Brown Lenox

JAW CRUSHERS

Breaking new ground,
everyday-everywhere.

BROWN LENOX JAW CRUSHERS INCORPORATE A MAJOR ADVANCE IN CRUSHER DESIGN.

THEY REQUIRE LESS POWER TO OPERATE AND LESS MAINTENANCE THAN OLDER TYPES OF JAW CRUSHER

Proven advantages that cut crushing costs.

The jaw geometry of our crusher provides a crushing action that is pure compression and so avoids all rubbing in the crushing chamber.

Result: five to ten times longer jaw life.

The double toggle action of our crusher utilises crushing on downward stroke.

Result: Lower horse power, higher allowable speed, light simple mechanism, less maintenance

The jaw crusher is recognised as the most economical and effective crusher for hard and abrasive material. And yet crushing without rubbing was not achieved until the development of our type of crusher. Until then jaw crushers had always incorporated a rubbing movement which was incidental to the main action of the crusher but which was responsible for rapid wear of the jaw plates and waste of crushing power.

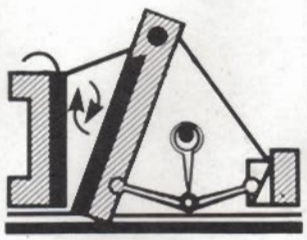
Our jaw crusher achieves crushing without rubbing by aligning centre line of crushing zone with the hinge pin centre. Rock is therefore held firm by the straight line crushing action of the jaws.

Our Crushers have a double toggle action to give the maximum mechanical advantage to the eccentric. Crushing on the downward stroke enables a much lighter pitman and toggles to be employed, so reducing inertia and enabling higher operating speeds and greater throughput to be achieved.

Lighter components also result in a smaller power requirement, size for size, than other jaw crushers and make our series particularly suitable for mobile or skid-mounted applications.

This leaflet gives details of the construction of our crushers and indicates typical throughputs. We would be happy to assist in any matter related to the application of crushing machinery.

