



COMPONENT CATALOG
FRONT-END CYLINDERS

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Hyva's telescopic front-end cylinders are designed for dump trucks and tipping semitrailers. Our tipping cylinders have earned their reputation for reliability and value for money over many years with hundreds of thousands cylinders working around the world, in all weather conditions, confirming Hyva as the world leader in the production of telescopic cylinders. Hyva designs and manufactures a complete range of telescopic tipping cylinders, both for front-end and underbody applications. The Hyva cylinder is lightweight, uses less oil and therefore tips and lowers faster and is strong, stable and maintenance free.

Hyva telescopic cylinders

Hyva front-end cylinder range

The standard Hyva cylinder range includes Front-end Cylinders with

- Outer Cover (FC)
- With Eye (FE)
- Eye/Eye (FSE)
- Eye/Eye (FEE)

Tipping capacity ranges up to 100 tons. In addition to our standard features, Hyva offers options such as a double acting last stage.

The standard FC-range consists of cylinders with a first stage diameter of 110 to 226 mm and a stroke ranging from 3100 to 9530. The standard FE/FSE/FEE-range consists of cylinders with a first stage diameter from 110 to 226 and a stroke ranging from 2785 to 9030. Tippers with slanted headboard generally are fitted with an FE/FSE/FEE cylinder or FC with a short cover.

Segmentation

Hyva has designed based on different requirements of different user's suitable cylinders for different application areas. Our product range is developed to withstand all conditions in the Construction, Transportation or Mining segment.

Construction and Transportation

Hyva standard Alpha cylinder with the standard operating pressure up to 250 bar, providing best all round performance through combination of reduced weight, increased tipping speed and the stability required for these applications.

Mining

Hyva Heavy Duty (HD) Alpha cylinder designed to perform at high speed in heavy duty conditions. The Heavy Duty Alpha cylinder has larger overlaps and the stop and lift faces are designed to permit exceptionally high tipping and lowering speed increases up to 50%.

Modular design

Thanks to the modular design Hyva can offer a complete range of tipping cylinders assembled to order. Our flexible manufacturing is your best guarantee for a minimum delivery time for the standard range of cylinders. The use of top quality materials keeps wear at a minimum and maintenance simple. For service no special tools are required.

Quality

All Hyva cylinders are fully tested before dispatch (pressure tests up to 1¼ times working pressure). Our customers all over the world acknowledge our reliability. The ISO 9001 standard held since 1991 is your assurance of optimum quality, safety and professionalism.

After sales service

Whatever the age of your equipment and wherever it is working, Hyva's world-wide service network will support you. In case of technical trouble you will be back on the road in no time.

Code system tipping cylinders

FC A191 - 5 - 07130 - 000 - K0343 - XX

FC	A	191	5	7130	000	K0343	XX	
FC								Cylinder type description
	A							Alpha cylinder range
		191						Effective diameter first stage
			5					Number of extensions
				7130				Total stroke in mm (pull-out incorporated)
					0			Code E1 concerning fitting to base
						0		Code E2 concerning fitting to hydraulic system
							0	Code E3 concerning fitting to body
						K0343		Closed length
							XX	Other options

Cylinder type description

- FC - front-end cylinder with outer cover
- FE - front-end cylinder with piston eye
- FEE - front-end cylinder with piston eye and bottom eye with pin
- FSE - front-end cylinder with piston eye and single bottom eye
- FCE - front-end cylinder with outer cover and bottom eye

Code E1 concerning fitting to base

- 0 - standard trunnion at standard position
- 2 - double eye trunnion with bush (FEE)
- 4 - single spherical eye (FSE)

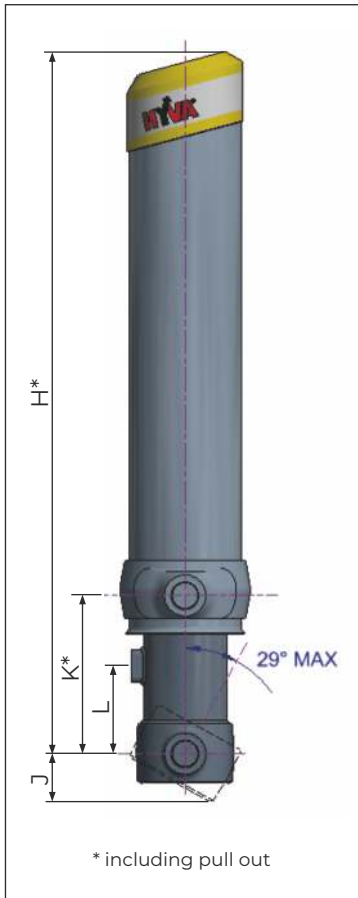
Code E2 concerning fitting to hydraulics

- 0 - standard inlet at standard front position
- 1 - standard inlet at non-standard front position
- 2 - NPT 1" inlet at standard front position
- 7 - standard inlet at side

Code E3 concerning fitting to body

- 0 - standard cover
- 1 - standard spherical eye
- 2 - fixed eye with bush
- 4 - non standard cover
- 9 - special cover or piston

FRONT-END CYLINDER WITH OUTER COVER (FC)



- All cylinders can be ordered in Hard Chromed (HC) version.
- Below K-dimensions are available as standard.
 - K= 343mm
 - K= 486mm
 - K= 550mm
 - K= 900mm
 - K= 1050mm
- Below L-dimensions are available as standard.
 - L= 190mm
 - L= 290mm
- All cylinders incl. 20 mm pull out with tolerances of -5/+30mm.

FC A110

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70523160	FC A110-3-03235-000-K0343	250	28 - 50	130	24	1" BSP	1402	86	343	190
70523180	FC A110-3-03490-000-K0343	250	28 - 46	137	26	1" BSP	1492	86	343	190

FC A118

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70124180	FC A118-3-03490-000-K0343	250	34 - 61	176	30	1" BSP	1492	88	343	190
70124200	FC A118-3-03730-000-K0343	250	34 - 57	183	32	1" BSP	1572	88	343	190
70124230	FC A118-3-03880-000-K0343	250	33 - 55	198	34	1" BSP	1642	88	343	190

FC A129

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70524174	FC A129-3-03100-009-K0550	250	46 - 64	186	34	1" BSP	1489	91	550	190
70524180	FC A129-3-03490-000-K0343	250	45 - 60	186	37	1" BSP	1492	91	343	190
70524210	FC A129-3-03880-000-K0343	250	44 - 58	214	41	1" BSP	1642	91	343	190
70524240	FC A129-3-04270-000-K0343	250	45 - 61	219	45	1" BSP	1772	91	343	190
70524254	FC A129-4-04320-000-K0343	250	29 - 49	201	39	1" BSP	1402	91	343	190
70524292	FC A129-4-04660-000-K0343	250	29 - 46	211	42	1" BSP	1492	91	343	190
70524400	FC A129-4-04980-000-K0343	250	28 - 48	213	45	1" BSP	1572	91	343	190
70524410	FC A129-4-05180-000-K0343	250	28 - 47	221	47	1" BSP	1642	91	343	190

FC A137

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70125220	FC A137-4-04320-000-K0343	250	37 - 55	202	45	1" BSP	1402	92	343	190
70125292	FC A137-4-04660-000-K0343	250	36 - 53	213	49	1" BSP	1492	92	343	190
70125360	FC A137-4-04980-000-K0343	250	35 - 53	222	52	1" BSP	1572	92	343	190
70125364	FC A137-4-04980-004-K1050	250	35 - 52	205	52	1" BSP	1569	92	1050	190
70125410	FC A137-4-05180-000-K0343	250	35 - 53	231	54	1" BSP	1642	92	343	190

FC A149

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70525190	FC A149-4-03720-000-K0343	250	46 - 60	199	47	1" BSP	1252	95	343	190
70525200	FC A149-3-03720-000-K0343	250	64 - 87	239	54	1" BSP	1572	95	343	190
70525220	FC A149-3-03880-000-K0343	250	64 - 84	248	56	1" BSP	1642	95	343	190
70525240	FC A149-4-04090-000-K0343	250	67 - 88	257	59	1" BSP	1712	95	343	190
70525358	FC A149-4-04030-079-K0343	250	48 - 57	225	52	1" BSP	1402	95	343	190
70525370	FC A149-4-04320-000-K0343	250	48 - 56	225	54	1" BSP	1402	95	343	190
70525374	FC A149-4-04420-079-K0343	250	47 - 60	230	57	1" BSP	1492	95	343	190
70525380	FC A149-4-04500-070-K0343	250	47 - 60	233	57	1" BSP	1452	95	343	190
70525388	FC A149-4-04660-070-K0343	250	46 - 59	237	59	1" BSP	1492	95	343	190
70525394	FC A149-4-04980-000-K0343	250	46 - 60	241	63	1" BSP	1572	95	343	190
70525408	FC A149-4-05180-000-K0343	250	45 - 59	250	65	1" BSP	1642	95	343	190
70525424	FC A149-4-05460-070-K0343	250	45 - 59	259	69	1" BSP	1712	95	343	190
70525450	FC A149-4-05700-000-K0343	250	45 - 57	267	72	1" BSP	1772	95	343	190

FC A157

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70126360	FC A157-4-04980-000-K0343	250	54 - 82	257	71	1" BSP	1572	102	343	190
70126416	FC A157-5-05405-074-K1050	250	36 - 50	230	68	1" BSP	1399	102	1050	290
70126424	FC A157-4-05460-000-K0343	250	53 - 85	277	78	1" BSP	1712	102	343	190
70126470	FC A157-5-05830-000-K0343	250	35 - 49	262	73	1" BSP	1492	102	343	190
70126490	FC A157-5-06230-000-K0343	250	35 - 48	281	78	1" BSP	1572	102	343	190
70126550	FC A157-5-06830-000-K0343	250	34 - 46	295	86	1" BSP	1712	102	343	190
70126590	FC A157-5-07130-000-K0343	250	34 - 47	304	90	1" BSP	1772	102	343	190

