

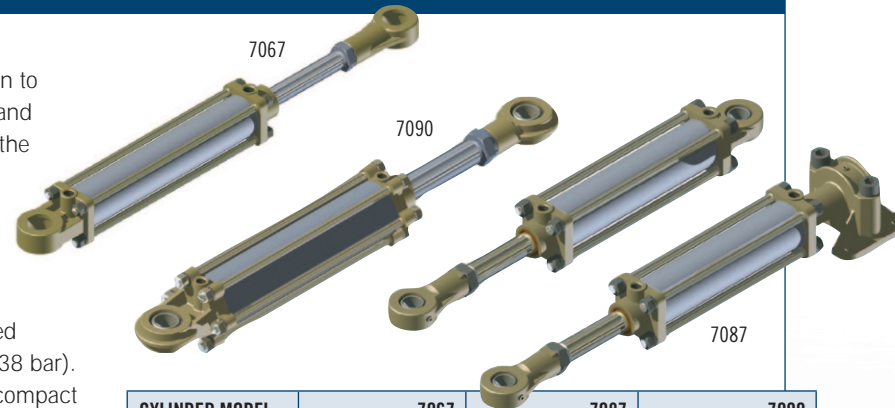


# NEW STEERING CYLINDERS FROM KOBELT

## KOBELT HAS RECENTLY DEVELOPED 3 NEW CYLINDERS

The 7067, 7087 and 7090 models have proven to be extremely popular for two reasons: Quality and Price. These cylinders are manufactured with the Kobelt superior quality that you have become accustomed to and are competitively priced versus the base-level automotive and industrial cylinders in the market today.

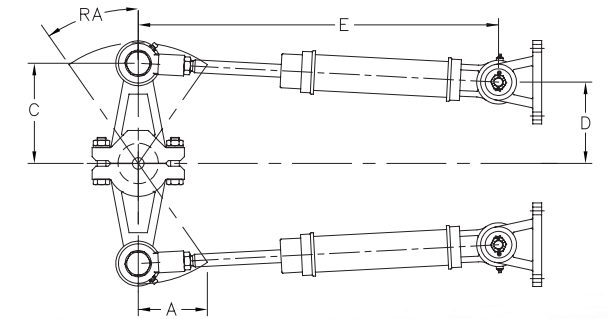
These cylinders are classification-type approved and based on 2,000 psi operating pressure (138 bar). The 7067 has a 2.5" i.d. and is an extremely compact cylinder with up to 2 tonne meters steering gear capacity and is ideal for installations with limited space available. Please note that pressures achieved average 400 - 600 psi with a manual helm pump, and up to 2,000 psi (138 bar) with a power-driven hydraulic pump.



CYLINDER MODEL	7067	7087	7090
BORE (φ)	2-1/2"	3-1/2"	4 1/2"
PISTON ROD (φ)	1-1/4"	1-3/4"	2-1/4"
ROD BALL HOLE (φ)	1-1/4"	1-1/2"	2"
ROD END THREAD	1-1/8" - 12 NF	1-1/2" - 12 NF	1-3/4" - 12 UN
PORT SIZE	3/4" - 16 ORB (#8)	7/8" - 14 ORB (#10)	7/8" - 14 ORB (#10)

## UNBALANCED CYLINDERS

An unbalanced cylinder is not suitable for a single cylinder installation because of the unequal oil volume and also unequal torque. Unbalanced cylinders must always be installed with two cylinders, the same stroke acting on the tiller arm to move the rudder.



Mounting brackets and tiller shown here are for illustration only

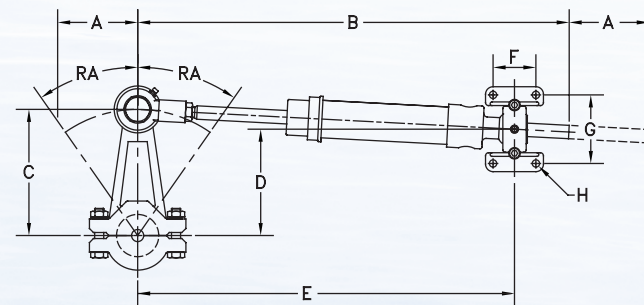
TORQUE IS BASED ON TWO CYLINDERS AT 2000 PSI (138 BAR)

### UNBALANCED CYLINDERS – RUDDER ANGLE (RA) 35°

MODEL	TORQUE		STROKE		DISPLACEMENT		A		B*		C		D		E	
	lbs. ft.	kgm	in	mm	in <sup>3</sup>	cm <sup>3</sup>	in	mm	in	mm	in	mm	in	mm	in	mm
7067	10235	1415	10	254	86	1409	5	127	31.6	803	8.7	221	7.9	201	29.1	740
	12255	1695	12	305	103	1688	6	152	34.6	879	10.5	266	9.5	242	32.1	816
	16425	2271	16	406	137	2261	8	203	40.6	1031	14.0	354	12.7	322	38.1	968
	20470	2830	20	508	172	2819	10	254	46.6	1184	17.4	443	15.9	403	44.1	1121
7087	24040	3324	12	305	202	3310	6	152	38.2	970	10.5	266	9.5	242	35.1	892
	32015	4426	16	406	269	4408	8	203	44.2	1123	14.0	354	12.7	322	41.1	1045
	39985	5529	20	508	327	5506	10	254	50.2	1275	17.4	443	15.9	403	47.1	1197
	48080	6648	24	610	404	6620	12	305	56.2	1427	20.9	531	19.0	483	53.1	1350
	56055	7750	28	711	471	7718	14	356	62.2	1580	24.4	620	22.2	564	59.1	1502
7090	52960	7322	16	406	445	7297	8	203	47.4	1204	13.9	353	12.7	322	42.6	1082
	66290	9165	20	508	557	9122	10	254	53.4	1356	17.4	442	15.9	403	48.6	1235
	79500	10991	24	610	668	10946	12	305	59.4	1509	20.9	531	19.0	483	54.6	1387
	92745	12882	28	711	779	12765	14	356	65.4	1661	24.4	620	22.2	564	60.6	1540
	105990	14654	32	813	891	14600	16	406	71.4	1814	27.9	708	25.4	644	66.6	1692