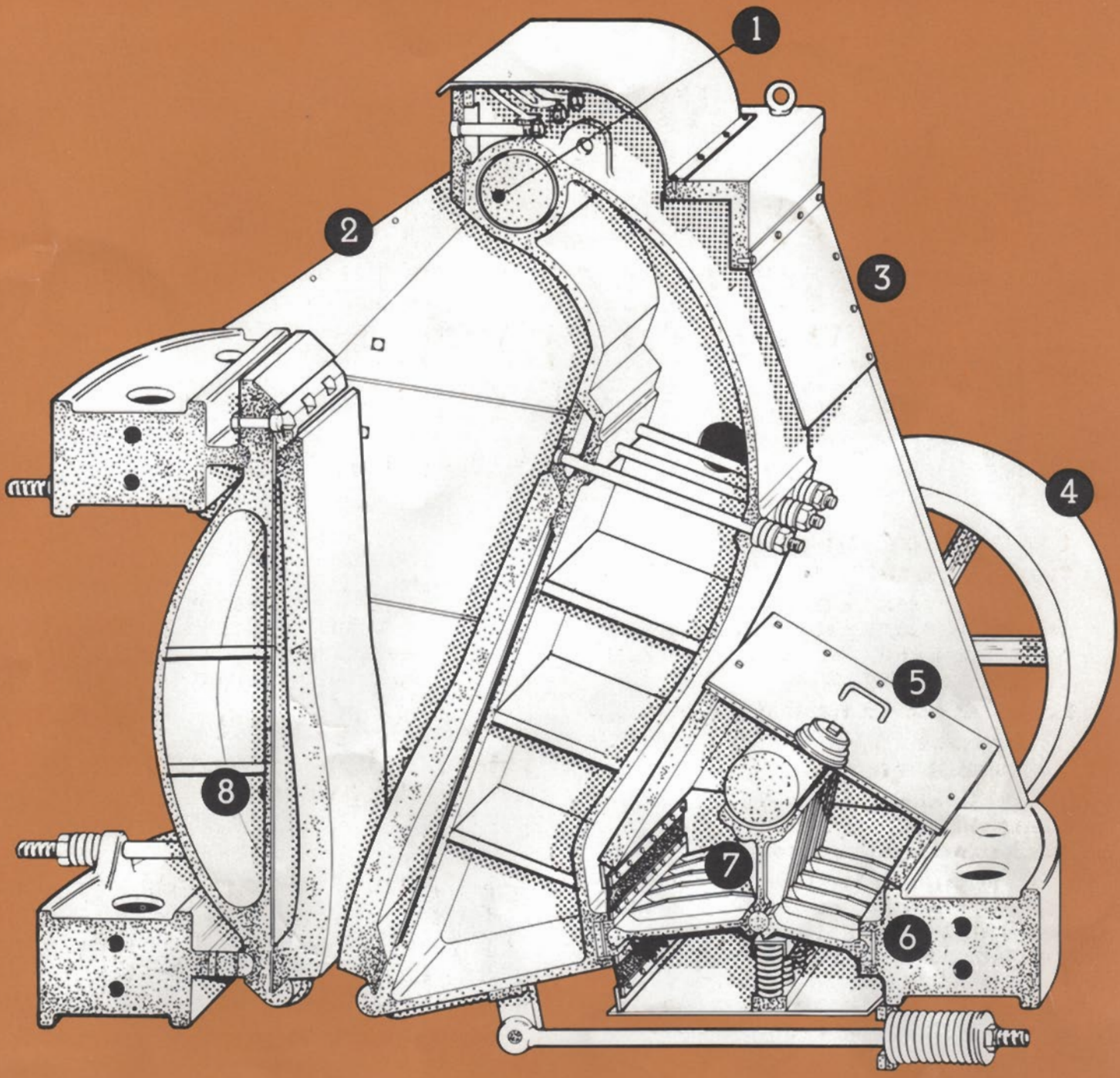
How BROWN LENOX Jaw Crushers give crushing without rubbing.



Blake double toggle crushers waste power. Pitman is in tension, swinging jaw is lifted and crushing is a combination of compression and attrition.

Overhead eccentric or single toggle crushers are poorly lubricated, have to lift entire weight of swinging jaw on every stroke and crush with a rubbing action.

Our crushers are so finely balanced that they can be turned over by hand. They operate faster and last longer as they crush by pure compression



1. **Hinge pin on crushing chamber centre-line for crushing without rubbing. Large bearings and integral lubrication.**

2. **Wide entry throat ensures easy feeding to crushing chamber.**

3. **Cast steel swing jaw is balanced to avoid power losses through lifting on crushing stroke.**

4. **A light small diameter flywheel is all that is necessary with the low inertia of the mechanism.**

5. **Operating mechanism is totally enclosed for maximum life and minimum maintenance.**

6. **Double toggles provide maximum leverage to long-stroke eccentric. Pull-back and lifter springs automatically compensate for wear.**

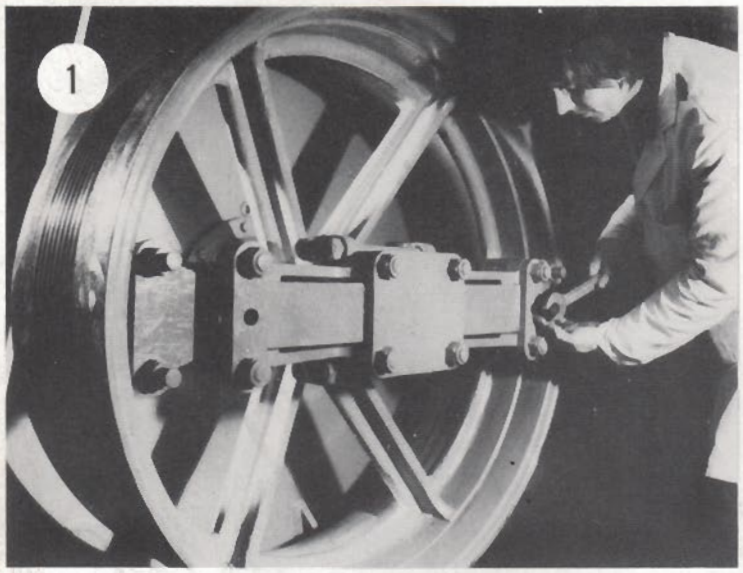
7. **Light-weight pitman is always in compression and bears directly on the underside of the eccentric.**