FC A169

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70526290	FC A169-4-04660-000-K0343	250	68 - 86	283	78	1" BSP	1492	105	343	190
70526336	FC A169-5-05005-009-K0343	250	47 - 58	268	78	1" BSP	1402	105	343	190
70526342	FC A169-5-05030-004-K1050	250	47 - 59	237	81	1" BSP	1329	105	1050	190
70526350	FC A169-4-05180-000-K0343	250	66 - 81	307	87	1" BSP	1642	105	343	190
70526410	FC A169-5-05405-000-K0343	250	46 - 56	274	80	1" BSP	1402	105	343	190
70526424	FC A169-4-05460-000-K0343	250	65 - 83	318	92	1" BSP	1712	105	343	190
70526450	FC A169-5-05830-000-K0343	250	46 - 58	289	87	1" BSP	1492	105	343	190
70526490	FC A169-5-06230-000-K0343	250	45 - 57	303	93	1" BSP	1572	105	343	190
70526528	FC A169-5-06480-014-K1050	250	45 - 56	300	97	1" BSP	1639	105	1050	290
70526550	FC A169-5-06830-000-K0343	250	45 - 55	327	102	1" BSP	1642	105	343	190
70526580	FC A169-5-07130-000-K0343	250	44 - 56	338	106	1" BSP	1772	105	343	190
70526610	FC A169-4-07220-004-K0343	220	55 - 78	400	121	1" BSP	2222	105	343	190
70526680	FC A169-5-07630-004-K0343	220	38 - 55	514	114	1" BSP	1912	105	343	190
70526710	FC A169-5-08130-004-K0343	190	33 - 47	379	121	1" BSP	2012	105	343	190
70526790	FC A169-5-08530-004-K0343	170	29 - 40	387	127	1" BSP	2122	105	343	190
70526844	FC A169-5-09000-009-K0900	150	26 - 34	408	138	1" BSP	2319	105	900	190
70526866	FC A169-5-09030-000-K0486	150	26 - 35	400	135	1" BSP	2215	105	486	190
70526906	FC A169-5-09530-004-K0343	150	26 - 34	420	142	1" BSP	2322	105	343	190

FC A179

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70127424	FC A179-4-05460-000-K0343	250	75 - 99	359	103	1" BSP	1712	108	343	190
70127550	FC A179-5-06830-000-K0343	250	53 - 65	381	115	1" BSP	1712	108	343	190
70127590	FC A179-5-07130-000-K0343	250	52 - 67	393	120	1" BSP	1772	108	343	190
70127650	FC A179-5-08130-000-K0486	190	39 - 54	435	137	1" BSP	2015	108	486	190
70127710	FC A179-5-09030-014-K0900	150	30 - 41	430	152	1" BSP	2229	108	900	290

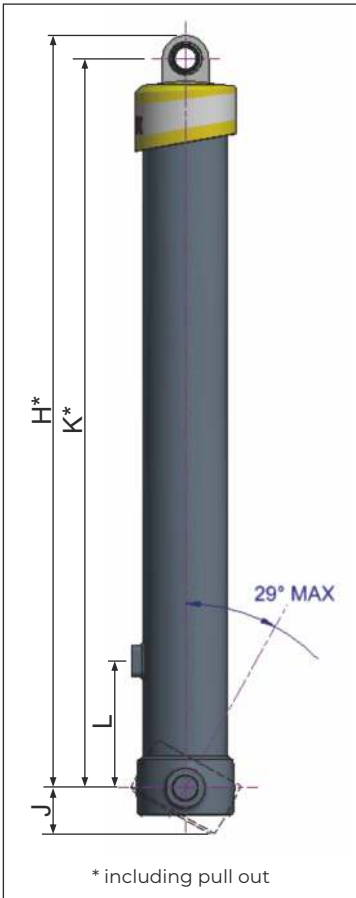
FC A191

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70527424	FC A191-4-05460-000-K0343	250	90 - 98	379	119	1" BSP	1712	115	343	190
70527470	FC A191-6-06040-000-K0343	250	47 - 55	341	106	1" BSP	1332	115	343	190
70527490	FC A191-5-06230-000-K0343	250	66 - 77	376	122	1" BSP	1572	115	343	190
70527550	FC A191-5-06830-000-K0343	250	65 - 79	405	134	1" BSP	1712	115	343	190
70527570	FC A191-6-07000-000-K0343	250	45 - 57	376	122	1" BSP	1492	115	343	190
70527580	FC A191-5-07130-000-K0343	250	65 - 79	417	139	1" BSP	1772	115	343	190
70527640	FC A191-5-07630-004-K0343	250	64 - 77	447	149	1" BSP	1912	115	343	190
70527716	FC A191-5-08130-004-K0343	220	56 - 79	468	159	1" BSP	2012	115	343	190
70527780	FC A191-6-08200-000-K0343	250	44 - 55	426	144	1" BSP	1712	115	343	190
70527856	FC A191-5-09030-000-K0486	170	43 - 57	507	177	1" BSP	2225	115	343	190
70527892	FC A191-6-09160-004-K0343	190	33 - 46	470	160	1" BSP	1912	115	343	190
70527920	FC A191-5-09530-000-K0486	150	37 - 49	528	186	1" BSP	2325	115	486	190

FC A214

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70528490	FC A214-5-06230-000-K0343	220	80 - 101	429	156	1" BSP	1552	133	343	190
70528550	FC A214-5-06830-004-K0486	220	79 - 97	457	171	1" BSP	1695	133	486	190
70528632	FC A214-5-07430-000-K0486	220	78 - 100	494	186	1" BSP	1815	133	486	190
70528680	FC A214-5-07630-000-K0486	220	78 - 101	514	191	1" BSP	1895	133	486	190
70528720	FC A214-5-08130-000-K0486	220	77 - 99	540	204	1" BSP	1995	133	486	190
70528780	FC A214-6-08200-004-K0486	220	57 - 76	483	186	1" BSP	1695	133	486	190
70528808	FC A214-5-08530-004-K1050	190	66 - 89	544	214	1" BSP	2109	133	1050	190
70528814	FC A214-6-08560-004-K1050	190	49 - 68	478	194	1" BSP	1759	133	1050	190
70528856	FC A214-5-09030-000-K0486	190	66 - 88	590	227	1" BSP	2205	133	486	190
70528882	FC A214-6-09160-004-K0550	190	48 - 67	533	207	1" BSP	1899	133	550	190
70528920	FC A214-5-09530-004-K0343	170	58 - 77	618	239	1" BSP	2302	133	343	190

FRONT-END CYLINDER WITH EYE (FE)



- All cylinders can be ordered in Hard Chromed (HC) version.
- Below L-dimensions are available as standard.
 - L= 190mm
 - L= 290mm
 - L= 700mm
- All cylinders incl. 20 mm pull out with tolerances of -5/+30mm.

FE A110

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70543100	FE A110-3-02785-001-K1215	250	29 - 51	90	21	1" BSP	1268	86	1215	190
70543104	FE A110-3-02785-009-K1250	250	29 - 51	91	21	1" BSP	1303	86	1250	190
70543164	FE A110-3-03235-009-K1395	250	28 - 49	100	24	1" BSP	1448	86	1395	190
70543180	FE A110-3-03490-001-K1450	250	27 - 49	106	26	1" BSP	1503	86	1450	190
70543220	FE A110-3-03730-001-K1530	250	27 - 45	111	28	1" BSP	1583	86	1530	190

FE A118

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70144180	FE A118-3-03490-001-K1450	250	34 - 60	114	30	1" BSP	1503	88	1450	190
70144200	FE A118-3-03730-001-K1530	250	33 - 60	120	32	1" BSP	1583	88	1530	190
70144230	FE A118-3-03880-001-K1600	250	33 - 57	125	34	1" BSP	1653	88	1600	190

FE A129

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70544130	FE A129-3-03010-001-K1290	250	45 - 61	117	32	1" BSP	1343	91	1290	190
70544180	FE A129-3-03490-001-K1450	250	44 - 61	130	37	1" BSP	1503	91	1450	190
70544230	FE A129-3-03880-001-K1600	250	43 - 59	142	41	1" BSP	1653	91	1600	190
70544420	FE A129-4-05460-001-K1670	190	21 - 37	164	50	1" BSP	1723	91	1670	190

FRONT-END CYLINDER WITH EYE (FE)

FE A137

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70145224	FE A137-3-03880-009-K1635	250	51 - 81	151	47	1" BSP	1688	92	1635	190
70145250	FE A137-4-04320-001-K1365	250	36 - 52	145	45	1" BSP	1418	92	1365	190
70145292	FE A137-4-04660-001-K1450	250	35 - 54	154	49	1" BSP	1503	92	1450	190
70145360	FE A137-4-04980-001-K1530	220	31 - 52	161	52	1" BSP	1583	92	1530	190

FE A149

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70545230	FE A149-3-03880-009-K1645	250	62 - 83	168	56	1" BSP	1698	95	1645	190
70545264	FE A149-4-04320-001-K1365	250	47 - 61	162	54	1" BSP	1418	95	1365	190
70545292	FE A149-4-04660-001-K1450	250	45 - 60	171	59	1" BSP	1503	95	1450	190
70545296	FE A149-4-04660-009-K1485	250	45 - 60	172	59	1" BSP	1538	95	1485	190
70545360	FE A149-4-04980-001-K1530	250	45 - 60	180	63	1" BSP	1583	95	1530	190
70545374	FE A149-4-05180-011-K1600	220	39 - 57	187	65	1" BSP	1653	95	1600	700

FE A157

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70146260	FE A157-4-04320-011-K1364	250	55 - 85	178	62	1" BSP	1417	102	1364	290
70146296	FE A157-4-04660-019-K1484	250	54 - 83	189	67	1" BSP	1537	102	1484	290
70146400	FE A157-5-05405-011-K1364	250	35 - 48	193	68	1" BSP	1417	102	1364	290
70146420	FE A157-4-05460-011-K1669	220	46 - 80	214	78	1" BSP	1722	102	1669	290
70146506	FE A157-5-05830-011-K1449	190	27 - 47	204	73	1" BSP	1502	102	1449	700
70146530	FE A157-5-06230-001-K1529	190	26 - 45	214	78	1" BSP	1582	102	1529	190
70146550	FE A157-5-06830-001-K1669	150	20 - 33	233	86	1" BSP	1722	102	1669	190
70146590	FE A157-5-07130-011-K1729	135	18 - 26	241	90	1" BSP	1782	102	1729	700

FE A169

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70546326	FE A169-4-04980-011-K1529	250	66 - 84	227	84	1" BSP	1582	105	1529	290
70546358	FE A169-4-05180-011-K1599	250	65 - 83	227	87	1" BSP	1652	105	1599	290
70546382	FE A169-5-05300-079-K1449	250	46 - 56	227	83	1" BSP	1502	105	1449	190
70546404	FE A169-5-05405-019-K1394	250	46 - 58	213	80	1" BSP	1447	105	1394	700
70546406	FE A169-5-05420-019-K1529	250	45 - 58	226	84	1" BSP	1582	105	1529	700
70546420	FE A169-4-05460-011-K1669	250	65 - 81	227	92	1" BSP	1722	105	1669	290
70546466	FE A169-5-05830-009-K1529	220	40 - 56	226	87	1" BSP	1582	105	1529	190
70546526	FE A169-5-06230-011-K1529	190	34 - 52	236	93	1" BSP	1582	105	1529	290
70546540	FE A169-5-06480-011-K1599	190	34 - 56	247	97	1" BSP	1652	105	1599	290
70546556	FE A169-5-06830-011-K1669	170	30 - 48	257	102	1" BSP	1722	105	1669	700
70546584	FE A169-5-07030-019-K1729	170	30 - 42	265	106	1" BSP	1782	105	1729	290
70546588	FE A169-5-07080-019-K1789	170	30 - 43	274	108	1" BSP	1842	105	1789	290
70546640	FE A169-5-07630-011-K1869	170	29 - 40	286	114	1" BSP	1922	105	1869	700