## BALANCED CYLINDERS

A balanced cylinder has the piston rod protruding on both ends; because of this the volume of oil on both sides of the piston is equal. These cylinders can be used for a single cylinder installation.



TORQUE IS BASED ON ONE CYLINDER AT 2000 PSI (138 BAR)

### BALANCED CYLINDERS – RUDDER ANGLE (RA) 35°

MODEL	TORQUE		STROKE		DISPLACEMENT		A		B		C		D		E		F*		G*		H*	
	lbs. ft.	kgm	in	mm	in <sup>3</sup>	cm <sup>3</sup>	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
7087	10354	1432	12	305	87	1426	6	152	40.25	1022	10.5	266	9.5	242	36.6	930	5	127	6	152	3/4	19
	13686	1892	16	406	115	1885	8	203	46.25	1175	14.0	354	12.7	322	42.6	1083	5	127	6	152	3/4	19
	17138	2369	20	508	144	2360	10	254	52.25	1327	17.4	443	15.9	403	48.6	1235	5	127	6	152	3/4	19
	20589	2847	24	610	173	2835	12	305	58.25	1480	20.9	531	19.0	483	54.6	1387	5	127	6	152	3/4	19
	24040	3324	28	711	202	3310	14	356	64.25	1632	24.4	620	22.2	564	60.6	1540	5	127	6	152	3/4	19

### BALANCED CYLINDERS – RUDDER ANGLE (RA) 45°

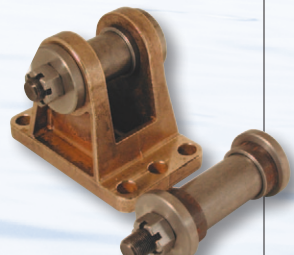
MODEL	TORQUE		STROKE		DISPLACEMENT		A		B		C		D		E		F*		G*		H*	
	lbs. ft.	kgm	in	mm	in <sup>3</sup>	cm <sup>3</sup>	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
7087	7250	1002	12	305	87	1426	6	152	40.25	1022	8.5	216	7.3	184	36.6	930	5	127	6	152	3/4	19
	9583	1325	16	406	115	1885	8	203	46.25	1175	11.3	287	9.7	245	42.6	1083	5	127	6	152	3/4	19
	12000	1659	20	508	144	2360	10	254	52.25	1327	14.1	359	12.1	307	48.6	1235	5	127	6	152	3/4	19
	14417	1993	24	610	173	2835	12	305	58.25	1480	17.0	431	14.5	368	54.6	1387	5	127	6	152	3/4	19
	16833	2327	28	711	202	3310	14	356	64.25	1632	19.8	503	16.9	429	60.6	1540	5	127	6	152	3/4	19

\* dimensions for optional parts

### UNBALANCED CYLINDERS – RUDDER ANGLE (RA) 45°

MODEL	TORQUE		STROKE		DISPLACEMENT		A		B*		C		D		E**	
	lbs. ft.	kgm	in	mm	in <sup>3</sup>	cm <sup>3</sup>	in	mm	in	mm	in	mm	in	mm	in	mm
7067	7165	991	10	254	86	1408	5	127	31.6	803	7.1	180	6.0	153	29.1	740
	8580	1187	12	305	103	1690	6	152	34.6	879	8.5	216	7.3	184	32.1	816
	11500	1590	16	406	137	2251	8	203	40.6	1031	11.3	287	9.7	245	38.1	968
	14330	1982	20	508	172	2815	10	254	46.6	1184	14.1	359	12.1	307	44.1	1121
7087	16830	2327	12	305	202	3311	6	152	38.2	970	8.5	216	7.3	184	35.1	892
	22415	3099	16	406	269	4415	8	203	44.2	1123	11.3	287	9.7	245	41.1	1045
	28000	3871	20	508	327	5518	10	254	52.2	1275	14.1	359	12.1	307	47.1	1197
	33665	4655	24	610	404	6622	12	305	56.2	1427	17.0	431	14.5	368	53.1	1350
	39250	5427	28	711	471	7725	14	356	62.2	1580	19.8	503	16.9	429	59.1	1502
7090	37080	5127	16	406	445	7297	8	203	47.4	1204	11.3	287	9.7	245	42.6	1082
	46415	6417	20	508	557	9122	10	254	53.4	1356	14.1	359	12.1	307	48.6	1235
	55665	7696	24	610	668	10946	12	305	59.4	1509	17.0	431	14.5	368	54.6	1387
	64940	8978	28	711	779	12765	14	356	65.4	1661	19.8	503	16.9	429	60.6	1540
	74220	10261	32	813	891	14600	16	406	71.4	1814	22.6	575	19.3	491	66.6	1692

\* dimensions for optional parts \*\* mid-stroke or mid-position



Note: optional bracket and pin kit available for all cylinders

