 - 60/130



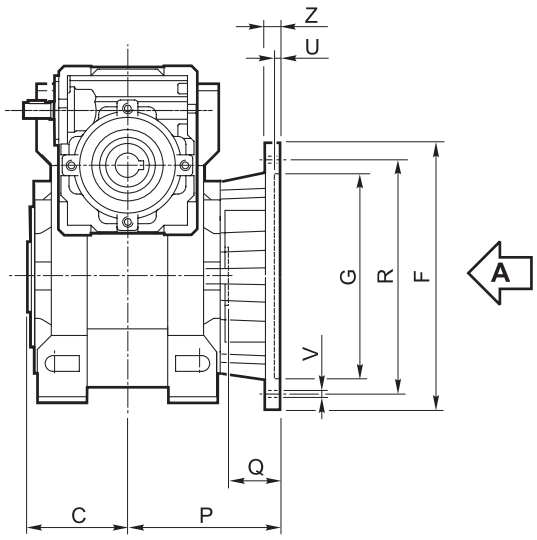
8 Agujeros / *Holes* / Trous

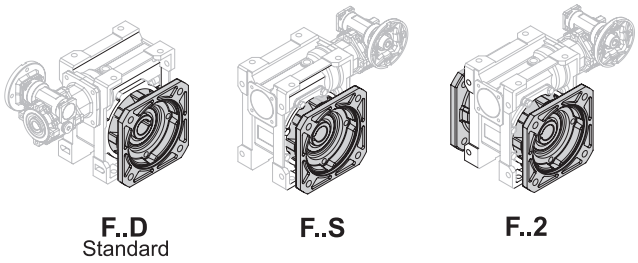
	KKC																							
	A		a		B		b		f		H		S		b_2		C_1	C_2	D2 H8		E_1	E_2	G h8
	1	2	1	2	1	2	1	2	1	2	1	2	1	2									
30/30	67		40-52		78		66		6.5		52	55	5	8	5	—	31.5	31.5	**14**	—	41	41	55
30/40	86.5		70	52	98		84	81	7	8.5	71	72	9	10	6	6		39	**18**	19		51	60
30/50	106		63-85		119		99		9		85	82	11	8	8	8		46	**25**	24		60	70
30/63	127.5		95		136		111		11		100		12		8	—	39	56		—	51	71	80
40/63																							
40/75	155.5		120		140		115		11		115		12		8	—		60	**28**	30		85	95
50/75																	46				60		
40/89 40/90	190		140		168		140	146	13	11	135	142	14		10	—	39	70	**35**	—	51	103	110
50/89 50/90																	46				60		
50/110	250		200		210		162	181	13	13	171	170	17	15	12	—		77.5	**42**	—		127.5	130
63/110																	56				71		
63/130	295		235	220	229		190	191	15		200	195	20	15	14		56	85	**45**	48	71	147.5	180

	KKC														
	I	I_1	I_2	J_1	J_2	K_c	L_t	M	P_P	R	T_i	T_u	t_2		X
30/30	100	31.5	31.5	37.5	37.5	57	171.5	M6x8	29	65	52.5	Tu	16.3	—	1.5
30/40	122		40		43.5		203.5	M6x10	36.5	75		52.5	20.8	21.8	1.5
30/50	132		50		53.5		223.5	M8x10	43.5	85		68.5	28.3	27.3	1.5
30/63	147		63		64		248.5	M8x14	53	95		82.5		—	2
40/63	152	40		43.5		75	261				68.5	100.5			
40/75	176.5		75		78		301.5	M8x14	57	115			31.3	—	2
50/75	192	50		53.5		82	324				82.5	116.5			
40/89 40/90	186.5	40	90	43.5	100	75	328.5	M10x18	67	130	68.5		38.3	—	2
50/89 50/90	202	50		53.5		82	351				82.5	131.5			
50/110	226		110		122		399.5	M10x18	74	165			45.3	—	2.5
63/110	236	63		64		97	419.5				100.5	161.5			
63/130	256	63	130	64	131	97	459.5	M12x20	81	215	100.5	181	48.8	51.8	3