FE A179

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70147420	FE A179-4-05460-011-K1677	250	74 - 99	259	103	1" BSP	1739	108	1677	290
70147470	FE A179-5-05830-001-K1457	220	47 - 69	246	98	1" BSP	1510	108	1457	190
70147490	FE A179-4-06100-011-K1877	190	55 - 90	288	115	1" BSP	1930	108	1877	290
70147500	FE A179-5-06230-001-K1537	190	40 - 69	258	105	1" BSP	1590	108	1537	190
70147550	FE A179-5-06830-011-K1677	170	35 - 57	281	115	1" BSP	1730	108	1677	290
70147586	FE A179-5-07030-019-K1737	170	35 - 50	290	119	1" BSP	1790	108	1737	290
70147650	FE A179-5-07430-011-K1797	150	31 - 43	300	125	1" BSP	1850	108	1797	700

FRONT-END CYLINDER WITH EYE (FE)

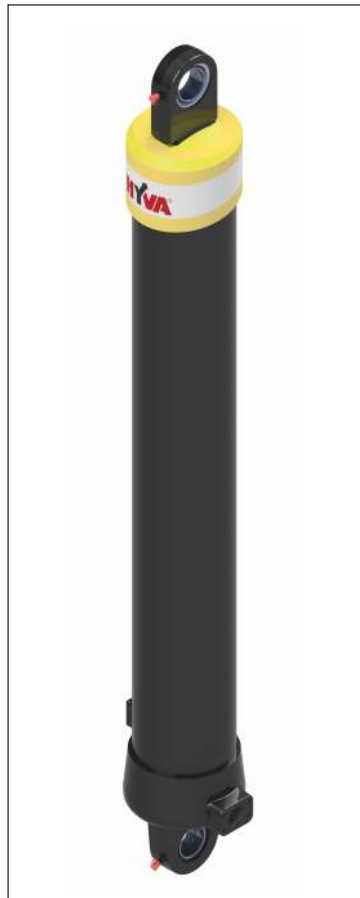
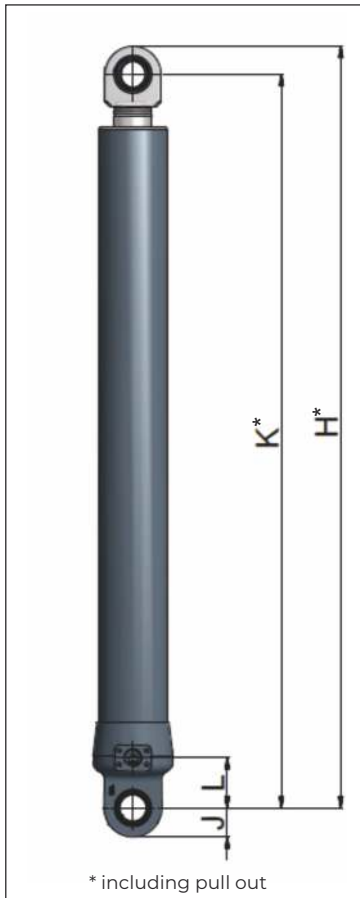
FE A191

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70547400	FE A191-5-05405-011-K1367	250	67 - 81	253	106	1" BSP	1420	115	1367	290
70547434	FE A191-6-05590-019-K1367	250	46 - 56	244	98	1" BSP	1420	115	1367	290
70547474	FE A191-5-05830-019-K1532	250	66 - 78	269	114	1" BSP	1585	115	1532	700
70547484	FE A191-6-06040-019-K1367	220	40 - 57	257	106	1" BSP	1420	115	1367	290
70547536	FE A191-5-06230-019-K1562	220	57 - 79	282	122	1" BSP	1615	115	1562	290
70547538	FE A191-6-06460-079-K1452	250	45 - 56	288	119	1" BSP	1505	115	1452	190
70547540	FE A191-6-06600-019-K1532	220	40 - 56	287	120	1" BSP	1585	115	1532	700
70547544	FE A191-5-06480-011-K1602	150	39 - 65	294	127	1" BSP	1655	115	1602	290
70547550	FE A191-5-06830-011-K1672	190	49 - 78	306	134	1" BSP	1725	115	1672	700
70547582	FE A191-6-07000-078-K1452	190	34 - 50	288	122	1" BSP	1505	115	1452	190
70547602	FE A191-5-07130-011-K1732	170	43 - 61	316	139	1" BSP	1785	115	1732	290
70547650	FE A191-5-07430-011-K1792	150	38 - 53	326	145	1" BSP	1845	115	1792	700
70547684	FE A191-4-07620-011-K2282	150	51 - 67	376	167	1" BSP	2335	115	2282	700
70547784	FE A191-6-08200-011-K1672	135	24 - 33	327	144	1" BSP	1725	115	1672	700
70547836	FE A191-5-08530-019-K2282	110	27 - 36	380	167	1" BSP	2335	115	2282	290
70547860	FE A191-5-09030-011-K2182	110	27 - 36	394	177	1" BSP	2235	115	2182	290

FE A214

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70548530	FE A214-5-06230-011-K1517	220	79 - 104	338	156	1" BSP	1579	133	1517	700
70548576	FE A214-6-07000-019-K1517	190	49 - 74	344	158	1" BSP	1570	133	1517	700
70548584	FE A214-5-07130-011-K1717	190	67 - 94	379	179	1" BSP	1779	133	1717	700

FRONT-END CYLINDER WITH PISTON EYE & BOTTOM EYE (FSE)



- All cylinders can be ordered in Hard Chromed (HC) version.
- All cylinders incl. 20 mm pull out with tolerances -5/+30mm.

FSE A129

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70574191	FSE A129-3-03490-471-K1549-HC	250	44 - 61	124	37	1" BSP	1657	55	1549	95
70574278	FSE A129-4-04320-471-K1464	250	29 - 48	130	39	1" BSP	1572	55	1464	95

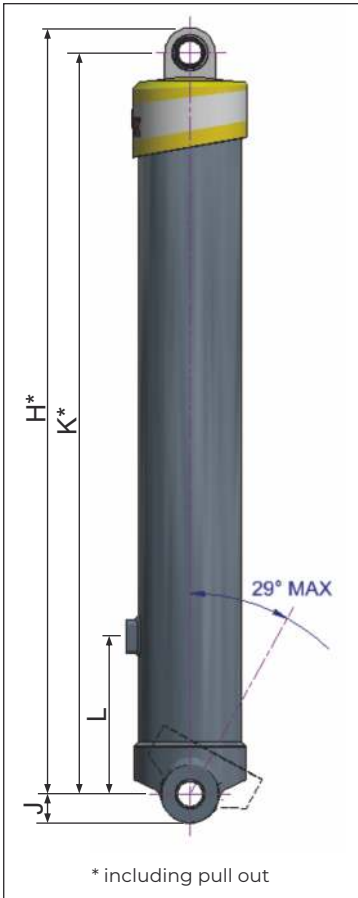
FSE A137

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70165245	FSE A137-4-03585-479-K1396-HD-HC	250	35 - 55	127	38	1" BSP	1504	55	1396	95
70165320	FSE A137-4-04185-479-K1496-HD	250	36 - 52	141	44	1" BSP	1604	55	1496	95

FSE A149

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70565245	FSE A149-4-03585-479-K1396-HD-HC	250	46 - 61	143	46	1" BSP	1504	55	1396	95

FRONT-END CYLINDER WITH PISTON EYE, BOTTOM EYE & PIN (FEE)



- All cylinders can be ordered in Hard Chromed (HC) version.
- Below L-dimensions are available as standard.
 - L= 330mm
 - L= 390mm
- All cylinders Incl. 20 mm pull out with tolerances of -5/+30mm.

FEE A149

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70575254	FEE A149-4-04020-221-K1375	250	47 - 57	151	51	1"NPT	1428	56	1375	390
70575306	FEE A149-4-04660-209-K1615	250	46 - 61	170	59	1"BSP	1668	56	1615	390

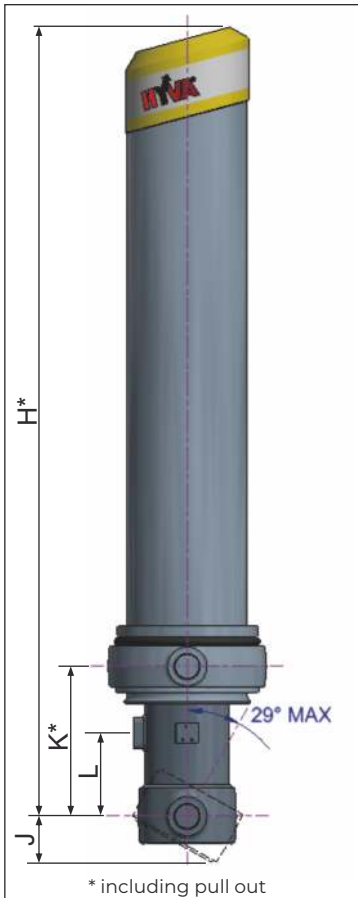
FEE A191

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70577450	FEE A191-5-05830-221-K1552	250	66 - 78	265	114	1"NPT	1605	56	1552	330
70577534	FEE A191-5-06230-201-K1632	220	57 - 78	279	122	1"BSP	1685	56	1632	330

FEE A214

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70578450	FEE A214-5-05830-221-K1552	220	80 - 100	315	146	1"NPT	1614	63.5	1552	330
70578534	FEE A214-5-06230-211-K1632	220	79 - 102	332	156	1"BSP	1694	63.5	1632	330
70578584	FEE A214-5-07130-211-K1832	190	67 - 94	373	179	1"BSP	1894	63.5	1832	390

HEAVY DUTY FRONT-END CYLINDER WITH OUTER COVER (FC)



- All cylinders can be ordered in Hard Chromed (HC) version.
- Below K-dimensions are available as standard.
 - K= 343mm
 - K= 486mm
 - K= 550mm
 - K= 900mm
 - K= 1050mm
- Below L-dimensions are available as standard.
 - L= 190mm
 - L= 290mm
- All cylinders incl. 20 mm pull out with tolerances -5/+30mm.

