Fd7
AXLES & TYRES

EJES AGRICOLAS E INDUSTRIALES

Agricultural and Industrial Axles

C/ Cobalto 31,Pol.Ind.PTR - 50720 - Zaragoza (Spain)
Tel. 34 – 976 410 221
www.ferruz.com · ferruz@ferruz.com

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Ed. 3.2.

EJES RECTOS

Semiejes rectos sin freno
Semiejes rectos con freno
Semiejes de Trailla
Ejes rectos sin freno
Ejes rectos con freno monoblock
Ejes rectos con freno combinado
Ejes rectos con freno combinado. Semi-industrial

EJES DIRECCIONALES

Información técnica
Ejes Autodireccionales
Eje Direccional forzado hidráulicamente
Componentes Ejes Direccionales

SUSPENSIONES

Gama de productos
Tandems
Boggies
Ballesta de lanza
Ballesta parabólica

REPUESTOS

Despiece tambor y freno
Cubos sin freno - Tambores (Freno monoblock)
Tambores (Freno combinado) - Rodamientos Rodillos Cónicos
Espárragos – Tapacubos – Tuercas de manga
Accesorios de freno – Retenes

OTROS PRODUCTOS

Enganches de lanza
Apoyos hidráulicos
Rodetes (giratorias)
Montaje y mantenimiento de rodetes (giratorias)
Palancas de freno
Calzos y soportes
Conjunto Válvula Hidráulica de Freno Manual
Sistema neumático de freno
Ejes de trailla, regulables, curvos, altura regulable, especiales

INFORMACION

Presentación
Características generales ejes
Carga máxima sobre eje
Homologación de freno

RIGID AXLES

Unbraked rigid stubaxles
Braked rigid stubaxles
Leashes axles
Unbraked rigid axles
Braked rigid axles - solid drum
Braked rigid axles - hub and drum
Semi-industrial braked rigid axles - hub and drum

STEERING AXLES

Technical information
Self Steering Axles
Forced Steering Axles
Steering Axles Components

SUSPENSIONS

Products range
Tandems
Boggies
Spring drawbar
Parabolic leaf spring

SPARE PARTS

Hub and brake assembly
Hubs - Drums (solid drum)
Drums (assambled drums) - Tapered roller bearings
Wheel studs - Hub Caps - Wheel washers
Brake accesories - Seal ring

OTHER PRODUCTS

Towing Eyes
Hydraulic crutchs
Turntables
Turntables assembly and maintenance
Brake levers
Wheel chock and chock holder
Brake System Manual Action
Pneumatic brake equipment
Special assemblies

INFORMATION

Introduction
General characteristics axles
Load capacity
Brake approvals

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Agricultural and Industrial Axles

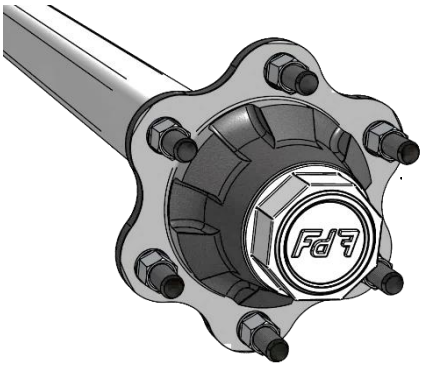
EJES RECTOS

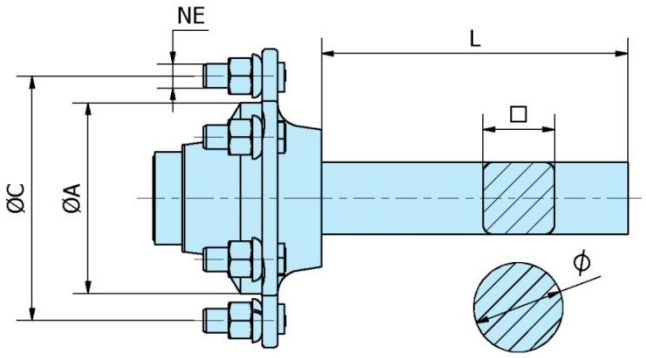
Semiejes rectos sin freno
Semiejes rectos con freno
Semiejes de Trailla
Ejes rectos sin freno
Ejes rectos con freno monoblock (1)
Ejes rectos con freno monoblock (2)
Ejes rectos con freno combinado (1)
Ejes rectos con freno combinado (2)
Ejes rectos con freno combinado. Semi-industrial

RIGID AXLES

Unbraked rigid stubaxles
Braked rigid stubaxles
Leashes axles
Unbraked rigid axles
Braked rigid axles–solid drum (1)
Braked rigid axles–solid drum (2)
Braked rigid axles - hub and drum (1)
Braked rigid axles - hub and drum (2)
Semi-industrial braked rigid axles - hub and drum

Semiejes rectos sin freno / Unbraked rigid stubaxles





Mangón opcional en redondo
Optional round solid

REFERENCIA Reference	CUA. Square ⧄ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	L Standard mm	CARGA POR SEMI-EJE Capacity per stubaxle 40 km/h kg	kg	kg	PESO Weight kg
H030025000-04	**30**	30204	30205	58	98	4 x M12	200	525	450	375	3,5
H035025000-04	**35**	30204	30205	58	98	4 x M12	200	525	450	375	4,5
H040035000-02	**40**	30205	30207	93	140	5 x M16	200	975	825	725	7,0
H045040000-02	**45**	30206	30208	93	140	5 x M16	200	1250	1050	900	8,5
H050045000-02	**50**	30206	30209	93	140	5 x M16	200	1600	1350	1200	9,4
H050045000-07	**50**	30206	30209	160	205	6 x M18	200	1600	1350	1200	10,0
H060055000-07	**60**	30208	30211	160	205	6 x M18	200	2500	2000	1750	17,0
H070055000-07	**70**	30208	30211	160	205	6 x M18	200	2500	2000	1750	18,9
H070065000-07	**70**	32210	30213	160	205	6 x M18	200	3750	3250	3000	21,5
H070065000-0B	**70**	32210	30213	160	205	6 x M20	200	3750	3250	3000	21,5
H070065000-08	**70**	32210	30213	220	275	8 x M20	200	3750	3250	3000	25,5
H080065000-07	**80**	32210	30213	160	205	6 x M18	200	3750	3250	3000	23,0
H080065000-0B	**80**	32210	30213	160	205	6 x M20	200	3750	3250	3000	23,0
H080065000-08	**80**	32210	30213	220	275	8 x M20	200	3750	3250	3000	27,0
H080075000-07	**80**	32212	32215	160	205	6 x M18	200	4500	4000	3750	26,2
H080075000-0B	**80**	32212	32215	160	205	6 x M20	200	4500	4000	3750	26,2
H080075000-08	**80**	32212	32215	220	275	8 X M20	200	4500	4000	3750	29,5
H090075000-07	**90**	32212	32215	160	205	6 x M18	200	4500	4000	3750	29,0
H090075000-0B	**90**	32212	32215	160	205	6 x M20	200	4500	4000	3750	29,0
H090075000-08	**90**	32212	32215	220	275	8 X M20	200	4500	4000	3750	32,3
H090085000-08	**90**	32214	32217	220	275	8 x M20	200	6250	5500	4750	35,5
H100085000-08	**100**	32214	32217	220	275	8 x M20	200	6250	5500	4750	38,5

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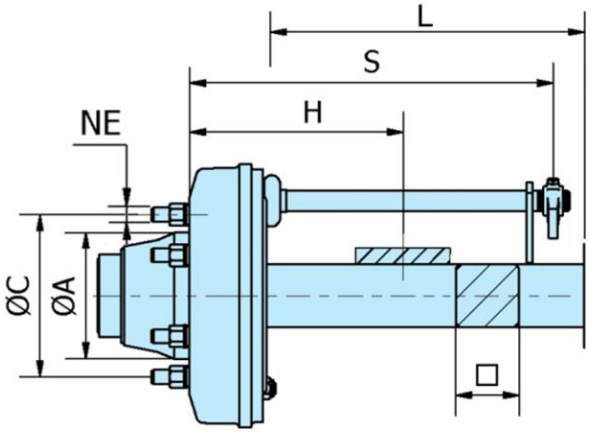
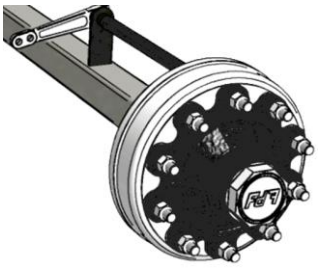
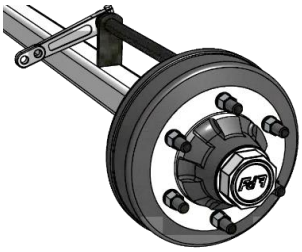
Semiejes rectos con freno / Braked rigid stubaxles







REFERENCIA Reference	CUA. Square ⊠ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	L Standard mm	S Standard mm	CARGA POR SEMI-EJE Capacity per stubaxle 40 km/h kg	kg	kg	PESO Weight kg	FRENOS Brakes
H040035200-42	**40**	30205	30207	93	140	5 x M16	360	380	975	825	725	7,0	200 x 40
H045040200-42	**45**	30206	30208	93	140	5 x M16	360	380	1250	1050	900	8,5	200 x 40
H050045200-42	**50**	30206	30209	93	140	5 x M16	360	380	1600	1350	1200	9,4	200 x 40
H050045250-67	**50**	30206	30209	160	205	6 x M18	340	384	1600	1350	1200	10,2	250 x 60
H060055250-67	**60**	30208	30211	160	205	6 x M18	340	384	2500	2000	1750	17,0	250 x 60
H060055300-67	**60**	30208	30211	160	205	6 x M18	410	460	2500	2000	1750	17,8	300 x 60
H070055250-67	**70**	30208	30211	160	205	6 x M18	340	384	2500	2000	1750	18,0	250 x 60
H070055300-67	**70**	30208	30211	160	205	6 x M18	410	460	2500	2000	1750	18,9	300 x 60
H070065300-67	**70**	32210	30213	160	205	6 x M18	410	460	3750	3250	3000	21,5	300 x 60
H070065300-6B	**70**	32210	30213	160	205	6 x M20	410	460	3750	3250	3000	21,5	300 x 60
H070065300-68	**70**	32210	30213	220	275	8 x M20	410	460	3750	3250	3000	25,5	300 x 60
H080065300-67	**80**	32210	30213	160	205	6 x M18	410	460	3750	3250	3000	23,0	300 x 60
H080065300-6B	**80**	32210	30213	160	205	6 x M20	410	460	3750	3250	3000	23,0	300 x 60
H080065300-68	**80**	32210	30213	220	275	8 x M20	410	460	3750	3250	3000	27,0	300 x 60
H080075300-67	**80**	32212	32215	160	205	6 x M18	410	460	4500	4000	3750	26,2	300 x 60
H080075300-6B	**80**	32212	32215	160	205	6 x M20	410	460	4500	4000	3750	26,2	300 x 60
H080075300-68	**80**	32212	32215	220	275	8 X M20	410	460	4500	4000	3750	29,5	300 x 60
H080075350-68	**80**	32212	32215	220	275	8 X M20	560	630	4500	4000	3750	29,5	350 x 60
H090075300-67	**90**	32212	32215	160	205	6 x M18	410	460	4500	4000	3750	29,0	300 x 60
H090075300-6B	**90**	32212	32215	160	205	6 x M20	410	460	4500	4000	3750	29,0	300 x 60
H090075300-68	**90**	32212	32215	220	275	8 X M20	410	460	4500	4000	3750	32,3	300 x 60
H090075350-68	**90**	32212	32215	220	275	8 X M20	560	630	4500	4000	3750	32,3	350 x 60
H090085350-68	**90**	32214	32217	220	275	8 x M20	560	630	6250	5500	4750	35,5	350 x 60
H100085350-68	**100**	32214	32217	220	275	8 x M20	560	630	6250	5500	4750	38,5	350 x 60

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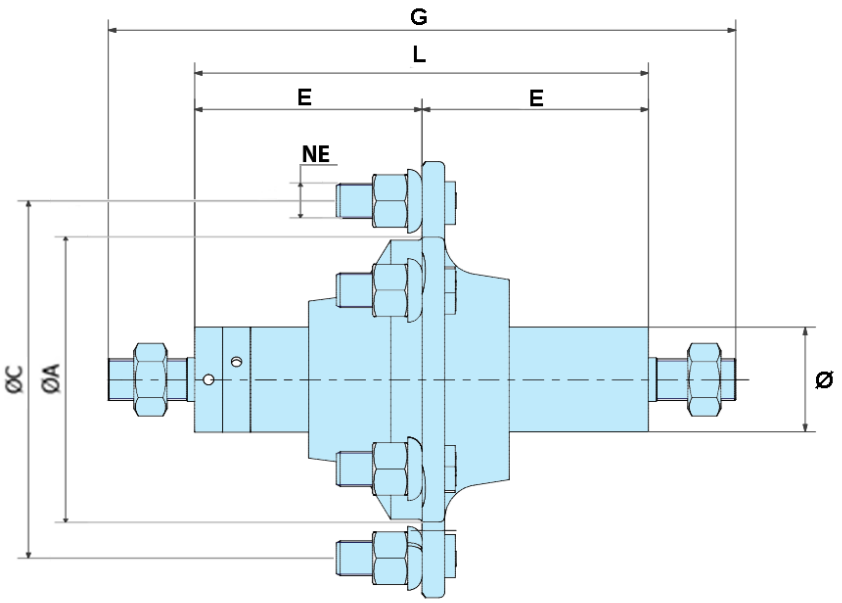
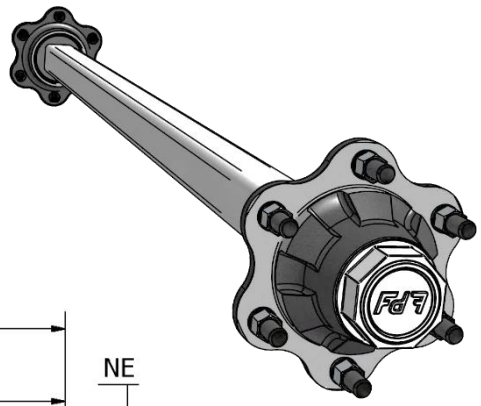
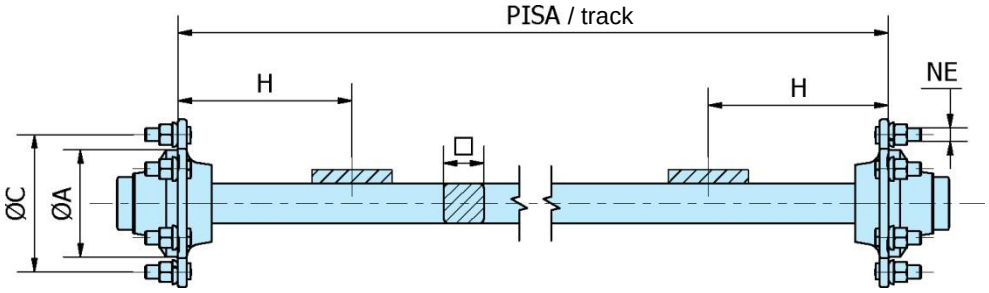


REFERENCIA Reference	Ø EJE Ø Axis mm	PASADOR Bolt	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	E mm	G mm	L Standard mm	CARGA POR SEMI-EJE Capacity per stubaxle 40 km/h kg	PESO Weight kg
T045040000-020H	**45**	M18	30206	30208	93	140	5 x M16	85	260	170	1250	6.7
T050045000-020L	**50**	M18	30206	30209	93	140	5 x M16	100	290	200	1600	7.5
T060055000-0B0T	**60**	M24	30208	30211	160	205	6 x M20	130	360	260	2500	14.7
T070065000-0B0V	**70**	M24	30210	30213	160	205	6 x M20	140	380	280	3750	19.4
T080075000-0B18	**80**	M30	30212	30215	160	205	6 x M20	150	400	300	4500	25,0
T090075000-0B18	**90**	M30	30212	30215	160	205	6 x M20	150	400	300	4500	27.4
TR090085000-081P	**90**	M30	30214	30217	220	275	8 x M20	275	650	550	6250	52,0
TR100085000-081P	**100**	M30	30214	30217	220	275	8 x M20	275	650	550	6250	56,0

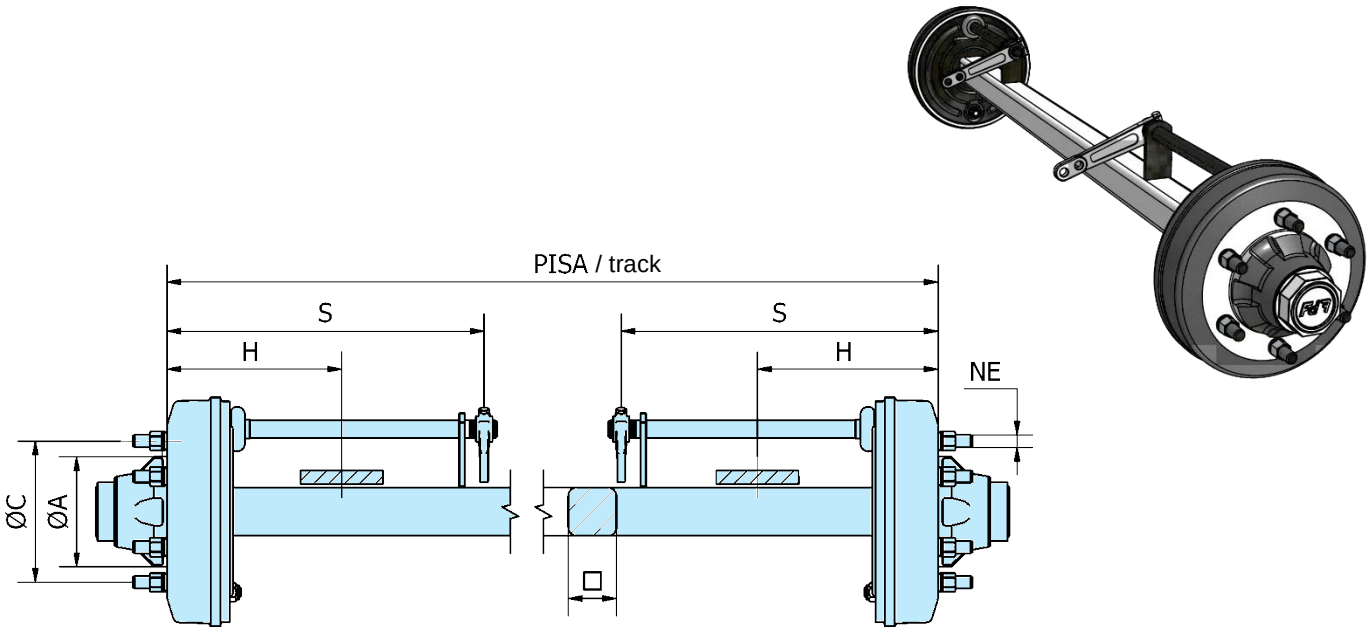
Ejes rectos sin freno / Unbraked rigid axles





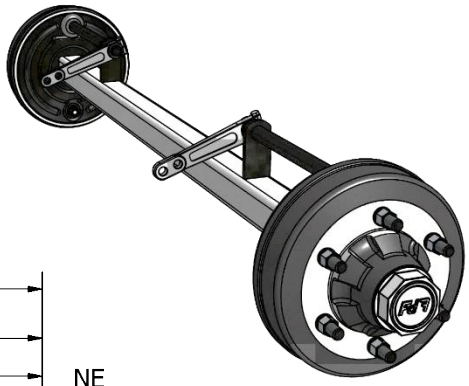
REFERENCIA Reference	CUA. Square □ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	H mm	CARGA POR EJE Capacity per axle 40 km/h kg	kg	kg	PESO Weight kg	
E030025000-04	**30**	30204	30205	58	98	4 x M12	135	1050	900	750	10,0	((Pisa=1000)
E035025000-04	**35**	30204	30205	58	98	4 x M12	205	1050	900	750	15,5	(Pisa=1100)
E040035000-02	**40**	30205	30207	93	140	5 x M16	205	1950	1650	1450	20,0	(Pisa=1100)
E045040000-02	**45**	30206	30208	93	140	5 x M16	205	2500	2100	1800	24,0	(Pisa=1100)
E050045000-02	**50**	30206	30209	93	140	5 x M16	250	3200	2700	2400	32,5	(Pisa=1200)
E050045000-07	**50**	30206	30209	160	205	6 x M18	250	3200	2700	2400	35,0	(Pisa=1200)
E060055000-07	**60**	30208	30211	160	205	6 x M18	250	5000	4000	3500	63,0	(Pisa=1600)
E070055000-07	**70**	30208	30211	160	205	6 x M18	300	5000	4000	3500	81,0	(Pisa=1700)
E070065000-07	**70**	32210	30213	160	205	6 x M18	300	7500	6500	6000	86,0	(Pisa=1700)
E070065000-0B	**70**	32210	30213	160	205	6 x M20	300	7500	6500	6000	86,0	(Pisa=1700)
E070065000-08	**70**	32210	30213	220	275	8 x M20	300	7500	6500	6000	94,5	(Pisa=1700)
E080065000-07	**80**	32210	30213	160	205	6 x M18	350	7500	6500	6000	105,0	(Pisa=1800)
E080065000-0B	**80**	32210	30213	160	205	6 x M20	350	7500	6500	6000	105,0	(Pisa=1800)
E080065000-08	**80**	32210	30213	220	275	8 x M20	350	7500	6500	6000	113,5	(Pisa=1800)
E080075000-07	**80**	32212	32215	160	205	6 x M18	350	9000	8000	7500	120,0	(Pisa=1800)
E080075000-0B	**80**	32212	32215	160	205	6 x M20	350	9000	8000	7500	120,0	(Pisa=1800)
E080075000-08	**80**	32212	32215	220	275	8 X M20	350	9000	8000	7500	127,0	(Pisa=1800)
E090075000-07	**90**	32212	32215	160	205	6 x M18	400	9000	8000	7500	139,0	(Pisa=1800)
E090075000-0B	**90**	32212	32215	160	205	6 x M20	400	9000	8000	7500	139,0	(Pisa=1800)
E090075000-08	**90**	32212	32215	220	275	8 x M20	400	9000	8000	7500	147,0	(Pisa=1800)
E090085000-08	**90**	32214	32217	220	275	8 x M20	400	12500	11000	9500	154,0	(Pisa=1800)
E100085000-08	**100**	32214	32217	220	275	8 x M20	400	12500	11000	9500	176,0	(Pisa=1800)
E100090000-08	**100**	33215	33118	220	275	8 x M20	400	14000	12500	11000	180,0	(Pisa=1800)
E100090000-09	**100**	33215	33118	280	335	10 x M22	400	14000	12500	11000	186,0	(Pisa=1800)

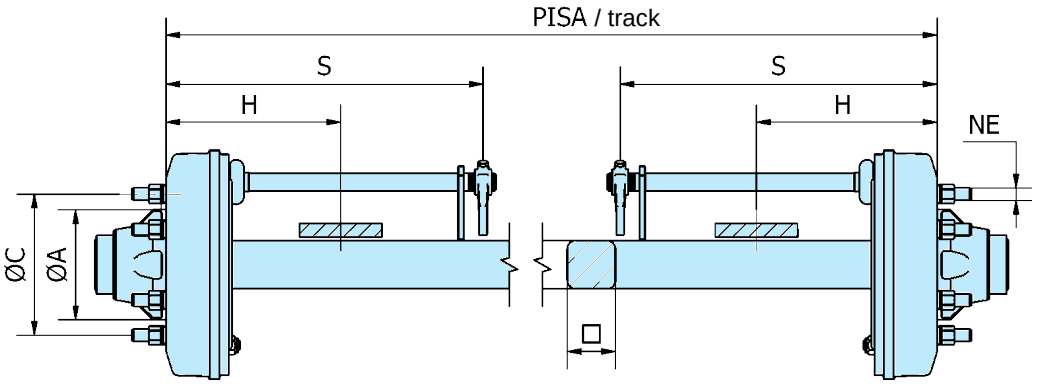
Ejes rectos con freno monoblock / Braked rigid axles–solid drum (1)



REFERENCIA Reference	CUA. Square ⧄ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	H mm	S mm	CARGA POR EJE Capacity per axle 40 km/h kg	kg	kg	PESO Weight kg	
FRENO MONOBLOCK 200 x 40 / Solid drum													
E040035200-42	**40**	30205	30207	93	140	5 x M16	205	380	1950	1650	1450	31,5	(Pisa=1200)
E050045200-42	**50**	30206	30209	93	140	5 x M16	250	380	3200	2700	2400	43,5	(Pisa=1350)
FRENO MONOBLOCK 250 x 60 / Solid drum													
E050045250-67	**50**	30206	30209	160	205	6 x M18	250	384	3200	2700	2400	62,0	(Pisa=1200)
E060055250-67	**60**	30208	30211	160	205	6 x M18	250	384	5000	4000	3500	77,0	(Pisa=1450)
E070055250-67	**70**	30208	30211	160	205	6 x M18	250	384	5000	4000	3500	82,0	(Pisa=1450)

Ejes rectos con freno monoblock / Braked rigid axles–solid drum (2)





REFERENCIA Reference	CUA. Square ⊡ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	H mm	S mm	CARGA POR EJE Capacity per axle 40 km/h kg	kg	kg	PESO Weight kg	
FRENO MONOBLOCK 300 x 60 / Solid drum													
E060055300-67	**60**	30208	30211	160	205	6 x M18	250	460	5000	4000	3500	98,0	(Pisa=1600)
E070055300-67	**70**	30208	30211	160	205	6 x M18	300	460	5000	4000	3500	116,0	(Pisa=1700)
E070065300-67	**70**	32210	30213	160	205	6 x M18	300	460	7500	6500	6000	121,5	(Pisa=1700)
E070065300-6B	**70**	32210	30213	160	205	6 x M20	300	460	7500	6500	6000	121,5	(Pisa=1700)
E070065300-68	**70**	32210	30213	220	275	8 x M20	300	460	7500	6500	6000	129,5	(Pisa=1700)
E080065300-67	**80**	32210	30213	160	205	6 x M18	350	460	7500	6500	6000	140,5	(Pisa=1800)
E080065300-6B	**80**	32210	30213	160	205	6 x M20	350	460	7500	6500	6000	140,5	(Pisa=1800)
E080065300-68	**80**	32210	30213	220	275	8 x M20	350	460	7500	6500	6000	148,5	(Pisa=1800)
E080075300-67	**80**	32212	32215	160	205	6 x M18	350	460	9000	8000	7500	152,0	(Pisa=1800)
E080075300-6B	**80**	32212	32215	160	205	6 x M20	350	460	9000	8000	7500	152,0	(Pisa=1800)
E080075300-68	**80**	32212	32215	220	275	8 x M20	350	462	9000	8000	7500	159,0	(Pisa=1800)
E090075300-67	**90**	32212	32215	160	205	6 x M18	400	462	9000	8000	7500	171,0	(Pisa=1800)
E090075300-6B	**90**	32212	32215	160	205	6 x M20	400	462	9000	8000	7500	171,0	(Pisa=1800)
E090075300-68	**90**	32212	32215	220	275	8 x M20	400	462	9000	8000	7500	179,0	(Pisa=1800)

