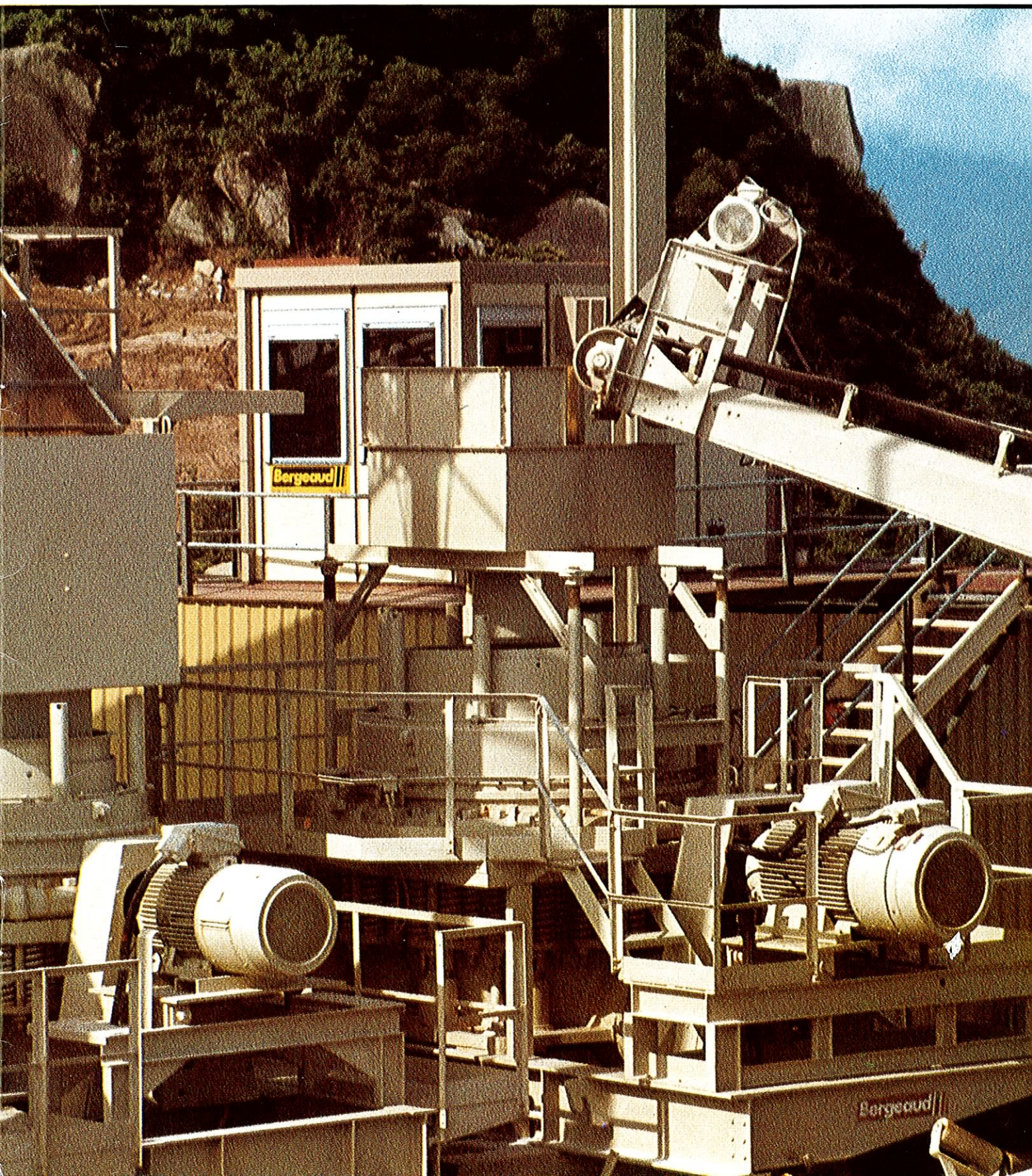
Bergeaud
Nordberg

Symons cone crushers

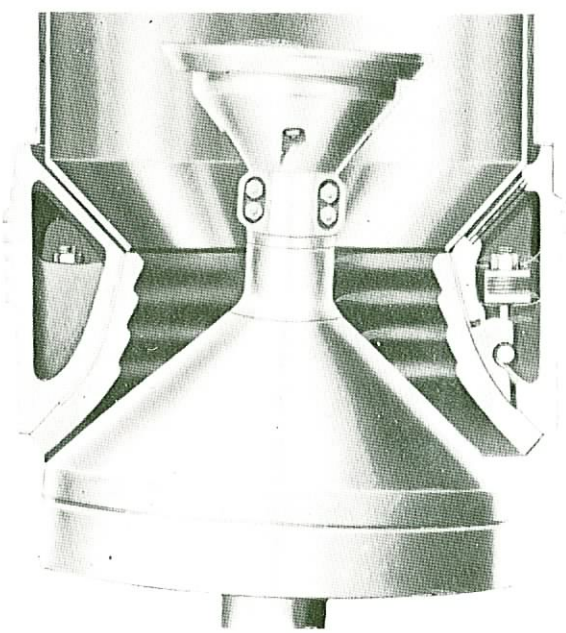


The crushing chamber

The main difference between the standard and shorthead Symons Cone Crushers is the shape of the crushing chamber and in the location of the feed distributor.