FC A118-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70114180	FC A118-3-03395-000-K0343-HD	250	34 - 58	184	29	1" BSP	1492	88	343	190
70114200	FC A118-3-03635-000-K0343-HD	250	34 - 58	192	32	1" BSP	1572	88	343	190
70114210	FC A118-3-03845-000-K0343-HD	250	33 - 55	198	33	1" BSP	1642	88	343	190
70114250	FC A118-3-04235-000-K0343-HD	250	34 - 60	211	37	1" BSP	1772	88	343	190

FC A129-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70514180	FC A129-3-03395-000-K0343-HD	250	45 - 61	209	36	1" BSP	1492	91	343	190
70514210	FC A129-3-03845-000-K0343-HD	250	44 - 59	226	41	1" BSP	1642	91	343	190
70514250	FC A129-3-04235-000-K0343-HD	250	45 - 61	240	45	1" BSP	1772	91	343	190

FC A137-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70115180	FC A137-3-03380-000-K0343-HD	250	53 - 82	216	41	1" BSP	1492	92	343	190
70115292	FC A137-4-04525-000-K0343-HD	250	36 - 54	232	47	1" BSP	1492	92	343	190
70115360	FC A137-4-04845-000-K0343-HD	250	36 - 52	242	51	1" BSP	1572	92	343	190
70115362	FC A137-4-04845-014-K1050-HD	250	35 - 54	221	51	1" BSP	1569	92	1050	290
70115400	FC A137-4-05125-000-K0343-HD	250	35 - 52	251	54	1" BSP	1642	92	343	190
70115410	FC A137-4-05125-070-K0343-HD	250	35 - 52	251	54	1" BSP	1642	92	343	190
70115446	FC A137-4-05405-000-K0343-HD	250	35 - 51	260	57	1" BSP	1712	92	343	190
70115450	FC A137-4-05405-070-K0343-HD	250	35 - 51	260	57	1" BSP	1712	92	343	190

HEAVY DUTY FRONT-END CYLINDER WITH OUTER COVER (FC)

FC A149-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70515354	FC A149-4-04365-070-K0343-HD	250	47 - 61	253	55	1" BSP	1452	95	343	190
70515362	FC A149-4-04845-014-K1050-HD	250	46 - 60	244	61	1" BSP	1569	95	1050	290
70515404	FC A149-4-05125-070-K0343-HD	250	46 - 60	281	65	1" BSP	1642	95	343	190
70515424	FC A149-4-05405-070-K0343-HD	250	45 - 57	291	68	1" BSP	1712	95	343	190

FC A157-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70116390	FC A157-4-05105-000-K0343-HD	250	54 - 82	306	73	1" BSP	1642	102	343	190
70116424	FC A157-4-05385-000-K0343-HD	250	53 - 78	317	77	1" BSP	1712	102	343	190
70116440	FC A157-4-04505-000-K0343-HD	250	55 - 82	282	64	1" BSP	1492	102	343	190
70116470	FC A157-5-05650-000-K0343-HD	250	36 - 50	298	71	1" BSP	1492	102	343	190
70116500	FC A157-5-06050-000-K0343-HD	250	35 - 49	312	76	1" BSP	1572	102	343	190
70116508	FC A157-5-06050-004-K1050-HD	250	35 - 49	279	76	1" BSP	1569	102	1050	190
70116550	FC A157-5-06750-000-K0343-HD	250	34 - 46	335	85	1" BSP	1712	102	343	190
70116590	FC A157-5-07050-000-K0343-HD	250	34 - 48	345	88	1" BSP	1772	102	343	190

FC A169-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70516280	FC A169-4-04505-000-K0343-HD	250	68 - 80	300	76	1" BSP	1492	105	343	190
70516436	FC A169-4-05625-000-K0343-HD	250	65 - 82	345	95	1" BSP	1772	105	343	190
70516440	FC A169-5-05650-000-K0343-HD	250	46 - 55	318	84	1" BSP	1492	105	343	190
70516500	FC A169-5-06050-000-K0343-HD	250	45 - 57	332	90	1" BSP	1572	105	343	190
70516580	FC A169-5-07050-000-K0343-HD	250	44 - 56	368	105	1" BSP	1806	105	343	190
70516704	FC A169-5-08130-000-K0486-HD	190	33 - 46	407	121	1" BSP	2005	105	486	190

FC A179-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70117424	FC A179-4-05365-000-K0343-HD	250	76 - 98	359	101	1" BSP	1712	108	343	190
70117550	FC A179-5-06725-000-K0343-HD	250	53 - 65	381	113	1" BSP	1712	108	343	190
70117580	FC A179-5-07025-000-K0343-HD	250	52 - 67	393	118	1" BSP	1772	108	343	190
70117586	FC A179-5-07025-014-K1300-HD	190	40 - 57	353	118	1" BSP	1779	108	1300	290
70117704	FC A179-5-08130-000-K0486-HD	190	39 - 54	435	137	1" BSP	2015	108	486	190

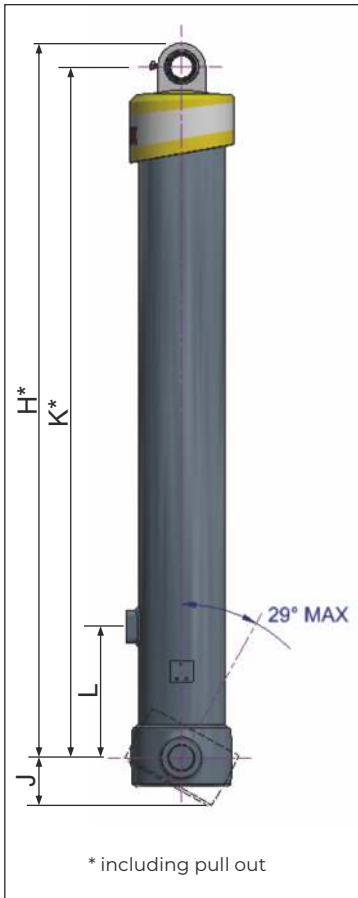
FC A191-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70517550	FC A191-5-06725-000-K0343-HD	250	65 - 80	405	131	1" BSP	1712	115	343	190
70517598	FC A191-5-07325-004-K0343-HD	250	64 - 79	430	143	1" BSP	1832	115	343	190
70517708	FC A191-5-08130-004-K1050-HD	190	48 - 66	442	159	1" BSP	2009	115	1050	190
70517780	FC A191-6-08090-000-K0343-HD	250	44 - 55	426	141	1" BSP	1712	115	343	190
70517810	FC A191-6-08450-014-K1050-HD	170	30 - 41	413	148	1" BSP	1769	115	1050	290

FC A214-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70518550	FC A214-5-06695-004-K0486-HD	220	79 - 98	457	168	1" BSP	1695	133	486	190
70518780	FC A214-6-08055-004-K0486-HD	220	57 - 76	483	182	1" BSP	1695	133	486	190

HEAVY DUTY FRONT-END CYLINDER WITH EYE (FE)



- All cylinders can be ordered in Hard Chromed (HC) version.
- Below L-dimensions are available as standard.
 - L= 190mm
 - L= 290mm
 - L= 700mm
- All cylinders incl. 20 mm pull out with tolerances of -5/+30mm.

FE A118-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70134180	FE A118-3-03395-001-K1450-HD	250	34 - 57	114	29	1" BSP	1503	88	1450	190
70134210	FE A118-3-03635-001-K1530-HD	250	33 - 57	120	32	1" BSP	1583	88	1530	190
70134220	FE A118-3-03845-001-K1600-HD	250	33 - 59	125	33	1" BSP	1653	88	1600	190
70134224	FE A118-3-03845-071-K1600-HD	250	33 - 59	125	33	1" BSP	1653	88	1600	190

FE A129-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70534180	FE A129-3-03395-001-K1450-HD	250	44 - 57	130	36	1" BSP	1503	91	1450	190
70534220	FE A129-3-03845-001-K1600-HD	250	43 - 59	142	41	1" BSP	1653	91	1600	190

FE A137-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70135180	FE A137-3-03380-001-K1450-HD	250	52 - 82	138	41	1" BSP	1503	92	1450	190
70135220	FE A137-3-03830-001-K1600-HD	250	51 - 84	151	46	1" BSP	1653	92	1600	190
70135224	FE A137-3-03830-009-K1635-HD	250	51 - 84	151	46	1" BSP	1688	92	1635	190
70135292	FE A137-4-04525-001-K1450-HD	250	35 - 52	154	47	1" BSP	1503	92	1450	190

HEAVY DUTY FRONT-END CYLINDER WITH EYE (FE)

FE A149-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70535210	FE A149-3-03830-009-K1645-HD	250	63 - 84	168	55	1" BSP	1698	95	1645	190
70535294	FE A149-4-04525-009-K1485-HD	250	46 - 61	171	57	1" BSP	1538	95	1485	190

FE A157-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70136220	FE A157-4-04165-011-K1364-HD	250	56 - 80	178	59	1" BSP	1417	102	1364	290
70136270	FE A157-4-04505-011-K1449-HD	250	54 - 84	188	64	1" BSP	1502	102	1449	290
70136390	FE A157-4-05105-011-K1599-HD	250	53 - 82	206	73	1" BSP	1652	102	1599	290
70136406	FE A157-5-05225-011-K1364-HD	250	36 - 49	193	65	1" BSP	1687	102	1634	290
70136420	FE A157-4-05385-011-K1669-HD	220	46 - 82	214	77	1" BSP	1722	102	1669	700
70136476	FE A157-5-05650-011-K1449-HD	220	31 - 48	204	71	1" BSP	1502	102	1449	700
70136550	FE A157-5-06750-011-K1669-HD	150	20 - 33	233	85	1" BSP	1722	102	1669	700

FE A169-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70536370	FE A169-4-05105-001-K1599-HD	250	66 - 84	227	86	1" BSP	1652	105	1599	190
70536468	FE A169-5-05650-019-K1564-HD	220	40 - 57	226	84	1" BSP	1617	105	1564	700
70536484	FE A169-5-06050-011-K1529-HD	190	34 - 53	236	90	1" BSP	1582	105	1529	290
70536490	FE A169-5-06050-019-K1564-HD	190	34 - 53	237	90	1" BSP	1617	105	1564	290
70536550	FE A169-5-06750-011-K1669-HD	170	30 - 49	257	100	1" BSP	1722	105	1669	290
70536574	FE A169-5-06950-019-K1729-HD	170	30 - 48	265	104	1" BSP	1782	105	1729	290
70536680	FE A169-5-07630-011-K1869-HD	170	29 - 40	286	114	1" BSP	1922	105	1869	700

