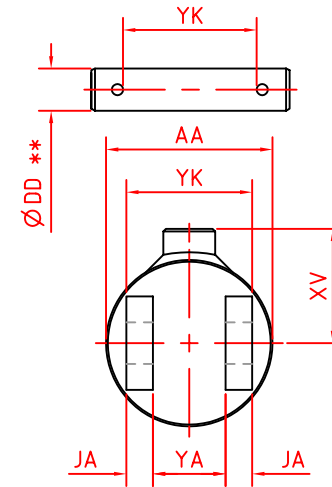
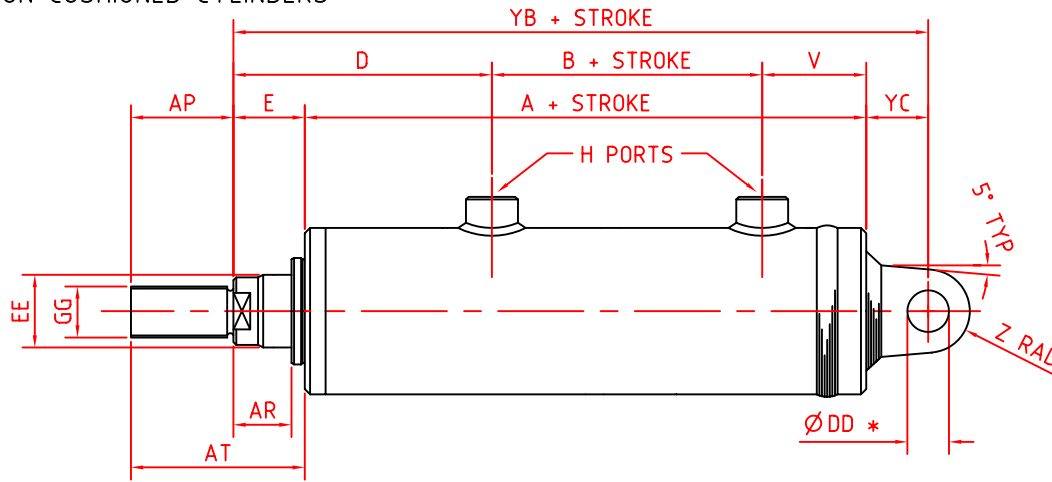


HR & HSH NON-CUSHIONED CYLINDERS

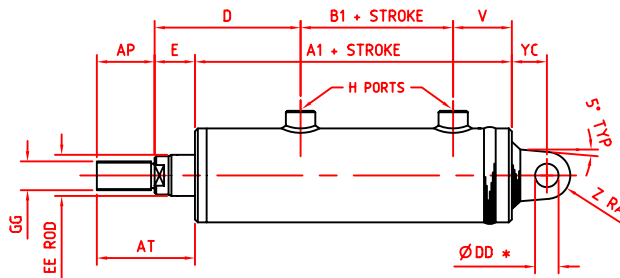
HR SHOWN



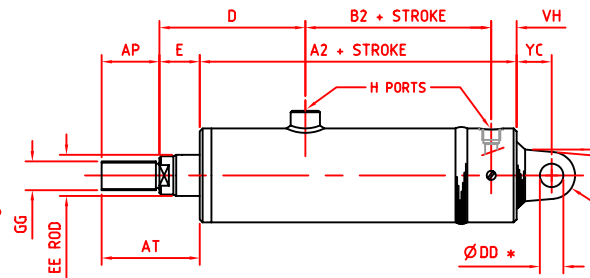
* FIT FOR HOLE DD: USE BS 1916 C H8
 ** FIT FOR PIN DD: USE BS 1916 C f8