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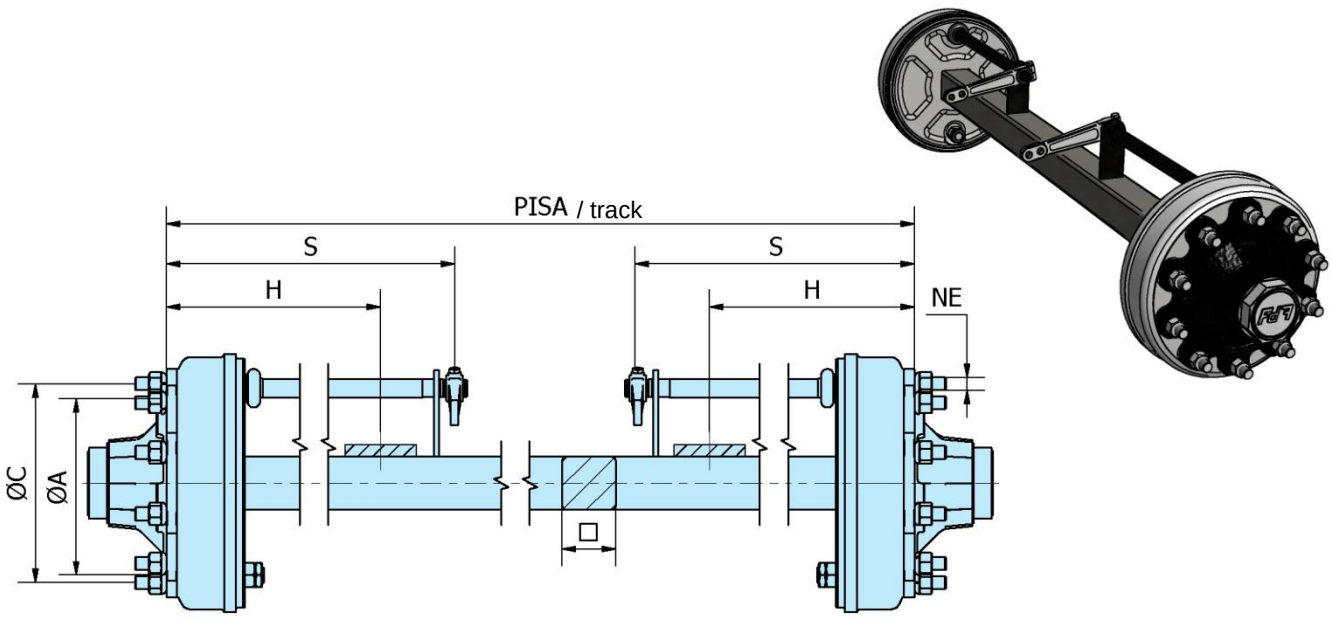
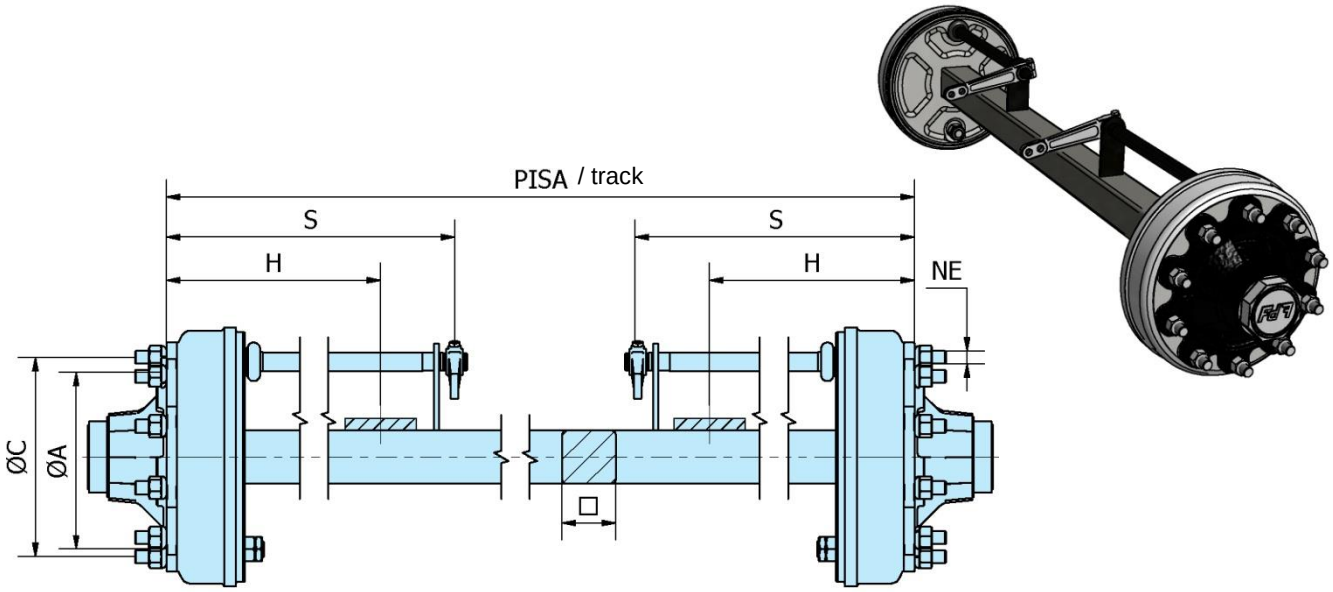
(The information contained in this catalogue can be modified without further notice)

Ejes rectos con freno combinado / Braked rigid axles - hub and drum (1)



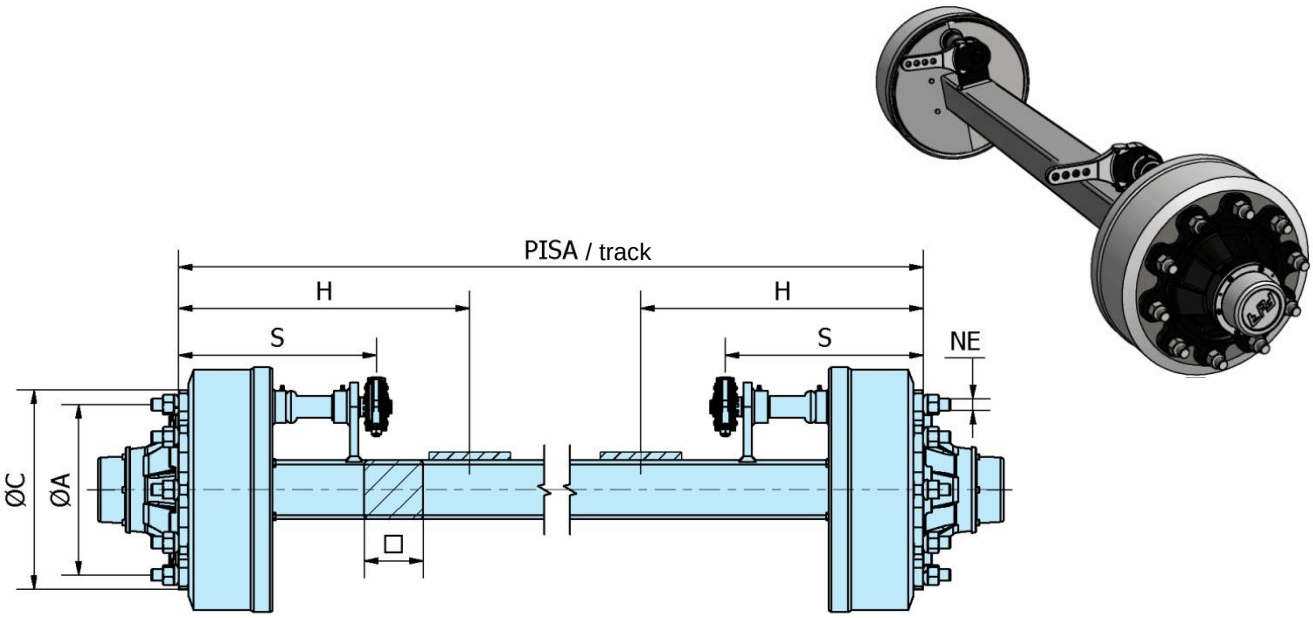
REFERENCIA Reference	CUA. Square ⧄ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	H mm	S mm	CARGA POR EJE Capacity per axle 40 km/h kg	kg	kg	CARGA POR EJE Capacity per axle 60 km/h kg	kg	kg	PESO Weight kg	
FRENO COMBINADO 300 x 60 / Hub and drum																
C070065300-67	**70**	32210	30213	160	205	6 x M18	300	470	7500	6500	6000	7000	6000	5000	131,2	(Pisa=1700)
C070065300-68	**70**	32210	30213	220	275	8 x M20	300	470	7500	6500	6000	7000	6000	5000	134,5	(Pisa=1700)
C080065300-67	**80**	32210	30213	160	205	6 x M18	350	470	7500	6500	6000	7000	6000	5000	152,0	(Pisa=1800)
C080065300-68	**80**	32210	30213	220	275	8 x M20	350	470	7500	6500	6000	7000	6000	5000	153,5	(Pisa=1800)
C080075300-67	**80**	32212	32215	160	205	6 x M18	350	470	9000	8000	7500	8500	7500	7000	161,0	(Pisa=1800)
C080075300-68	**80**	32212	32215	220	275	8 x M20	350	470	9000	8000	7500	8500	7500	7000	164,0	(Pisa=1800)
C090075300-67	**90**	32212	32215	160	205	6 x M18	400	472	9000	8000	7500	8500	7500	7000	170,0	(Pisa=1800)
C090075300-68	**90**	32212	32215	220	275	8 x M20	400	472	9000	8000	7500	8500	7500	7000	172,0	(Pisa=1800)
C090085300-68	**90**	32214	32217	220	275	8 x M20	400	472	12500	11000	9500	11200	10000	8500	194,0	(Pisa=1800)
C100085300-68	**100**	32214	32217	220	275	8 x M20	400	472	12500	11000	9500	11200	10000	8500	215,0	(Pisa=1800)
FRENO COMBINADO 300 x 90 / Hub and drum																
C070065300-97	**70**	32210	30213	160	205	6 x M18	300	650	7500	6500	6000	7000	6000	5000	150,2	(Pisa=1700)
C070065300-98	**70**	32210	30213	220	275	8 x M20	300	650	7500	6500	6000	7000	6000	5000	153,5	(Pisa=1700)
C080065300-97	**80**	32210	30213	160	205	6 x M18	350	650	7500	6500	6000	7000	6000	5000	171	(Pisa=1800)
C080065300-98	**80**	32210	30213	220	275	8 x M20	350	650	7500	6500	6000	7000	6000	5000	172,5	(Pisa=1800)
C080075300-97	**80**	32212	32215	160	205	6 x M18	350	650	9000	8000	7500	8500	7500	7000	180	(Pisa=1800)
C080075300-98	**80**	32212	32215	220	275	8 x M20	350	650	9000	8000	7500	8500	7500	7000	183	(Pisa=1800)
C090075300-97	**90**	32212	32215	160	205	6 x M18	400	650	9000	8000	7500	8500	7500	7000	189	(Pisa=1800)
C090075300-98	**90**	32212	32215	220	275	8 x M20	400	650	9000	8000	7500	8500	7500	7000	191	(Pisa=1800)
C090085300-98	**90**	32214	32217	220	275	8 x M20	400	650	12500	11000	9500	11200	10000	8500	213	(Pisa=1800)
C100085300-98	**100**	32214	32217	220	275	8 x M20	400	650	12500	11000	9500	11200	10000	8500	234	(Pisa=1800)

Ejes rectos con freno combinado / Braked rigid axles - hub and drum (2)



REFERENCIA Reference	CUA. Square ⧄ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	H mm	S mm	CARGA POR EJE Capacity per axle 40 km/h kg	kg	kg	CARGA POR EJE Capacity per axle 60 km/h kg	kg	kg	PESO Weight kg	
FRENO COMBINADO 350 x 60 / Hub and drum																
C080075350-68	**80**	32212	32215	220	275	8 x M20	350	630	9000	8000	7500	8500	7500	7000	169,0	(Pisa=1800)
C090075350-68	**90**	32212	32215	220	275	8 x M20	400	630	9000	8000	7500	8500	7500	7000	188,0	(Pisa=1800)
C090085350-68	**90**	32214	32217	220	275	8 x M20	400	630	12500	11000	9500	11200	10000	8500	210,0	(Pisa=1800)
C100085350-68	**100**	32214	32217	220	275	8 x M20	400	630	12500	11000	9500	11200	10000	8500	232,0	(Pisa=1800)
C100090350-68	**100**	33215	33118	220	275	8 x M20	400	630	14000	12500	11000	13000	11000	10000	267,0	(Pisa=2000)
FRENO COMBINADO 350 x 90 / Hub and drum																
C080075350-98	**80**	32212	32215	220	275	8 x M20	350	665	9000	8000	7500	8500	7500	7000	189	(Pisa=1800)
C090075350-98	**90**	32212	32215	220	275	8 x M20	400	665	9000	8000	7500	8500	7500	7000	208	(Pisa=1800)
C090085350-98	**90**	32214	32217	220	275	8 x M20	400	665	12500	11000	9500	11200	10000	8500	230	(Pisa=1800)
C100085350-98	**100**	32214	32217	220	275	8 x M20	400	665	12500	11000	9500	11200	10000	8500	252	(Pisa=1800)
C100090350-98	**100**	33215	33118	220	275	8 x M20	400	665	14000	12500	11000	13000	11000	10000	287	(Pisa=2000)
C120085350-98	**120**	32214	32217	220	275	8 x M20	400	665	12500	11000	9500	11200	10000	8500	252	(Pisa=1800)
C120090350-98	**120**	33215	33118	220	275	8 x M20	400	665	14000	12500	11000	13000	11000	10000	287	(Pisa=2000)
FRENO COMBINADO 400 x 80 / Hub and drum																
C080075400-88	**80**	32212	32215	220	275	8 x M20	350	640	9000	8000	7500	8500	7500	7000	189,0	(Pisa=1800)
C090075400-88	**90**	32212	32215	220	275	8 x M20	400	640	9000	8000	7500	8500	7500	7000	208,0	(Pisa=1800)
C090085400-88	**90**	32214	32217	220	275	8 x M20	400	640	12500	11000	9500	11200	10000	8500	230,0	(Pisa=1800)
C090085400-89	**90**	32214	32217	280	335	10 x M22	400	640	12500	11000	9500	11200	10000	8500	244,0	(Pisa=1800)
C100085400-88	**100**	32214	32217	220	275	8 x M20	400	640	12500	11000	9500	11200	10000	8500	252,0	(Pisa=1800)
C100085400-89	**100**	32214	32217	280	335	10 x M22	400	640	12500	11000	9500	11200	10000	8500	266,0	(Pisa=1800)
C100090400-88	**100**	33215	33118	220	275	8 x M20	400	640	14000	12500	11000	13000	11000	10000	287,0	(Pisa=1800)
C100090400-89	**100**	33215	33118	280	335	10 x M22	400	640	14000	12500	11000	13000	11000	10000	301,0	(Pisa=1800)
C110090400-88	**110**	33215	33118	220	275	8 x M20	400	640	14000	12500	11000	13000	11000	10000	316,0	(Pisa=1800)
C110090400-89	**110**	33215	33118	280	335	10 x M22	400	640	14000	12500	11000	13000	11000	10000	301,0	(Pisa=1800)

Ejes rectos con freno combinado. Semi-industrial / Semi-industrial braked rigid axles - hub and drum



REFERENCIA Reference	CUA. Square □ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	H mm	S mm	CARGA POR EJE Capacity per axle 40 km/h kg	kg	kg	CARGA POR EJE Capacity per axle 60 km/h kg	kg	kg	PESO Weight kg
FRENO COMBINADO 300 x 100 (SEMI-INDUSTRIAL) Hub and drum															
C080070300-01	**80**	32211	32214	220	275	8 x M18	350	660	8000	7000	6500	7500	6500	6000	217,0 (Pisa=2100)
C090070300-01	**90**	32211	32214	220	275	8 x M18	400	660	8000	7000	6500	7500	6500	6000	242,0 (Pisa=2100)
FRENO COMBINADO 406 x 120 (SEMI-INDUSTRIAL) Hub and drum															
C100090406-29	**100**	33215	33118	280	335	10 x M22	400	640	14000	12500	11000	13000	11000	10000	362,0 (Pisa=1800)
C110090406-29	**110**	33215	33118	280	335	10 x M22	400	640	14000	12500	11000	13000	11000	10000	379,0 (Pisa=1800)
C120090406-29	**120**	33215	33118	280	335	10 x M22	400	640	14000	12500	11000	13000	11000	10000	282,0 (Pisa=1800)

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AXLES & TYRES

EJES AGRICOLAS E INDUSTRIALES
Agricultural and Industrial Axles

EJES DIRECCIONALES

Información técnica
Ejes Autodireccionales (1)
Ejes Autodireccionales (2)
Eje Direccional forzado hidráulicamente (1)
Eje Direccional forzado hidráulicamente (2)
Componentes Ejes Direccionales

STEERING AXLES

Technical information
Self Steering Axles (1)
Self Steering Axles (2)
Forced Steering Axles (1)
Forced Steering Axles (2)
Steering Axles Components

Thanks to benefits they provide, the steering axles are a good choice for your machines. Its strengths shows when little radius turn manoeuvring is required and on abrasive surface.

The benefits in relation to rigid axles are a less turn radio required, less tyre wear and lower fuel consumption. (*Figure 1*)

The self-steering axle is designed to follow the movement of the tractor whereas the forced steering axles are provided with a hydraulic system in order to turn the wheels at the same direction and angle that the tractor.

Thanks to the design of the steering axles with the pivot axis advanced in respect of the support point, it made easier the manoeuvrings. (*Figure 2*)

Steering axles, features and benefits:

- Lower tyre wear
- Lower fuel consumption
- Greater manoeuvrability, reduced transport space requirement
- Less transversal strain on the system road and body

Gracias a los beneficios que aportan, los ejes direccionales son una buena elección para sus máquinas.

Sus fortalezas aparecen cuando se requieren maniobras de giro de poco radio y sobre terreno abrasivo. Los beneficios en relación a los ejes rígidos son, un menor radio de giro requerido, menor desgaste de los neumáticos y el consumo de combustible disminuye. (*Figura 1*)

Los ejes auto-direccionales están diseñados para seguir el movimiento del tractor mientras que los ejes direccionales forzados están provistos de un sistema hidráulico que hace girar las ruedas en la misma dirección y ángulo que las del tractor.

Gracias al diseño del eje direccional con el eje de giro adelantado respecto al punto de apoyo, se facilita la ejecución de las maniobras. (*Figura 2*)

Ejes direccionales, ventajas y características:

- Menor desgaste de los neumáticos
- Reducción del consumo de combustible
- Mejor maniobrabilidad, reducción del espacio para giros
- Menores esfuerzos transversales en el sistema de rodaje y chasis

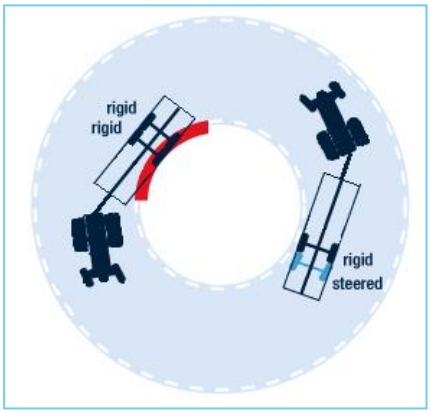


Figura 1. Diferencias en el giro entre eje direccional y rígido
Figure 1. Turn differences between directional and rigid axle

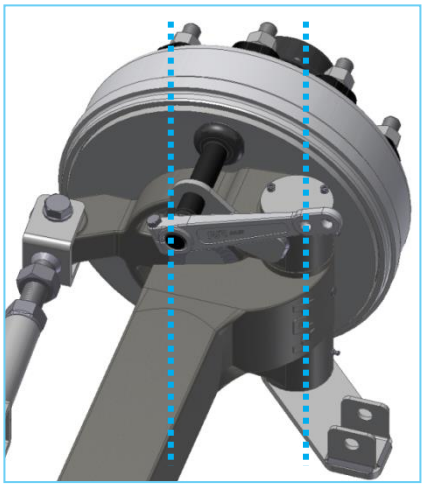
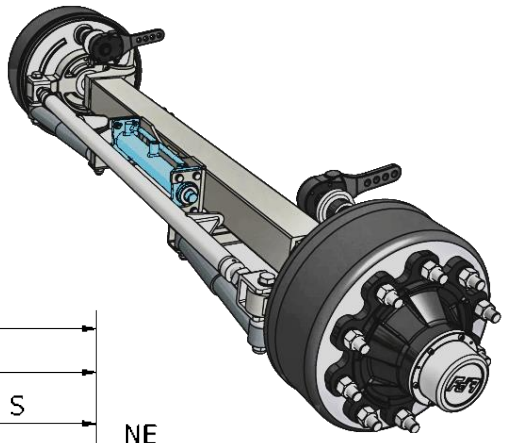
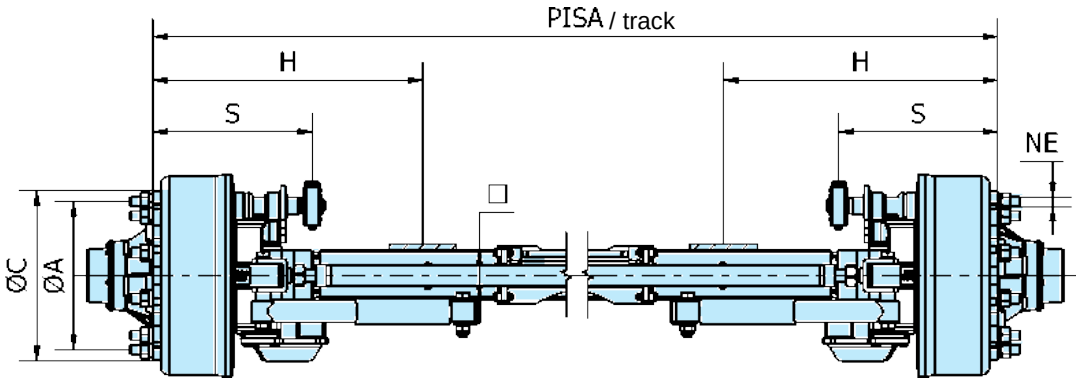


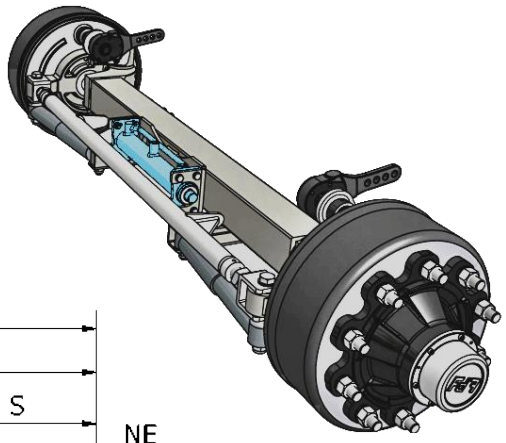
Figura 2. Eje de giro adelantado respecto al punto de apoyo
Figure 2. Pivot axis advanced in respect of the support point

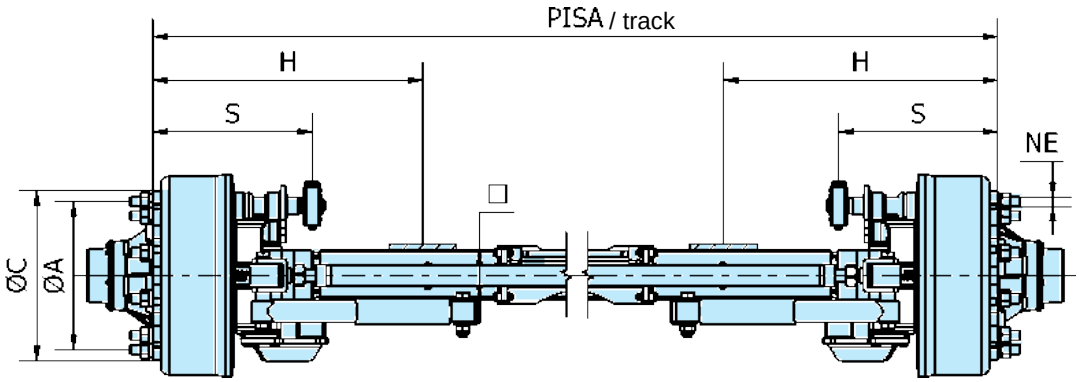
Ejes Autodireccionales / Self Steering Axles (1)





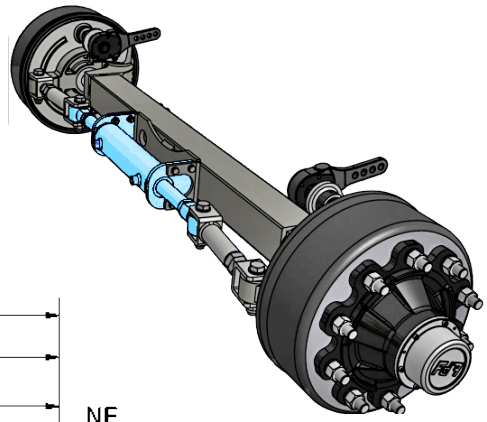
REFERENCIA Reference	CUA. Square ⊡ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	H mm	S mm	CARGA POR EJE Capacity per axle 40 km/h kg	CARGA POR EJE Capacity per axle 60 km/h kg	PESO Weight kg	
FRENO COMBINADO 300 x 90 / Hub and drum												
A080075300-97	**80**	32212	32215	160	205	6 x M18	525	370	7500	7000	310	(Pisa=1800)
A080075300-98	**80**	32212	32215	220	275	8 x M20	525	370	7500	7000	310	(Pisa=1800)
A090075300-97	**90**	32212	32215	160	205	6 x M18	525	370	7500	7000	320	(Pisa=1800)
A090075300-98	**90**	32212	32215	220	275	8 x M20	525	370	7500	7000	320	(Pisa=1800)
A090085300-98	**90**	32214	32217	220	275	8 x M20	525	370	9500	8500	340	(Pisa=1800)
A100085300-98	**100**	32214	32217	220	275	8 x M20	525	370	9500	8500	355	(Pisa=1800)
FRENO COMBINADO 350 x 60 / Hub and drum												
A090085350-68	**90**	32214	32217	220	275	8 x M20	400	300	9500	8500	327,0	(Pisa=1800)
A100085350-68	**100**	32214	32217	220	275	8 x M20	400	300	9500	8500	349,0	(Pisa=1800)
A100090350-68	**100**	33215	33118	220	275	8 x M20	400	300	11000	10000	371,0	(Pisa=2000)
A110090350-68	**100**	33215	33118	220	275	8 x M20	400	300	11000	10000	393,0	(Pisa=2000)
FRENO COMBINADO 350 x 90 / Hub and drum												
A080075350-98	**80**	32212	32215	220	275	8 x M20	500	350	7500	7000	330	(Pisa=1800)
A090075350-98	**90**	32212	32215	220	275	8 x M20	500	350	7500	7000	340	(Pisa=1800)
A090085350-98	**90**	32214	32217	220	275	8 x M20	500	350	9500	8500	365	(Pisa=1800)
A100085350-98	**100**	32214	32217	220	275	8 x M20	500	350	9500	8500	380	(Pisa=1800)
A100090350-98	**100**	33215	33118	220	275	8 x M20	500	350	11000	10000	390	(Pisa=1800)
A120090350-98	**120**	33215	33118	220	275	8 x M20	500	350	11000	10000	355	(Pisa=1800)

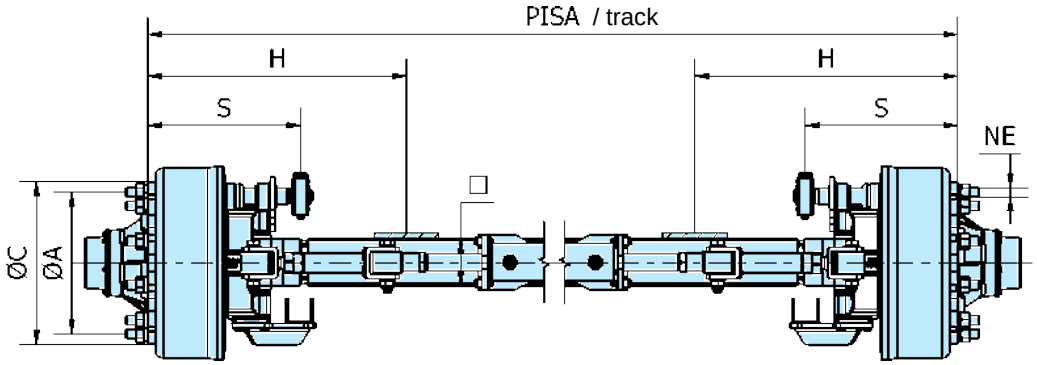




REFERENCIA Reference	CUA. Square ⧄ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	H mm	S mm	CARGA POR EJE Capacity per axle 40 km/h kg	CARGA POR EJE Capacity per axle 60 km/h kg	PESO Weight kg
FRENO COMBINADO 400 x 80 / Hub and drum											
A090085400-88	**90**	32214	32217	220	275	8 x M20	400	320	9500	8500	315,0 (Pisa=1800)
A090085400-89	**90**	32214	32217	280	335	10 x M22	400	320	9500	8500	329,0 (Pisa=1800)
A100085400-88	**100**	32214	32217	220	275	8 x M20	400	320	9500	8500	343,0 (Pisa=1800)
A100085400-89	**100**	32214	32217	280	335	10 x M22	400	320	9500	8500	357,0 (Pisa=1800)
A100090400-88	**100**	33215	33118	220	275	8 x M20	400	320	11000	10000	371,0 (Pisa=1800)
A100090400-89	**100**	33215	33118	280	335	10 x M22	400	320	11000	10000	385,0 (Pisa=1800)
A110090400-88	**110**	33215	33118	220	275	8 x M20	400	320	11000	10000	399,0 (Pisa=1800)
A110090400-89	**110**	33215	33118	280	335	10 x M22	400	320	11000	10000	413,0 (Pisa=1800)
FRENO COMBINADO 406 x 120 (SEMI-INDUSTRIAL) / Hub and drum											
A100090406-29	**100**	33215	33118	280	335	10 x M22	400	360	11000	10000	415,0 (Pisa=1800)
A110090406-29	**110**	33215	33118	280	335	10 x M22	400	360	11000	10000	445,0 (Pisa=1800)
A120090406-29	**120**	33215	33118	280	335	10 x M22	400	360	11000	10000	351,0 (Pisa=1800)