5.6 Tamaño — *5.6 Dimensions* — 5.6 Dimensions

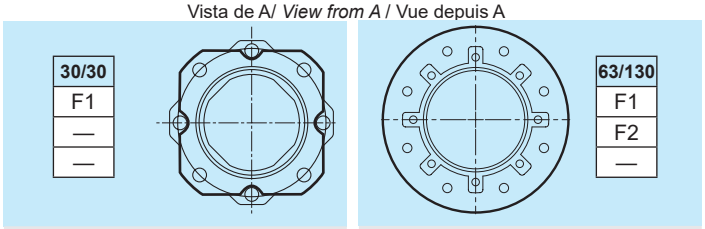
Brida de salida / *Output flange* / Bride de sortie



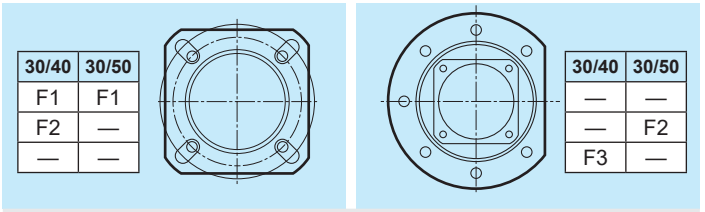


F..D Standard — **F..S** — **F..2**

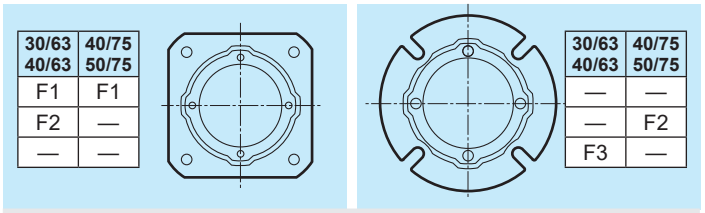
Vista de A/ *View from A* / Vue depuis A



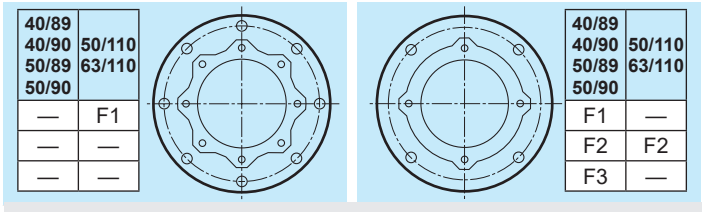
30/30 — **63/130**



30/40 - 30/50



30/63 - 40/63 - 40/75 - 50/75



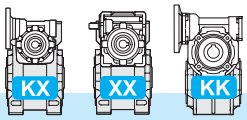
40/89 - 40/90 - 50/89 - 50/90 - 50/110 - 63/110

KX XX KK	Tipo *Type* Typ	C	F		G H8	P	Q	R	U	V		Ø	Z
30/30	F1	31.5		66	50	54.5	23	68	4	n* 4		6.5	6
30/40	F1	39		85	60	67	28	75-90	4	n* 4		9	8
	F2			85	60	97	58	75-90	4	n* 4		9	8
	F3		140		95	80	41	115	5		n° 7	9	10
30/50	F1	46		94	70	90	44	85-100	5	n* 4		11	10
	F2		160		110	89	43	130	5		n* 7	11	11
30/63 40/63	F1	56		142	115	82	26	150	5	n* 4		11	11
	F2			142	115	112	56	150	5	n* 4		11	11
	F3		160		110	80.5	24.5	130	5	n* 4		11	12
40/75	F1	60		160	130	111	51	165	5	n* 4		13	12
50/75	F2		160		110	90	30	130	6	n* 4		11	13
40/89	F1	70	200		152	111	41	175	5	n* 4		13	12
40/90 50/89	F2		200		152	151	81	175	5	n* 4		13	13
50/90	F3		200		130	110	40	165	6	n* 4		11	11
50/110	F1	77.5	260		170	131	53.5	230	6		n° 8	13	15
63/110	F2		250		180	150	72.5	215	5	n* 4		15	16
63/130	F1	85	320		180	140	55	255	7		n° 8 *	16	16
	F2		300		230			265					