CYLINDER SIZE	EE ROD	GG THREAD	A	B	E	D	AP	V	AT	H BSPP	AA	XV	AR MIN	DD	JA	YA	YB	YC	YK	Z RAD	CYLINDER SIZE
HR/HSH 15 1.50" BORE	0.875 22.22	3/4" - 16UN	5.00 127.00	1.50 38.10	0.875 22.22	3.125 79.37	1.125 28.57	1.25 31.75	2.00 50.80	3/8"	2.00 50.80	1.75 44.45	0.50 12.70	0.50 12.70	0.375 9.53	0.875 22.22	6.625 168.27	0.75 19.05	1.625 41.27	0.50 12.70	HR/HSH 15 1.50" BORE
HR/HSH 20 2.00" BORE	1.00 25.40	3/4" - 16UN	4.875 123.82	1.875 47.62	0.875 22.22	2.75 69.85	1.125 28.57	1.125 28.57	2.00 50.80	3/8"	2.50 63.50	2.00 50.80	0.50 12.70	0.625 15.88	0.50 12.70	1.00 25.40	6.625 168.27	0.875 22.22	2.00 50.80	0.625 15.88	HR/HSH 20 2.00" BORE
HR/HSH 25 2.50" BORE	1.375 34.92	1" - 14UN	5.375 136.52	2.125 53.98	1.125 28.58	3.125 79.37	1.625 41.28	1.25 31.75	2.75 69.85	1/2"	3.00 76.20	2.25 57.15	0.75 19.05	0.75 19.05	0.562 14.27	1.125 28.57	7.625 193.67	1.125 28.57	2.25 57.15	0.75 19.05	HR/HSH 25 2.50" BORE
HR/HSH 30 3.00" BORE	1.75 44.45	1 1/4" - 12UN	6.625 168.27	2.50 63.50	1.25 31.75	4.00 101.60	2.00 50.80	1.375 34.92	3.25 82.55	1/2"	3.50 88.90	2.375 60.33	0.875 22.22	1.00 25.40	0.625 15.88	1.375 34.93	9.25 234.95	1.375 34.93	2.625 66.68	1.00 25.40	HR/HSH 30 3.00" BORE
HR/HSH 35 3.50" BORE	1.75 44.45	1 1/4" - 12UN	7.00 177.80	2.50 63.50	1.25 31.75	4.00 101.60	2.00 50.80	1.75 44.45	3.25 82.55	3/4"	4.00 101.60	2.875 73.03	0.875 22.22	1.00 25.40	0.625 15.88	1.375 34.93	9.625 244.48	1.375 34.93	2.625 66.68	1.00 25.40	HR/HSH 35 3.50" BORE
HR/HSH 40 4.00" BORE	2.00 50.80	1 1/2" - 12UN	7.625 193.67	2.625 66.68	1.375 34.92	4.50 114.30	2.25 57.15	1.875 47.63	3.625 92.08	3/4"	4.50 114.30	3.25 82.55	0.875 22.22	1.25 31.75	0.875 22.22	1.75 44.45	10.625 269.88	1.625 41.28	3.50 88.90	1.25 31.75	HR/HSH 40 4.00" BORE
HR/HSH 45 4.50" BORE	2.00 50.80	1 1/2" - 12UN	8.375 212.72	3.00 76.20	1.375 34.92	4.50 114.30	2.25 57.15	2.25 57.15	3.625 92.08	3/4"	5.125 130.18	3.50 88.90	0.875 22.22	1.25 31.75	0.875 22.22	1.75 44.45	11.375 289.93	1.625 41.28	3.50 88.90	1.25 31.75	HR/HSH 45 4.50" BORE
HR/HSH 50 5.00" BORE	2.50 63.50	1 3/8" - 12UN	8.625 219.08	3.00 76.20	1.50 38.10	4.875 123.83	3.00 76.20	2.25 57.15	4.50 114.30	1"	5.625 142.88	3.875 98.43	1.00 25.40	1.75 44.45	1.00 25.40	2.00 50.80	12.375 314.33	2.25 57.15	4.00 101.60	1.75 44.45	HR/HSH 50 5.00" BORE