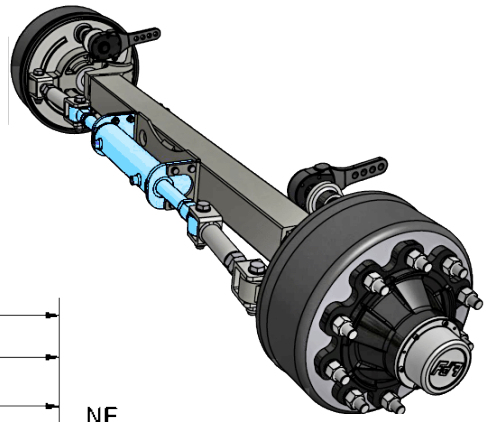
Eje Direccional forzado hidráulicamente / Forced Steering Axles (1)

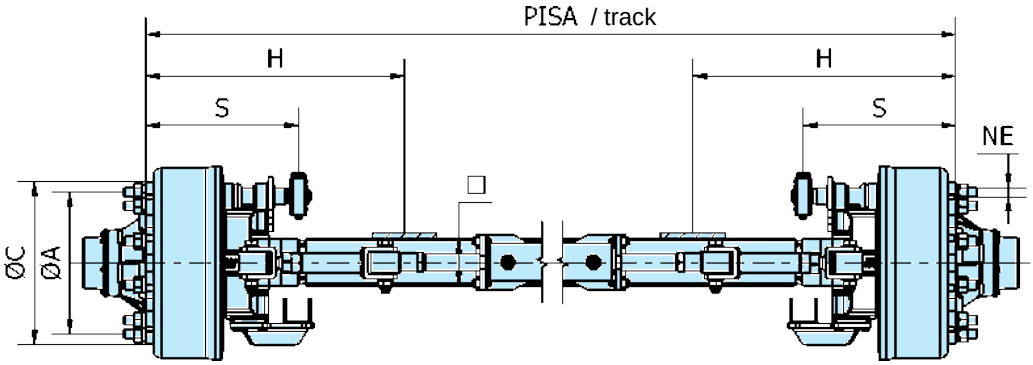




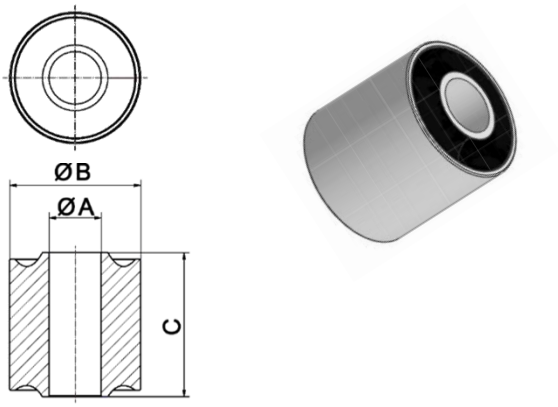
REFERENCIA Reference	CUA. Square □ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	H mm	S mm	CARGA POR EJE Capacity per axle 40 km/h kg	CARGA POR EJE Capacity per axle 60 km/h kg	PESO Weight kg
FRENO COMBINADO 300 x 90 / Hub and drum											
D080075300-97	**80**	32212	32215	160	205	6 x M18	525	370	7500	7000	310 (Pisa=1800)
D080075300-98	**80**	32212	32215	220	275	8 x M20	525	370	7500	7000	310 (Pisa=1800)
D090075300-97	**90**	32212	32215	160	205	6 x M18	525	370	7500	7000	320 (Pisa=1800)
D090075300-98	**90**	32212	32215	220	275	8 x M20	525	370	7500	7000	320 (Pisa=1800)
D090085300-98	**90**	32214	32217	220	275	8 x M20	525	370	9500	8500	340 (Pisa=1800)
D100085300-98	**100**	32214	32217	220	275	8 x M20	525	370	9500	8500	355 (Pisa=1800)
FRENO COMBINADO 350 x 60 / Hub and drum											
D090085350-68	**90**	32214	32217	220	275	8 x M20	400	300	9500	8500	327,0 (Pisa=1800)
D100085350-68	**100**	32214	32217	220	275	8 x M20	400	300	9500	8500	349,0 (Pisa=1800)
D100090350-68	**100**	33215	33118	220	275	8 x M20	400	300	11000	10000	371,0 (Pisa=1800)
D110090350-68	**100**	33215	33118	220	275	8 x M20	400	300	11000	10000	393,0 (Pisa=1800)
FRENO COMBINADO 350 x 90 / Hub and drum											
D080075350-98	**80**	32212	32215	220	275	8 x M20	500	350	7500	7000	330 (Pisa=1800)
D090075350-98	**90**	32212	32215	220	275	8 x M20	500	350	7500	7000	340 (Pisa=1800)
D090085350-98	**90**	32214	32217	220	275	8 x M20	500	350	9500	8500	365 (Pisa=1800)
D100085350-98	**100**	32214	32217	220	275	8 x M20	500	350	9500	8500	380 (Pisa=1800)
D100090350-98	**100**	33215	33118	220	275	8 x M20	500	350	11000	10000	390 (Pisa=1800)
D120090350-98	**120**	33215	33118	220	275	8 x M20	500	350	11000	10000	355 (Pisa=1800)

Eje Direccional forzado hidráulicamente / Forced Steering Axles (2)



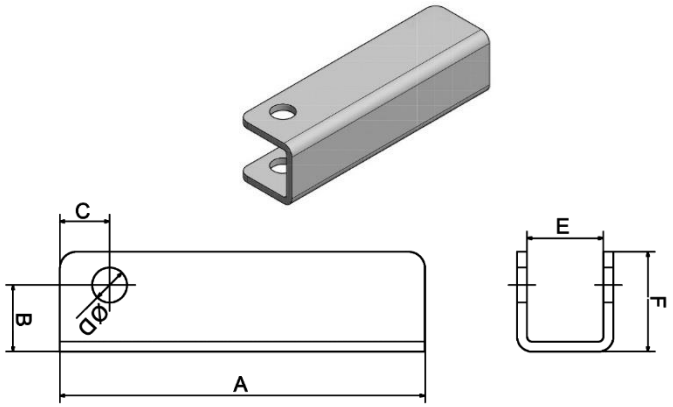


REFERENCIA Reference	CUA. Square □ mm	RODAMIENTOS Bearings		ATAQUE Wheel fixing ØA mm	ØC mm	NE	H mm	S mm	CARGA POR EJE Capacity per axle 40 km/h kg	CARGA POR EJE Capacity per axle 60 km/h kg	PESO Weight kg
FRENO COMBINADO 400 x 80 / Hub and drum											
D090085400-88	**90**	32214	32217	220	275	8 x M20	400	320	9500	8500	315,0 (Pisa=1800)
D090085400-89	**90**	32214	32217	280	335	10 x M22	400	320	9500	8500	329,0 (Pisa=1800)
D100085400-88	**100**	32214	32217	220	275	8 x M20	400	320	9500	8500	343,0 (Pisa=1800)
D100085400-89	**100**	32214	32217	280	335	10 x M22	400	320	9500	8500	357,0 (Pisa=1800)
D100090400-88	**100**	33215	33118	220	275	8 x M20	400	320	11000	10000	371,0 (Pisa=1800)
D100090400-89	**100**	33215	33118	280	335	10 x M22	400	320	11000	10000	385,0 (Pisa=1800)
D110090400-88	**110**	33215	33118	220	275	8 x M20	400	320	11000	10000	399,0 (Pisa=1800)
D110090400-89	**110**	33215	33118	280	335	10 x M22	400	320	11000	10000	413,0 (Pisa=1800)
FRENO COMBINADO 406 x 120 / Hub and drum											
D100090406-29	**100**	33215	33118	280	335	10 x M22	400	360	11000	10000	415,0 (Pisa=1800)
D110090406-29	**110**	33215	33118	280	335	10 x M22	400	360	11000	10000	445,0 (Pisa=1800)
D120090406-29	**120**	33215	33118	280	335	10 x M22	400	360	11000	10000	351,0 (Pisa=1800)



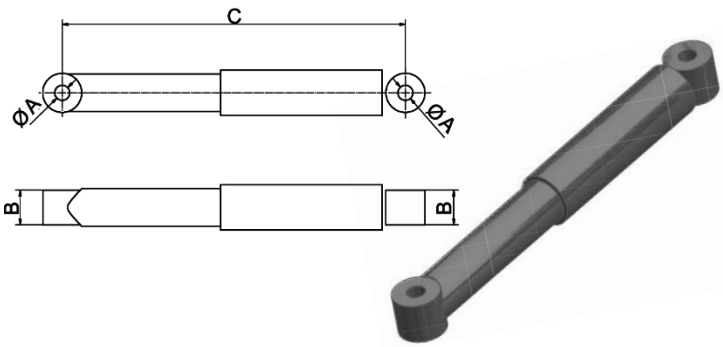
Articulación Elástica / Shock Absorber Joint

Referencia	Dimensiones (dimensions)		
Reference	ØA	ØB	C
P.99.205050	20	50	55



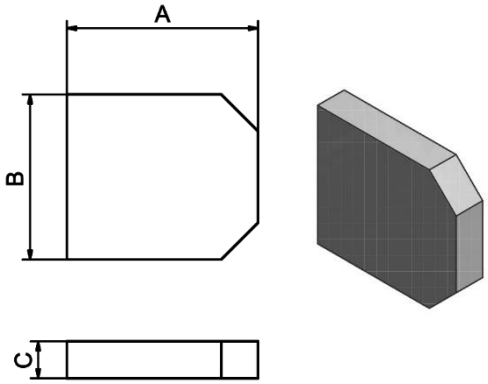
Soporte Amortiguador / Shock Absorber Support

Referencia	Dimensiones (dimensions)					
Reference	A	B	C	ØD	E	F
D.A0.X07.00	220	30	40	21	46	60



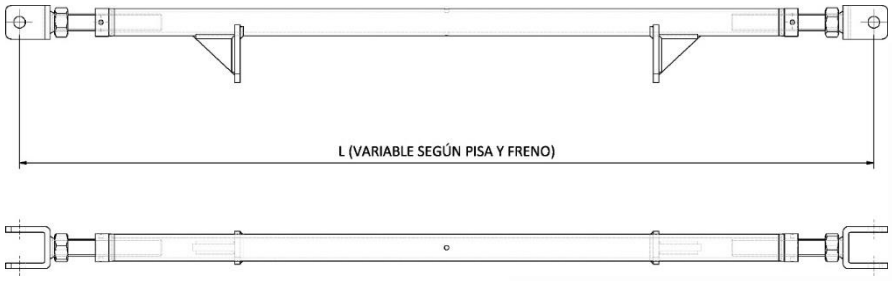
Amortiguador / Shock Absorber

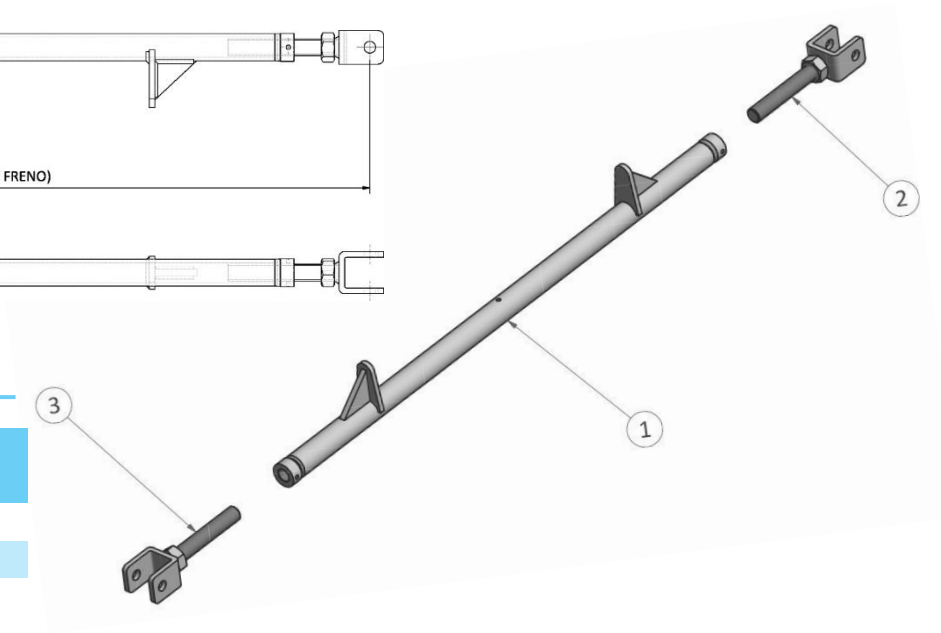
Referencia	Dimensiones (dimensions)		
Reference	ØA	B	C
P.99.32.752550	20	46	457



Refuerzo Soporte Amortiguador / Shock Absorber Reinforcement

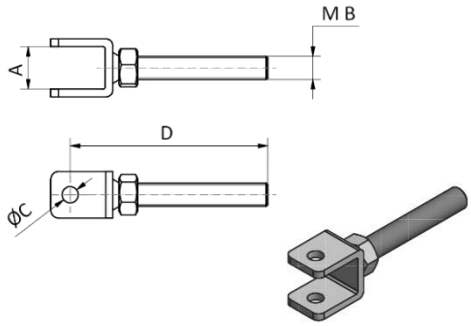
Referencia	Dimensiones (dimensions)		
Reference	A	B	C
D.A0.X07.01	52	45	10





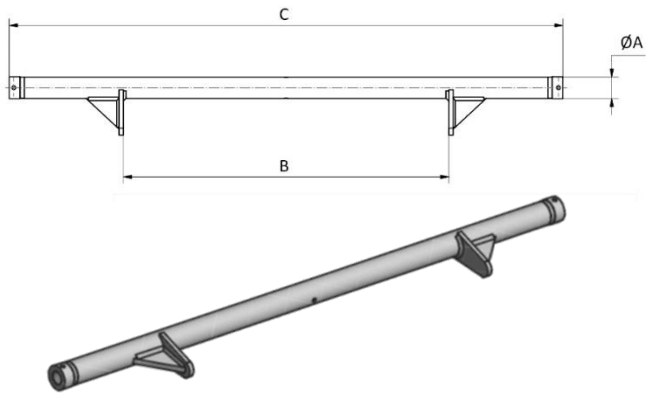
Barra de Transmisión / Bar Transmission

Posición Position	Referencia Reference
1	D.A0.XS3.LD.000
2	D.A0.XS3.RI.000
3	D.A0.XS3.LI.000



Espiga / Screwed Bar

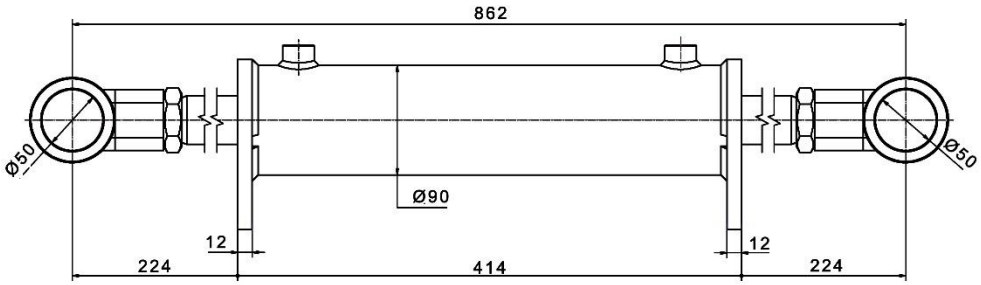
Referencia Reference	Dimensiones (dimensions)			
	A	B	ØC	D
D.A0.XS3.RI.000	55	30 (dchas)	21	255
D.A0.XS3.LI.000	55	30 (izdas)	21	255

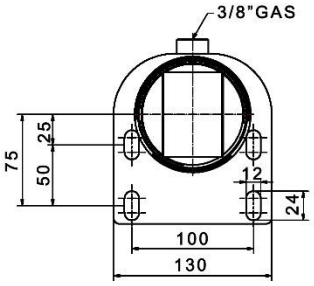


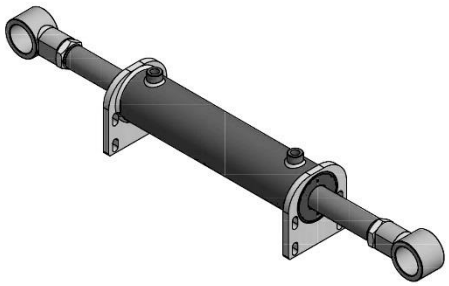
Cuerpo Central / Main Body

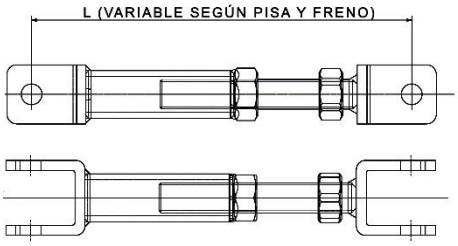
Referencia Reference	Dimensiones (dimensions)		
	ØA	B	C
D.A0.XS3.LD.000	48	741	1260

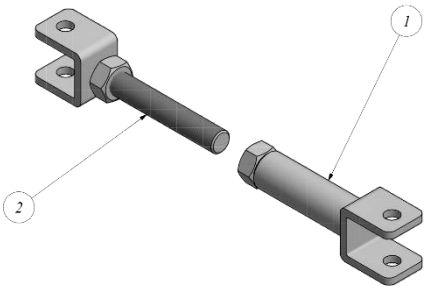
Cilindro Comandado/ Forced Steering Cylinder





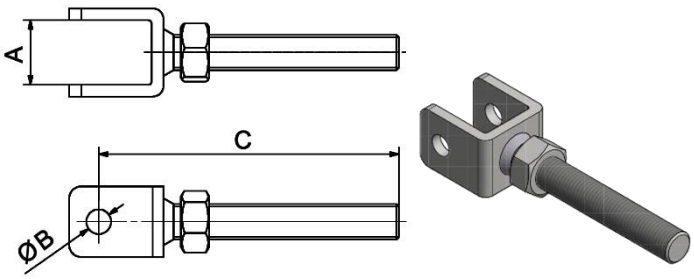






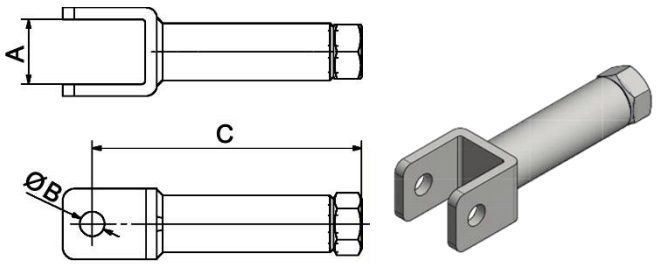
Barra de Transmisión / Transmission Bar

Posición Position	**Referencia** Reference
1	D.C0.XS3.LD.000
2	D.C0.XS3.LI.000



Espiga / Screwed Bar

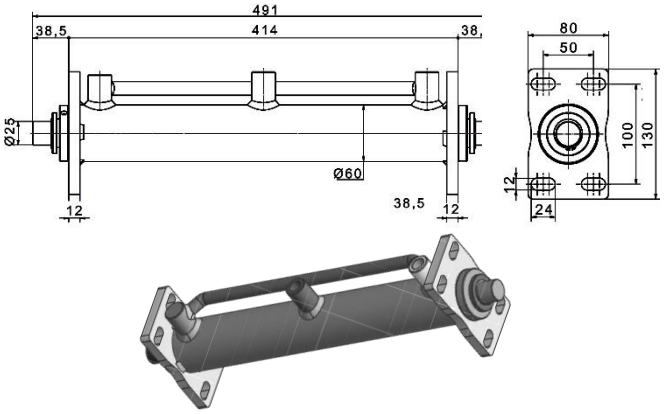
Referencia Reference	**Dimensiones** (dimensions)		
	A	**ØB**	**C**
D.C0.XS3.LI.00	55	21	255



Cuerpo Fijo / Main Body

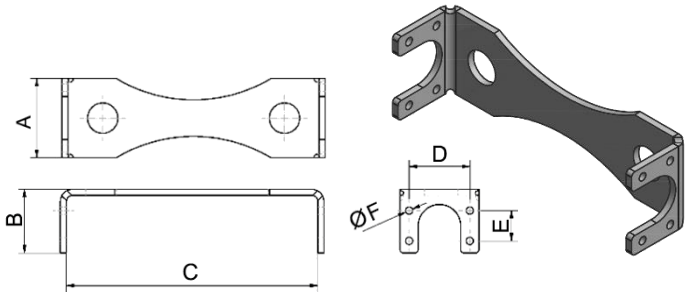
Referencia Reference	**Dimensiones** (dimensions)		
	A	**ØB**	**C**
D.C0.XS3.LD.00	55	21	Variable según pisa y freno

Cilindro de Bloqueo / Block Cylinder



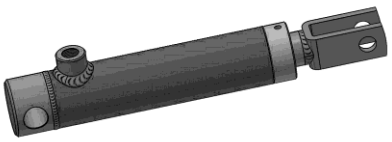
Soporte Cilindro de Bloqueo / Block Cylinder Support

Referencia Reference	**Dimensiones** (dimensions)					
	A	**B**	**C**	**D**	**E**	**ØF**
D.00.X18.01	130	105	414	100	50	12



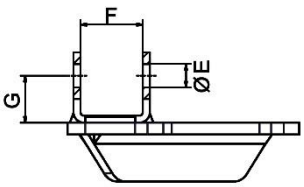
Cilindro de Freno / Brake Cylinder

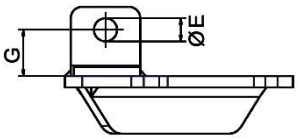
Referencia Reference	**ØVástago** Ø Rod	**Carrera** Stroke	**Cerrado** Closed	**Toma aceite** Oil plug (female)
5502310100GJS-5	23	100	290	3/8" (hembra)
5502510085GJS-1	25	85	290	3/8" (hembra)
5503010085GJS-1	30	95	290	3/8" (hembra)



Soporte Cilindro de Freno / Brake Cylinder Support

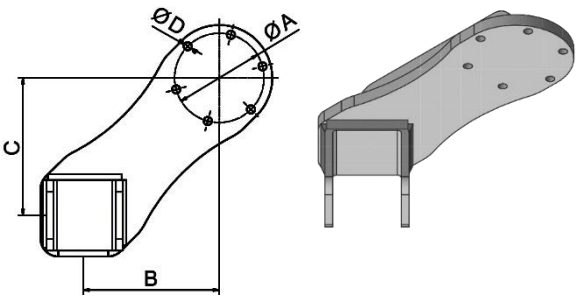
Referencia Reference	**Dimensiones** (dimensions)						
	ØA	**B**	**C**	**ØD**	**ØE**	**F**	**G**
D.00.XS4.LD.000 D.00.XS4.LI.000	76	116	117	7	20	53	40





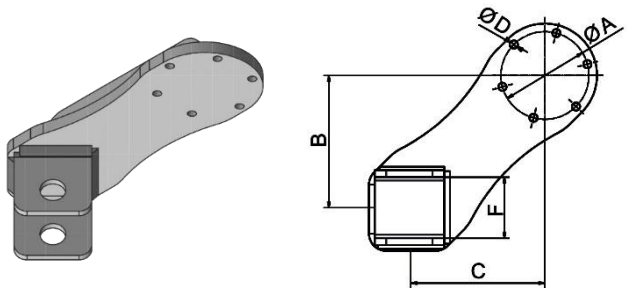
Izquierdo / Left

D.00.XS4.LI.000



Derecho / Right

D.00.XS4.LD.000



Fd7
AXLES & TYRES

EJES AGRICOLAS E INDUSTRIALES

Agricultural and Industrial Axles

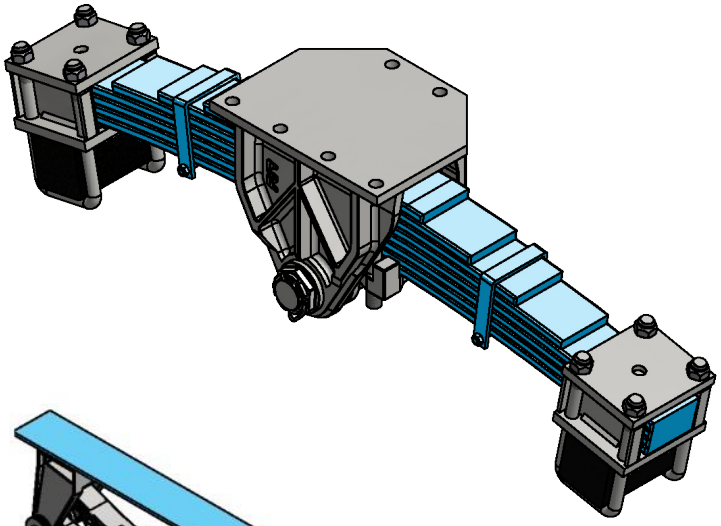
SUSPENSIONES

Gama de productos
Boggies
Monems, tandems y tridems
Ballesta de lanza
Ballesta parabólica

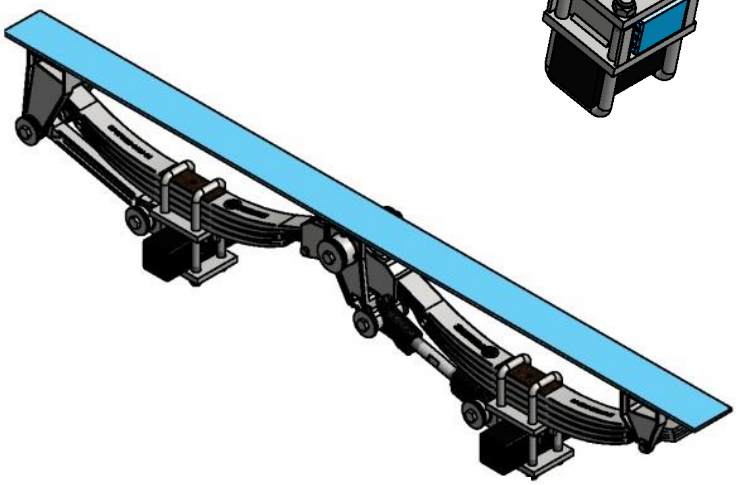
SUSPENSIONS

Products range
Boggies
Monems, tandems and tridems
Spring drawbar
Parabolic leaf spring

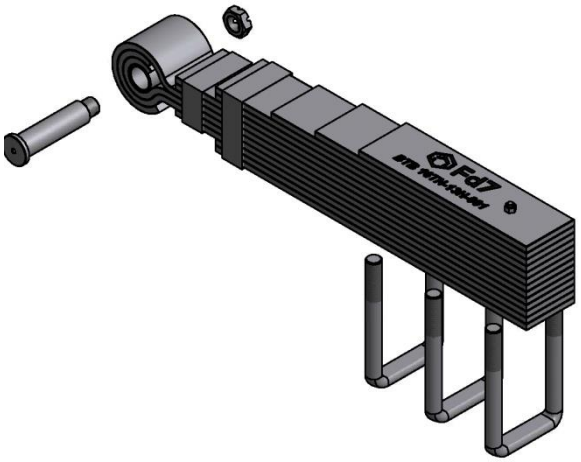
Boggies
Boggies



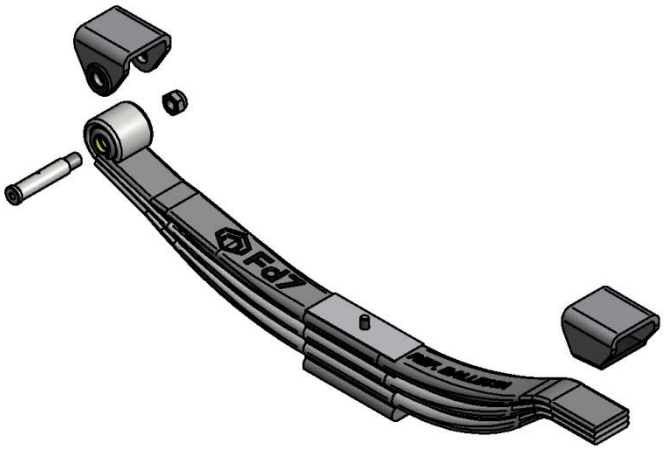
Monems, tandems y tridems
Monems, tandems and tridems



