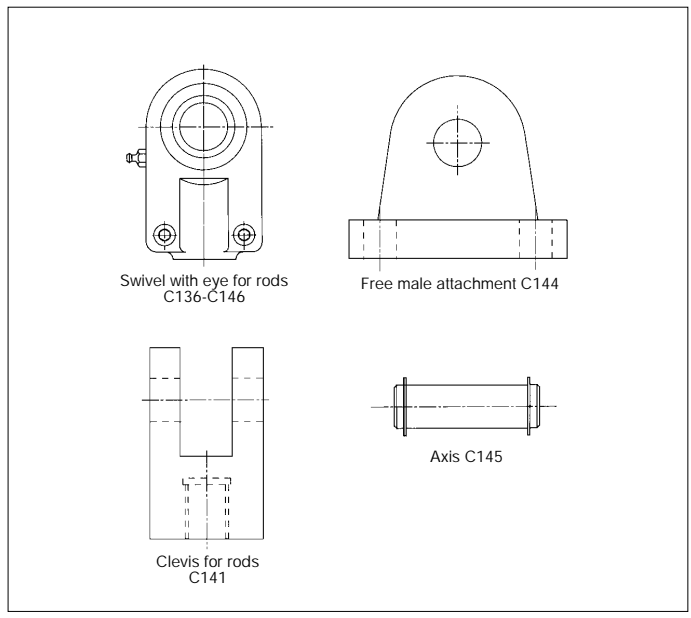


# Attachments for hydraulic cylinders

to ISO 6982 and ISO 8133





For each bore, standard rod attachments (clevis and clevis with swivel eye) and free male attachments are available. Assembly variants are shown in the table below.

<b>1 MODEL CODE</b>		<b>12</b>
<b>C</b>	<b>- 141</b>	<b>12</b>
standard attachment		Piston diameter (mm)
attachments: <b>141</b> = female clevis ISO 8133 <b>144</b> = free male clevis ISO 8133 <b>145</b> = axis for female clevis ISO 8133 <b>136</b> = swivel with eye ISO 6982 <b>146</b> = swivel with eye ISO 8133/DIN 24555		

**ATTACHMENTS: POSSIBLE COMPOSITIONS - SUMMARIZING TABLE**

Ø ROD [mm]	type	diff. suff. H *	POSSIBLE ASSEMBLIES			Ø PISTON [mm]	
			C-136 C-146	C-141	C-145		
12	18H		C-14612	C-14112	C-14512	C-14425	25
14	22H		C-13616 C-14614	C-14114	C-14514	C-14432	32
18	28H		C-13618 C-14618	C-14118	C-14518	C-14440	40
22	36H		C-13622 C-14622	C-14122	C-14522	C-14450	50
28	45H		C-13628 C-14628	C-14128	C-14528	C-14463	63
36	56H		C-13636 C-14636	C-14136	C-14536	C-14480	80
45	70H		C-13645 C-14645	C-14145	C-14545	C-144100	100
56	90H		C-13656 C-14656	C-14156	C-14556	C-144125	125
70	110H		C-13670 C-14670	C-14170	C-14570	C-144160	160
90	140H		C-13690 C-14690	C-14190	C-14590	C-144200	200
110	—		C-136110	—	—	—	—
140	—		C-136140	—	—	—	—
180	—		C-136180	—	—	—	—

\* : Optional light male thread to DIN 24554, for other details see table B137, section  and .

Notes: table codes, in the same line, are referring to attachments assembling in the manner shown in the central figure. Ex: clevis C-14114 can be screwed at cylinder CK-32/14 or CK-32/22 suff H and is coupled with male free attachment C-14432 through axis C-14514. Free attachment C-14432 is also coupled with female clevis C rear attachment (ISO MP1) of cylinder CK-32. The female clevis attachment "C" and clevis C-141 are always supplied with the C-145 axis.