HR/HSH 55 5.50" BORE	2.50 63.50	1 3/8" - 12UN	9.375 238.13	3.625 92.08	1.50 38.10	5.00 127.00	3.00 76.20	2.25 57.15	4.50 114.30	1"	6.125 155.58	4.25 107.95	1.00 25.40	1.75 44.45	1.00 25.40	2.00 50.80	13.125 333.38	2.25 57.15	4.00 101.60	1.75 44.45	HR/HSH 55 5.50" BORE
HR/HSH 60 6.00" BORE	3.00 76.20	2 1/4" - 12UN	10.00 254.00	3.875 98.43	1.50 38.10	5.125 130.18	3.50 88.90	2.50 63.50	5.00 127.00	1"	6.625 168.28	4.50 114.30	1.00 25.40	2.00 50.80	1.25 31.75	2.375 60.33	14.00 355.60	2.50 63.50	4.875 123.83	2.00 50.80	HR/HSH 60 6.00" BORE
HR/HSH 65 6.50" BORE	3.00 76.20	2 1/4" - 12UN	10.25 260.35	4.00 101.60	1.50 38.10	5.25 133.25	3.50 88.90	2.50 63.50	5.00 127.00	1"	7.25 184.15	4.75 120.65	1.00 25.40	2.00 50.80	1.25 31.75	2.375 60.33	14.25 361.95	2.50 63.50	4.875 123.83	2.00 50.80	HR/HSH 65 6.50" BORE
HR/HSH 70 7.00" BORE	3.50 88.90	2 1/2" - 12UN	11.75 298.45	4.50 114.30	1.50 38.10	6.00 152.40	3.50 88.90	2.75 69.85	5.00 127.00	1 1/4"	7.75 196.85	5.25 133.35	1.00 25.40	2.50 63.50	1.375 34.93	2.625 66.68	16.25 412.75	3.00 76.20	5.375 136.53	2.50 63.50	HR/HSH 70 7.00" BORE
HR/HSH 75 7.50" BORE	3.50 88.90	2 1/2" - 12UN	12.25 311.15	4.25 107.95	1.50 38.10	6.50 165.10	3.50 88.90	3.00 76.20	5.00 127.00	1 1/4"	8.50 215.90	5.50 139.70	1.00 25.40	2.50 63.50	1.375 34.93	2.625 66.68	16.75 425.45	3.00 76.20	5.375 136.53	2.50 63.50	HR/HSH 75 7.50" BORE
HR/HSH 80 8.00" BORE	4.00 101.60	3" - 12UN	13.25 336.55	5.00 127.00	1.50 38.10	6.50 165.10	4.00 101.60	3.25 82.55	5.50 139.70	1 1/4"	9.00 228.60	6.00 152.40	1.00 25.40	3.00 76.20	1.50 38.10	3.125 79.38	18.25 463.55	3.50 88.90	6.125 155.58	3.00 76.20	HR/HSH 80 8.00" BORE
HR/HSH 90 9.00" BORE	4.50 114.30	3" - 12UN	14.875 377.83	6.00 152.40	1.50 38.10	7.00 177.80	4.00 101.60	3.375 85.73	5.50 139.70	1 1/4"	10.00 254.00	6.50 165.10	1.00 25.40	3.50 88.90	2.00 50.80	4.00 101.60	20.375 517.53	4.00 101.60	8.00 203.20	3.50 88.90	HR/HSH 90 9.00" BORE
HR/HSH 100 10.00" BORE	5.00 127.00	3 3/4" - 12UN	15.625 396.88	6.125 155.58	1.50 38.10	7.50 190.50	4.375 111.13	3.50 88.90	5.875 149.22	1 1/4"	11.00 279.40	7.00 177.80	1.00 25.40	3.50 88.90	2.00 50.80	4.00 101.60	21.125 536.58	4.00 101.60	8.00 203.20	3.50 88.90	HR/HSH 100 10.00" BORE