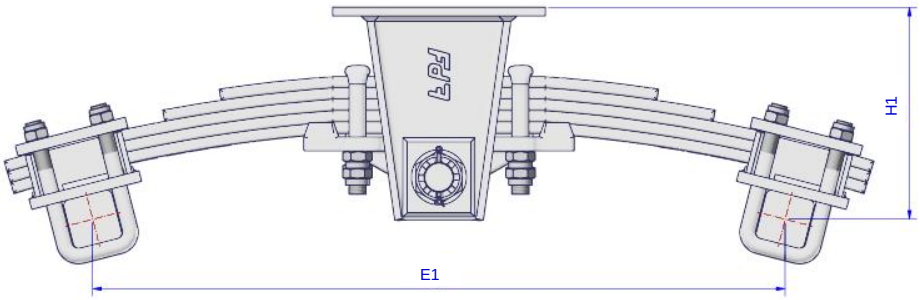
Ballesta de lanza
Spring drawbar

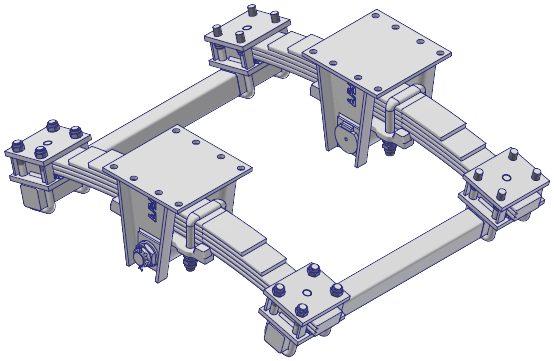


Ballesta parabólica
Parabolic leaf spring

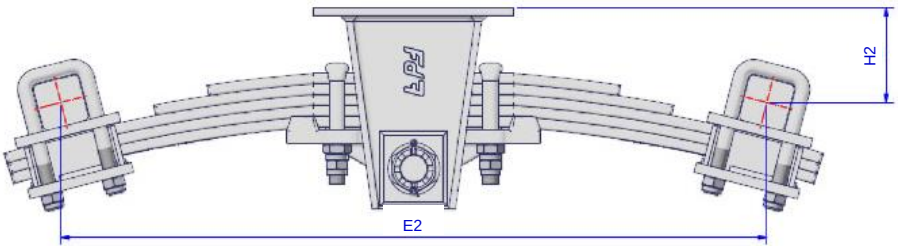


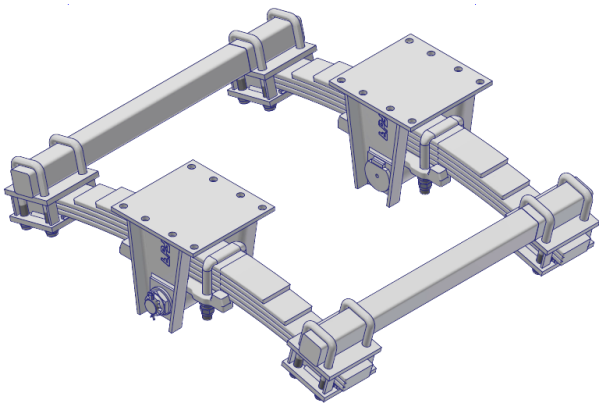
BOGGIE CON BALLESTA CONVENCIONAL – SOPORTES DE CHAPA
BOGGIE WITH CONVENTIONAL SPRING – METAL STAMPING SUPPORTS



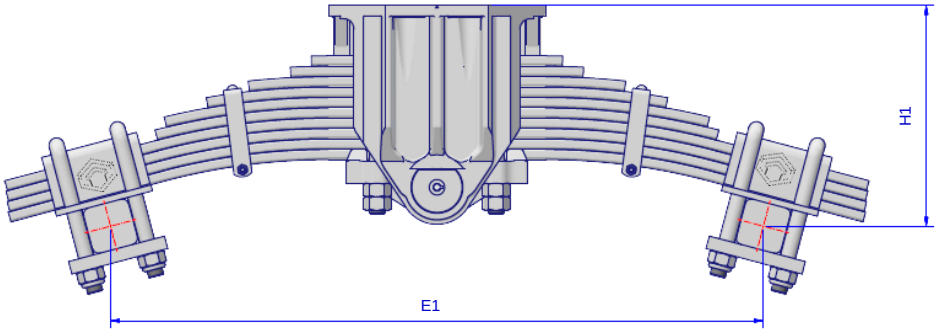


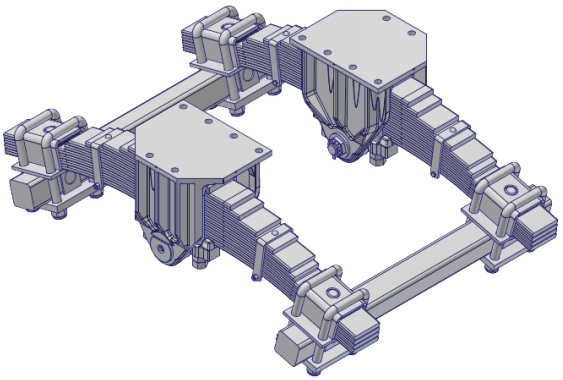
CAPACIDAD Capacity Kg	E1 mm	E2 mm	□ mm	H1 mm	H2 mm	BALLESTA Spring Tipo-Nº hojas	REFERENCIA Code
8.000	1000	1050	70	300	140	BM100x16-5	BCC08.1000.070
			80	300	140	BM100x16-5	BCC08.1000.080
			90	300	140	BM100x16-5	BCC08.1000.090
			100	300	140	BM100x16-5	BCC08.1000.100



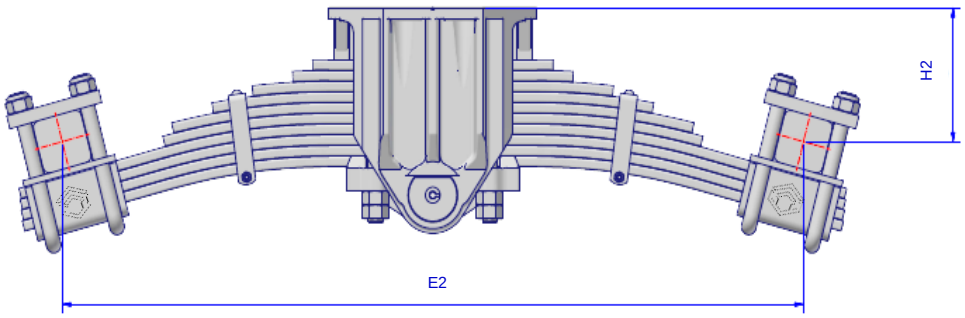


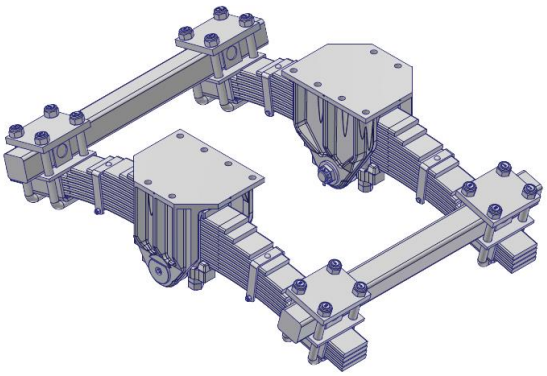
BOGGIE CON BALLESTA CONVENCIONAL – SOPORTES DE FUNDICION
BOGGIE WITH CONVENTIONAL SPRING – CAST SUPPORTS





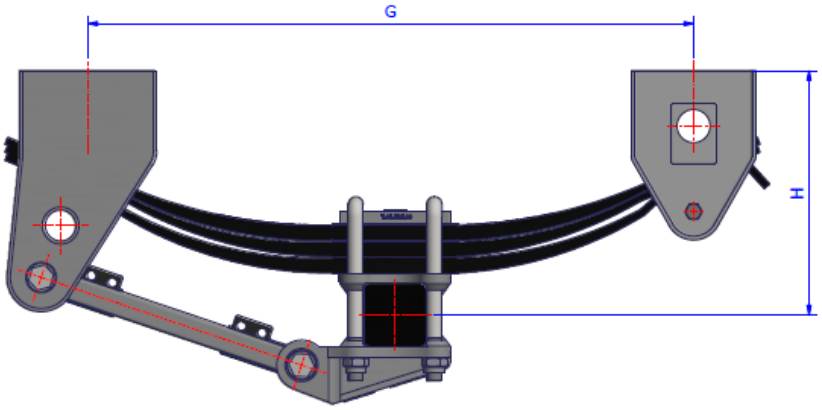
CAPACIDAD Capacity Kg	E1 mm	E2 mm	□ mm	H1 mm	H2 mm	BALLESTA Spring Tipo-Nº hojas	REFERENCIA Code
16.000	1080	1160	80	340	170	BM100x16-7	BFC16.1160.080
			90	345	170	BM100x16-7	BFC16.1160.090
			100	350	170	BM100x16-7	BFC16.1160.100
	1180	1260	80	350	180	BM100x16-7	BFC16.1260.080
			90	355	180	BM100x16-7	BFC16.1260.090
			100	360	180	BM100x16-7	BFC16.1260.100
18.000	1280	1360	90	340	135	BM120x20-7	BFC18.1360.090
			100	350	135	BM120x20-7	BFC18.1360.100
			120	360	135	BM120x20-7	BFC18.1360.120
22.000	1260	1360	90	425	235	BM120x20-10	BFC22.1360.090
			100	430	235	BM120x20-10	BFC22.1360.100
			120	440	235	BM120x20-10	BFC22.1360.120
	1400	1500	100	445	250	BM120x20-10	BFC22.1500.100
			120	455	250	BM120x20-10	BFC22.1500.120
	1600	1700	120	450	225	BM120x20-10	BFC22.1700.120
			150	460	225	BM120x20-10	BFC22.1700.150





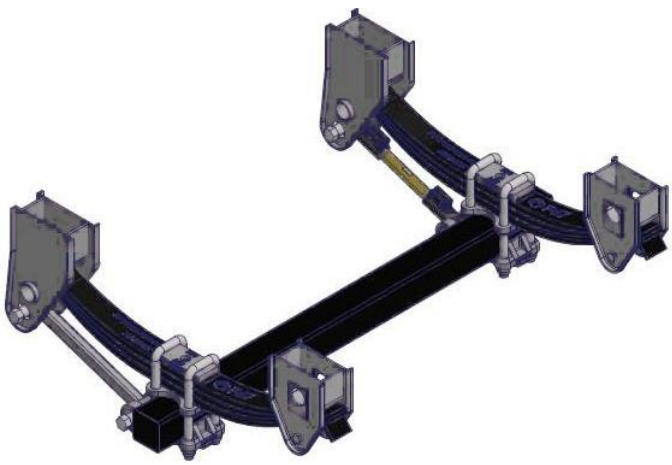
MONEM CON BALLESTA PARABOLICA B76
MONEM WITH PARABOLIC SPRING B76

SENTIDO DE MARCHA
FORWARD



CAPACIDAD Capacity Kg	G mm	□ mm	H mm	BALLESTA Spring Tipo-Nº hojas	REFERENCIA Code
8.000	750	70	335	BP76x23-3	MCP08.0750.070
		80	335	BP76x23-3	MCP08.0750.080
		90	335	BP76x23-3	MCP08.0750.090
	810	70	340	BP76x23-3	MCP08.0810.070
		80	340	BP76x23-3	MCP08.0810.080
		90	340	BP76x23-3	MCP08.0810.090
10.000	970	70	395	BP76x25-3	MCP10.0970.070
		80	395	BP76x25-3	MCP10.0970.080
		90	395	BP76x25-3	MCP10.0970.090
		100	400	BP76x25-3	MCP10.0970.100
		120	435	BP76x25-3	MCP10.0970.120
12.000	980	90	415	BP76x25-4	MCP12.0980.090
		100	420	BP76x25-4	MCP12.0980.100
		120	465	BP76x25-4	MCP12.0980.120

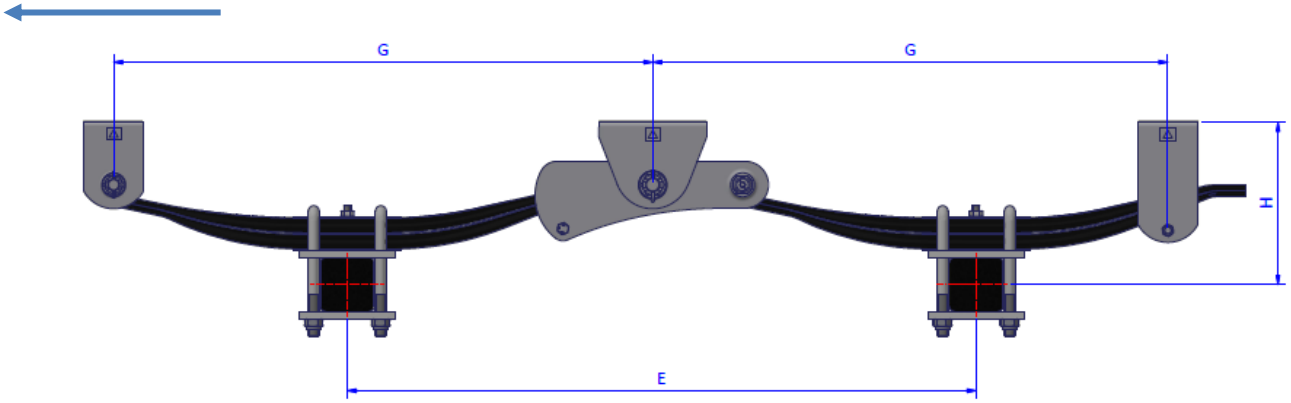
***Suspensiones en □120 el tirante va montado entre ballesta y eje.**



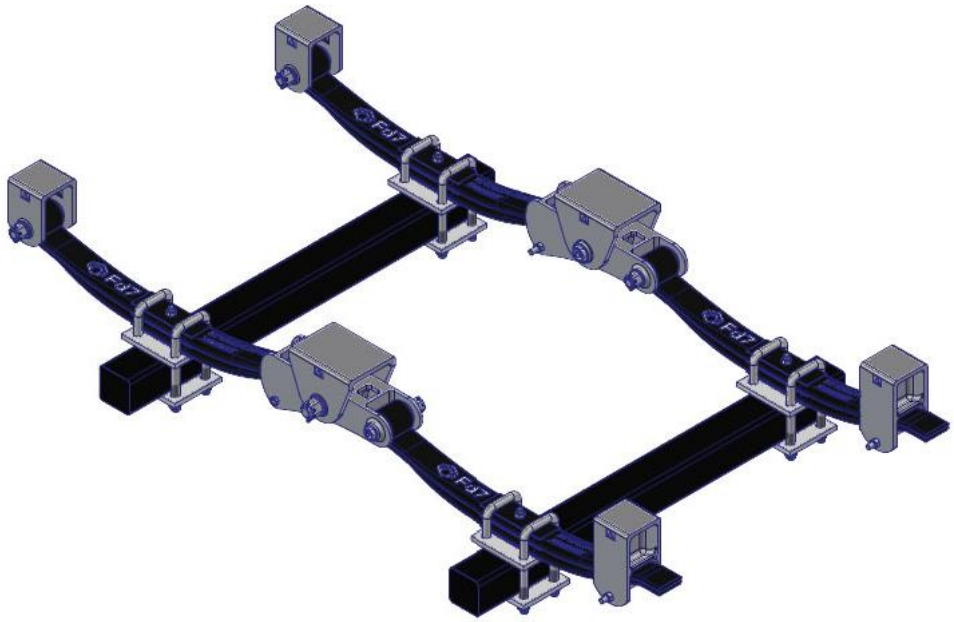
TANDEM CON BALLESTA PARABOLICA B70 – SOPORTES DE FUNDICION

TANDEM WITH PARABOLIC SPRING B70 – CAST SUPPORTS

SENTIDO DE MARCHA
FORWARD

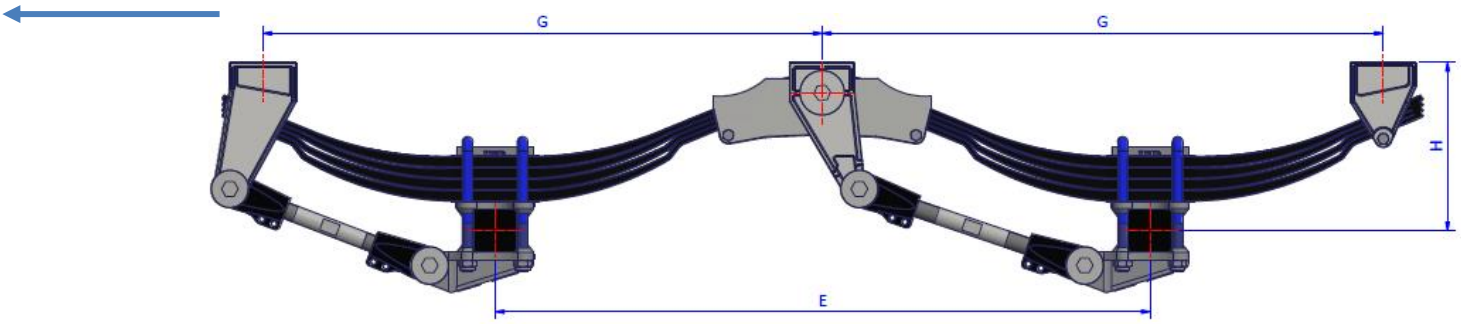


CAPACIDAD Capacity Kg	**E** mm	□ mm	**G** mm	**H** mm	**BALLESTA** Spring Tipo-Nº hojas	**REFERENCIA** Code
12.000	1050	70	1000	260	BP70x25-2	TFP12.1050.070
		80	1000	265	BP70x25-2	TFP12.1050.080
		90	1000	270	BP70x25-2	TFP12.1050.090



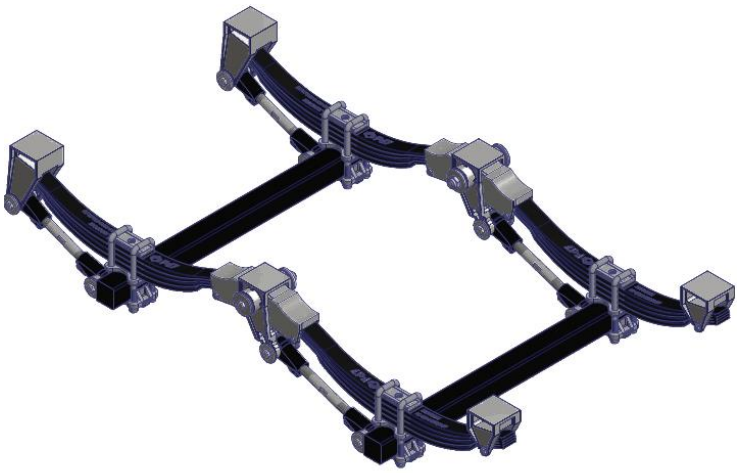
TANDEM CON BALLESTA PARABOLICA B76 - SOPORTES DE FUNDICION
TANDEM WITH PARABOLIC SPRING B76 - CAST SUPPORTS

SENTIDO DE MARCHA
FORWARD



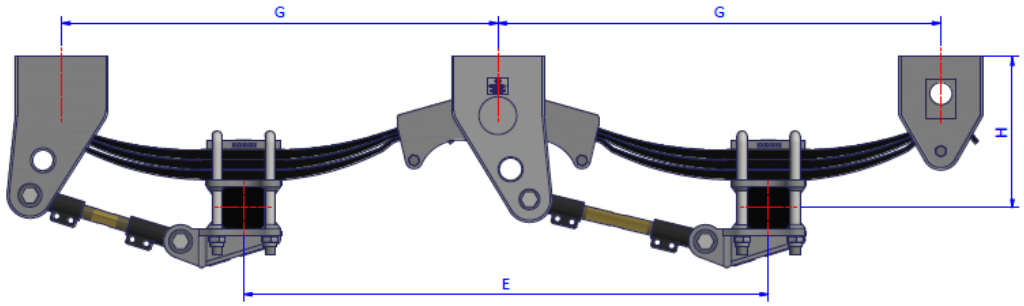
CAPACIDAD Capacity Kg	E mm	□ mm	G mm	H mm	BALLESTA Spring Tipo-Nº hojas	REFERENCIA Code
16.000	1200	80	1040	300	BP76x23-3	TFP16.1200.080
		90	1040	305	BP76x23-3	TFP16.1200.090
		100	1040	310	BP76x23-3	TFP16.1200.100
	1310	80	1100	300	BP76x23-3	TFP16.1310.080
		90	1100	305	BP76x23-3	TFP16.1310.090
		100	1100	310	BP76x23-3	TFP16.1310.100
20.000	1360	90	1200	340	BP76x25-3	TFP20.1360.090
		100	1200	345	BP76x25-3	TFP20.1360.100
		120	1200	390	BP76x25-3	TFP20.1360.120
	1450	90	1250	340	BP76x25-3	TFP20.1450.090
		100	1250	345	BP76x25-3	TFP20.1450.100
		120	1250	390	BP76x25-3	TFP20.1450.120
24.000	1360	100	1200	380	BP76x25-4	TFP24.1360.100
		120	1200	425	BP76x25-4	TFP24.1360.120
	1450	100	1250	380	BP76x25-4	TFP24.1450.100
		120	1250	425	BP76x25-4	TFP24.1450.120

***Suspensiones en □120 el tirante va montado entre ballesta y eje.**



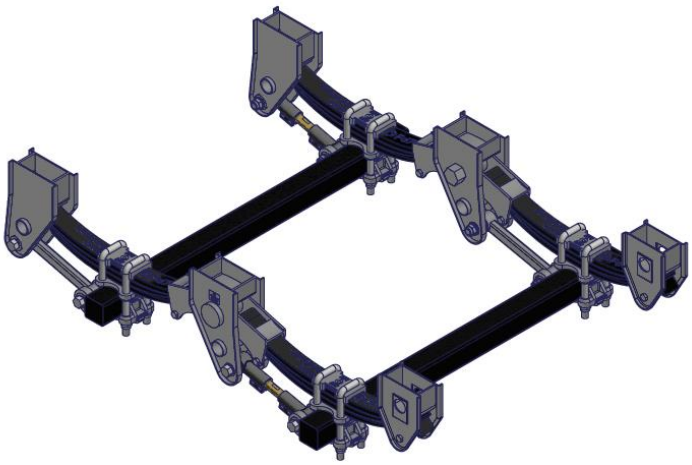
TANDEM CON BALLESTA PARABOLICA B76 - SOPORTES DE CHAPA
TANDEM WITH PARABOLIC SPRING B76 – METAL STAMPING SUPPORTS

SENTIDO DE MARCHA
FORWARD



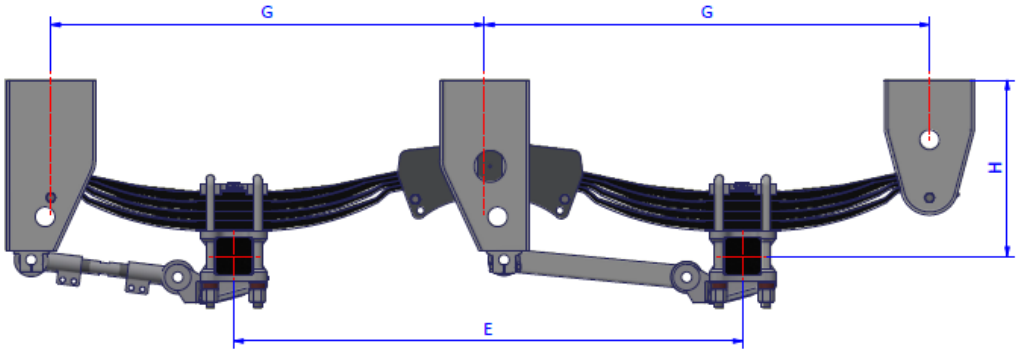
CAPACIDAD Capacity Kg	**E** mm	□ mm	**G** mm	**H** mm	**BALLESTA** Spring Tipo-Nº hojas	**REFERENCIA** Code
16.000	1050	70	900	335	BP76x23-3	TCP16.1050.070
		80	900	335	BP76x23-3	TCP16.1050.080
		90	900	335	BP76x23-3	TCP16.1050.090
		100	900	340	BP76x23-3	TCP16.1050.100
	1180	70	980	340	BP76x23-3	TCP16.1180.070
		80	980	340	BP76x23-3	TCP16.1180.080
		90	980	340	BP76x23-3	TCP16.1180.090
		100	980	345	BP76x23-3	TCP16.1180.100
20.000	1360	70	1185/1200	395	BP76x25-3	TCP20.1360.070
		80	1185/1200	395	BP76x25-3	TCP20.1360.080
		90	1185/1200	395	BP76x25-3	TCP20.1360.090
		100	1185/1200	400	BP76x25-3	TCP20.1360.100
		120	1185/1200	435	BP76x25-3	TCP20.1360.120
24.000	1250	90	1045	415	BP76x23-3	TCP24.1250.090
		100	1045	420	BP76x23-3	TCP24.1250.100
		120	1045	465	BP76x23-3	TCP24.1250.120
	1360	90	1185/1200	415	BP76x25-4	TCP24.1360.090
		100	1185/1200	420	BP76x25-4	TCP24.1360.100
		120	1185/1200	465	BP76x25-4	TCP24.1360.120

***Suspensiones en □120 el tirante va montado entre ballesta y eje.**

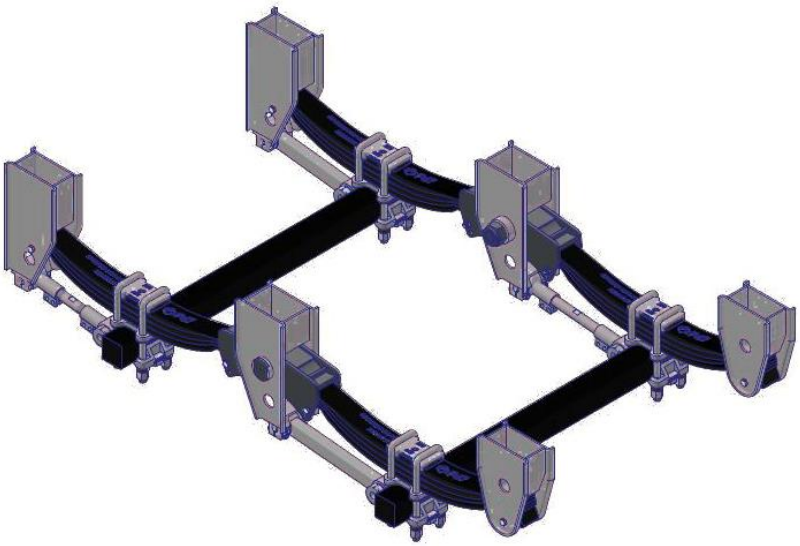


TANDEM CON BALLESTA PARABOLICA B90 - SOPORTES DE CHAPA
TANDEM WITH PARABOLIC SPRING B90 – METAL STAMPING SUPPORTS

SENTIDO DE MARCHA
FORWARD

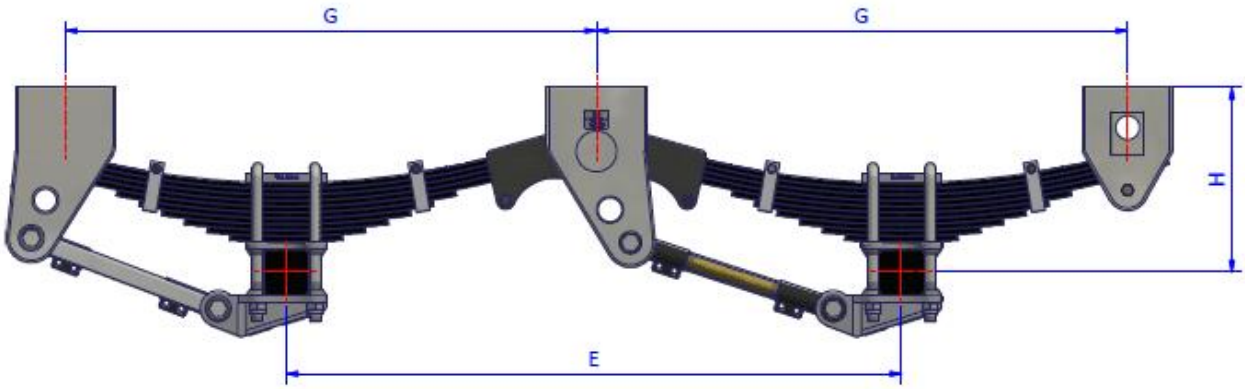


CAPACIDAD Capacity Kg	E mm	□ mm	G mm	H mm	BALLESTA Spring Tipo-Nº hojas	REFERENCIA Code
26.000	1360	100	1180	470	BP90x25-4	TCP26.1360.100
		120	1180	490	BP90x25-4	TCP26.1360.120
		150	1180	495	BP90x25-4	TCP26.1360.150
	1450	120	1210	480	BP90x25-4	TCP26.1450.120
		150	1210	495	BP90x25-4	TCP26.1450.150