FE A179-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70137500	FE A179-5-06025-011-K1537-HD	220	47 - 67	258	101	1" BSP	1590	108	1537	700

FE A191-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70537410	FE A191-5-05200-011-K1367-HD	250	67 - 83	253	101	1" BSP	1420	115	1367	290
70537530	FE A191-5-06025-011-K1532-HD	250	65 - 81	282	118	1" BSP	1585	115	1532	290
70537538	FE A191-5-06200-019-K1602-HD	220	57 - 78	294	123	1" BSP	1655	115	1602	290
70537556	FE A191-5-06730-019-K1732-HD	190	49 - 79	316	134	1" BSP	1785	115	1732	290
70537784	FE A191-6-08090-011-K1672-HD	135	24 - 33	327	141	1" BSP	1725	115	1672	700

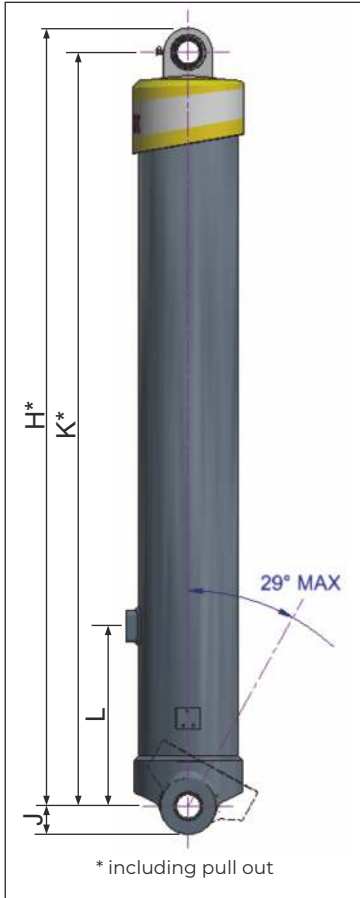
FE A214-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70538450	FE A214-5-05995-011-K1517-HD	220	79 - 104	338	150	1" BSP	1579	133	1517	290
70538596	FE A214-5-07030-009-K1777-HD	220	77 - 100	392	179	1" BSP	1839	133	1777	190
70538684	FE A214-4-07620-011-K2267-HD	170	77 - 102	450	212	1" BSP	2329	133	2267	700

FE A226-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H* (mm)	J (mm)	K* (mm)	L (mm)
70139630	FE A226-5-06970-011-K1723-HD	190	75 - 108	430	195	1" BSP	1785	137	1723	390

HEAVY DUTY FRONT-END CYLINDER WITH PISTON EYE, BOTTOM EYE & PIN (FEE)



- All cylinders can be ordered in Hard Chromed (HC) version.
- Below L-dimensions are available as standard.
 - L= 330mm
 - L= 390mm
- All cylinders incl. 20 mm pull out with tolerances of -5/+30mm.

FEE A149-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H (mm)	J (mm)	K (mm)	L (mm)
70565210	FEE A149-4-03585-221-K1300-HD	250	46 - 61	143	45	1"NPT	1353	56	1300	330
70565296	FEE A149-4-04525-219-K1615-HD	250	46 - 61	170	57	1"BSP	1668	56	1615	390

FEE A169-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H (mm)	J (mm)	K (mm)	L (mm)
70566260	FEE A169-4-04165-221-K1454-HD	250	68 - 79	191	70	1"NPT	1507	56	1454	330

FEE A191-HD

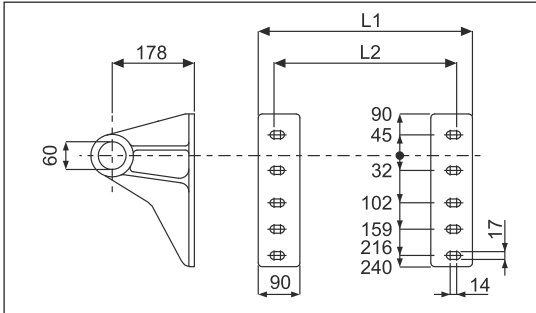
Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H (mm)	J (mm)	K (mm)	L (mm)
70567490	FEE A191-5-06025-211-K1632-HD	220	57 - 79	279	118	1"BSP	1685	56	1632	390

FEE A214-HD

Part no.	Description	Press (bar)	Tipping weight (ton)	Weight (kg.)	Vol. (ltr.)	Oil inlet	H (mm)	J (mm)	K (mm)	L (mm)
70568584	FEE A214-5-06995-211-K1832-HD	190	67 - 96	373	175	1"BSP	1894	63.5	1832	390

LIFTING BRACKETS FOR CYLINDER TYPE: FC 110/118/129

Bracket Type	Part no. right bracket	Part no. left bracket	Description	Weight (kg)	Max. cylinder load (kN)	Part no. replacement bush
Maintenance free	01509120	01509121	Lifting bracket D60 H178 110-129	7.7	190	01794235
Greased version	01509124	01509125	Lifting bracket D60 H178 110-129 greas	7.9	255	None

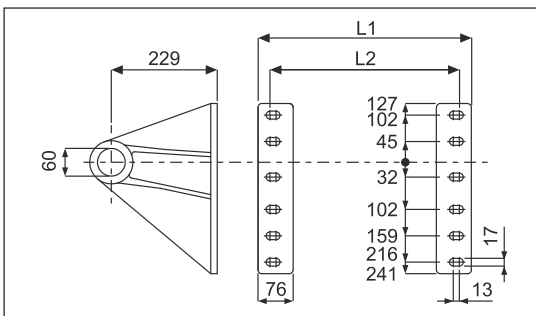


Cover	A-dimension*	L1 (mm)	L2 (mm)
168	201	305	237
219	340	444	376
241	340	444	376
242	340	444	376

* Refers to trunnion width, which can be found on the spec sheet.

LIFTING BRACKETS FOR CYLINDER TYPE: FC 118/129/137/149/157/169/179

Bracket Type	Part no. right bracket	Part no. left bracket	Description	Weight (kg)	Max. cylinder load (kN)	Part no. replacement bush
Maintenance free	01509130	01509131	Lifting bracket D60 H229 118-179	9.8	235	01794240
Greased version	01509136	01509137	Lifting bracket D60 H229 118-179 GR M8	10.0	290	None
Greased air coupling 90°	01509138	01509139	Lifting bracket D60 H229 GR M8-90	10.0	290	None

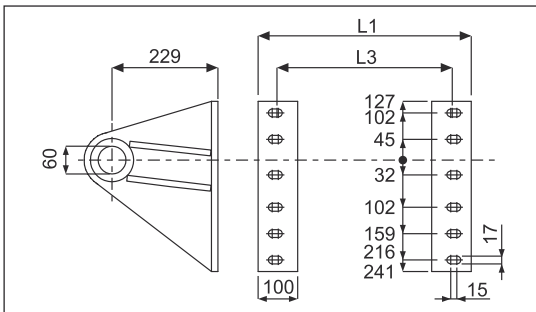


Cover	A-dimension*	L1 (mm)	L2 (mm)
219	340	462	410
241	340	462	410
242	340	462	410
273	360	462	430

* Refers to trunnion width, which can be found on the spec sheet.

LIFTING BRACKETS FOR CYLINDER TYPE: FC 191/202/214

Bracket Type	Part no. right bracket	Part no. left bracket	Description	Weight (kg)	Max. cylinder load (kN)	Part no. replacement bush
Maintenance free	01506728	01506726	Lifting bracket D60 H229 214 HD	13.5	235	01794240
Greased version	5629000122	5629000123	Lifting bracket 149-169-191 (welded)	14.0	440	01794020



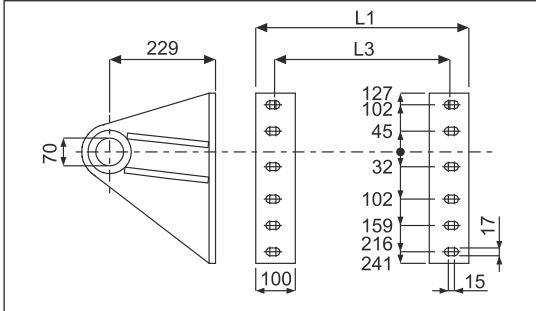
Cover	A-dimension*	L1 (mm)	L2 (mm)
241	340	490	386
242	340	490	386
273	360	510	410

* Refers to trunnion width, which can be found on the spec sheet.

Mount the lifting brackets with the bolts to the outer side or the inner side of the slotted hole. In this way the washer and bolt, clamp on maximum surface and can absorb the largest forces. *Max. 1 mm clearance between each bracket and the cylinder.*

LIFTING BRACKETS FOR CYLINDER TYPE: FC 202

Bracket Type	Part no. right bracket	Part no. left bracket	Description	Weight (kg)	Max. cylinder load (kN)	Part no. replacement bush
Greased version	5629000673	5629000672	Lifting bracket 202	15.0	390	01794029

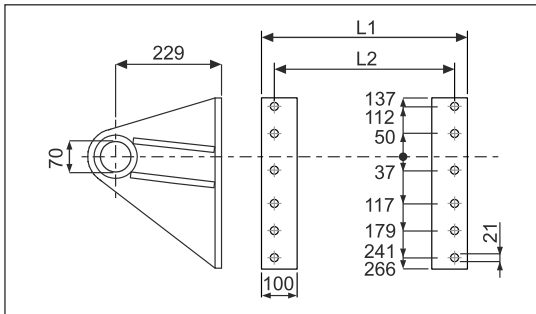


Cover	A-dimension*	L1 (mm)	L2 (mm)
273	360	510	410

* Refers to trunnion width, which can be found on the spec sheet.

LIFTING BRACKETS FOR CYLINDER TYPE: FC 226

Bracket Type	Part no. right bracket	Part no. left bracket	Description	Weight (kg)	Max. cylinder load (kN)	Part no. replacement bush
Greased version	5629000162	5629000161	Lifting bracket 226	18.5	490	01794029



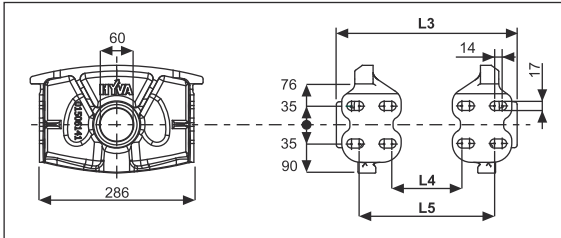
Cover	A-dimension*	L1 (mm)	L2 (mm)
324	415	569	495

* Refers to trunnion width, which can be found on the spec sheet.