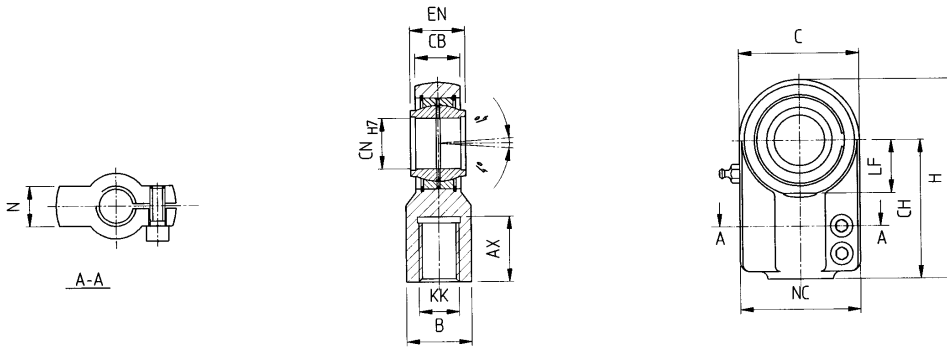
**DIMENSIONS [mm]**

C-146 to ISO 8133 DIN 24555

Ø ROD [mm]	type	diff. suff. H	ATTACHMENT CODE	KK	CX		EN		EF max	CH 13	AX min	LF min	EU h 13	N max	MAS SES (kg)	NOMINAL FORCE [N]
					tol µm	tol µm	tol µm	tol µm								
12	18H		C-146 12	M10x1,25	12	0	10	-8	20	42	15	16	8	17	0,120	8000
14	22H		C-146 14	M12x1,25	16		14		22,5	48	17	20	11	21	0,215	12500
18	28H		C-146 18	M14x1,5	20		16		27,5	58	19	25	13	25	0,38	20000
22	36H		C-146 22	M16x1,5	25		20	0	32,5	68	23	30	17	30	0,66	32000
28	45H		C-146 28	M20x1,5	30	0	22	-12	40	85	29	35	19	36	1,16	50000
36	56H		C-146 36	M27x2	40		28		50	105	37	45	23	45	2,10	80000
45	70H		C-146 45	M33x2	50		35		62,5	130	46	58	30	55	3,85	125000
56	90H		C-146 56	M42x2	60	0	44	0	80	150	57	68	38	68	8,05	200000
70	110H		C-146 70	M48x2	80	-15	55	-150	102,5	185	64	92	47	90	19,00	320000
90	140H		C-146 90	M64x3	100	0	70	0	120	240	86	116	57	110	28,00	500000

3 DIMENSIONS [mm]

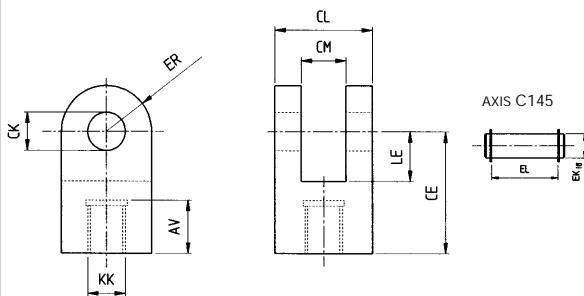
C-136 - ISO 6982



Ø ROD [mm]	type	diff. suff. H	ATTACHMENT CODE	KK	AX min	B	C	CB	CH	CN	EN H12 (1)	H	LF	N	NC	FASTENING BOLTS	TIGHTENING TORQUE [N-m]	MASSES [kg]	NOMINAL FORCE [N]
14	22H		C-13616 (2)	M12x1,25	17	16	32	10,5	38	12	12	54	14	12	32	M5x12	6	0,12	8000
18	28H		C-13618	M14x1,5	19	21	40	13	44	16	16	64	18	11,5	40	M5x12	6	0,23	12500
22	36H		C-13622	M16x1,5	23	25	47	17	52	20	20	77	22	14	47	M6x16	10	0,42	20000
28	45H		C-13628	M20x1,5	29	30	58	21	65	25	25	96	27	17	54	M6x16	10	0,68	32000
36	56H		C-13636	M27x2	37	38	70	27	80	32	32	118	32	22	66	M8x20	25	1,14	50000
45	70H		C-13645	M33x2	46	47	89	32	97	40	40	146	41	26	80	M8x25	25	2,08	80000
56	90H		C-13656	M42x2	57	58	108	40	120	50	50	179	50	32	96	M10x30	49	4,47	125000
70	110H		C-13670	M48x2	64	70	132	52	140	63	63	211	62	38	114	M12x35	86	7,65	200000
90	140H		C-13690	M64x3	86	90	168	66	180	80	80	270	78	48	148	M16x45	210	14,55	320000
110	—		C-136110	M80x3	96	110	210	84	210	100	100	322	98	62	178	M20x60	410	28,20	500000
140	—		C-136140	M100x3	113	135	264	103	260	125	—	405	120	72	200	M24x75	710	49,5	—
180	—		C-136180	M125x4	126	165	326	130	310	160	—	488	150	82	250	M24x85	710	85,5	—