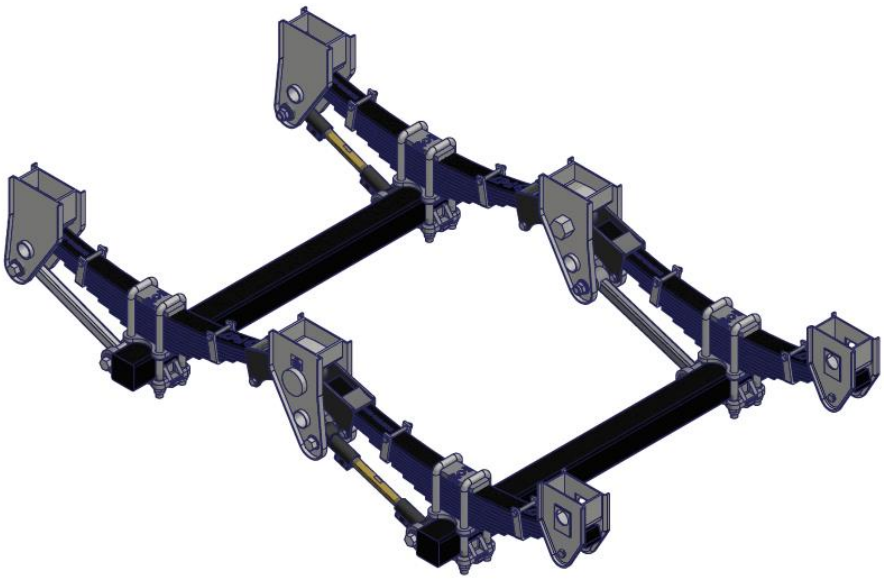
TANDEM CON BALLESTA CONVENCIONAL B75 - SOPORTES DE CHAPA
TANDEM WITH CONVENTIONAL SPRING B75 – METAL STAMPING SUPPORTS

SENTIDO DE MARCHA
FORWARD

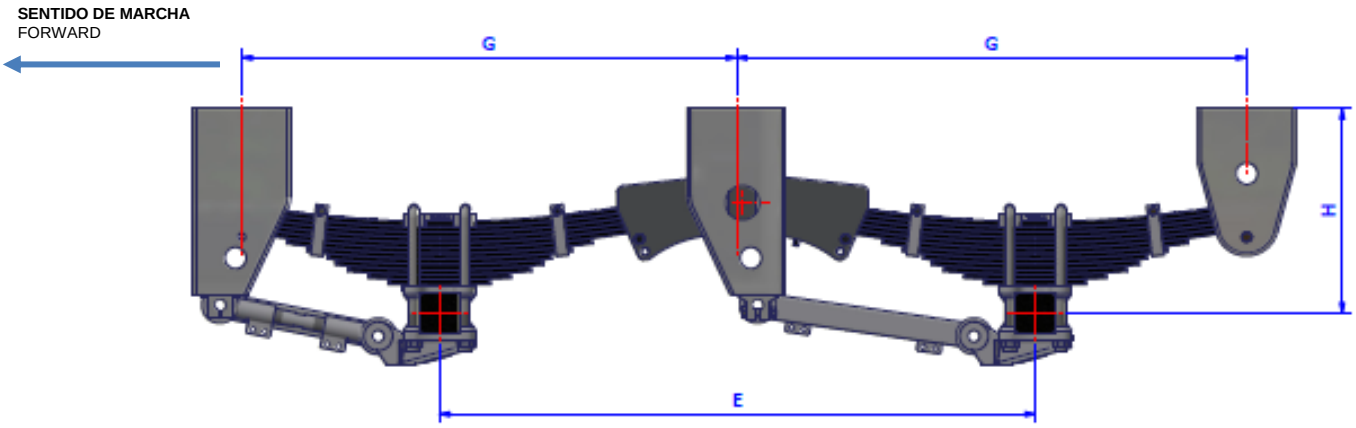


CAPACIDAD Capacity Kg	**E** mm	□ mm	**G** mm	**H** mm	**BALLESTA** Spring Tipo-Nº hojas	**REFERENCIA** Code
22.000	1360	90	1175	400	BC75x13-10	TCC22.1360.090
		100	1175	405	BC75x13-10	TCC22.1360.100
		120	1175	460	BC75x13-10	TCC22.1360.120

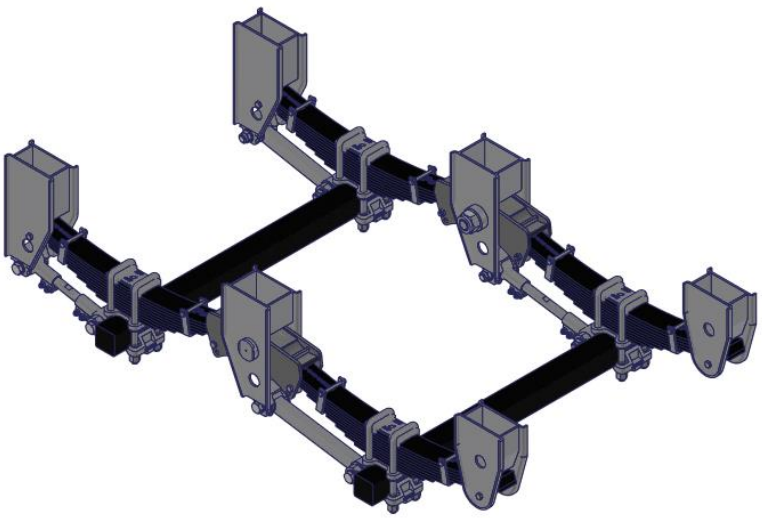
***Suspensiones en □120 el tirante va montado entre ballesta y eje.**



TANDEM CON BALLESTA CONVENCIONAL B90 – SOPORTES DE CHAPA
TANDEM WITH CONVENTIONAL SPRING B90 – METAL STAMPING SUPPORTS

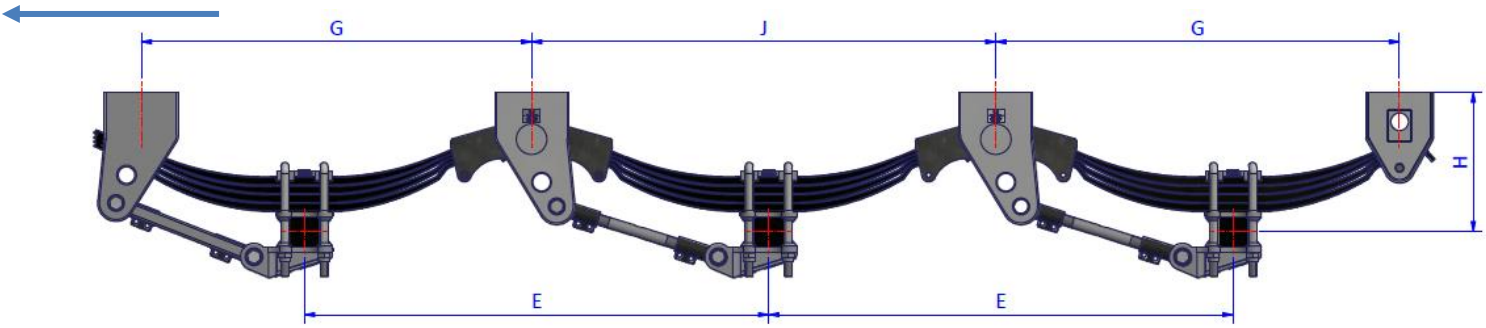


CAPACIDAD Capacity Kg	E mm	□ mm	G mm	H mm	BALLESTA Spring Tipo-Nº hojas	REFERENCIA Code
26.000	1360	90	1155/1205	510	BC90x13-10	TCC26.1360.090
		100	1155/1205	500	BC90x13-10	TCC26.1360.100
		120	1155/1205	510	BC90x13-10	TCC26.1360.120
		150	1155/1205	520	BC90x13-10	TCC26.1360.150
	1450	100	1225	500	BC90x13-10	TCC26.1450.100
		120	1225	510	BC90x13-10	TCC26.1450.120
		150	1225	525	BC90x13-10	TCC26.1450.150
	1620	150	1320/1350	560	BC90x13-12	TCC26.1620.150
32.000	1360	120	1155/1205	510	BC90x13-12	TCC32.1360.120
		150	1155/1205	525	BC90x13-12	TCC32.1360.150



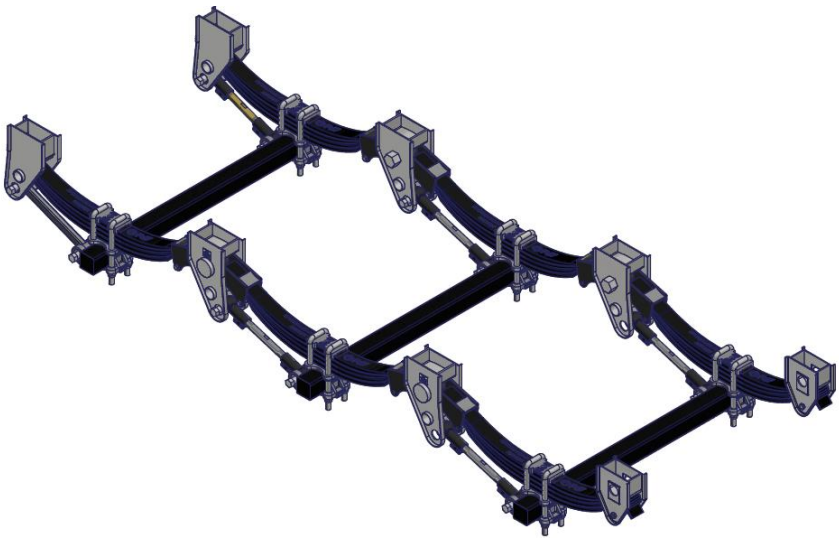
TRIDEM CON BALLESTA PARABOLICA B76 - SOPORTES DE CHAPA
TRIDEM WITH PARABOLIC SPRING B76 – METAL STAMPING SUPPORTS

SENTIDO DE MARCHA
FORWARD

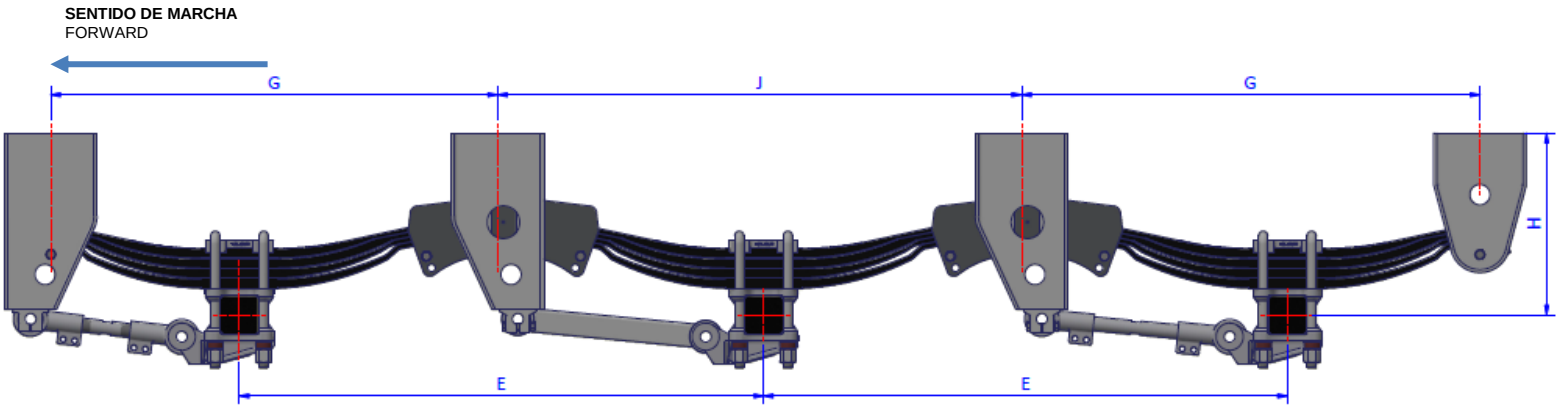


CAPACIDAD Capacity Kg	E mm	□ mm	G mm	J mm	H mm	BALLESTA Spring Tipo-Nº hojas	REFERENCIA Code
24.000	1050	70	900	1050	335	BP76x23-3	LCP24.1050.070
		80	900	1050	335	BP76x23-3	LCP24.1050.080
		90	900	1050	335	BP76x23-3	LCP24.1050.090
		100	900	1050	340	BP76x23-3	LCP24.1050.100
	1180	70	990	1180	340	BP76x23-3	LCP24.1180.070
		80	990	1180	340	BP76x23-3	LCP24.1180.080
		90	990	1180	340	BP76x23-3	LCP24.1180.090
		100	990	1180	345	BP76x23-3	LCP24.1180.100
30.000	1360	70	1185/1200	1360	395	BP76x25-3	LCP30.1360.070
		80	1185/1200	1360	395	BP76x25-3	LCP30.1360.080
		90	1185/1200	1360	395	BP76x25-3	LCP30.1360.090
		100	1185/1200	1360	400	BP76x25-3	LCP30.1360.100
		120	1185/1200	1360	435	BP76x25-3	LCP30.1360.120
36.000	1360	90	1185/1200	1360	415	BP76x25-4	LCP36.1360.090
		100	1185/1200	1360	420	BP76x25-4	LCP36.1360.100
		120	1185/1200	1360	465	BP76x25-4	LCP36.1360.120

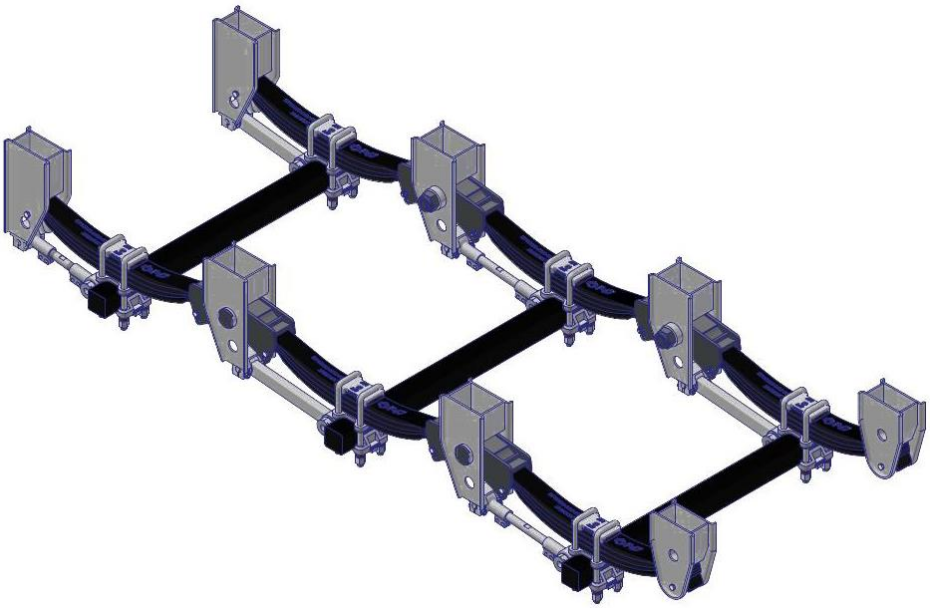
***Suspensiones en □120 el tirante va montado entre ballesta y eje.**



TRIDEM CON BALLESTA PARABOLICA B90 - SOPORTES DE CHAPA
TRIDEM WITH PARABOLIC SPRING B90 – METAL STAMPING SUPPORTS

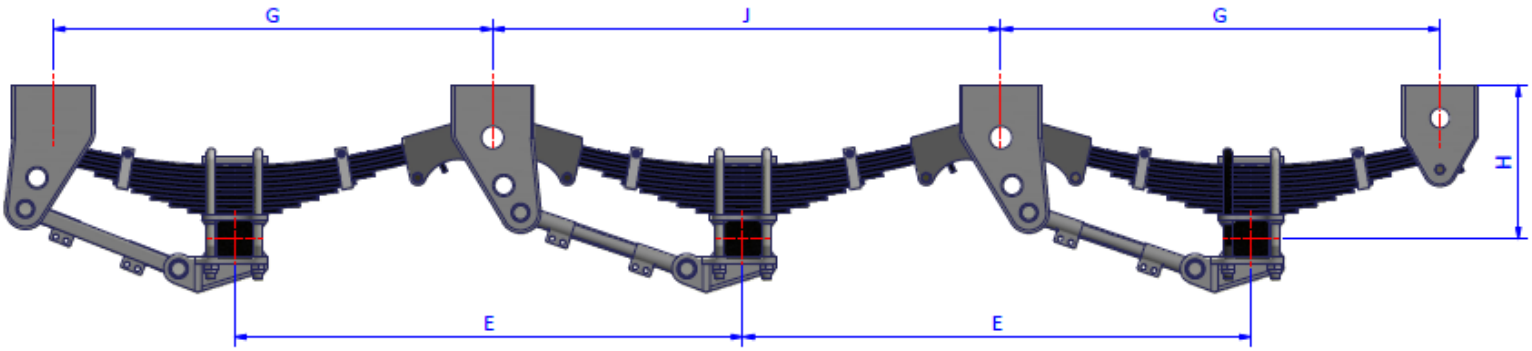


CAPACIDAD Capacity Kg	E mm	□ mm	G mm	J mm	H mm	BALLESTA Spring Tipo-Nº hojas	REFERENCIA Code
39.000	1360	100	1155/1205	1360	470	BP90x25-4	LCP39.1360.100
		120	1155/1205	1360	480	BP90x25-4	LCP39.1360.120
		150	1155/1205	1360	490	BP90x25-4	LCP39.1360.150
	1450	100	1210	1450	470	BP90x25-4	LCP39.1450.100
		120	1210	1450	480	BP90x25-4	LCP39.1450.120
		150	1210	1450	490	BP90x25-4	LCP39.1450.150



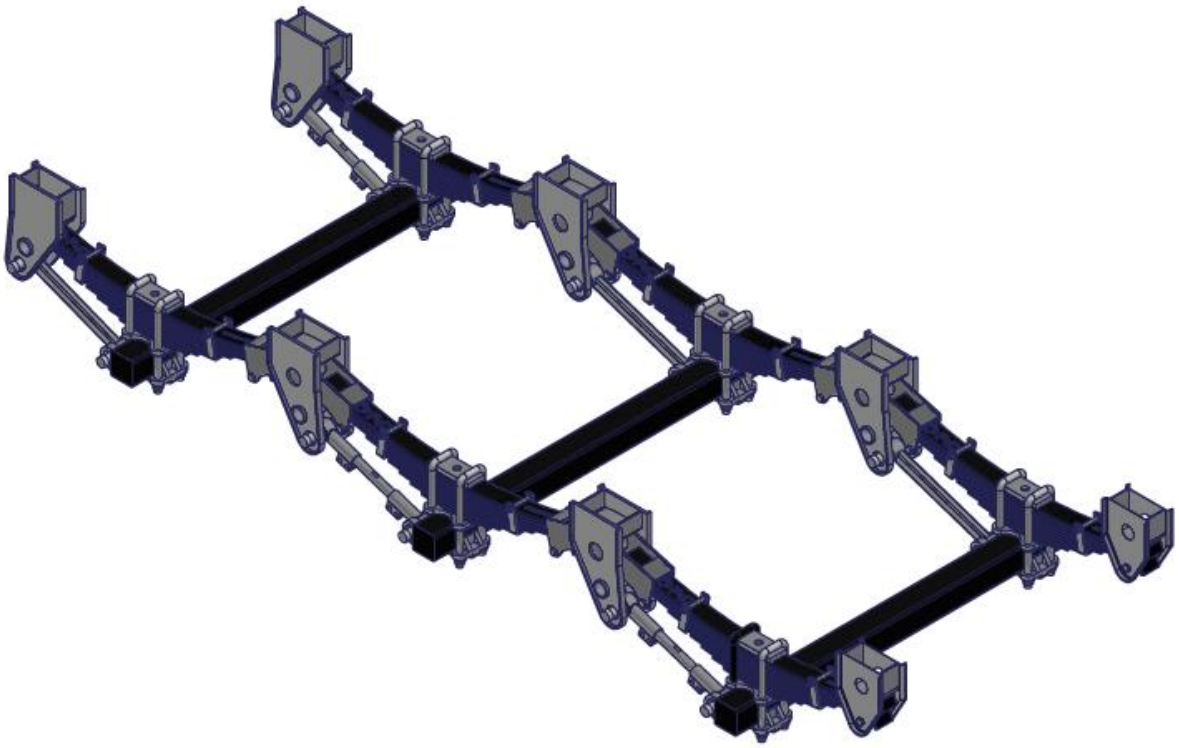
TRIDEM CON BALLESTA CONVENCIONAL B75 - SOPORTES DE CHAPA
TRIDEM WITH CONVENTIONAL SPRING B75 – METAL STAMPING SUPPORTS

SENTIDO DE MARCHA
FORWARD



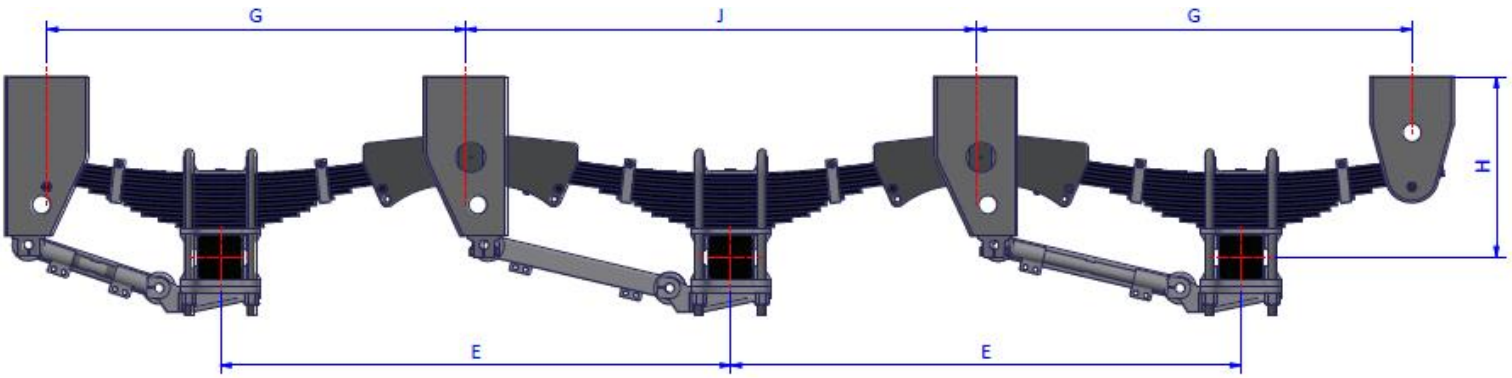
CAPACIDAD Capacity Kg	E mm	□ mm	G mm	J mm	H mm	BALLESTA Spring Tipo-Nº hojas	REFERENCIA Code
33.000	1360	90	1175	1360	400	BC75x13-10	LCC33.1360.090
		100	1175	1360	410	BC75x13-10	LCC33.1360.100
		120	1175	1360	460	BC75x13-10	LCC33.1360.120

***Suspensiones en □120 el tirante va montado entre ballesta y eje.**

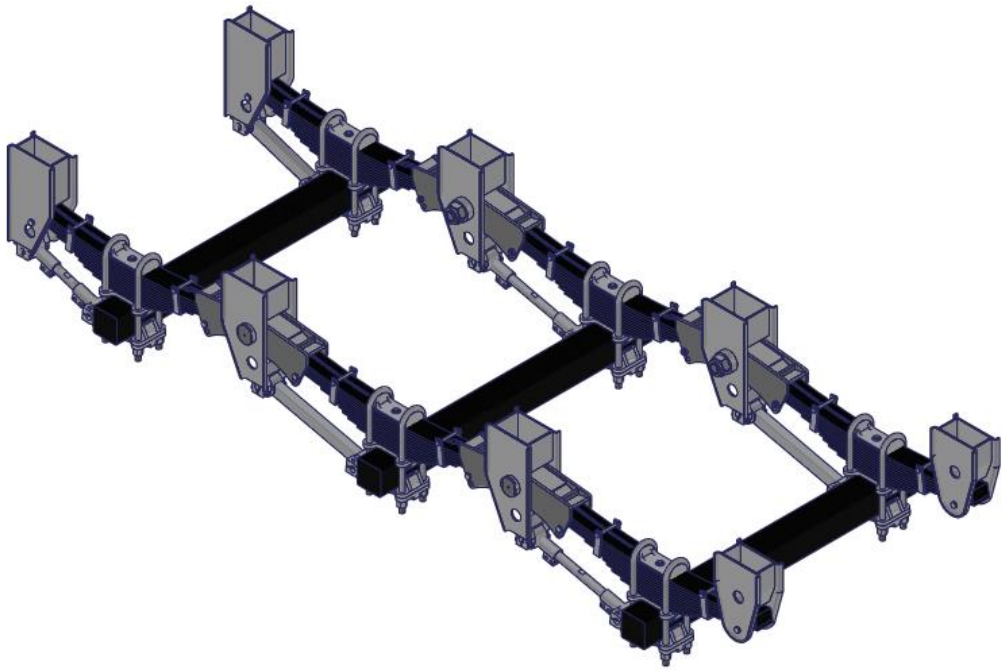


TRIDEM CON BALLESTA CONVENCIONAL B90 – SOPORTES DE CHAPA
TRIDEM WITH CONVENTIONAL SPRING B90 – METAL STAMPING SUPPORTS

SENTIDO DE MARCHA
FORWARD

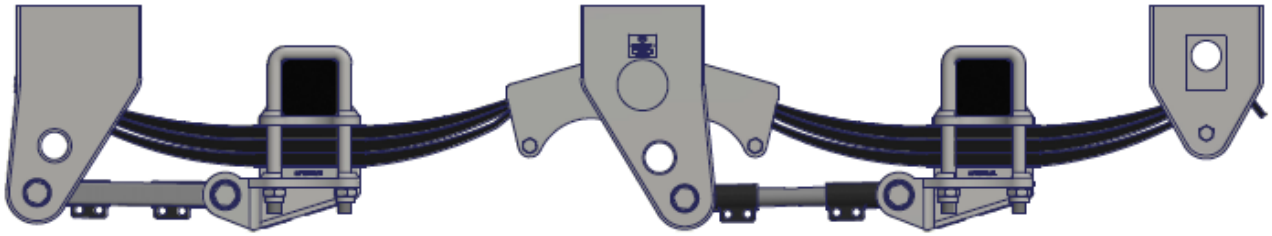


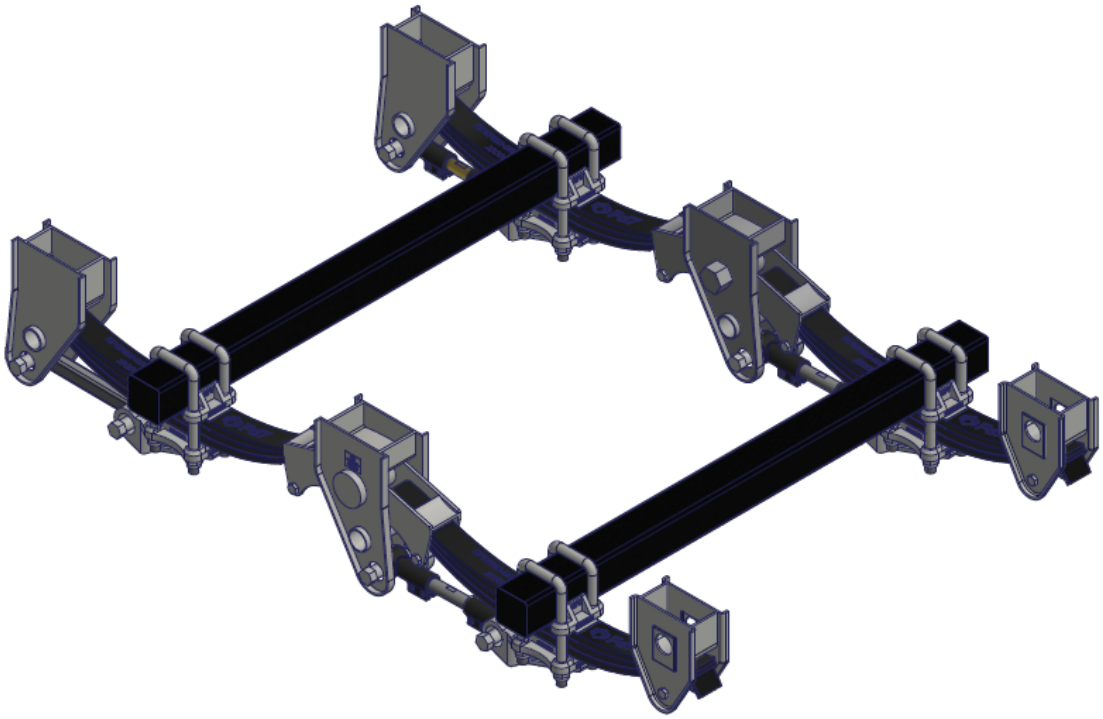
CAPACIDAD Capacity Kg	E mm	□ mm	G mm	J mm	H mm	BALLESTA Spring Tipo-Nº hojas	REFERENCIA Code
39.000	1360	100	1155/1205	1360	500	BC90x13-10	LCC39.1360.090
		120	1155/1205	1360	510	BC90x13-10	LCC39.1360.110
		150	1155/1205	1360	540	BC90x13-10	LCC39.1360.150
	1450	100	1225	1450	500	BC90x13-12	LCC39.1450.100
		120	1225	1450	510	BC90x13-12	LCC39.1450.120
		150	1225	1450	540	BC90x13-12	LCC39.1450.150
	1620	120	1320/1350	1620	545	BC90x13-13	LCC39.1620.150
		150	1320/1350	1620	560	BC90x13-13	LCC39.1620.150
48.000	1360	120	1155/1205	1360	510	BC90x13-12	LCC48.1360.120
	1360	150	1155/1205	1360	525	BC90x13-12	LCC48.1360.150