* Agujero girado 22.5°

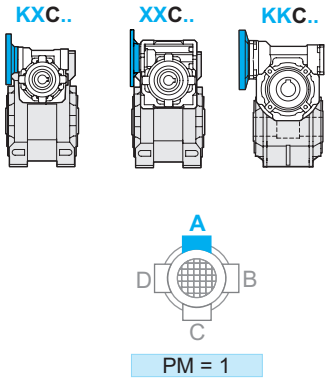
* *Drilling turned of 22.5°*

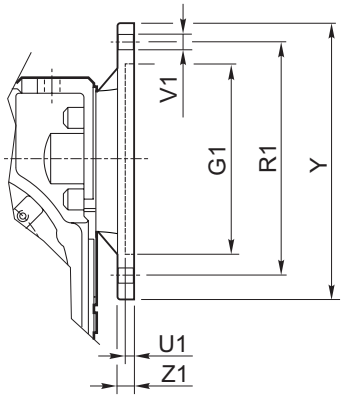
* Perçage tourné de 22,5°



5.6 Tamaño — *5.6 Dimensions* — 5.6 Dimensions

Brida de entrada / *Input flange* / Bride d'entrée





KXC XXC KKC	IEC	G_1	PM 1	PM 2	R_1	U_1	V_1 Ø	V_1	V_1	V_1	Y	Z_1	Diámetro orificios PAM / *Holes diameter IEC* / Diamètre des trous PAM: 150 200 300	450	600	900	1200	1500 2500	1950 3250	4000	5000 10000
30/30 30/40 30/50 30/63	56 B5	80	•	•	100	4	7		8		120	8	9	9	9	9	9	9	9	9	9
	56 B14	50	•	•	65	3.5	6		8		80	8	9	9	9	9	9	9	9	9	9
	63 B5	95	•	•	115	4	9		8		140	8	11	11	11	11	11	11	/	/	/
	63 B14	60	•	•	75	4	6		8		90	8	11	11	11	11	11	11	/	/	/
40/63 40/75 40/89 40/90	56 B5	80	•	•	100	4	7		8		120	9	/	/	/	/	/	9	9	9	9
	56 B14	50		•	65	3.5	6			4	80	8	/	/	/	/	/	9	9	9	9
	63 B5	95	•	•	115	4	9		8		140	9	11	11	11	11	11	11	11	11	11
	63 B14	60		•	75	3.5	6			4	90	8	11	11	11	11	11	11	11	11	11
	71 B5	110	•	•	130	4.5	9		8		160	10	14	14	14	14	14	/	/	/	/
	71 B14	70	•	•	85	3.5	7		8		105	8	14	14	14	14	14	/	/	/	/
50/75 50/89 50/90 50/110	63 B5	95	•	•	115	4	9		8		140	9	/	/	/	/	11	11	11	11	11
	63 B14	60		•	75	3.5	6			4	90	8	/	/	/	/	11	11	11	11	11
	71 B5	110	•	•	130	4.5	9		8		160	10	14	14	14	14	14	14	14	14	14
	71 B14	70		•	85	3.5	7			4	105	8	14	14	14	14	14	14	14	14	14
	80 B5	130	•	•	165	4.5	11		8		200	10	19	19	19	19	19	/	/	/	/
	80 B14	80	•	•	100	4	7		8		120	10	19	19	19	19	19	/	/	/	/
63/110 63/130	71 B5	110	•	•	130	4.5	9		8		160	10	/	/	/	/	14	14	14	14	14
	71 B14	70		•	85	3.5	7			4	105	10	/	/	/	/	14	14	14	14	14
	80 B5	130	•	•	165	4.5	11		8		200	10	19	19	19	19	19	19	19	19	19
	80 B14	80		•	100	4	7			4	120	10	19	19	19	19	19	19	19	19	19
	90 B5	130	•	•	165	4.5	11		8		200	10	24	24	24	24	/	/	/	/	/
	90 B14	95	•	•	115	4	8.5		8		140	10	24	24	24	24	/	/	/	/	/