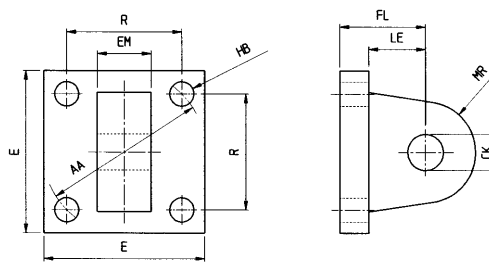
(1): Tolerance on EN dimensions is ± 0.2 mm from C-13616 to C-13628 and ± 0.3 mm for C-13636 to C-136180.  
 (2): Greater not included.

C-141 ISO 8133



Ø ROD [mm]	type	diff. suff. H	ATTACHMENT CODE	KK	CK H9	CM A16	ER max JS13	CE JS13	AV min	LE min	CL max	EL min	EK f8	MASSES [kg]	NOMINAL FORCE [N]
12	18H		C-14112 C-14512	M10x1,25	10	12	12	32	14	13	26	29	10	0,06	8000
14	22H		C-14114 C-14514	M12x1,25	12	16	17	36	16	19	34	37	12	0,20	12500
18	28H		C-14118 C-14518	M14x1,5	14	20	17	38	18	19	42	45	14	0,20	20000
22	36H		C-14122 C-14522	M16x1,5	20	30	29	54	22	32	62	66	20	0,50	32000
28	45H		C-14128 C-14528	M20x1,5	20	30	29	60	28	32	62	66	20	0,95	50000
36	56H		C-14136 C-14536	M27x2	28	40	34	75	36	39	83	87	28	1,75	80000
45	70H		C-14145 C-14545	M33x2	36	50	50	99	45	54	103	107	36	3,70	125000
56	90H		C-14156 C-14556	M42x2	45	60	53	113	56	57	123	129	45	5,60	200000
70	110H		C-14170 C-14570	M48x2	56	70	59	126	63	63	143	149	56	9,30	320000
90	140H		C-14190 C-14590	M64x3	70	80	78	168	85	83	163	169	70	20,90	500000

C-144 ISO 8133



Ø PISTON [mm]	ATTACHMENT CODE	CK H8	E max	EM h13	FL JS14	MR max	LE min	AA	HB H13	R JS14	MASSES [kg]	NOMINAL FORCE [N]
25	C-14425	10	40	12	23	12	13	40	5,5	28,3	0,30	8000
32	C-14432	12	45	16	29	17	19	47	6,6	33,2	0,45	12500
40	C-14440	14	63	20	29	17	19	59	9	41,7	0,90	20000
50	C-14450	20	75	30	48	29	32	74	13,5	52,3	1,30	32000
63	C-14463	20	90	30	48	29	32	91	13,5	64,3	1,90	50000
80	C-14480	28	115	40	58	34	39	117	17,5	82,7	4,00	80000
100	C-144100	36	130	50	79	50	54	137	17,5	96,9	6,25	125000
125	C-144125	45	165	60	87	53	57	178	24	125,9	11,40	200000
160	C-144160	56	205	70	103	59	63	219	30	154,9	20,80	320000
200	C-144200	70	245	80	132	78	82	269	33	190,2	38,80	500000

Note: the clevis C-141 are always supplied with the axis C-145\*