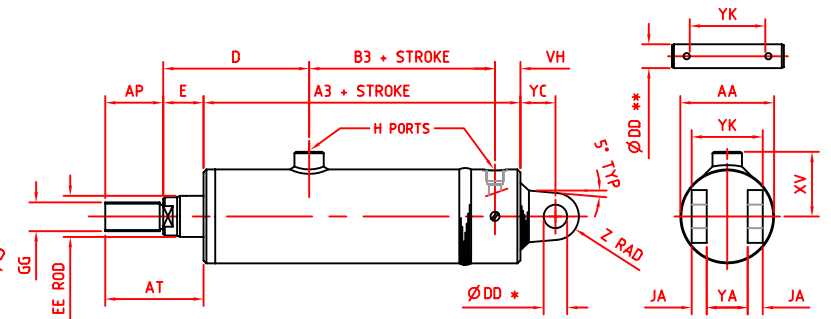
CUSHION FRONT CF



CUSHION REAR CR



CUSHION FRONT & REAR CF/CR



* FIT FOR HOLE DD: USE BS 1916 C HB
 ** FIT FOR PIN DD: USE BS 1916 C FB

CYLINDER SIZE	EE ROD	GG THREAD	A1	A2	A3	B1	B2	B3	E	D	AP	V	VH	AT	H BSPP	AA	XV	DD	JA	YA	YC	YK	Z RAD
HR/HSB 15 1.50" BORE	0.875 22.22	3/4" - 16UN	5.875 149.23	6.375 161.93	7.25 184.15	2.375 60.33	3.375 85.73	4.25 107.95	0.875 22.22	3.125 79.37	1.125 28.57	1.25 31.75	0.75 19.05	2.00 50.80	3/8"	2.00 50.80	1.75 44.45	0.50 12.70	0.375 9.53	0.875 22.22	0.75 19.05	1.625 41.27	0.50 12.70
HR/HSB 20 2.00" BORE	1.00 25.40	3/4" - 16UN	5.875 149.23	6.375 161.93	7.375 187.33	2.875 73.03	3.75 95.25	4.75 120.65	0.875 22.22	2.75 69.85	1.125 28.57	1.125 28.57	0.75 19.05	2.00 50.80	3/8"	2.50 63.50	2.00 50.80	0.625 15.88	0.50 12.70	1.00 25.40	0.875 22.22	2.00 50.80	0.625 15.88
HR/HSB 25 2.50" BORE	1.375 34.92	1" - 14UN	6.375 161.93	6.875 174.63	7.875 200.03	3.125 79.38	4.00 101.60	5.00 127.00	1.125 28.58	3.125 79.37	1.625 41.28	1.25 31.75	0.875 22.22	2.75 69.85	1/2"	3.00 76.20	2.25 57.15	0.75 19.05	0.562 14.27	1.125 28.57	1.125 28.57	2.25 57.15	0.75 19.05
HR/HSB 30 3.00" BORE	1.75 44.45	1 1/4" - 12UN	8.125 206.38	8.125 206.38	9.625 244.48	4.00 101.60	4.50 114.30	6.00 152.40	1.25 31.75	4.00 101.60	2.00 50.80	1.375 34.92	0.875 22.22	3.25 82.55	1/2"	3.50 88.90	2.375 60.33	1.00 25.40	0.625 15.88	1.375 34.93	1.375 34.93	2.625 66.68	1.00 25.40
HR/HSB 35 3.50" BORE	1.75 44.45	1 1/4" - 12UN	8.625 219.08	8.375 212.73	10.00 254.00	4.125 104.78	4.75 120.65	6.375 161.93	1.25 31.75	4.00 101.60	2.00 50.80	1.75 44.45	0.875 22.22	3.25 82.55	3/4"	4.00 101.60	2.875 73.03	1.00 25.40	0.625 15.88	1.375 34.93	1.375 34.93	2.625 66.68	1.00 25.40
HR/HSB 40 4.00" BORE	2.00 50.80	1 1/2" - 12UN	9.375 238.13	8.875 225.43	10.625 269.88	4.375 111.13	4.875 138.83	6.625 168.28	1.375 34.92	4.50 114.30	2.25 57.15	1.875 47.63	0.875 22.22	3.625 92.08	3/4"	4.50 114.30	3.25 82.55	1.25 31.75	0.875 22.22	1.75 44.45	1.625 41.28	3.50 88.90	1.25 31.75
HR/HSB 45 4.50" BORE	2.00 50.80	1 1/2" - 12UN	10.125 257.18	9.625 244.48	11.375 288.93	4.75 120.65	5.625 142.88	7.375 187.33	1.375 34.92	4.50 114.30	2.25 57.15	2.25 57.15	0.875 22.22	3.625 92.08	3/4"	5.125 130.18	3.50 88.90	1.25 31.75	0.875 22.22	1.75 44.45	1.625 41.28	3.50 88.90	1.25 31.75
HR/HSB 50 5.00" BORE	2.50 63.50	1 3/8" - 12UN	10.625 269.88	10.625 269.88	12.625 320.68	5.00 127.00	5.875 149.23	7.875 200.03	1.50 38.10	4.875 123.83	3.00 76.20	2.25 57.15	1.375 34.93	4.50 114.30	1"	5.625 142.88	3.875 98.43	1.75 44.45	1.00 25.40	2.00 50.80	2.25 57.15	4.00 101.60	1.75 44.45