Mount the lifting brackets with the bolts to the outer side or the inner side of the slotted hole. In this way the washer and bolt, clamp on maximum surface and can absorb the largest forces. *Max. 1 mm clearance between each bracket and the cylinder.*

CHASSIS BRACKETS FOR CYLINDER TYPE: FC/FE 110/118/129/137/149

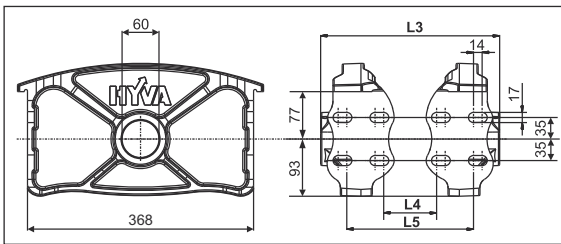
Bracket Type	Part no. bracket	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. replacement bush
Maintenance free	01506141	Chassis bracket 286-D60 HD-GR-T24 mach.	7.7	235	01794240
Greased	01506146	Chassis bracket 286-D60 HD-GR-T30 mach.	7.7	295	01794020
Greased RS20	01506147	Chassis bracket 286-D60 HD-GR-RS20-T30	7.5	295	01794012



Cylinder	L3 (mm)	L4 (mm)	L5 (mm)
FC/FE 110	308	103	223
FC/FE 118	325	120	240
FC/FE 129	346	141	261
FC/FE 137	346	141	261
FC/FE 149	346	141	261

CHASSIS BRACKETS FOR CYLINDER TYPE: FC/FE 137/149

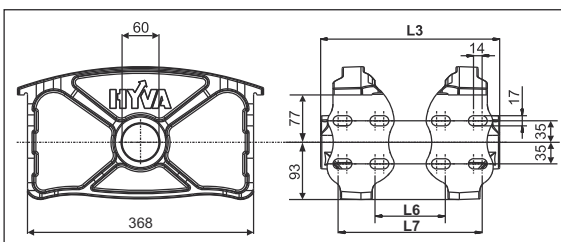
Bracket Type	Part no. bracket	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. replacement bush
Maintenance free	01506181	Chassis bracket 368-D60 STD-MF-T24 mach.	10.6	235	01794240
Greased	01506182	Chassis bracket 368-D60 HD-GR-T45 mach.	10.5	440	01794020
Greased RS20	01506183	Chassis bracket 368-D60 HD-GR-RS20-T45	10.3	440	01794012



Cylinder	L3 (mm)	L4 (mm)	L5 (mm)
FC/FE 137	346	141	261
FC/FE 149	346	141	261

CHASSIS BRACKETS FOR CYLINDER TYPE: FC/FE 157/169/179/191

Bracket Type	Part no. bracket	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. replacement bush
Maintenance free	01506181	Chassis bracket 368-D60 STD-MF-T24 mach.	10.6	235	01794240
Greased	01506182	Chassis bracket 368-D60 HD-GR-T45 mach.	10.5	440	01794020
Greased RS20	01506183	Chassis bracket 368-D60 HD-GR-RS20-T45	10.3	440	01794012

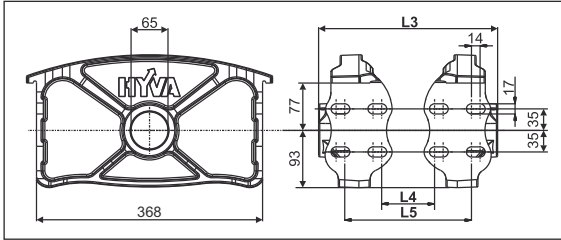


Cylinder	L3 (mm)	L6 (mm)	L7 (mm)
FC/FE 157	388	211	331
FC/FE 169	388	211	331
FC/FE 179	388	211	331
FC/FE 191	388	211	331

Mount the chassis brackets with the bolts to the outer side or the inner side of the slotted hole. In this way the washer and bolt, clamp on maximum surface and can absorb the largest forces. *Max. 1 mm clearance between each bracket and the cylinder.*

CHASSIS BRACKETS FOR CYLINDER TYPE: FC/FE 214

Bracket Type	Part no. bracket	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. replacement bush
Maintenance free	01506185	Chassis bracket 368-D65-STD-MF-T26	10.4	255	01794245
Greased	01506186	Chassis bracket 368-D65-HD-GR-T45	10.5	440	01794025

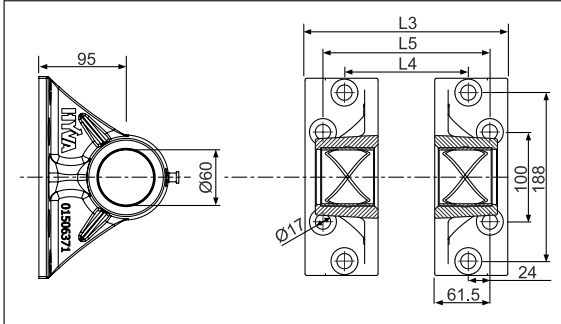


Cylinder	L3 (mm)	L4 (mm)	L5 (mm)
FC/FE 214	413	211	331

Mount the chassis brackets with the bolts to the outer side or the inner side of the slotted hole. In this way the washer and bolt, clamp on maximum surface and can absorb the largest forces. *Max. 1 mm clearance between each bracket and the cylinder.*

CHASSIS BRACKETS FOR FRONT END CYLINDER TYPE: FC/FE 110 - 191

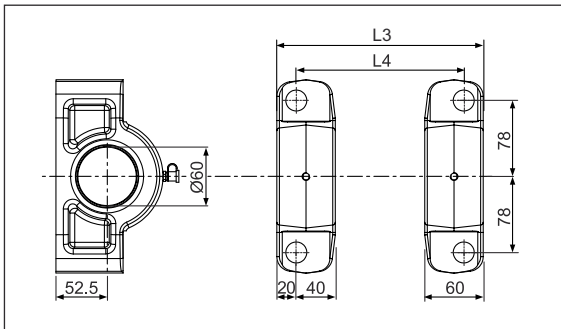
Bracket Type	Part no. bracket	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. replacement bush
Greased version	01506371	Foot mount H=95 D60 HD-GR assembly	4.4	335	01794020



Cylinder type	L3 (mm)	L4 (mm)	L5 (mm)
110	328	240	288
118	345	257	261
129 / 137 / 149	366	278	282
157 / 169	410	322	326
179 / 191	454	366	370

CHASSIS BRACKETS FOR FRONT END CYLINDER TYPE: FC/FE 110 - 191

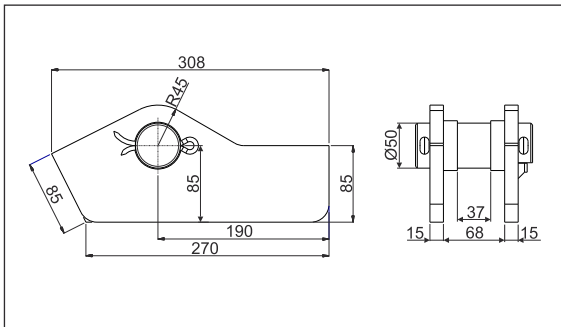
Bracket Type	Part no. bracket	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. replacement bush
Greased version	01506166	Chassis bracket compact greased	4.6	335	01794020



Cylinder type	L3 (mm)	L4 (mm)
110	284	244
118	301	261
129 / 137 / 149	322	282
157 / 169	366	326
179 / 191	410	370

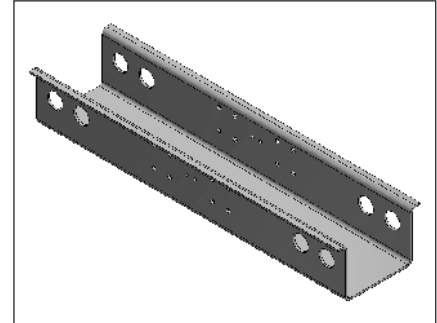
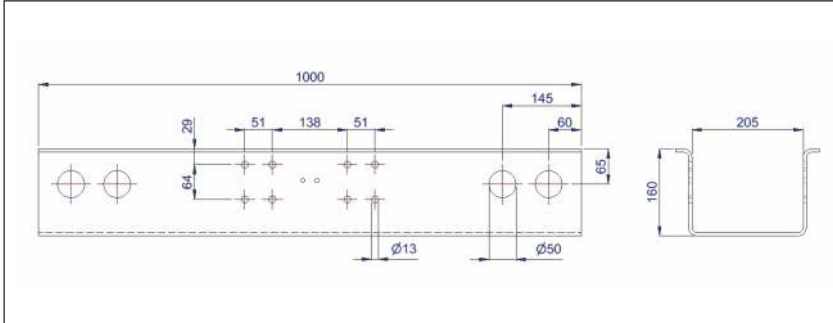
CHASSIS BRACKETS FOR FRONT END CYLINDER TYPE: FSE 110 - 191

Bracket Type	Part no. bracket	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. replacement bush
Welded version	01506206	Chassis bracket D50 FSE 110-191	8.9	295	01506776



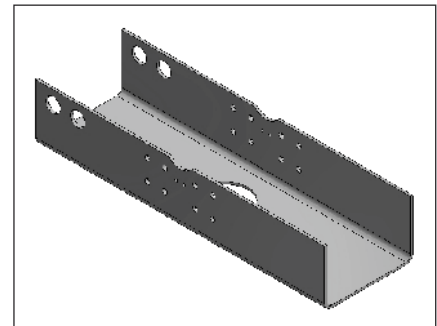
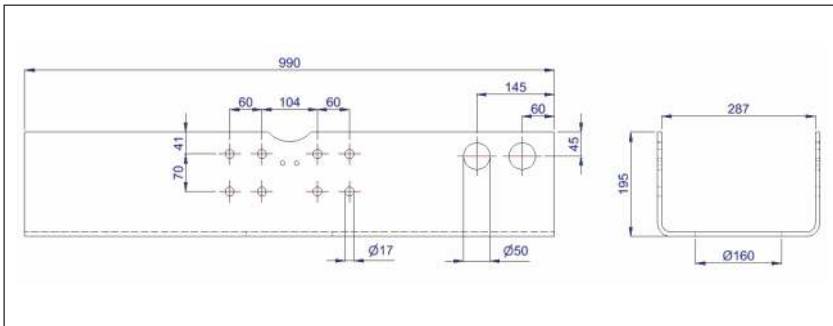
CYLINDER CRADLE FOR FRONT END CYLINDER TYPE: FC/FE 110 (NARROW)