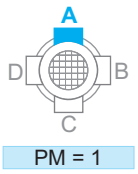
N.B.: Es posible también realizar todas las composiciones híbridas obtenibles de las bridas existentes.

N.B.: it is possible to create hybrid combinations with the existing flanges.

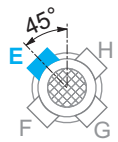
N.B. : Il est possible de réaliser des compositions hybrides à partir des brides existantes.

5.6 Tamaño

Brida de entrada / *Input flange* / Bride d'entrée

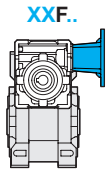


PM = 1

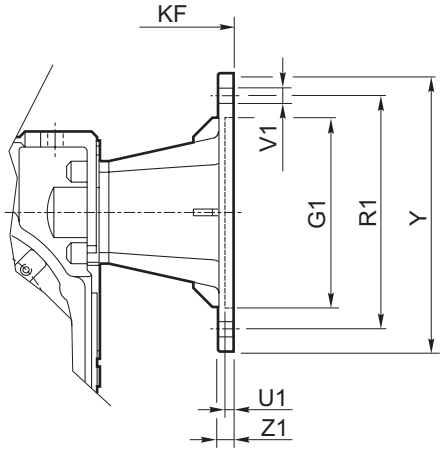


PM = 2

5.6 *Dimensions*



5.6 Dimensions



XXF	IEC	PM		G_1	K_F	R_1	U_1	V_1				Y	Z_1
		1	2					Ø					
30/30 30/40 30/50 30/63	56 B5	•	•	80	82.5	100	3.5	7		8		120	8
	56 B14		•	50	82.5	65	3.5	6			4	80	8
	63 B5	•	•	95	85.5	115	4	9		8		140	10
	63 B14	•	•	60	85.5	75	3.5	6		8		90	8
40/63 40/75 40/89 40/90	56 B5	•	•	80	101.5	100	3.5	7		8		120	8
	63 B5	•	•	95	104.5	115	4	9		8		140	10
	63 B14	•	•	60	104.5	75	3.5	6		8		90	8
	71 B5	•	•	110	111.5	130	4.5	9		8		160	10
	71 B14	•	•	70	111.5	85	4	7		8		105	10
50/75 50/89 50/90 50/110	63 B5	•	•	95	119.5	115	4	9		8		140	10
	71 B5	•	•	110	126.5	130	4.5	9		8		160	10
	71 B14		•	70	126.5	85	3.5	7			4	105	10
	80 B5	•	•	130	136.5	165	4.5	11		8		200	10
	80 B14	•	•	80	136.5	100	4	7		8		120	10
63/110 63/130	71 B5	•	•	110	141.5	130	4.5	9		8		160	10
	80/90 B5	•	•	130	161.5	165	4.5	11		8		200	10
	80 B14	•	•	80	151.5	100	4	7		8		120	10
	90 B14	•	•	95	161.5	115	4	9		8		140	10

5.7 Limitador de par agujero pasante

Realizados para trabajar en baño de aceite, el dispositivo resulta fiable en el tiempo y es exente a usar si no es mantenido en condiciones prolongadas de deslizamiento (condiciones que se verifican cuando el par tiene valores superiores a los del calibrado).
El calibrado es fácilmente regulable desde el externo, a través de la sujeción de una abrazadera autoblocante que comprime los cuatro resortes a taza dispuestos entre ellos en serie.
El dispositivo no permite:
• El uso de cojinetes de rodillos cónicos en salida.
• funcionamiento prolungando en condiciones de deslizamiento.