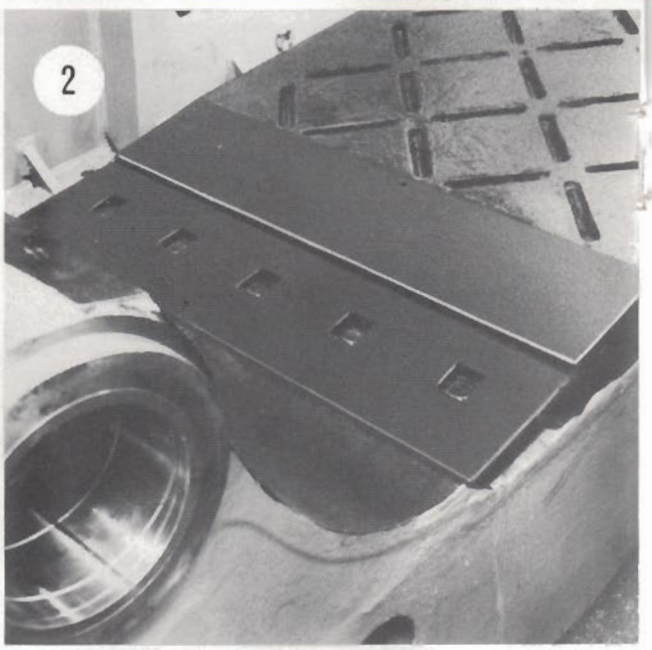
8. **All adjustments are carried out on the fixed jaw to avoid disturbing the crushing geometry.**

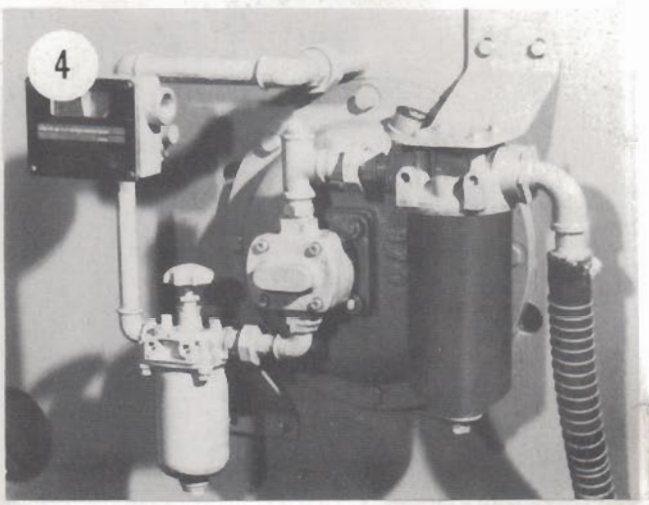
Brown Lenox Jaw Crushers

1 Tramp iron protection is provided by a spring loaded safety device which disconnects the lightweight flywheel from the main shaft if material of excessive crushing strength enters the crushing chamber. The device is easily adjustable so that it will operate at any appropriate crushing strength and can be reset simply after the chamber is cleared.

2 The correct jaw plates for specific applications can be recommended as a result of trials on customers' sample material. A wide range of plates with different configurations are available and can be fitted quickly. They are fully machined to give positive location and are retained by wedge-profile keeper plates.