MONTAJES DE SUSPENSIONES CON EJE POR ENCIMA DE LA BALLESTA
SUSPENSION ASSEMBLY UNDERSLUNG

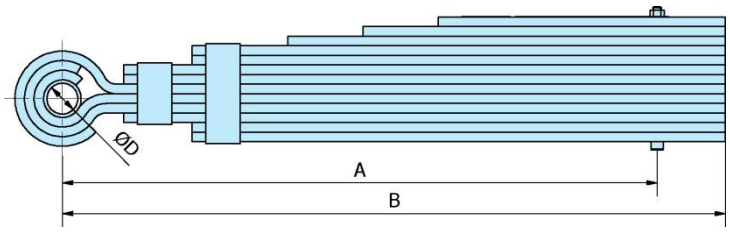
SENTIDO DE MARCHA
FORWARD

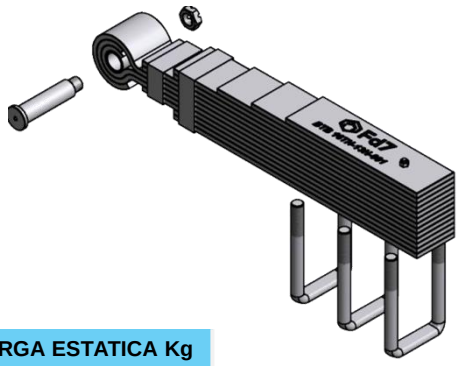




***Para montajes de suspensiones con el eje por encima de la ballesta consultad a Grupo FERRUZ..**

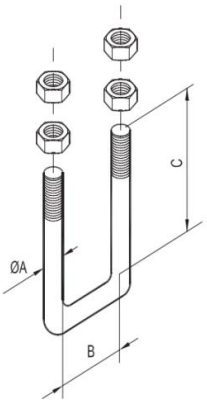
Ballesta de lanza y ballesta de ojo / Spring drawbar and eye spring





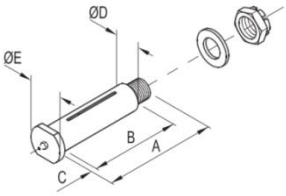
REFERENCIA Part number	PERFIL Dimensions	Nº HOJAS Nº of leafs	ØD mm	A mm	B mm	CARGA ESTATICA Kg Static load (Kg)
BTB10TN-07H-001	120 x 14	7	45	870	970	1800
BTB12TN-09H-001	120 x 14	9	45	870	970	2500
BTB14TN-11H-001	120 x 14	11	45	870	970	2900
BTB16TN-13H-001	120 x 14	13	45	870	970	3400
BTB21TN-15H-001	120 x 14	15	45	870	970	3900

Accesorios para ballesta de lanza / Spring drawbar accesories



Abarcones con tuercas
U-bolt with nuts

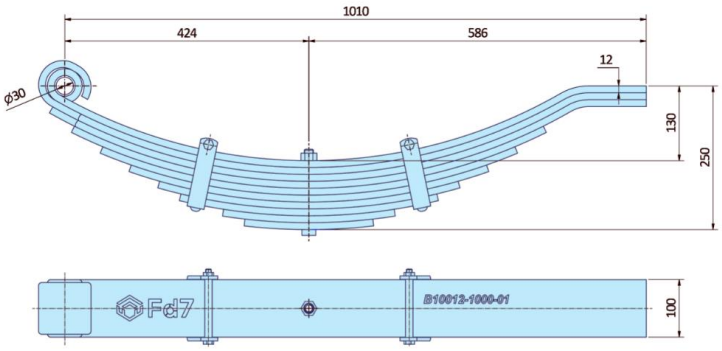
REFERENCIA Part number	A mm	B mm	C mm	BALLESTA Spring
AB-M30X121X200-1	30	121	200	BTB10TN-07H-001 BTB12TN-09H-001
AB-M30X121X230-1	30	121	230	BTB14TN-11H-001
AB-M30X121X260-1	30	121	260	BTB16TN-13H-001
AB-M30X121X285-1	30	121	285	BTB21TN-15H-001

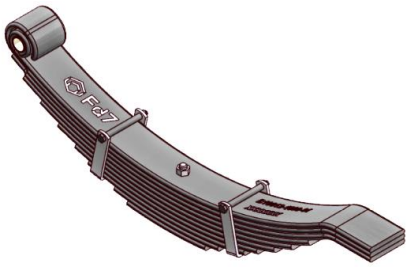


Set de bulón con tuerca, arandela y pasador
Rod with nut, washer and pin

REFERENCIA Part number	A mm	B mm	C mm	ØD mm	E mm
BUB-120-D44-S1	200	160	10	44,5	60

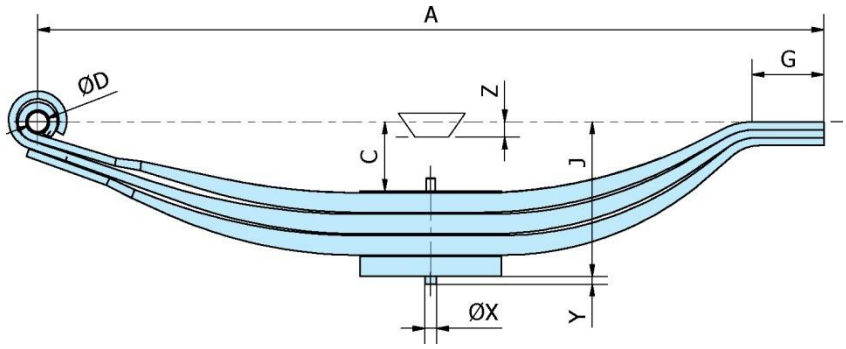
Ballesta con ojo / Eye Spring

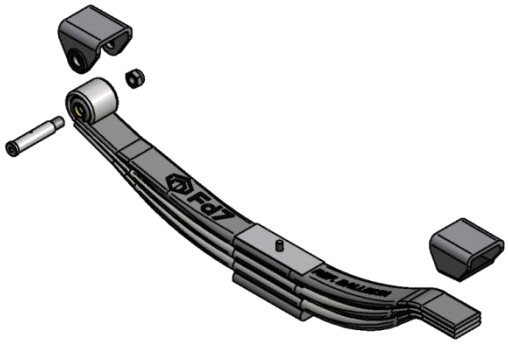




REFERENCIA Part number	PERFIL Dimensions	Nº HOJAS Nº of leafs	CARGA ESTATICA Kg Static load (Kg)
B10012-1000-01	100 x 12	10	7000

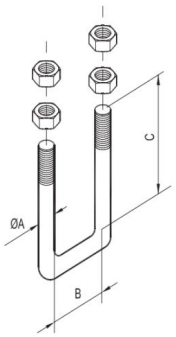
Ballesta parabólica / Parabolic leaf spring





REFERENCIA Part number	PERFIL Dimensions	Nº HOJAS Nº of leafs	A mm	C mm	ØD mm	G mm	J mm	ØX mm	Y mm	Z mm	CARGA ESTATICA (Kg) Static load (Kg)	TIPO Type
BP07025-0100-01	70 x 25	1	1000	90	25	100	194	15	10	-28	1750	Estandar
BP07025-0200-01	70 x 25	2	1000	90	25	100	196	15	10	-28	3500	Estandar
BP07025-0200-02	70 x 25	2	840	50	25	43,5	158	15	10	-20	5000	Estandar
BP07025-0300-01	70 x 25	3	1000	90	25	100	196	15	10	-28	5300	Estandar
BP07025-0300-02	70 x 25	3	1000	90	25	100	196	15	10	-28	5300	Progresiva
BP07025-0400-01	70 x 25	4	1000	90	25	100	198	15	10	-28	7000	Estandar
BP07025-0400-02	70 x 25	4	1000	90	25	100	198	15	10	-28	7000	Progresiva

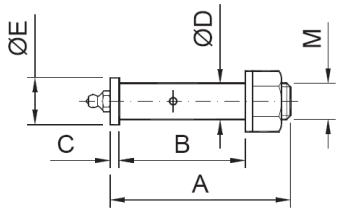
Accesorios para ballestas / Springs accesories



Abarcones con tuercas / U-bolt with nuts

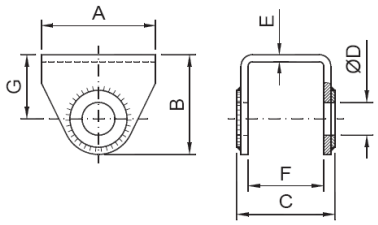
REFERENCIA Part number	A mm	B mm	C mm	BALLESTA** Spring
AB-M18X70X125-1	18	70	125	BP07025-0100-01
AB-M18X70X160-1	18	70	160	BP07025-0200-01
AB-M18X70X200-1	18	70	200	BP07025-0300-01
AB-M18X70X240-1	18	70	240	BP07025-0400-01
AB-M20X70X160-1	20	70	160	BP07025-0200-01

**Con eje de 80 □



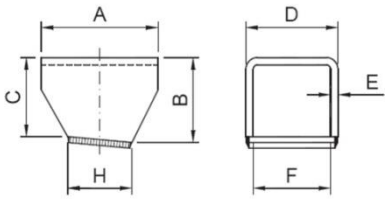
Bulones para ojo de ballesta con tuerca / Bolts for spring eye with screw

REFERENCIA Part number	DESCRIPCION Descrlption	A mm	B mm	C mm	ØD mm	E mm	M
BUB-70-D25-S1	Bulón x Ball. 70	133	101	8	24.5	30	M20 x 1,5



Soportes para ojo de ballesta / Front hanger

REFERENCIA Part number	DESCRIPCION Description	A mm	B mm	C mm	ØD mm	E mm	F mm	G mm
SOB-70-T25-01-A	Soporte con ojo x Ball. 70	100	88	103	25	10	75	62



Soportes para resbalón de ballesta / Rear hanger

REFERENCIA Part number	DESCRIPCION Description	A	B	C	D	E	F	H
REB-70-03	Resbalón x Ball. 70	100	65	60	97	10	77	56

Fd7
AXLES & TYRES

EJES AGRICOLAS E INDUSTRIALES

Agricultural and Industrial Axles

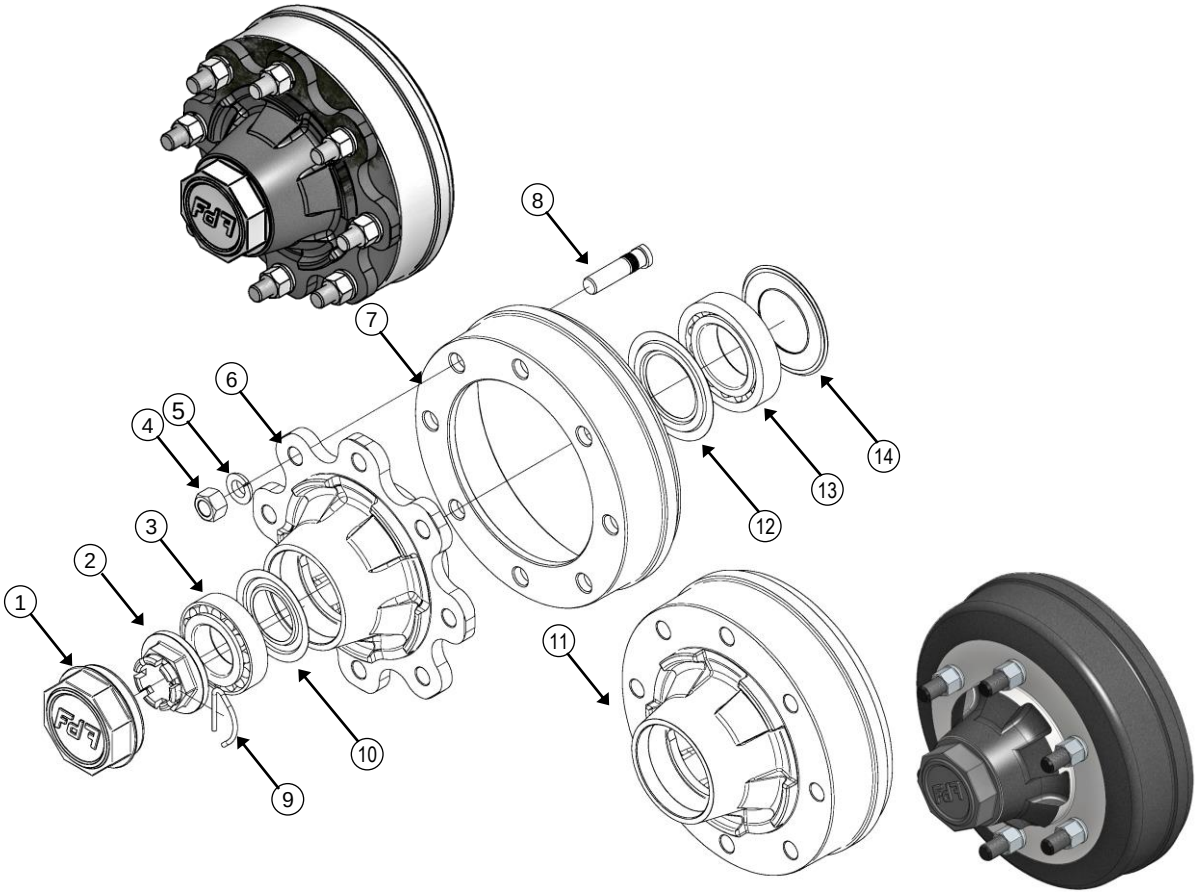
REPUESTOS

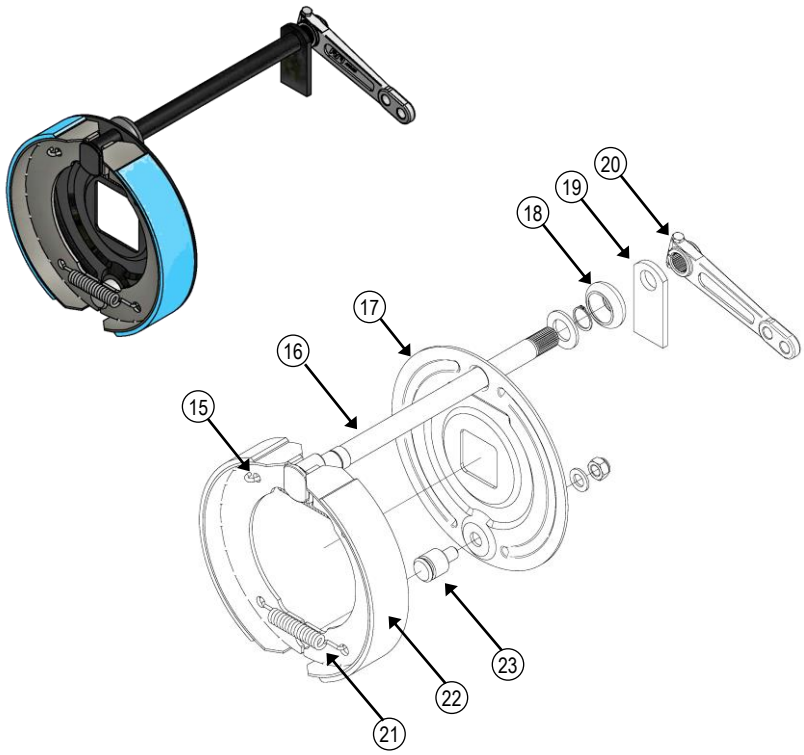
Despiece tambor y freno
Cubos sin freno - Tambores (Freno monoblock)
Tambores (Freno combinado)- Rodamientos Rodillos Cónicos
Espárragos – Tapacubos – Tuercas de manga
Accesorios de freno – Retenes

SPARE PARTS

Hub and brake assembly
Hubs - Drums (solid drum)
Drums (assambled drums) - Tapered roller bearings
Wheel studs - Hub Caps - Wheel washers
Brake accesories - Seal ring

Despiece tambor y freno / Hub and brake assembly

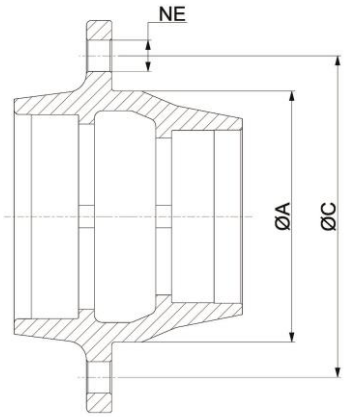




POSICION Position	DENOMINACION Denomination
1	Tapacubo / Hubcap
2	Tuerca de manga / Castle nut
3	Rodamiento exterior / External bearing
4	Tuerca de llanta / Wheel nut
5	Arandela de llanta / Wheel washer
6	Cubo / Hub
7	Tambor de freno / Brake drum
8	Espárrago / Stud
9	Pasador / Spindle clip
10	Tapa rodamiento exterior / External bearing cover
11	Cubo monoblock / Monoblock
12	Tapa rodamiento int. / Internal bearing cover
13	Rodamiento interior / Internal bearing
14	Retén / Seal
15	Muelle superior / Upper spring
16	Leva / Cam shaft
17	Cierre tambor / Dust cover
18	Protector eje leva / Cam shaft protector
19	Apoyo eje leva / Cam shaft support
20	Palanca de freno / Brake lever
21	Muelle inferior / Lower spring
22	Zapata de freno / Brake shoe
23	Bulón de giro zapatas / Brake shoe pin

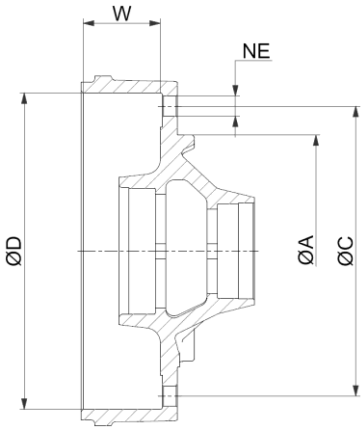
Cubos sin freno / Hubs

Referencia Reference	Tipos de ejes Axle types		Ataque Wheel fixing	
		ØA (mm)	ØC (mm)	NE
P.D4.001.00	E030025…	58	98	4 x M12
P.H2.001.00	E040035…	93	140	5 x M16
P.K2.001.00	E045040…	93	140	5 x M16
P.02.001.00	E050045…	93	140	5 x M16
P.07.001.00	E050045…	160	205	6 x M18
P.67.001.00	E060055…	160	205	6 x M18
P.77.001.00	E070065…	160	205	6 x M18
P.7B.001.00	E070065…	160	205	6 x M20
P.78.001.00	E070065…	220	275	8 x M20
P.87.001.00	E080075…	160	205	6 x M18
P.8B.001.00	E080075…	160	205	6 x M20
P.88.001.00	E080075…	220	275	8 x M20
P.98.001.01	E090085…	220	275	8 x M20
P.99.001.01	E090085…	280	335	10 x M22
P.A8.001.00	E100090…	220	275	8 x M20
P.A9.001.00	E100090…	280	335	10 x M22



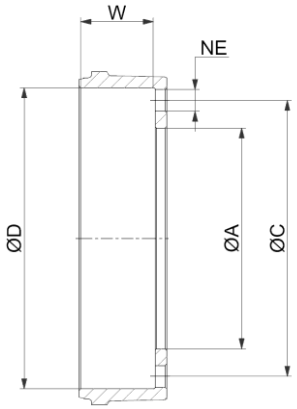
Tambores (Freno monoblock) / Drums (solid drum)

Referencia Reference	Tipos de ejes Axle types	Tipo de freno Brake type		Ataque Wheel fixing		
		ØD (mm)	W (mm)	ØA (mm)	ØC (mm)	NE
P.D4.A01.00	E030025…	140	30	58	98	4 x M12
P.H2.B01.00	E040035…	200	40	93	140	5 x M16
P.K2.B01.00	E045040…	200	40	93	140	5 x M16
P.02.B01.00	E050045…	200	40	93	140	5 x M16
P.07.C01.00	E050045…	250	60	160	205	6 x M18
P.67.C01.00	E060055…	250	60	160	205	6 x M18
P.67.D01.00	E060055…	300	60	160	205	6 x M18
P.77.D01.00	E070065…	300	60	160	205	6 x M18
P.7B.D01.00	E070065…	300	60	160	205	6 x M20
P.78.D01.00	E070065…	300	60	220	275	8 x M20
P.87.D01.00	E080075…	300	60	160	205	6 x M18
P.8B.D01.00	E080075…	300	60	160	205	6 x M20
P.88.D01.00	E080075…	300	60	220	275	8 x M20



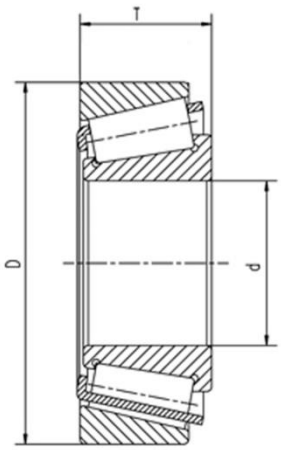
Tambores (Freno combinado) / Drums (assambled drums)

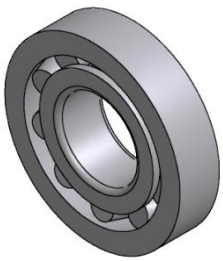
Referencia Reference	Tipos de ejes Axle types	Tipo de freno Brake type		Ataque Wheel fixing		
		ØD (mm) mm	W(mm) mm	ØA(mm) mm	ØC(mm) mm	NE(mm)
F.D7.002.00	C070065… C080075…	300	60	160	205	6 x M18
F.D8.002.00	C070065… C080075… C090085…	300	60	220	275	8 x M20
F.E7.002.00	C070065… C080075…	300	90	160	205	6 x M18
F.E8.002.00	C070065… C080075… C090085…	300	90	220	275	8 x M20
F.J8.002.00	C080075… C090085… C100090…	350	60	220	275	8 x M20
F.K8.002.00	C080075… C090085… C100090…	350	90	220	275	8 x M20
F.L8.002.00	C080075… C090085… C100090…	400	80	220	275	8 x M20
F.L9.002.00	C090085… C100090…	400	80	280	335	10 x M22
F.P9.002.00	C090085… C100090…	406	120	280	335	10 x M22



Rodamientos Rodillos Cónicos / Tapered roller bearings

Referencia Reference	Dimensiones Dimensions			Capacidades de carga en daN (Kg) Load capacity daN (Kg)	
	d	Ø	T	Carga dinámica Dynamic load	Carga estática Static load
30204	20	47	15,25	2 190	1 640
30205	25	52	16.25	2 250	1 710
30206	30	62	17,25	3 100	2 470
30207	35	72	18,25	3 850	3 000
30208	40	80	19,75	4 400	3 450
30209	45	85	20,75	5 100	4 200
30211	55	100	22,75	7 300	6 200
30213	65	120	24,75	9 100	7 600
32210	50	90	24,75	6 400	5 500
32211	55	100	26,75	7 900	6 900
32212	60	110	29,75	9 900	8 900
32214	70	125	33,25	11 900	10 900
32215	75	130	33,25	12 200	11 200
32217	85	150	38,50	15 800	14 600
33215	75	130	41,00	17 000	17 600
33118	90	150	45,00	21 600	22 000

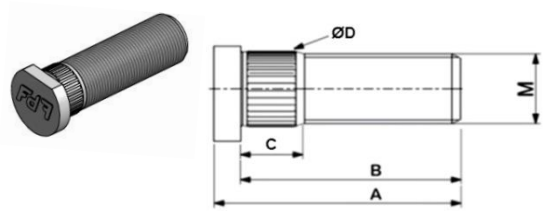




Espárragos / Wheel studs

Referencia Reference	A mm	B mm	C mm	M mm	ØD mm
P.12.011.00	37	32	10	M12x1.5	13
P.16.011.00	48	43	10	M16x1.5	17
P.18.011.00	70	64	13	M18x1.5	19
P.18.011.01	60	54	13	M18x1.5	19
P.20.011.00	68	62	13	M20x1.5	21
P.20.011.G0	80	74	13	M20x1.5	21

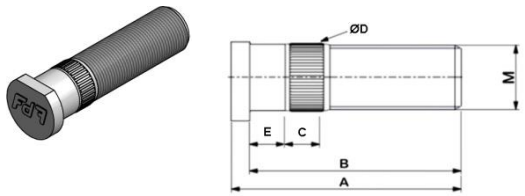
Para ejes sin freno / con freno monoblock
For unbracked axles / solid drum axles



Espárragos / Wheel studs

Referencia Reference	A mm	B mm	C mm	E mm	M mm	ØD mm
P.18.C11.G0	93	87	12	12	M18x1.5	19
P.20.C11.00	84	78	12	12	M20x1.5	21
P.20.C11.G0	96	90	12	12	M20x1.5	21
P.22.C11.00	91	85	12	14	M22x1.5	23

Para ejes con freno combinado
For axles with assembled hub and drum

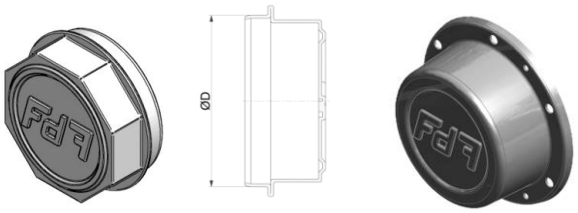


Tuercas de espárrago / Wheel nuts

Referencia Reference	M mm	Tipo Type
P.99.74361F.12	M12x1.5	Cónica
P.99.74361F.16	M16x1.5	Cónica
P.99.74361A.18	M18x1.5	Esférica
P.99.74361B.18	M18x1.5	Plana
P.99.74361B.20	M20x1.5	Plana
P.99.74361B.22	M22x1.5	Plana

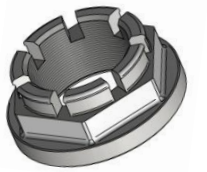
Tapacubos / Hub Caps

Referencia Reference	Tipos de ejes Axle types	ØD mm	Nº Esparr.
P.D0.008.00	E030025…	47	-
P.H0.008.00	E040035…	52	-
P.K0.008.00	E045040… E050045…	62	-
P.60.008.00	E060055…	80	-
P.70.008.00	E070065…	90	-
P.80.008.00	E080075…	110	-
P.90.008.01	E090085…	Atornillado	6
P.A0.008.00	E100090…	Atornillado	6



Tuerca de manga / Spindle nut

Referencia Reference	Tipos de ejes Axle types	M mm
P.99.985.18	E030025…	M18x1,5
P.H0.004.00	E040035…	M22X1,5
P.00.004.00	E045040… E050045…	M27x1,5
P.70.004.00	E060055… E070065…	M39x1,5
P.90.004.00	E080075… E090085…	M48x1,5
P.A0.004.00	E100090…	M60x1,5



Arandelas de espárrago / Wheel washers

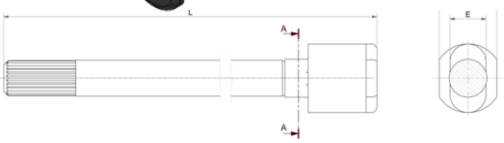
Referencia Reference	M mm
P.99.74361C.18	Ø18
P.99.74361C.20	Ø20
P.99.74361C.22	Ø22

Anillos centraje rueda gemela/ Washers for twin wheel

Referencia Reference	M mm
P.99,015,18	M18
P.99.015.20	M20
P.99.015.22	M22

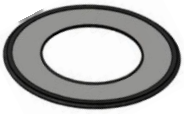
Levas de freno / Brake camshaft

Referencia Reference	Tipo de freno Brake type		
	ØD (mm)	W (mm)	L
F.B0.010.XXXX	200	40	Variable
F.Y0.010.XXXX	250	60	Variable
	300	60	Variable
F.Z0.010.XXXX	300	90	Variable
	350	60	Variable
	350	90	Variable
	400	80	Variable
F.F0.010.XXXX	300	100	Variable
F.P0.010.XXXX	406	120	Variable



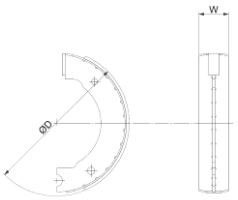
Retenes / Seal ring

Referencia Reference	Tipos de ejes Axle types	Ød Int mm	Ød Ext mm
P.D0.009.00	E030025…	25	52,5
P.H0.009.00	E040035…	35	72,5
P.K0.009.00	E045040…	40	80,5
P.00.009.00	E050045…	45	85,5
P.60.009.00	E060055…	55	100,5
P.70.009.00	E070065…	65	120,5
P.80.009.00	E080075…	75	130,5
P.90.009.00	E090085…	85	150,5
P.A0.009.00	E100090…	90	150,5