En la siguiente tabla se detallan los valores de los pares de deslizamiento M_{2S} en función del n° de giros de la abrazadera.

5.7 *Torque limiter with through hollow shaft*

Designed to be working in oil bath, the device is reliable over time and is not subject to wear unless in case of operation with prolonged slipping (it occurs when the torque values are higher than the calibration values).
Calibration can be easily adjusted from outside by tightening of the self-locking ring nut, which causes the compression of the 4 Belleville washers arranged in series.

The device does not go together with:
- *the use of tapered roller bearings at output*
- *prolonged operation under slipping conditions*

The following table shows the values of M_{2S} slipping torques depending on the number of revolutions of the ring nut.

5.7 Limiteur de couple creux continu

Conçu pour fonctionner en bain d'huile, le dispositif est fiable sur la durée et il ne s'use pas, sauf en cas de glissement prolongé (condition qui se vérifie lorsque le couple présente des valeurs supérieures à celles du calibrage).
Le calibrage se fait facilement depuis l'extérieur en serrant une frette autobloquante qui comprime les 4 rondelles Belleville disposées en série.

Le dispositif ne permet pas :
• l'utilisation de roulements coniques à la sortie.
• le fonctionnement prolongé en condition de glissement.

Dans le tableau ci-dessous sont reportées les valeurs des couples de glissement M_{2S} en fonction du nombre de tours de la frette.

5.7 Limitador de par agujero pasante

5.7 Torque limiter with through hollow shaft

5.7 Limiteur de couple creux continu

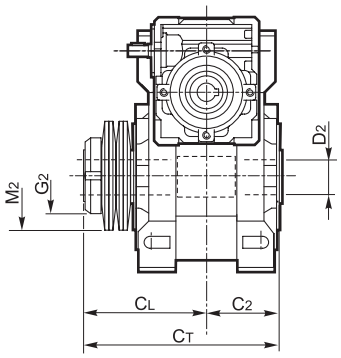
XX-KX KK	N°. giros de la abrazadera de regulación / *N°. revolutions of ring nut* / N°. tours de l'anneau de réglage														
	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4	4 1/2
30/30	20	25	30	35	40										
30/40	50	60	70	80	90										
30/50	75	95	115	135	155										
30/63		110	125	145	160	180	200	220	230	245	255	265	285		
40/63															
40/75			220	245	275	310	350	375	410	450					
50/75															
40/89 40/90				330	365	410	435	465	500	530	560	580	600	630	670
50/89 50/90															
50/110		750	860	1000	1100	1230									
63/110															
63/130															

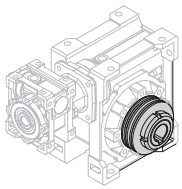
Los valores para calibrar tienen tolerancia del ±10% con referencia a la condición estática.
En condiciones dinámicas se note que el par de deslizamiento asume valores distintos según el tipo y/o modalidad en el cual se verifica la sobrecarga: con valores mayores en caso de cargas uniformemente creciente, con respecto a pesos menores, se debe a picos imprevistos de cargas.
NOTA: Cuando se superanlos valores de calibro se obtiene el deslizamiento.
El coeficiente de fricción entre la superficie de contacto del estático deviene dinámico y el par trasmitido baja aproximadamente un 30%.
De hecho es oportuno anticipar un stop para así poder iniciar con los valores de base del calibrado.

Calibration values feature a ±10% tolerance and refer to static conditions.
Under dynamic conditions the values of the slipping torque will change according to the type of overload: the values are higher if the load increase is uniform; the values are lower if sudden load peaks occur.

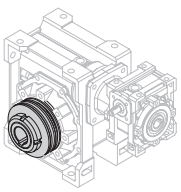
***NOTE:** Slipping occurs when the setting values are exceeded.*
The friction coefficient between the contact surfaces from static becomes dynamic and the transmitted torque is approx. 30% lower.
It is advisable to have a stop first in order to have a restart based on the initial setting value.