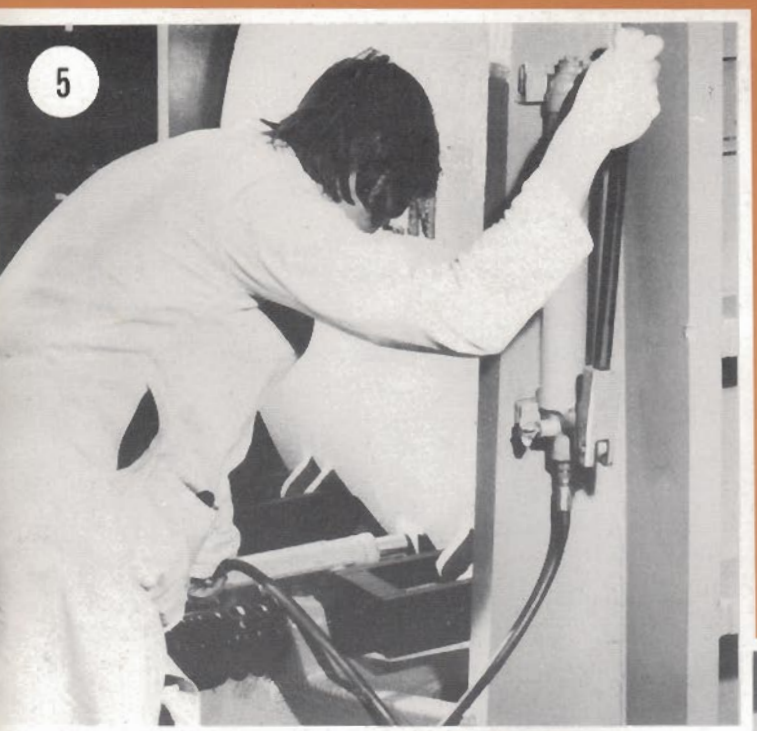






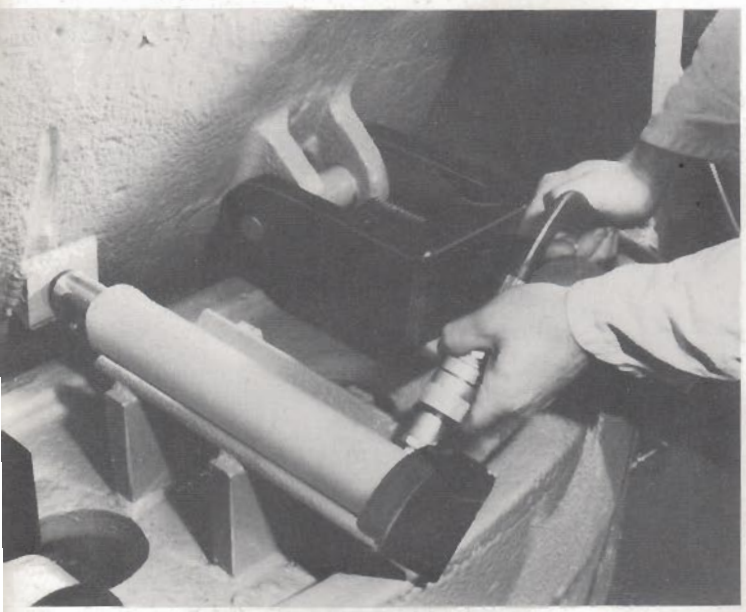
3 The lightweight, downward-acting pitman, the toggles and eccentric operate in a sealed chamber. Oil stays in and dirt is kept out to give greatly extended life.