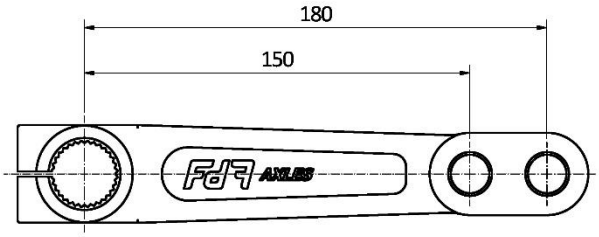
Zapatas de freno / Brake shoes

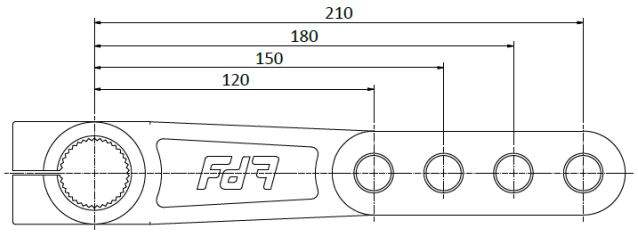
Referencia Reference	Tipo de freno Brake type	
	ØD (mm)	W (mm)
F.B0.005.XX	200	40
F.C0.005.XX	250	60
F.D0.005.XX	300	60
F.E0.005.XX	300	90
F.J0.005.XX	350	60
F.K0.005.XX	350	90
F.L0.005.XX	400	80
F.F0.005.XX	300	100
F.P0.005.XX	406	120



Palanca de freno fija

Brake lever



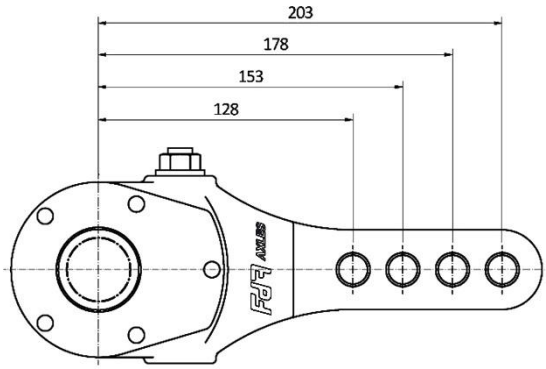


Referencia Reference	Tipo de freno Brake type
F.C0.006.00	250 x 60
	300 x 60

Referencia Reference	Tipo de freno Brake type
F.J0.006.03	300 x 90
	350 x 60
	350 x 90
	400 x 80

Palanca de freno semiautomática

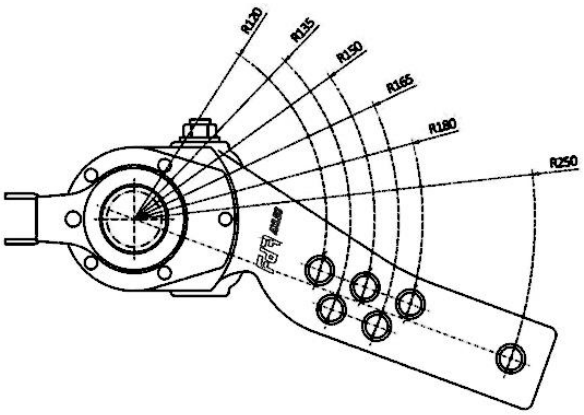
Adjustable lever



Referencia Reference	Tipo de freno Brake type
F.C0.006.01	250 x 60
	300 x 60
F.J0.006.01	300 x 90
	350 x 60
	350 x 90
	400 x 80
F.F0.006.00	300 x 100
	406 x 120

Palanca de freno automática

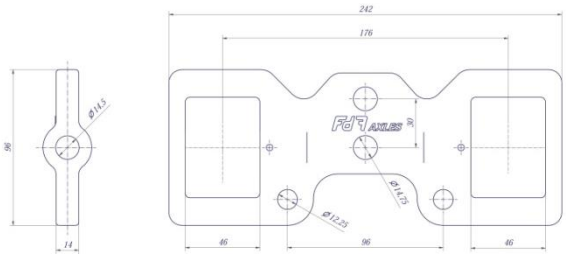
Self-adjustable lever



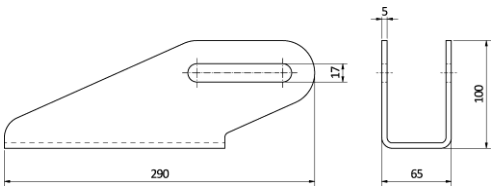
Referencia Reference	Tipo de freno Brake type
F.J0.006.02	300 x 90
	350 x 60
	350 x 90
	400 x 80
F.F0.006.01	300 x 100
	406 x 120

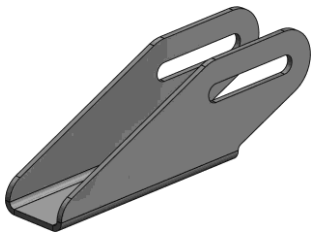
Accesorios de freno / Brake accesories

Referencia Reference	Nombre Name
P.99.BALANCIN175	BALANCIN



Referencia Reference	Nombre Name
P.99.SOPORTE.02	SOPORTE CILINDRO





Muelles de freno / Brake shoe spring

Referencia Reference	Tipo de freno Brake type	
	ØD (mm)	W (mm)
F.B0.020.00	200	40
F.C0.020.00	250	60
F.C0.018.00	250	60
F.D0.020.00	300	60
F.D0.018.00	300	60
F.E0.018.00	300	90
F.E0.020.00	300	90
F.J0.020.00	350	60
	350	90
F.L0.018.00	400	80
F.F0.018.00	300	100
F.F0.019.00	300	100
F.P0.018.00	406	120

Bulón de giro zapata / Brake shoe pin

Referencia Reference	Tipo de freno Brake type	
	ØD (mm)	W (mm)
F.B0.008.00	200	40
F.C0.008.00	250	60
F.C0.X08.00	250	60
F.D0.008.00	300	60
F.D0.X08.00	300	60
F.E0.008.00	300	90
F.J0.008.00	350	60
F.J0.X08.00	350	60
F.K0.008.00	350	90
F.L0.008.00	400	80
F.L0.X08.00	400	80

Fd7
AXLES & TYRES

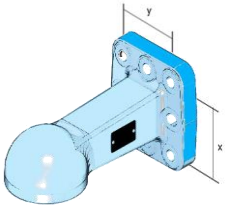
EJES AGRICOLAS E INDUSTRIALES
Agricultural and Industrial Axles

OTROS PRODUCTOS

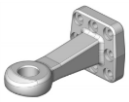
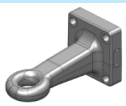
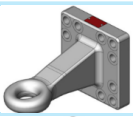
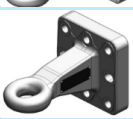
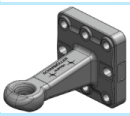
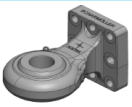
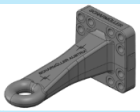
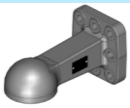
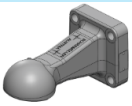
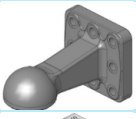
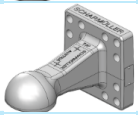
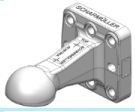
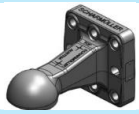
Enganches de lanza
Apoyos hidráulicos
Rodetes (giratorias)
Montaje y mantenimiento de rodetes (giratorias)
Palancas de freno
Calzos y soportes
Conjunto Válvula Hidráulica de Freno Manual
Sistema neumático de freno
Ejes de trailla, regulables, curvos, altura regulable, especiales

OTHER PRODUCTS

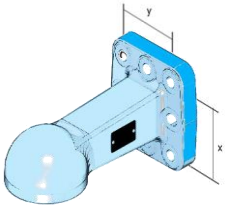
Towing Eyes
Hydraulic crutchs
Turntables
Turntables assembly and maintenance
Brake levers
Wheel chock and chock holder
Brake System Manual Action
Pneumatic brake equipment
Special assemblies



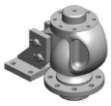
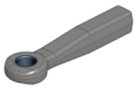
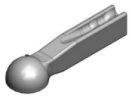
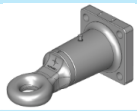
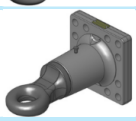
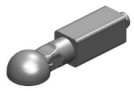
scharmüller ANHÄNGERKUPPLUNGEN

REFERENCIA Reference		TIPO ANCLAJE Coupling	SISTEMA ANCLAJE Coupling system	COTAS BASE (x,y) mm Dimensions	CARGA VERTICAL max Max. Vertical load (kg)	AGUJEROS Holes	IMAGEN Image
TLBRI-50-DIN-001	00.652.30.0	Atornillado	Bulón Ø50mm	110 X 100	1.000	8 X M16	
TLBRI-50-DIN-002	00.664.43.0	Atornillado	Bulón Ø50mm	120 X 120	2.500	4 X M20	
TLBRI-50-DIN-003	00.665.42.0	Atornillado	Bulón Ø50mm	160 X 160	3.000	12 X M20	
TLBRI-50-DIN-004	00.654.41.0	Atornillado	Bulón Ø50mm	145 X 145	3.000	8 X M20	
TLBRI-40-DIN-005	00.654.24.0	Atornillado	Bulón Ø40mm	145 X 145	3.000	8 X M20	
TLBRI-50-DIN-008	00.652.171.1	Atornillado	Bulón Ø50mm	110 X 100	3.000	8 X M16	
TLBRI-50-DIN-009	00.665.42.1	Atornillado	Bulón Ø50mm	160 X 160	3.000	12 X M20	
TLBRI-80-ISO-001	00.652.90.0	Atornillado	Bola Ø80mm	110 X 100	3.000	8 X M16	
TLBRI-80-ISO-003	00.664.91.0	Atornillado	Bola Ø80mm	120 X 120	3.000	4 X M20	
TLBRI-80-ISO-004	00.653.90.0	Atornillado	Bola Ø80mm	130 X 130	3.000	8 X M20	
TLBRI-80-ISO-006	00.665.90.1	Atornillado	Bola Ø80mm	160 X 160	4.000	12 X M20	
TLBRI-80-ISO-007	00.650.90.3	Atornillado	Bola Ø80mm	145 X 145	6.000	8 X M20	
TLBRI-80-ISO-008	00.650.901.0	Atornillado	Bola Ø80mm	145 X 145	4.000	8 X M20	

Disponemos de más modelos de sistemas de tiro Scharmüller.
Puede consultar el catálogo completo con más modelos de Scharmüller en www.ferruz.com / información técnica.



scharmüller ANHÄNGERKUPPLUNGEN

REFERENCIA Reference		TIPO ANCLAJE Coupling	SISTEMA ANCLAJE Coupling system	COTAS BASE (x,y) mm Dimensions	CARGA VERTICAL max Max. Vertical load (kg)	AGUJEROS Holes	IMAGEN Image
TLBCS-80-ISO-001	02.481.351	--	Bola Ø80mm	120x40	4.000	--	
TLBRI-110-ISO-003	00.965.300.0	--	Bola Ø110mm	-	15.000	--	
TLFIJ-50-DIN-002	00.651.30.0	Soldado	Bulón Ø50mm	65 X 60	1.200	--	
TLFIJ-50-DIN-003	00.651.41.1	Soldado	Bulón Ø50mm	80 X 65	2.000	--	
TLFIJ-50-DIN-005	00.651.41.2	Soldado	Bulón Ø50mm	80 X 65	2.000	--	
TLFIJ-80-ISO-001	00.651.91.1	Soldado	Bola Ø80mm	80 X 65	2.000	--	
TLGIR-40-DIN-001	00.666.22.6	Soldado	Bulón Ø40mm	90 X 90	1.000	--	
TLGIR-40-DIN-002	00.666.20.6	Soldado	Bulón Ø40mm	75 X 75	1.000	--	
TLGIR-50-DIN-001	00.663.451.0	Soldado	Bulón Ø50mm	102 X 102	4.000	--	
TLGIR-50-DIN-002	00.664.40.0	Atornillado	Bulón Ø50mm	120 X 120	3.000	4 X M20	
TLGIR-50-DIN-003	00.654.43.0	Atornillado	Bulón Ø50mm	145 X 145	3.000	8 X M20	
TLGIR-50-DIN-004	00.665.40.0	Atornillado	Bulón Ø50mm	160 X 160	3.000	12 X M20	
TLGIR-80-ISO-001	00.666.92.6	Soldado	Bola Ø80mm	90 X 90	1.000	--	
TLGIR-80-ISO-002	00.663.931.0	Soldado	Bola Ø80mm	102 X 102	4.000	--	

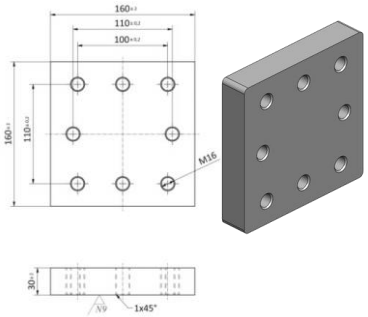
Puede consultar el catálogo completo con más modelos de Scharmüller en www.ferruz.com / información técnica.

Accesorios para Enganches de lanza/ Towing eyes accesories

Placas enganche
Weld-on plates

REFERENCIA Reference		X mm	Y mm	AGUJEROS
TLBRI-110-8	00.645.04.0	110	100	8 X M16
TLBRI-120-4	00.645.10.0	120	120	4 X M20
TLBR-130-8	00.645.03.0	130	130	8 X M20
TLBRI-145-8	00.645.01.0	145	145	8 X M20
TLBRI-160-12	00.645.13.0	160	160	12 X M20

00.645.04.0



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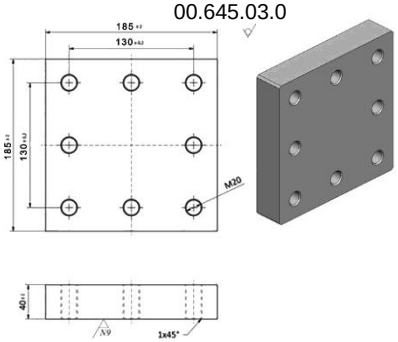

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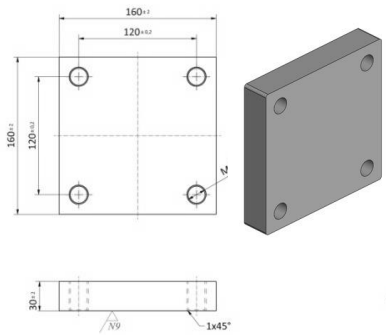

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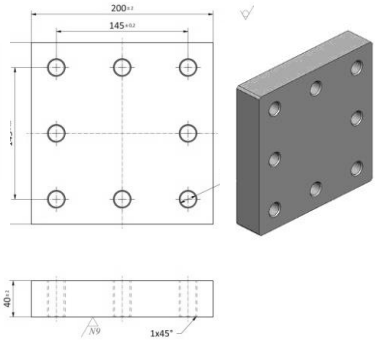
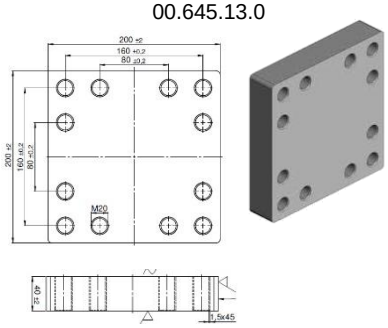
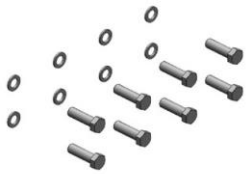


00.645.13.0



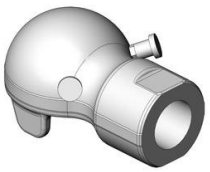
Kit de fijación
Fixing kit

REFERENCIA Reference	TORNILLOS Y ARANDELAS Bolts & Washers	UDS Uds	ENGANCHE(S) Towing Eye(s)
TLKIT-001	M16	8	TLBRI-50-DIN-001
			TLBRI-50-DIN-008
			TLBRI-80-ISO-001
			TLBRI-80-ISO-009
TLKIT-002	M20	4	TLBRI-50-DIN-002
			TLBRI-80-ISO-003
			TLGIR-50-DIN-002
TLKIT-003	M20	8	TLBRI-50-DIN-004
			TLBRI-50-DIN-005
			TLBRI-80-ISO-007
			TLBRI-80-ISO-008
TLKIT-004	M20	12	TLBRI-50-DIN-003
			TLBRI-50-DIN-006
			TLBRI-50-DIN-009
			TLBRI-80-ISO-005
			TLBRI-80-ISO-006
			TLGIR-50-DIN-004
TLKIT-005	M20	8	TLBRI-50-DIN-007
			TLBRI-80-ISO-004
TLKIT-006	M20	8	TLGIR-50-DIN-003

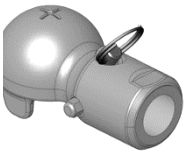


Componente dirección forzada
Towing spoons

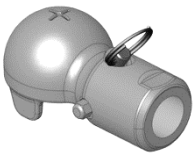
REFERENCIA Reference		MÉTRICA mm	SEGURO Lock	NORMA Standard
TLDIR-50-DIN-001	00.662.003.0	M30 X 2	NO	DIN 74058
TLDIR-50-DIN-002	00.662.020.1	M36 X 1.5	SI	DIN 74058
TLDIR-50-DIN-003	00.662.020.0	M30 X 2	SI	DIN 74058



TLDIR-50-DIN-001



TLDIR-50-DIN-002



TLDIR-50-DIN-003

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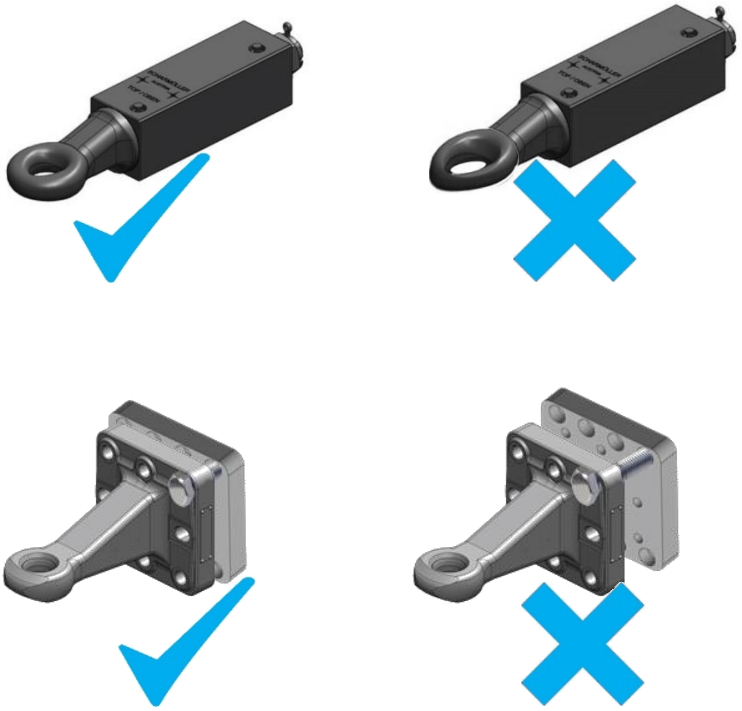
Puede consultar el catálogo completo con más modelos de Scharmüller en www.ferruz.com / información técnica.

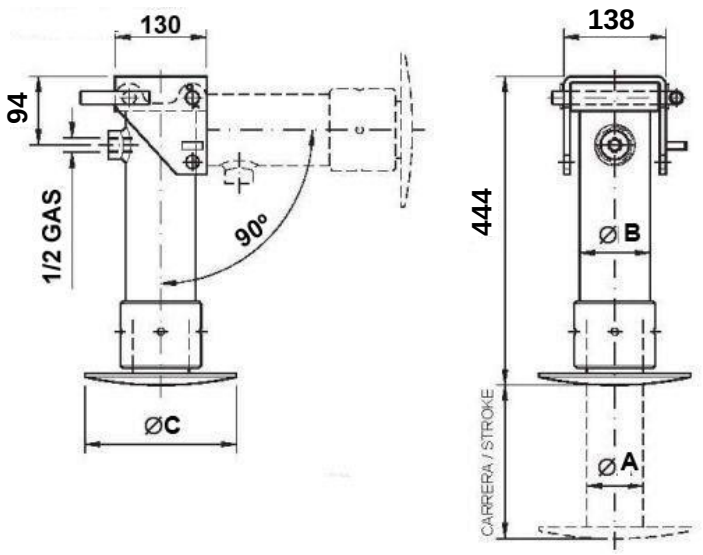
Instrucciones de montaje y mantenimiento

Los componentes móviles de los tiros de lanza se encuentran sujetos a desgaste debido a su uso normal.
El grado de desgaste dependerá de las condiciones de uso y mantenimiento del dispositivo.
Se recomienda realizar las siguientes operaciones al menos una vez al mes:

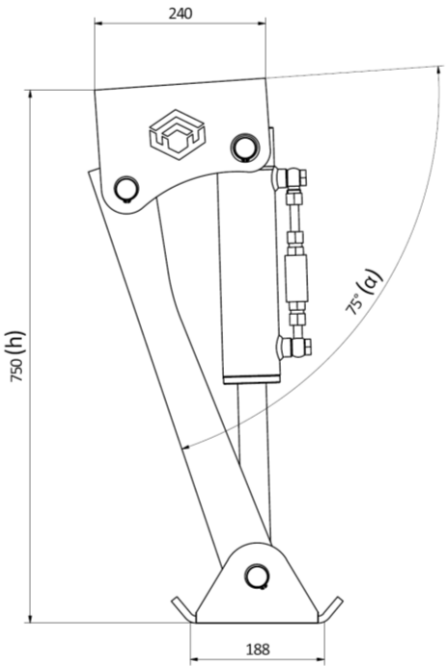
- Revisar que los cordones de soldadura que fijan el tiro con la lanza del vehículo no presenten grietas, poros, fisuras u otros posibles defectos.
- Revisar que el cuerpo del tiro de lanza no esté anormalmente desgastado.
- Engrasar el dispositivo utilizando grasa básica de litio.
- En el caso de enganche con brida se recomienda montar la placa suministrada por el fabricante del enganche.
- Revisar periódicamente el correcto apriete los tornillos de sujeción al chasis.
- En el caso de que en estas revisiones se aprecie que los componentes están considerablemente desgastados, se recomienda sustituir el tiro de lanza completo inmediatamente



PIE DE APOYO HIDRAULICO / Hydraulic Crutch

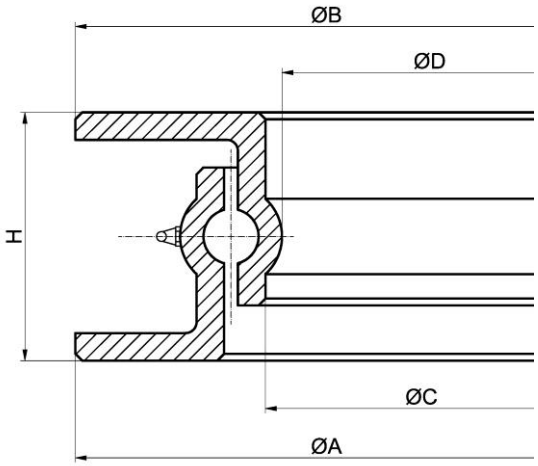


REFERENCIA	DIMENSIONES			CARRERA	VOLUMEN	PESO	CAPACIDAD KG	
Reference	A	B	C	MM	LT.	KG.	BAR 100	BAR 160
AH-SE-65X250-01	65	85	160	250	0.8	17	3300	5900
AH-SE-85X250-01	85	105	235	250	1.5	23	5700	10200



APOYO HIDRAULICO REGULABLE / Folding Hydraulic Crutch

α	h (mm)	AH-RE-70X200-01 (Ø pistón = 70mm) Capacidad de carga (Kg)	AH-RE-80X200-01 (Ø pistón = 80mm) Capacidad de carga (Kg)
1º	175	-	-
15º	350	3500	4500
26º	455	5000	6600
45º	585	6800	8800
61º	690	7500	9800
75º	750	7600	10000

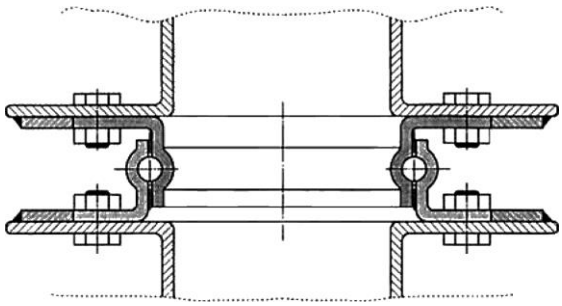


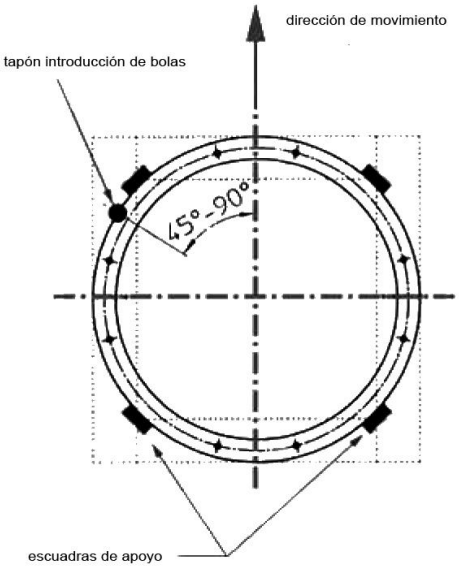
REFERENCIA Reference	ARTICULO Description	H (mm)	A (mm)	B (mm)	C (mm)	D (mm)	Ø BOLA (mm) Ø Ball (mm	PESO (kg) Weight (kg)	CARGA AXIAL(kg) Axial load (kg)
RA-LU-0300-000X	Rodete LU 300	55	298	298	220	200	12	5	500
RA-LU-0400-000X	Rodete LU 400	55	400	400	320	300	12	8	750
RA-LU-0500-000X	Rodete LU 500	55	500	500	420	400	12	10	1.000
RA-NU-0600-000X	Rodete NU 600	65	600	600	516	490	14	18	1.700
RA-NU-0700-000X	Rodete NU 700	65	700	700	620	594	14	22	2.200
RA-NU-0800-000X	Rodete NU 800	65	800	800	718	690	14	26	2.500
RA-NU-0900-000X	Rodete NU 900	65	900	900	820	793	14	30	3.500
RA-NU-1000-000X	Rodete NU 1000	65	1000	1000	920	895	14	33	4.000
RA-NU-1050-000X	Rodete NU 1050	65	1050	1050	970	945	14	35	4.500
RA-NU-1100-000X	Rodete NU 1100	65	1100	1100	1010	988	14	40	4.500
RA-PU-1100-000X	Rodete PU 1100	80	1100	1105	1005	976	16	45	6.500
RA-TU-1100-000X	Rodete TU 1100	90	1100	1100	980	948	20	65	10.000

Aplicación y condiciones de suministro

•Los rodetes de bolas para dirección “FD7” son utilizados para las más variadas aplicaciones, entre las más importantes podemos citar los remolques y maquinaria agrícola, transporte aeroportuario....

•No use el rodete en un vehículo que circule a una velocidad superior a 40 Km/h.
Para más información sobre el uso y las velocidades en exceso de 40 Km / h, por favor comuníquese con nuestra oficina técnica.





Montaje y mantenimiento

•Los rodetes deben ser fijados a la estructura con tornillos (no suministrados).

•La instalación del rodete debe hacerse sobre una superficie plana y rígida. Un mínimo de 50% de la corona de rotación debe estar nivelada con la superficie.

•Las fuerzas motrices deben ser distribuidas uniformemente sobre los anillos de rotación.

•Se debe evitar realizar los agujeros en correspondencia con el tapón de introducción de las bolas, reconocible por la soldadura en la pista del anillo externo. Este tapón deberá estar entre los 45º - 90º respecto a la dirección del movimiento.