Part no.	Description	Weight (kg)
01507512	Cylinder cradle FC/FE 110 narrow	25.2



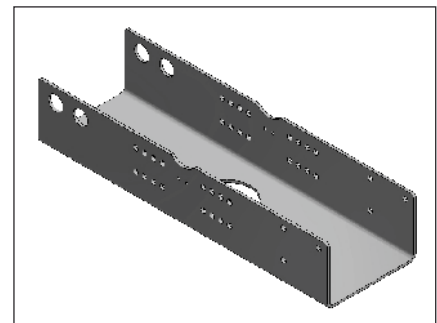
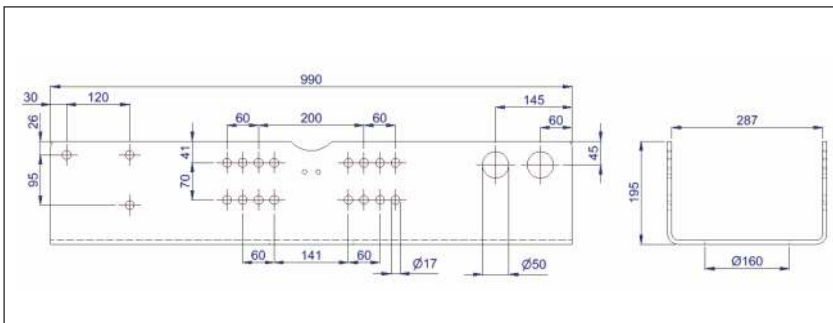
CYLINDER CRADLE FOR FRONT END CYLINDER TYPE: FC/FE 110 (WIDE)

Part no.	Description	Weight (kg)
01507513	Cylinder cradle FC/FE 110 wide	39.0



CYLINDER CRADLE FOR FRONT END CYLINDER TYPE: FC/FE 118/129/137/149 (NARROW)

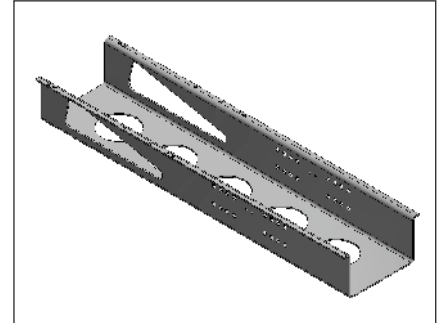
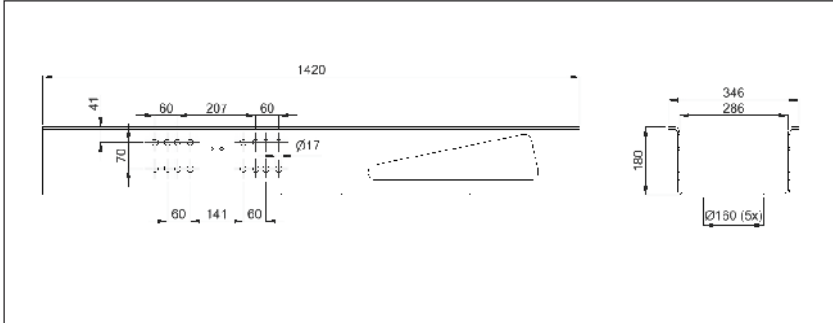
Part no.	Description	Weight (kg)
01507516	Cylinder cradle FC/FE 118/129/137/149 narrow	38.5



For all cradles use: Bolts & Self-locking nuts with Property Class 8.8 or higher & Washer over slotted holes in bracket.

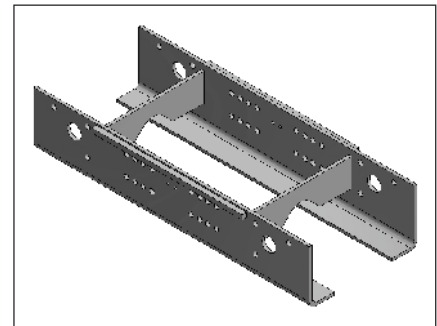
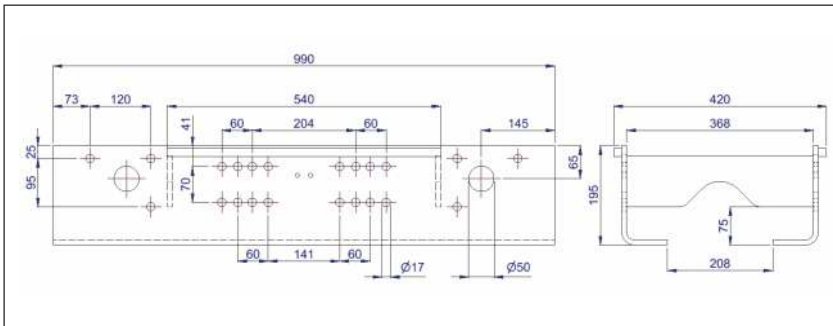
CYLINDER CRADLE FOR FRONT END CYLINDER TYPE: FC/FE 118/129/137/149 (NARROW)

Part no.	Description	Weight (kg)
01507538	Cylinder cradle FC/FE 118/129/137/149 narrow	36.5



CYLINDER CRADLE FOR FRONT END CYLINDER TYPE: FC/FE 137/149/157/169/179/191 (WIDE)

Part no.	Description	Weight (kg)
01507520	Cylinder cradle FC/FE 137/149/157/169/179/191 wide	47.3

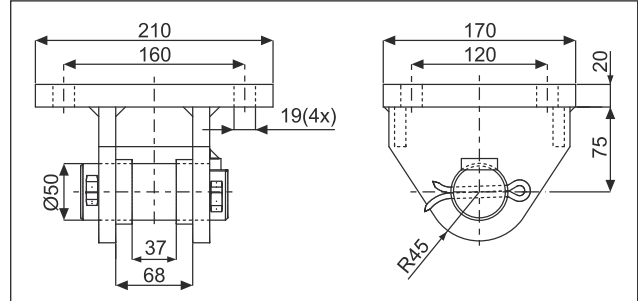


For all cradles use: Bolts & Self-locking nuts with Property Class 8.8 or higher & Washer over slotted holes in bracket.

TOP BRACKETS

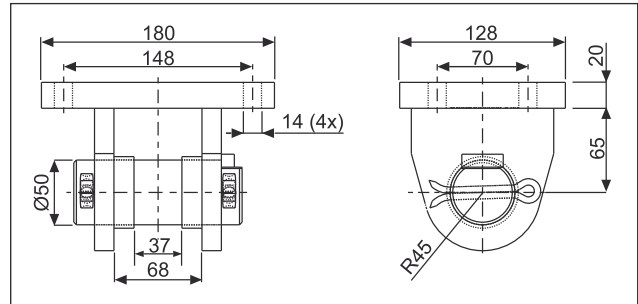
TOP BRACKETS FOR FRONT END CYLINDER TYPE: FE/FEE/FSE WITH EYE Ø50 (BOLTABLE)

Part no.	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. Replacement axle kit
01506777	Top bracket FE/FEE/FSE Bolted PIN50 H75 W210 T345	11.0	345	01506776



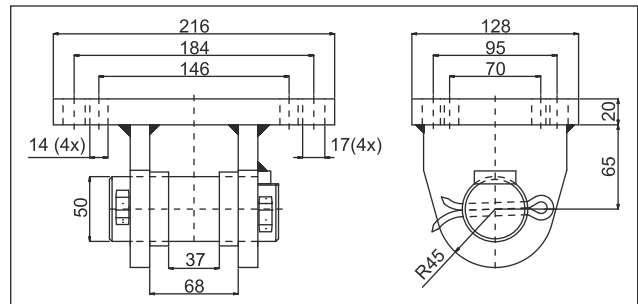
TOP BRACKETS FOR FRONT END CYLINDER TYPE: FE/FEE/FSE WITH EYE Ø50 (BOLTABLE)

Part no.	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. Replacement axle kit
01506787	Top bracket FE/FEE/FSE Bolted PIN50 H65 W180 T345	7.5	345	01506776



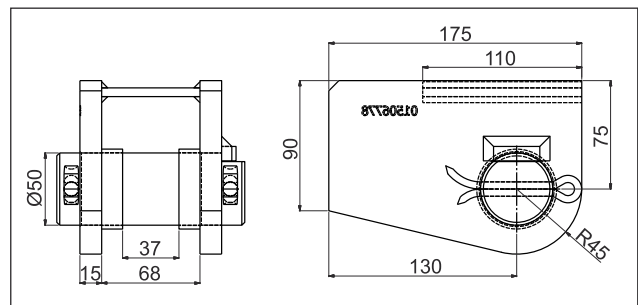
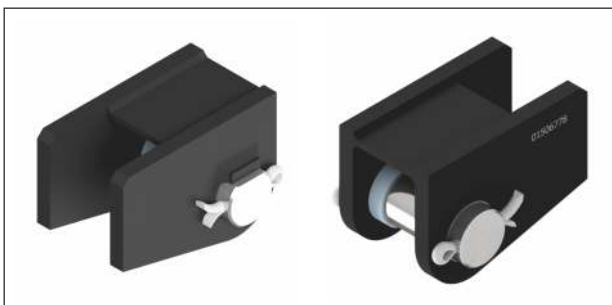
TOP BRACKETS FOR FRONT END CYLINDER TYPE: FE/FEE/FSE WITH EYE Ø50 (BOLTABLE)

Part no.	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. Replacement axle kit
01506785	Top bracket FE/FEE/FSE Bolted PIN50 H65 W216 T345	8.3	345	01506776



TOP BRACKETS FOR FRONT END CYLINDER TYPE: FE/FEE/FSE WITH EYE Ø50 (WELDABLE)

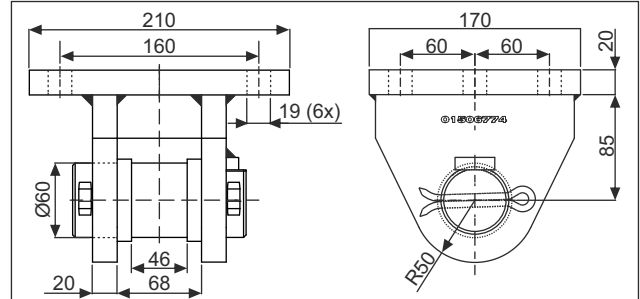
Part no.	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. Replacement axle kit
01506778	Top bracket FE/FEE/FSE Welded PIN50 H75 W98 T345	6.7	345	01506776