Les valeurs de calibrage ont une tolérance de ±10% et se réfèrent à une condition statique.
Il faut noter qu'en conditions dynamiques le couple de glissement a des valeurs différentes suivant le type et/ou les modalités de surcharge : les valeurs sont plus élevées si la charge augmente de manière continue, mais elles sont plus basses si l'on a une augmentation soudaine de la charge.
REMARQUE : il y a glissement lorsque la valeur de calibrage est dépassée.
Le coefficient de frottement entre les superficies passe de statique à dynamique et le couple transmis chute d'environ 30%.
Il est donc recommandé de s'arrêter afin de pouvoir repartir sur la base du calibrage initial.



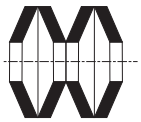


LD



LS

Disposición de los resortes
Washers' arrangement
Position des rondelles



IN SERIE (min. par, max. sensibilidad)
***SERIES** (min. torque, max sensitivity)*
EN SÉRIE (min. couple, max. sensibilité)

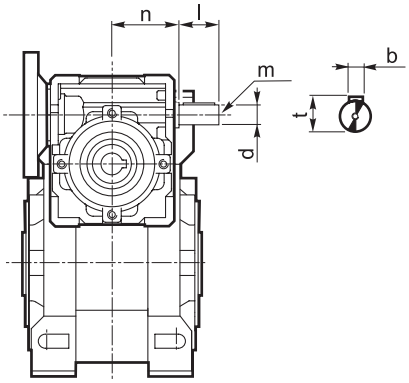
XX - KX LD - LS	C_2	C_L	C_t	D_2 H8	G_2	M_2
30/30	31.5	55.5	87	14	M25x1.5	50x25.4x1.5
30/40	39	65	104	18 (19)	M30x1.5	56x30.5x2
30/50	46	76	122	25 (24)	M40x1.5	63x40.5x2.5
30/63 40/63	56	91	147	25	M40x1.5	71x40.5x2.5
40/75 50/75	60	100	160	28 (30)	M50x1.5	90x50.5x3.5
40/89 - 40/90 50/89 - 50/90	70	109	179	35 (32)	M50x1.5	100x51x3.5
50/110 63/110	77.5	127.5	205	42	M60x2	125x61x5
63/130						

5.8 Ejecución con tornillo doble salida

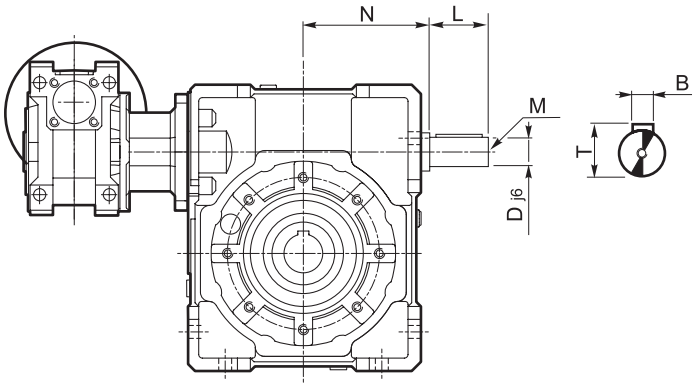
5.8 Double extended worm shaft design

5.8 Version avec double vis

SeA1



SeA2



La entrada suplementaria del reductor de salida (SeA2) no puede ser utilizada como comando, siendo que el relativo movimiento resulta ser impedido por la irreversibilidad del primer reductor.
Utilizado como eje conducto, la velocidad existente corresponderá a la de ingreso, reducida por la relación del primer reductor.

The second input shaft of the output gearbox (SeA2) can not be utilized as a drive because its motion will be stopped by the reversibility of the first gearbox.
If utilized as a drive shaft its speed will be equal to the input speed decreased by the ratio of the first gearbox.