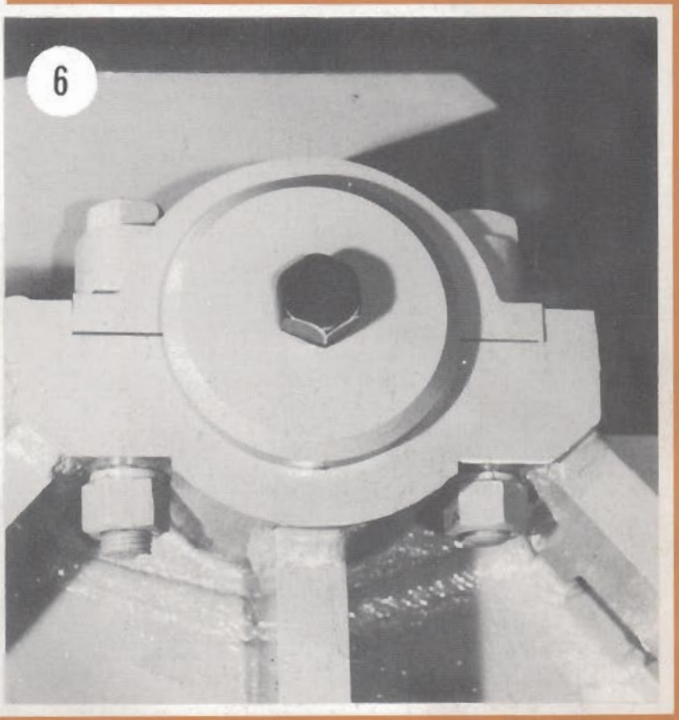
4 Lubrication system includes positive gear pump driven by crusher shaft, full-flow filtration and flow metering. Flow meter protects mechanism against oil pump failure or oil-way blockage. Flow switch automatically stops drive motor if flow ceases or sounds klaxon.



The inside story

Look at these features. They combine to make our series of jaw crushers an outstanding choice for hard and abrasive applications.





5 Setting the jaw opening is quick and easy with all adjustments carried out on the stationary jaw. Correct crushing geometry is not disturbed. Hydraulic pump and hydraulic ram relieve location springs to enable the appropriate spacer bars to be positioned between the lower end of the jaw and the frame.

6 The hinge pin is held in a massive split clamp to give a stiff, unyielding unit but it can be removed easily for major overhaul. Liquid grease lubrication ensures many years of life.

Throughput

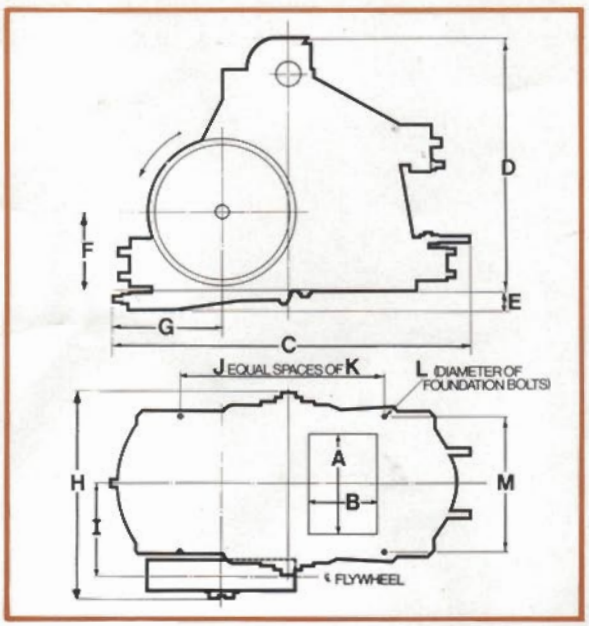
The table below gives an indication of the capacities of our Jaw Crushers, based on average hard dry quartz or similar rock weighing at least 100lb. per cubic foot when crushed. It must be emphasised that these figures are subject to variation depending upon the crushing conditions. The capacities given below are based on the assumption that the maximum size of feed will not be greater than 80% of the gape of the crusher, gape being the smaller of the two dimensions of the feed opening.

The jaw setting should be measured when the jaws are in their closed position.

Ratings are for continuous feed of graded sizes with "fines" (materials smaller than crusher setting) removed.

For materials which have difficult crushing properties, it is advisable to work on a much smaller ratio of reduction.