TOP BRACKETS

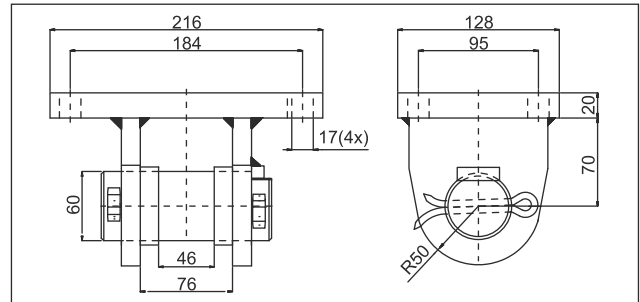
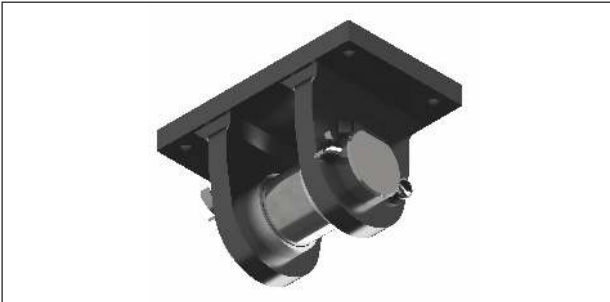
TOP BRACKETS FOR FRONT END CYLINDER TYPE: FE/FEE/FSE WITH EYE Ø60 (BOLTABLE)

Part no.	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. Replacement axle kit
01506774	Top Bracket FE/FEE/FSE Bolted PIN60 H85 W210 T495	13.3	495	01506783



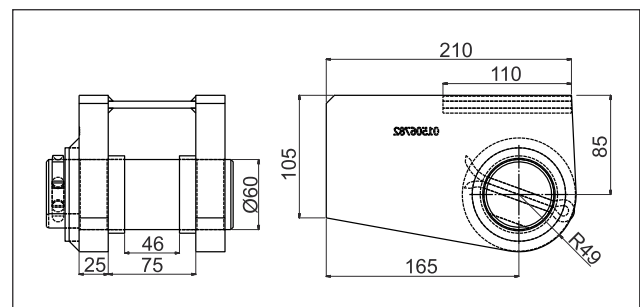
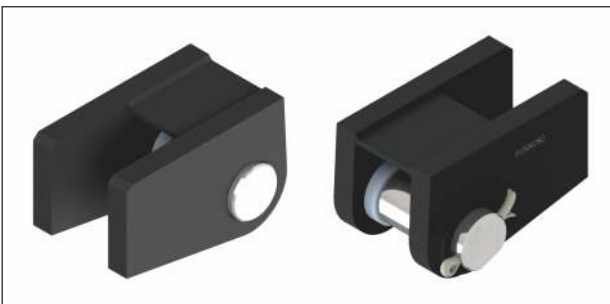
TOP BRACKETS FOR FRONT END CYLINDER TYPE: FE/FEE/FSE WITH EYE Ø60 (BOLTABLE)

Part no.	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. Replacement axle kit
01506789	Top Bracket FE/FEE/FSE Bolted PIN60 H70 W216 T495	10.6	495	01506784



TOP BRACKETS FOR FRONT END CYLINDER TYPE: FE/FEE/FSE WITH EYE Ø60 (WELDABLE)

Part no.	Description	Weight (kg)	Max. allowed thrust (kN)	Part no. Replacement axle kit
01506782	Top bracket FE/FEE/FSE Welded PIN50 H85 W125 T495	13.4	495	01506781



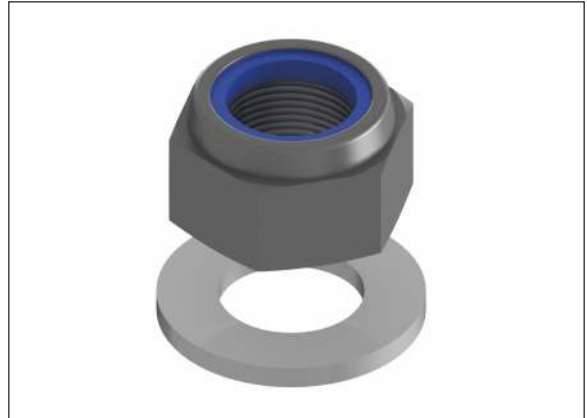
BRACKET MOUNTING BOLT SETS

Part no.	Description	Qty. of bolts
Q005	Chassis bracket bolt set M16x60	16
Q006	Lifting bracket bolt set M16x60	12
Q007	Lifting bracket bolt set M16x70	12



TOP NUT AND WASHER

Part no.	Description	Key width
01702890 K	Top nut and washer - FC - M48	75



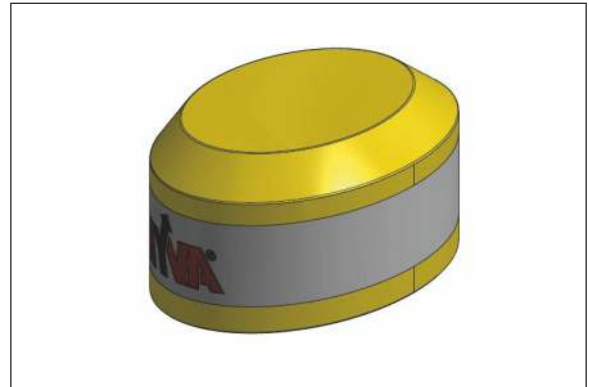
SEAL KITS FOR FC, FE & FSE CYLINDERS

Part no.	Description
71908310K	Seal kit complete A110-1
71908321K	Seal kit complete A110-2-HD
71908330K	Seal kit complete A110-3
71908331K	Seal kit complete A110-3-HD
71908335K	Seal kit complete A110-3-FSE
71907410K	Seal kit complete A118-1
71907420K	Seal kit complete A118-2
71907430K	Seal kit complete A118-3
71907431K	Seal kit complete A118-3-HD
71907435K	Seal kit complete A118-3-FSE
71908425K	Seal kit complete A129-2-FSE
71908430K	Seal kit complete A129-3
71908431K	Seal kit complete A129-3-HD
71908435K	Seal kit complete A129-3-FSE
71908440K	Seal kit complete A129-4
71908445K	Seal kit complete A129-4-FSE
71907530K	Seal kit complete A137-3
71907531K	Seal kit complete A137-3-HD
71907540K	Seal kit complete A137-4
71907541K	Seal kit complete A137-4-HD
71907545K	Seal kit complete A137-4-FSE
71907546K	Seal kit complete A137-4-HD-FSE
71908520K	Seal kit complete A149-2
71908530K	Seal kit complete A149-3
71908531K	Seal kit complete A149-3-HD
71908535K	Seal kit complete A149-3-FSE
71908540K	Seal kit complete A149-4
71908541K	Seal kit complete A149-4-HD
71908545K	Seal kit complete A149-4-FSE
71908546K	Seal kit complete A149-4-HD-FSE
71908550K	Seal kit complete A149-5
71907630K	Seal kit complete A157-3
71907631K	Seal kit complete A157-3-HD
71907640K	Seal kit complete A157-4
71907641K	Seal kit complete A157-4-HD
71907645K	Seal kit complete A157-4-FSE
71907650K	Seal kit complete A157-5
71907651K	Seal kit complete A157-5-HD
71908640K	Seal kit complete A169-4
71908641K	Seal kit complete A169-4-HD
71908645K	Seal kit complete A169-4-FSE
71908650K	Seal kit complete A169-5
71908651K	Seal kit complete A169-5-HD
71908660K	Seal kit complete A169-6
71907731K	Seal kit complete A179-3-HD
71907740K	Seal kit complete A179-4
71907741K	Seal kit complete A179-4-HD
71907750K	Seal kit complete A179-5
71907751K	Seal kit complete A179-5-HD
71907760K	Seal kit complete A179-6
71908740K	Seal kit complete A191-4
71908741K	Seal kit complete A191-4-HD
71908750K	Seal kit complete A191-5
71908751K	Seal kit complete A191-5-HD
71908760K	Seal kit complete A191-6
71908761K	Seal kit complete A191-6-HD
71907841K	Seal kit complete A202-4-HD
71907851K	Seal kit complete A202-5-HD
71908841K	Seal kit complete A214-4-HD
71908850K	Seal kit complete A214-5
71908851K	Seal kit complete A214-5-HD
71908860K	Seal kit complete A214-6
71908861K	Seal kit complete A214-6-HD
71907951K	Seal kit complete A226-5-HD



CAPS FOR FC CYLINDERS

Part no.	Description
71839000	Cylinder Cap for FC cover 168
71839010	Cylinder Cap for FC cover 195
71839020	Cylinder Cap for FC cover 219
71839030	Cylinder Cap for FC cover 241
71839040	Cylinder Cap for FC cover 244
71839050	Cylinder Cap for FC cover 273



CAPS FOR FE/FEE/FSE CYLINDERS

Part no.	Description
71839100	Cylinder Cap for FE/FEE/FSE 110-3/118-3
71839110	Cylinder Cap for FE/FEE/FSE 129-3/137-3
71839111	Cylinder Cap for FE/FEE/FSE 129-4/137-4
71839120	Cylinder Cap for FE/FEE/FSE 149-3
71839121	Cylinder Cap for FE/FEE/FSE 149-4/157-4
71839123	Cylinder Cap for FE/FEE/FSE 157-3
71839122	Cylinder Cap for FE/FEE/FSE 157-5
71839130	Cylinder Cap for FE/FEE/FSE 169-4/191-5
71839131	Cylinder Cap for FE/FEE/FSE 169-5/179-5/191-6
71839132	Cylinder Cap for FE/FEE/FSE 169-6
71839134	Cylinder Cap for FE/FEE/FSE 179-3
71839133	Cylinder Cap for FE/FEE/FSE 179-4/191-4
71839149	Cylinder Cap for FE/FEE/FSE 202-4/214-4
71839150	Cylinder Cap for FE/FEE/FSE 202-5/215-5
71839151	Cylinder Cap for FE/FEE/FSE 214-6
71839160	Cylinder Cap for FE/FEE/FSE 226-5



CYLINDER RING FOR FE/FEE/FSE CYLINDERS

Part no.	Description
71839200	Cylinder ring for FE/FEE/FSE 91
70233010	Cylinder ring for FE/FEE/FSE 99
71839210	Cylinder ring for FE/FEE/FSE 110
70233020	Cylinder ring for FE/FEE/FSE 118
71839220	Cylinder ring for FE/FEE/FSE 129
70233030	Cylinder ring for FE/FEE/FSE 137
71839230	Cylinder ring for FE/FEE/FSE 149
70233040	Cylinder ring for FE/FEE/FSE 157
71839240	Cylinder ring for FE/FEE/FSE 169
70233050	Cylinder ring for FE/FEE/FSE 179
71839250	Cylinder ring for FE/FEE/FSE 191
70233060	Cylinder ring for FE/FEE/FSE 202
71839260	Cylinder ring for FE/FEE/FSE 214
70233070	Cylinder ring for FE/FEE/FSE 226
71839270	Cylinder ring for FE/FEE/FSE 238



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+30 subsidiaries
14 production facilities



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