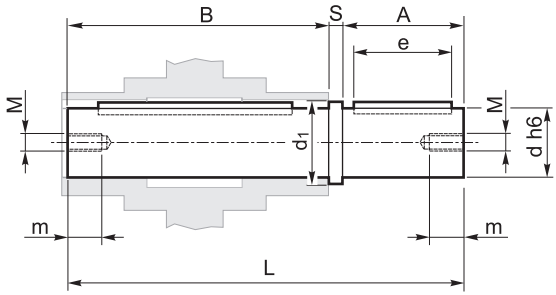
L'entrée supplémentaire du réducteur en sortie (SeA2) ne peut pas être utilisée en tant que commande car son mouvement est gêné par l'irréversibilité du premier réducteur.
S'il est utilisé comme arbre secondaire, sa vitesse correspondra à celle en entrée, mais elle sera diminuée par le rapport du premier réducteur.

KXC - XXC XXF - XXA KKC	SeA1							SeA2						
	b	d j6	l	m	n		t	B	D j6	L	M	N		T
					KK-KX	XX						KK	KX-XX	
30/30	3	9	15	M4x10	42.5	42.5	10.2	3	9	15	M4x10	42.5	42.5	10.2
30/40	3	9	15	M4x10	42.5	42.5	10.2	4	11	20	M4x12	52.5	52.5	12.5
30/50	3	9	15	M4x10	42.5	42.5	10.2	5	14	25	M5x13	62.5	62.5	16
30/63	3	9	15	M4x10	42.5	42.5	10.2	6	19	30	M8x20	72.5	74.5	21.5
40/63	4	11	20	M4x12	52.5	52.5	12.5	6	19	30	M8x20	72.5	74.5	21.5
40/75	4	11	20	M4x12	52.5	52.5	12.5	8	24	40	M8x20	89	91	27
50/75	5	14	25	M5x13	62.5	62.5	16	8	24	40	M8x20	89	91	27
40/89 40/90	4	11	20	M4x12	52.5	52.5	12.5	8	24	40	M8x20	108	108	27
50/89 50/90	5	14	25	M5x13	62.5	62.5	16	8	24	40	M8x20	108	108	27
50/110	5	14	25	M5x13	62.5	62.5	16	8	28	50	M8x20	132	132	31
63/110	6	19	30	M8x20	72.5	74.5	21.5	8	28	50	M8x20	132	132	31
63/130	6	19	30	M8x20	72.5	74.5	21.5	10	38	70	M10x25	152	152	41

5.9 Accesorios

Eje lento

Eje lento simple
Single output shaft
Arbre lent simple

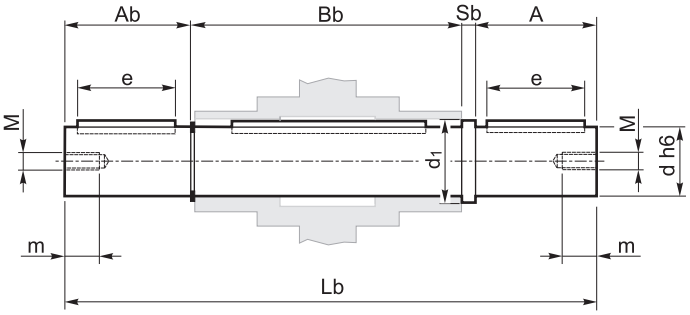


KK-KX-XX	A	B	d h6		d_1	e	L	M	m	S
30/30	30	62	**14**		18.5	20	94.5	M6	16	2.5
30/40	40	77	**18**	19	23.5	30	120	M6	16	3
30/50	50	90	**25**	24	31.5	40	143.5	M8	22	3.5
30/63 40/63	50	111	**25**		31.5	40	165	M8	22	4
40/75 50/75	60	119	**28**	30	34.5	50	183	M8	22	4
40/89 - 40/90 50/89 - 50/90	80	139	**35**		41.5	60	224	M10	28	5
50/110 63/110	80	154.5	**42**		49.5	60	242.5	M10	28	8
63/130	80	168	**45**		54.5	70	253	M16	36	5