JAW CRUSHER	FEED OPENING MM / IN		CAPACITY – METRIC . . . IMPERIAL CUBIC METRES (M^3) / TONS (2240 lb) PER HOUR WITH JAWS SET AT DIMENSIONS BELOW MM / IN															
			19	25	32	38	50	65	75	90	100	125	150	180	200	230	250	280
	A	B	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"	5"	6"	7"	8"	9"	10"	11"
34		152	8	10	11	12	16	22										
	406	6"	13	16	17	20	26	35										
35	16"	229		8	9	10	14	20										
		9"		13	15	16	22	31										
54		203		16	19	22	28	32										
		8"		26	31	35	44	51										
55		254			19	21	25	30	33									
	610	10"			30	33	40	48	53									
56	24"	305				20	24	28	32									
		12"				32	38	44	50									
57		381					22	28	32	36								
		15"					35	44	50	57								
75S	762	508					28	37	40	45	56	72						
	30"	20"					44	58	64	71	89	114						
79		203		28	33	39	45	54	60									
		8"		44	52	62	72	85	96									
80		254			32	37	44	51	59									
	914	10"			50	59	71	81	93									
81	36"	305				31	37	42	51									
		12"				49	58	66	81									
95		610							70	79	87	110						
		24"							111	125	138	174						
104		203		32	38	45	54	62	71									
		8"		50	60	72	85	98	112									
105		254			37	43	52	59	70									
		10"			58	69	82	94	110									
106		305				42	50	57	66									
		12"				66	80	90	104									
107	1067	356						56	65	73	82	95	108					
	42"	14"						89	103	116	130	151	172					
108		406						55	64	72	81	94	106	113				
		16"						88	101	115	128	149	169	180				
120		762									89	112	126	140	154	168		
		30"									142	178	200	223	245	267		
120S		914											126	140	154	168	183	195
		36"											200	223	245	267	290	310
150		914											140	154	183	203	225	253
	1219	36"											223	245	290	323	357	401
160	48"	1067											169	197	225	252	280	310
		42"											268	312	357	400	445	492
200	1524	1219													271	296	326	349
	60"	48"													430	470	517	554



Specification

Approximate general dimensions of our standard Jaw Crushers

Do not use this table for actual installation work, for which certified drawings will be furnished. Pulley rotation and speed are given. Face of pulley is flat, for V-flat drive, which we recommend. Grooved pulleys for V-V drive, or crown face pulleys for flat belt can be furnished at an additional charge, although we do not recommend them.

Standard crushers have manganese steel jaw plates, overload safety device in pulley, also pressure switch and connections to lubricating system, for automatic shutdown and protection against low oil pressure.

We reserve the right to make any alterations, or modifications which we consider an improvement.