HR/HSB 55 5.50" BORE	2.50 63.50	1 3/8" - 12UN	11.25 285.75	11.375 288.93	13.25 336.55	5.50 139.70	6.50 165.10	8.375 212.73	1.50 38.10	5.00 127.00	3.00 76.20	2.25 57.15	1.375 34.93	4.50 114.30	1"	6.125 155.58	4.25 107.95	1.75 44.45	1.00 25.40	2.00 50.80	2.25 57.15	4.00 101.60	1.75 44.45
HR/HSB 60 6.00" BORE	3.00 76.20	2 1/4" - 12UN	12.00 304.80	12.00 304.80	14.00 355.60	5.875 149.22	7.00 177.80	9.00 228.60	1.50 38.10	5.125 130.18	3.50 88.90	2.50 63.50	1.375 34.93	5.00 127.00	1"	6.625 168.28	4.50 114.30	2.00 50.80	1.25 31.75	2.375 60.33	2.50 63.50	4.875 123.83	2.00 50.80
HR/HSB 65 6.50" BORE	3.00 76.20	2 1/4" - 12UN	12.125 307.98	12.25 311.15	14.125 358.78	5.875 149.22	7.125 180.98	9.00 228.60	1.50 38.10	5.25 133.25	3.50 88.90	2.50 63.50	1.375 34.93	5.00 127.00	1"	7.25 184.15	4.75 120.65	2.00 50.80	1.25 31.75	2.375 60.33	2.50 63.50	4.875 123.83	2.00 50.80
HR/HSB 70 7.00" BORE	3.50 88.90	2 1/2" - 12UN	14.50 368.30	15.00 381.00	17.75 450.85	7.25 184.15	8.50 215.90	11.25 228.75	1.50 38.10	6.00 152.40	3.50 88.90	2.75 69.85	2.00 50.80	5.00 127.00	1 1/4"	7.75 196.85	5.25 133.35	2.50 63.50	1.375 34.93	2.625 66.68	3.00 76.20	5.375 136.53	2.50 63.50
HR/HSB 75 7.50" BORE	3.50 88.90	2 1/2" - 12UN	15.00 381.00	15.50 393.70	18.25 463.55	7.00 177.80	8.50 215.90	11.25 228.75	1.50 38.10	6.50 165.10	3.50 88.90	3.00 76.20	2.00 50.80	5.00 127.00	1 1/4"	8.50 215.90	5.50 139.70	2.50 63.50	1.375 34.93	2.625 66.68	3.00 76.20	5.375 136.53	2.50 63.50
HR/HSB 80 8.00" BORE	4.00 101.60	3" - 12UN	16.125 409.58	16.375 415.93	19.25 488.95	7.875 200.03	9.125 230.12	12.00 304.80	1.50 38.10	6.50 165.10	4.00 101.60	3.25 82.55	2.25 57.15	5.50 139.70	1 1/4"	9.00 228.60	6.00 152.40	3.00 76.20	1.50 38.10	3.125 79.38	3.50 88.90	6.125 155.58	3.00 76.20
HR/HSB 90 9.00" BORE	4.50 114.30	3" - 12UN	17.375 441.33	17.875 454.03	20.375 517.53	8.50 215.90	10.125 257.18	12.625 320.68	1.50 38.10	7.00 177.80	4.00 101.60	3.375 85.73	2.25 57.15	5.50 139.70	1 1/4"	10.00 254.00	6.50 165.10	3.50 88.90	2.00 50.80	4.00 101.60	4.00 101.60	8.00 203.20	3.50 88.90
HR/HSB 100 10.00" BORE	5.00 127.00	3 3/4" - 12UN	18.125 460.38	18.50 469.90	21.00 533.40	8.625 219.08	10.25 260.35	12.75 323.85	1.50 38.10	7.50 190.50	4.375 111.13	3.50 88.90	2.25 57.15	5.875 149.22	1 1/4"	11.00 279.40	7.00 177.80	3.50 88.90	2.00 50.80	4.00 101.60	4.00 101.60	8.00 203.20	3.50 88.90