5.9 *Accessories*

Output shaft

Eje lento doble
Double output shaft
Arbre lent double

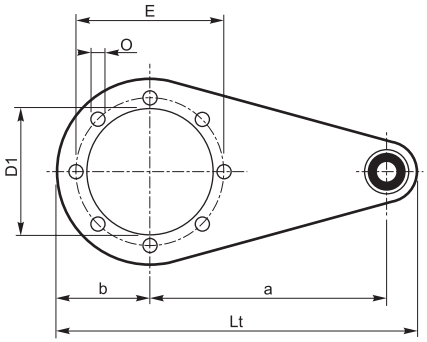


A	A_b	B_b	d h6	d_1	e	L_b	S_b
30	29	64	**14**	18.5	20	126	2.5
40	39	79	**18**	23.5	30	161	3
50	49	93	**25**	31.5	40	195.5	3.5
50	49	113	**25**	31.5	40	216	4
60	59	121	**28**	34.5	50	244	4
80	78.5	141.5	**35**	41.5	60	305	5
80	77.5	157	**42**	49.5	60	322.5	8
80	78	172	**45**	54.5	70	335	5

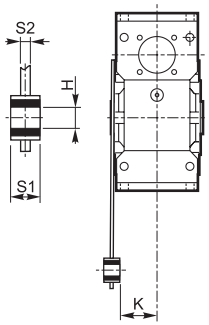
5.9 Accessoires

Arbre lent

Brazo de reacción



Torque arm

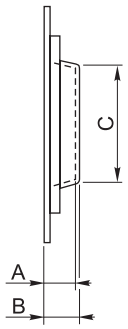


Bras de réaction

KK KX XX	a	b	D_1	E	H	K	L_t	O	S1	S2
30/30	85	37.5	55	65	8	24	141.5	7	14	4
30/40	100	45	60	75	10	31.5	167	7	14	4
30/50	100	50	70	85	10	39	172	9	14	5
30/63 40/63	150	55	80	95	10	49	227	9	14	6
40/75 50/75	200	70	95	115	20	47.5	302	9	25	6
40/89 -40/90 50/89 -50/90	200	80	110	130	20	57.5	312	11	25	6
50/110 63/110	250	100	130	165	25	62	390	11	30	6
63/130	250	125	180	215	25	69	415	13	30	6

Kit de protección: solo en versión P

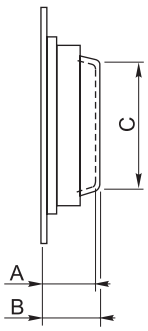
Eje hueco / *Hollow shaft* / Arbre creux



KK KX XX	A		B		C	
	IN	OUT	IN	OUT	IN	OUT
30/30	12	12	13	13	39	39
30/40		14		15.5		44
30/50		15		16.5		54
30/63		17		19		60
40/63	14		15.5		44	
40/75		18		20		70
50/75	15		16.5		54	
40/89 - 40/90	14	21.5	15.5	24	44	80
50/89 - 50/90	15		16.5		54	
50/110		22		25		96
63/110	17		19		60	
63/130	17	22	19	25	60	130

Protection Kit: *only for P version*

Limitador de par / *Torque limiter* / Limiteur de couple



KK KX XX	A		B		C	
	IN	OUT	IN	OUT	IN	OUT
30/30	36	36	37	37	36	36
30/40		40		41.5		44
30/50		47		48.5		53
30/63		52		54		55
40/63	40		41.5		44	
40/75		58		60		68
50/75	47		48.5		53	
40/89 - 40/90	40	60.5	41.5	63	44	70
50/89 - 50/90	47		48.5		53	
50/110		72		75		85
63/110	52		54		55	
63/130	52		54		55	

Kit de protection : uniquement sur la version P

Opciones disponibles:

Cojinetes de rodillos cónicos corona

Available options:

Tapered roller bearing on wormgear

Options disponibles :

Roulements coniques sur la roue