JAW CRUSHER	FEED OPENING. MM / IN		DIMENSIONS IN MM / IN											POWER KW / HP	SPEED R.P.M.	SHIPPING SPECIFICATION		
																APPROX WEIGHT HEAVIEST PIECE KG / LB	APPROX TOTAL WEIGHT KG / LB	VOLUME M^3 / $ft.^3$
	A	B	C	D	E	F	G	H	I	J	K	L	M					
34	406 16"	152	1727	1191	152	511	533	1016	467	2	533	25	584	15 20	365 to 400	853	2261	2·21
		6	68	46⅞	6	20⅛	21	40	18⅜		21	1	23			1880	4985	78
35		229	1727	1191	152	511	533	1016	467	2	533	25	584			853	2261	2·21
		9	68	46⅞	6	20⅛	21	40	18⅜		21	1	23			1880	4985	78
54	610 24"	203	1911	1314	117	537	597	1311	559	2	610	29	787	18/22 25/30		1297	3456	3·83
		8	75¼	51¾	4⅝	21⅛	23½	51⅝	22		24	1⅛	31			2860	7620	135
55		254	1911	1314	117	537	597	1311	559	2	610	29	787			1297	3456	3·83
		10	75¼	51¾	4⅝	21⅛	23½	51⅝	22		24	1⅛	31			2860	7620	135
56		305	1911	1314	117	537	597	1311	559	2	610	29	787			1297	3456	3·83
		12	75¼	51¾	4⅝	21⅛	23½	51⅝	22		24	1⅛	31			2860	7620	135
57		381	2146	1561	114	537	686	1264	565	3	483	29	813		350 to 385	1833	3856	5·67
		15	84½	60¾	4½	21⅛	27	49¾	22¼		19	1⅛	32			4040	8500	200
75S	762 30"	508	2692	1918	146	584	826	1537	698	3	514	32	1029	30 40	350 to 375	4336	8281	9·83
		20	106	75½	5¾	23	32½	60½	27½		20¼	1¼	40½			9560	18,256	347
79	914 36"	203	2496	1561	140	648	845	1749	791	3	★	32	1181	18/30 25/40	325 to 360	3914	7620	8·92
		8	98¼	60¾	5½	25½	33¼	68⅞	31⅛			1¼	46½			8630	16,800	315
80		254	2496	1561	140	648	845	1749	791	3	★	32	1181			3914	7620	8·92
		10	98¼	60¾	5½	25½	33¼	68⅞	31⅛			1¼	46½			8630	16,800	315
81		305	2496	1561	140	648	845	1749	791	3	★	32	1181			3914	7620	8·92
		12	98¼	60¾	5½	25½	33¼	68⅞	31⅛			1¼	46½			8630	16,800	315
95		610	2978	2280	152	654	848	1749	765	3	660	32	1181	22/37 30/50		5842	12,143	12·75
		24	117⅜	89¾	6	25¾	33⅜	68¾	30⅛		26	1¼	46½			12,880	26,770	450
104	1067 42"	203	3226	1670	149	660	1041	1880	883	4	★	32	1334	30/45 40/60	300 to 350	4672	10,206	11·61
		8	127	65¾	5⅞	26	41	74	34¾			1¼	52½			10,300	22,500	410
105		254	3200	1670	149	660	1041	1880	883	4	★	32	1334			4672	10,206	11·61
		10	126	65¾	5⅞	26	41	74	34¾			1¼	52½			10,300	22,500	410
106		305	3200	1670	149	660	1041	1880	883	4	★	32	1334			4672	10,206	11·61
		12	126	65¾	5⅞	26	41	74	34¾			1¼	52½			10,300	22,500	410
107		356	3156	1670	149	660	1041	1880	883	4	★	32	1334			5194	10,319	11·75
		14	124¼	65¾	5⅞	26	41	74	34¾			1¼	52½			11,450	22,750	415
108		406	3156	1670	149	660	1041	1880	883	4	★	32	1334			5194	10,319	11·75
		16	124¼	65¾	5⅞	26	41	74	34¾			1¼	52½			11,450	22,750	415
120		762	3505	2819	114	705	952	2057	940	5	508	32	1384	45/55 60/75	300 to 325	7121	20,829	19·83
		30	138	111	4½	27¾	37½	81	37		20	1¼	54½			15,700	45,920	700
120S		914	3505	2819	114	705	952	2057	940	5	508	32	1384		275 to 300	10,061	21,133	20·39
		36	138	111	4½	27¾	37½	81	37		20	1¼	54½			22,180	46,590	720
150	1219 48"	914	4470	3327	–	902	1206	2318	1130	7	★	32	1689	55/75 75/100		19,305	37,086	45·88
		36	176	131	–	35½	47½	91¼	44½			1¼	66½			42,560	81,760	1620
160		1067	4470	3759	–	902	1181	2229	1118	7	★	32	1689	75/110 100/150		28,449	50,294	50·98
		42	176	148	–	35½	46½	87¾	44			1¼	66½			62,720	110,880	1800
200	1524 60"	1219	4826	4166	–	927	1232	2711	1314	5	★	38	2020	110/150 150/200	225 to 275	30,391	68,039	53·52
		48	190	164	–	36½	48½	106¾	51¾			1½	79½			67,000	150,000	1890

★ HOLES NOT EQUALLY SPACED