•Para el montaje, utilice pernos con resistencia 8,8 y soldar pequeños bloques A - B - C - D

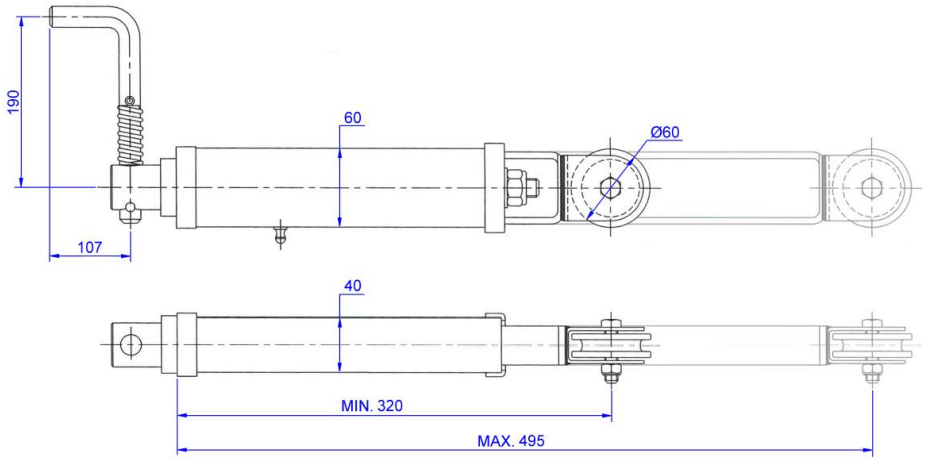
(8 escuadras, 4 por lado) en el marco para reducir la fuerza radial sobre los pernos.

•No soldar el rodete directamente al chasis.

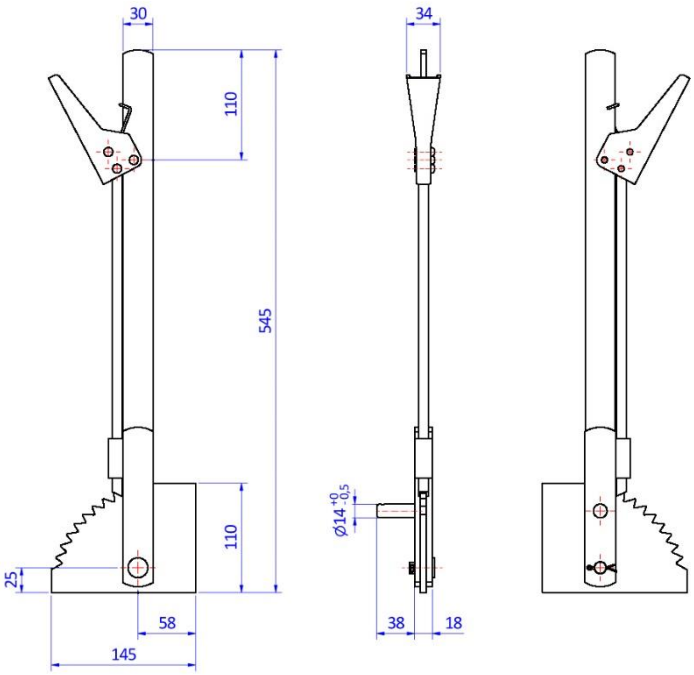
•Engrase el rodete antes del montaje, haciendo girar el rodete al mismo tiempo que se aplica grasa a través del engrasador.

TORNILLOS DE FIJACION / Assembly with bolts				
TIPO DE RODETE Type of turntable	**Nº MINIMO TORNILLOS** Minimum of bolts	**MEDIDA** Dimensions	**QUALITY** Quality	**TUERCA** Nut
L-300-400-500	4	M12	8.8 min	Exagonal autoblocante
N-600-700	6	M12-M14	8.8 min	
N-800-900-1000-1050-1100	6	M14-M16	8.8 min	
P-1100 , T-1100	8	M14-M16	8.8 min	

Referencia Reference	Nombre Name
PFE-002	PALANCA DE FRENO ESTACIONAMIENTO HUSILLO

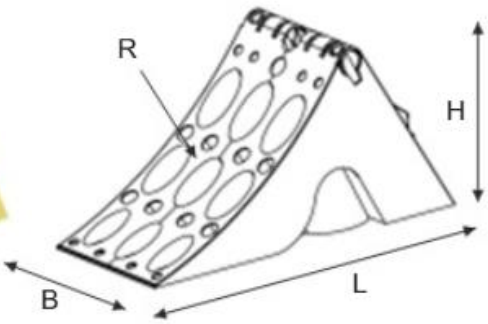


Referencia Reference	Nombre Name
PFE-001	PALANCA DE FRENO ESTACIONAMIENTO DENTADA



CALZO PARA RUEDA (RADIO MÁXIMO 460 ó 530 mm)

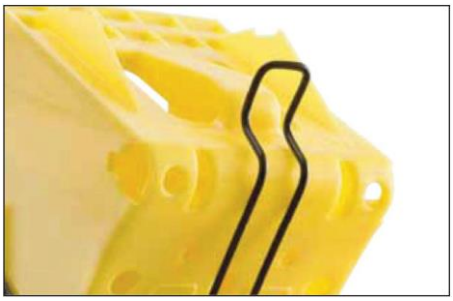
WHEEL CHOCK (MAXIMUM RADIUS 460 or 530 mm)

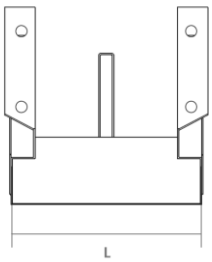


REFERENCIA Reference	DIMENSIONES (mm)				NORMA	MATERIAL	COLOR	PESO (Kg)
	L	B	H	R				
CALZO-460-PLAST	391	160	193	460	DIN 76051	Plástico	Amarillo	1,09
CALZO-530-PLAST	530	200	230	530	DIN 76051	Plástico	Amarillo	1,09

SOPORTE DE CALZO (RADIO MÁXIMO 460 ó 530 mm)

CHOCK HOLDER (MAXIMUM RADIUS 460 or 530 mm)





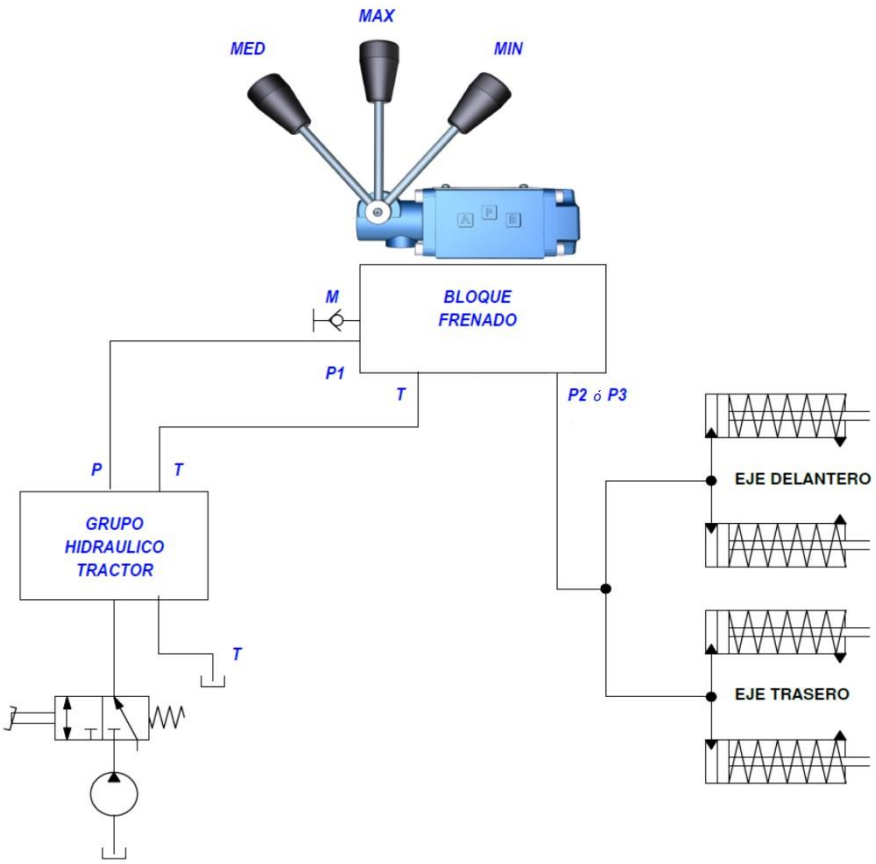
REFERENCIA Reference	DIMENSIONES (mm) L	NORMA	MATERIAL	COLOR	PESO (Kg)
CALZO-460-SOPORTE	160	DIN 76051	Metálico	Galvanizado	0,99
CALZO-530-SOPORTE	200	DIN 76051	Metálico	Galvanizado	1,41

SHF-VFM.00 - Conjunto Válvula Hidráulica de Freno Manual / Brake System Manual Action

Sistema de regulación de las presiones de frenado Reglamento Europeo 2015/68

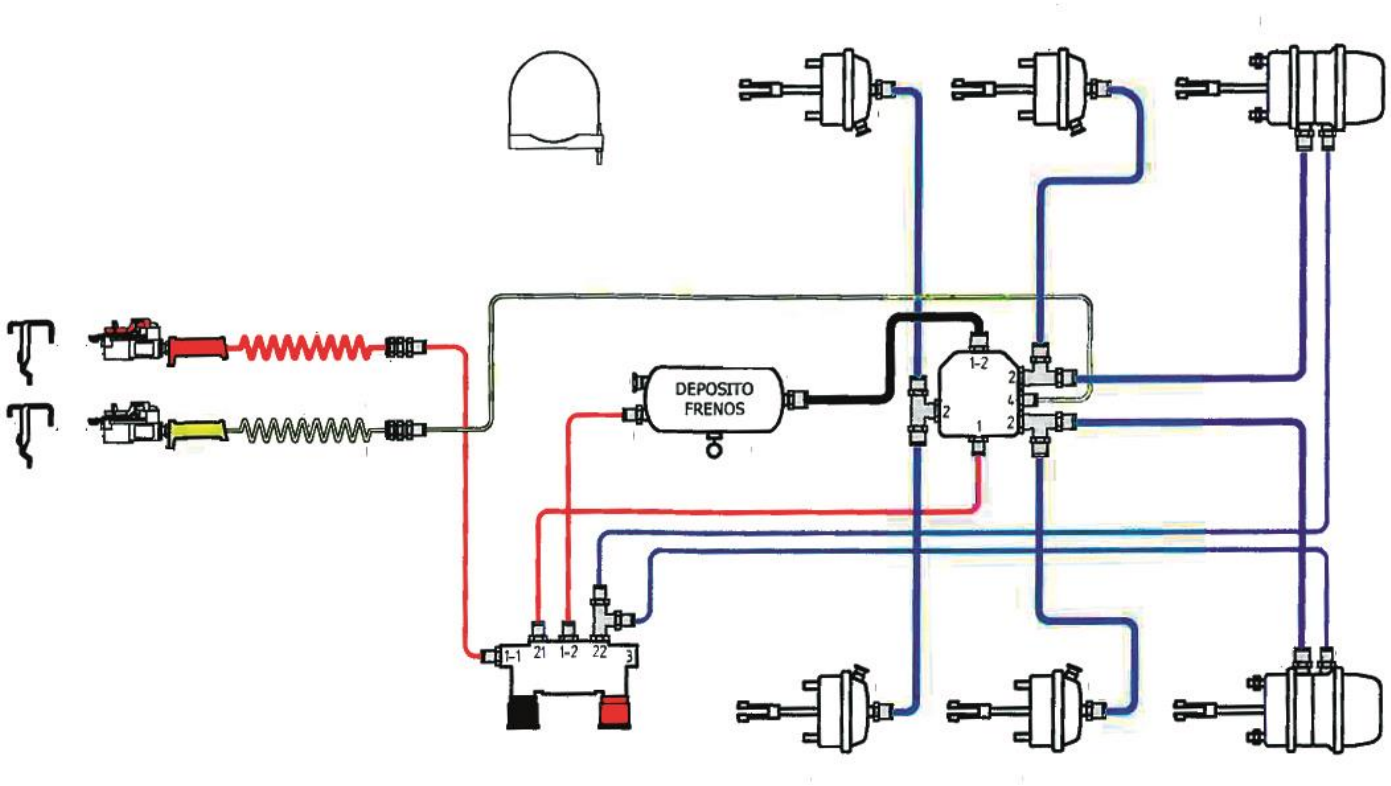
- Posicionando la palanca en MAX., se consigue que la presión de salida sea máxima. Vehículo cargado. (Presión máx: 250 bar.)
- Posicionando la palanca en MED., se consigue que la presión de salida sea para media carga.
- Posicionando la palanca en MIN., se consigue que la presión de salida sea la mínima. Vehículo sin carga. (Pmín: 30 bar.)

PUERTOS DE CONEXIÓN		
P1 P2 P3	3/8” BSP	ENTRADAS / SALIDAS
M	1/4” BSP	MANÓMETRO
T	3/8” BSP	TANQUE



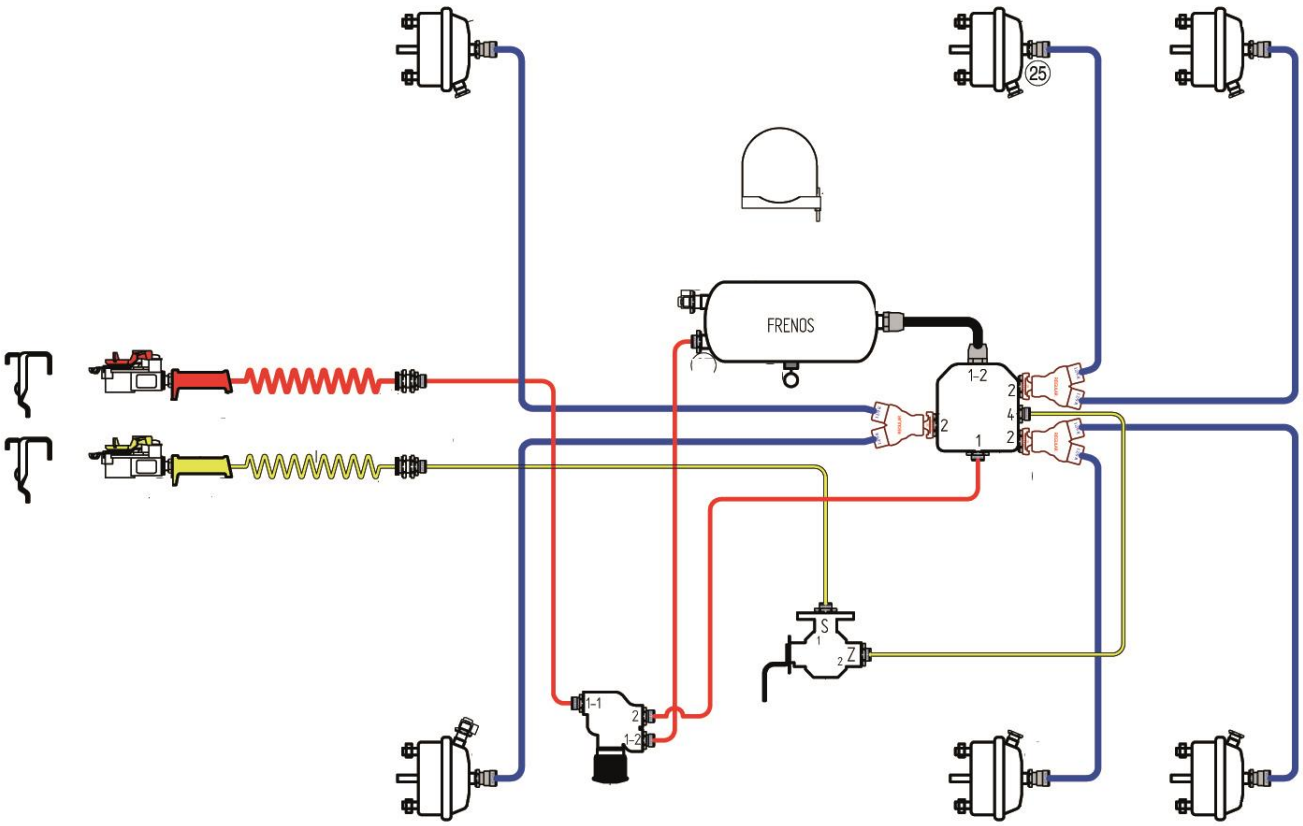
Equipo de freno neumático para vehículo de 3 ejes con freno de estacionamiento

Pneumatic brake equipment for 3 axle vehicles with parking valve

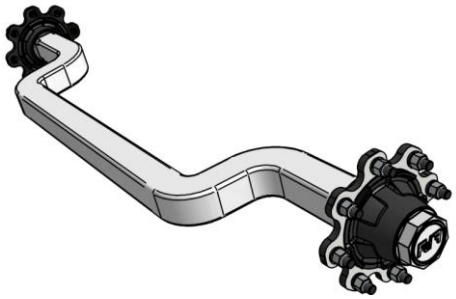


Equipo de freno neumático para vehículo de 3 ejes

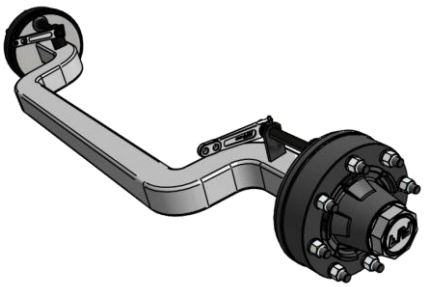
Pneumatic brake equipment for 3 axle vehicles



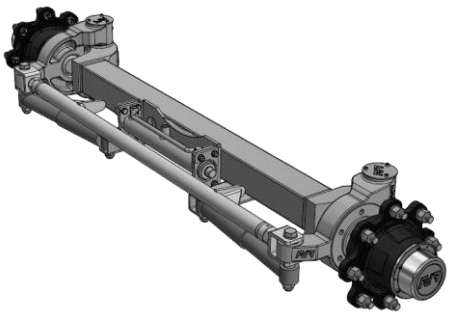
Ejes acodados sin freno
Unbraked stepped axles



Ejes acodados con freno monoblock
Braked stepped axles–solid drum

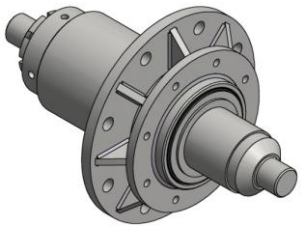


Ejes Autodireccionales sin freno
Self Steering unbraked xles



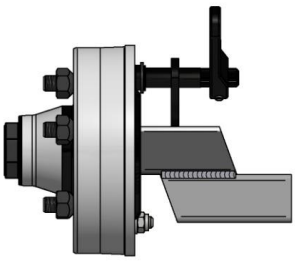
Ejes curvos estructurales
Stepped axles

Ejes de trailla alta capacidad
High capacity leashes axles

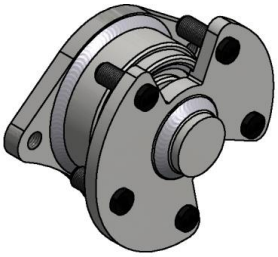


Ejes de trailla
Leashes axles

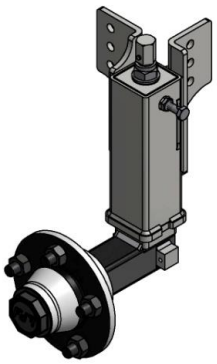
Ejes especiales
Special axles



Componentes de rodaje especiales
Special gear Systems



Semiejes altura regulable
Stub axles adjustable heigth



Fd7
AXLES & TYRES

EJES AGRICOLAS E INDUSTRIALES

Agricultural and Industrial Axles

INFORMACION

Presentación
Características generales ejes
Carga máxima sobre eje
Homologación de freno

INFORMATION

Introduction
General characteristics axles
Load capacity
Brake approvals

Presentación general

Con el presente catálogo técnico, tenemos el gusto de presentarles nuestra gama de ejes para remolques y maquinarias agrícolas.

Dotado con medios de estudios, de investigación e industrialización, FD7 AXLES & TYRES desarrolla productos cada vez más elaborados, cumpliendo así con las exigencias del mundo agrícola.

Todas las descripciones y especificaciones están sujetas a cambios sin previo aviso ni obligación por parte del fabricante.

FD7 AXLES & TYRES se reserva el derecho de realizar mejoras o cambios en la concepción sus productos o de abandonar la fabricación de algunas piezas.

General presentation

We are proud to introduce our range of axles for agricultural trailers and agricultural machines.

Empowered with means of research and industrialization, FD7 AXLES & TYRES is continuously developing more highly capable products which comply with the requirements of the world of agriculture.

The information contained in this catalogue is not subject to liability and can be modified without further notice.

FD7 AXLES & TYRES reserves the right to make improvements or changes in the design of its products and even to abandon the production of some parts.

Cómo elegir el eje correcto

Antes de elegir un producto, el usuario de este manual debería considerar todas las condiciones de trabajo del vehículo y comprobar que el producto FD7 que ha elegido cumple todos sus requerimientos.

Las capacidades de carga que encontrará en las siguientes páginas son los máximos permitidos para la velocidad indicada y de acuerdo al tipo de vehículo mostrado en la cabecera de las columnas.

El usuario, después de haber elegido el producto y la velocidad adecuada para su propósito, debe comprobar la distancia entre la pisa y los puntos de fijación al chasis del vehículo (cota H) para la palanquilla elegida. Por favor, revisar los diagramas de carga que encontrará en este catálogo (recordar por favor que la pisa es referida al centro de la rueda)

Considerar que las cisternas y tanques causan estrés adicional sobre los ejes. En este caso sugerimos referirse al catálogo y elegir una capacidad de carga de eje incrementada en un 10%.

How to choose the rigth axle

Before choosing a product, the user of this manual, should consider all the working conditions of this vehicle and check that the FD7 product he has chosen meets all those requirements.

The carrying capacity you'll find in the following sheets are the maximum allowed for the corresponding speed and according to the vehicle shown on the top of the columns.

The user, after having chosen the product and the speed fit for its purpose, must check if the axle beam is suitable to the distance between the track and the fixing points to the frame of the vehicle. Please refer to the diagrams you'll find at the designing of this catalogue (please remember that the track is always referred to the wheels' center).

Consider that tankers cause additional stress on axles. In this case we suggest you refer to the catalogue, for an axle capacity increased by 10% at least.

Manual de mantenimiento

Todos nuestros ejes son engrasados y ajustados durante el montaje en nuestras fábricas. Cada eje está concebido para aguantar la carga señalada en la documentación general y para una velocidad de uso de 40 km/h.

Una vez al año:
-Es preciso comprobar el juego y el engrase de los rodamientos así como el desgaste de las zapatas de freno.
-Es menester revisar el conjunto de freno y ajustar el recorrido de la leva de freno para que sea lo más corto posible.

Después de cada desmontaje, cambie el pasador de aletas de la tuerca almenada del eje. En caso de uso intensivo, es preciso repetir estas operaciones cada 3 meses.

Durante la puesta en servicio del vehículo, compruebe el ajuste de las tuercas

- después de 10 km
- después de 50 km
- y luego, cada mes

Repita la misma operación al desmontar las ruedas.

Par de apriete de las tuercas de ruedas:

- M12x1,5 –> 80 – 100 Nm
- M16x1,5 –> 120 – 140 Nm
- M18x1,5 –> 260 – 280 Nm
- M20x1,5 –> 340 – 360 Nm
- M22x1,5 –> 450 – 470 Nm

No pinte las caras de apoyo de ruedas de los bujes.

Maintenance manual

All our axles are greased and adjusted during assembly in our factory. Each axle is made to withstand the load capacity indicated in the general documentation and for a speed of use of 40 km/hr.

Once a year:
-It's necessary to check the looseness and bearings greasing as well the brake shoes waste.
-It is necessary to check the brake assembly and adjust the cam stroke so that it is as short as possible.

After each disassembly, replace the split pin from the axle castle nut.

In case of intensive use, these actions must be repeated every 3 months.

Check the nuts adjustments during the vehicle commissioning.

- After 10 km
- After 50 km
- Then, each month

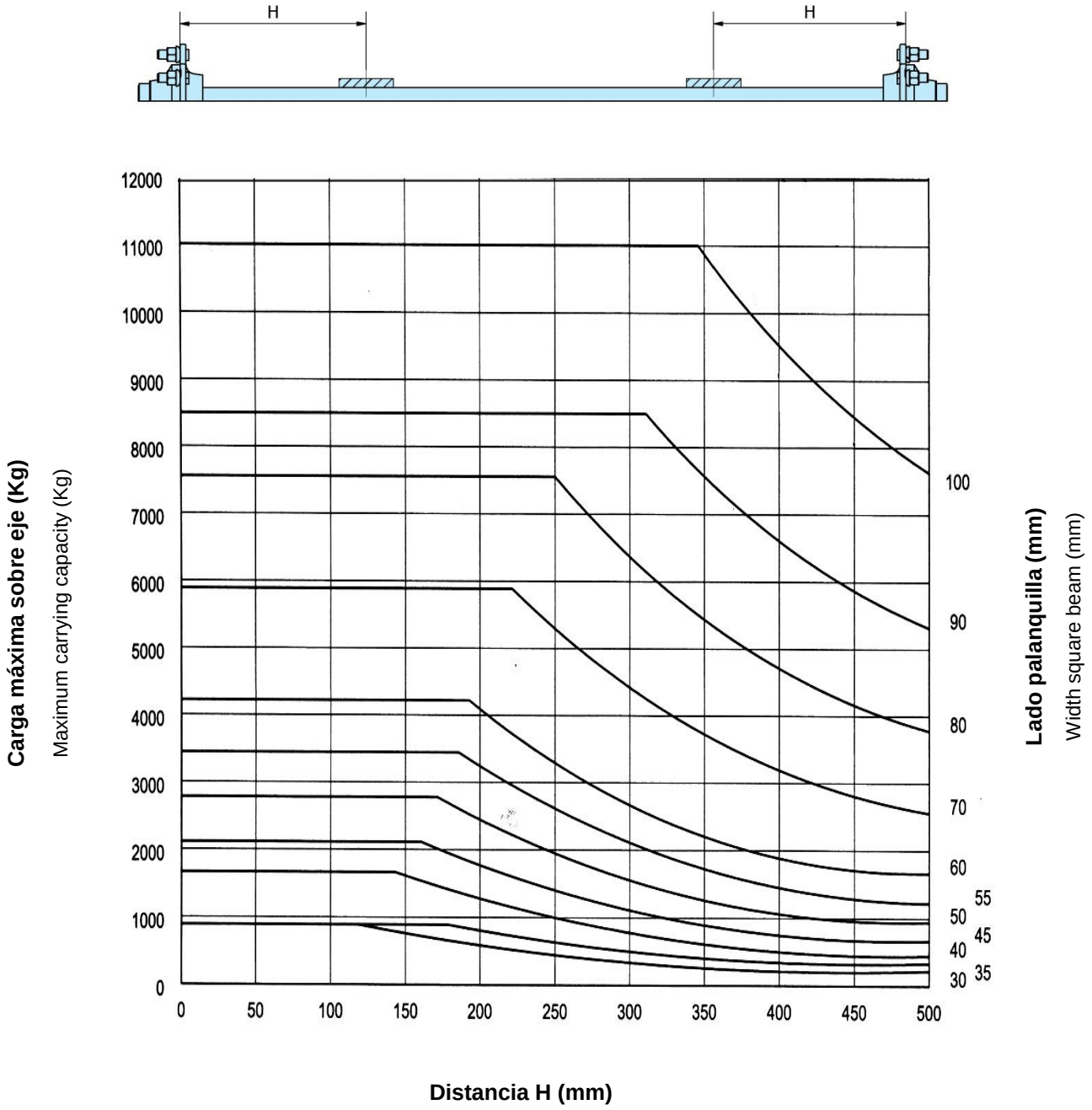
Repeat the same procedures when unmounting the wheels:

-Wheel's Nuts torque:

- Ø 16 – from 12 to 14 m da N
- Ø 18 – from 19 to 21 m da N
- Ø 20 – from 32 to 34 m da N
- Ø 22 – from 40 to 42 m da N

No paint on the hub surfaces.

Carga máxima sobre eje / Load capacity



Los ejes / The axles

Fd7
AXLES & TYRES

Están homologados por:
Have the approval of:

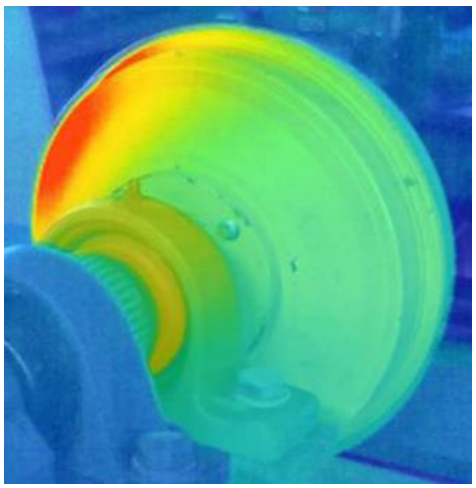
L'Union Technique de l'Automomobile du motocycle et du Cycle (UTAC)

Están homologados por:
Have the approval of:

TÜV SÜD
Auto Service GmbH

Informes de ensayo según la normativa NF U16-051 o ISO 5696 del UTAC (Francia)

Tests reports according the estándar NF U16-051 or ISO 5696 to UTAC (France)

Informes de ensayo según la normativa europea (EU) 2015/68-2016/1788

Tests reports according the europeen standard **(EU) 2015/68-2016/1788**