Standard :

Crushed product
0/16 to 0/80 mm
16 to 700 tph



Shorthead :

Crushed product
0/3 to 0/25 mm
5 to 330 tph

The range of Symons cone crushers

TYPE		STANDARD		
SIZE		BCS 2′	BCS 3′	BCS 4′
CRUSHER				
Weight	kg	4.600	10.600	16.800
Heaviest component	kg	1.270	2.630	4.650
Driven pulley				
pulley	mm	533	762	915
width	mm	137	227	300
Countershaft speed	rpm	575	580	485
MOTOR				
Speed 1500 rpm				
Power	kW	30	75	90
MOTOR PULLEY				
Pulley	mm	210	305	306
Width	mm	148	240	300
V belts				
Number		5	6	8
Section	mm	22 x 14	32 x 19	32 x 19
Belt length	m	4,163	5,023	6,863

These indicative figures and specifications are subject to change without notice.

STANDARD		SHORTHEAD				
BCS 4 1/4′	BCS 5 1/2′	BCS 2′	BCS 3′	BCS 4′	BCS 4 1/4′	BCS 5 1/2′
21.000	44.600	4.900	10.900	19.000	21.500	45.250
5.210	12.000	1.270	2.630	5.210	5.210	12.000
915	915	533	762	915	915	915
372	510	137	227	205	372	510
485	485	575	580	515	485	485
132	200	30	75	110	132	200
306	306	210	305	315	306	306
359	359	148	240	205	359	359
10	10	5	6	8	10	10
32 x 19	32 x 19	22 x 14	32 x 19	SPC	32 x 19	32 x 19
6,863	6,863	4,163	5,023	6,300	6,863	6,863

Open circuit performance

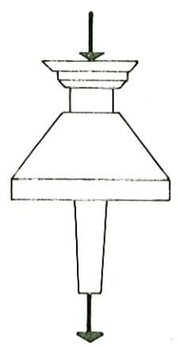
Open circuit		STANDARD					
Size	Cavity	Minimum recommended setting A	Aperture at minimum setting A		Maximum recommended setting A_1	Aperture at maximum setting A_1	
			closed B	open B		closed B_1	open B_1
2' ST 610 mm	Fine	6	56	71	19	64	80
	Coarse	8	78	93	38	103	114
	Extra-coarse	11	100	111	38	118	128
3' ST 914 mm	Fine	10	103	115	43	125	140
	Coarse	13	124	143	37	148	165
	Extra-coarse	19	180	196	37	198	211
4' ST 1219 mm	Fine	12	130	144	61	173	187
	Medium	15	157	176	63	215	230
	Coarse	19	182	204	80	250	265
	Extra-coarse	21	216	237	56	251	273
4 1/4' ST 1295 mm	Fine	13	131	150	62	180	199
	Medium	20	205	224	62	253	272
	Coarse	22	229	253	50	258	280
	Extra-coarse	25	242	270	68	290	310
5 1/2' ST 1676 mm	Fine	19	196	208	78	238	250
	Medium	22	219	241	92	289	311
	Coarse	25	251	276	76	302	327
	Extra-coarse	38	343	368	82	387	412

Production tph at respective settings									
6,3	10	12,5	16	20	25	32	40	50	63
16	19	22	27	33					
	19	22	27	33	45	54			
		22	27	36	50	63			
	36	45	54	65	75	90			
		50	65	85	105	125			
				90	115	135	160		
		85	105	130	160	180			
			105	130	160	190	225		
				140	175	215	245	270	
				150	190	220	260	300	
		100	125	150	180	200	225		
				150	180	210	245	280	
					200	230	280	320	
					215	250	290	330	370
				215	250	290	320	345	
					270	330	370	410	
					280	340	400	450	580
							420	470	610

* See N.B. on next page.

Open circuit		SHORTHEAD					
Size	Cavity	Minimum recommended setting A	Aperture at minimum setting A		Maximum recommended setting A_1	Aperture at maximum setting A_1	
			closed B	open B		closed B_1	open B_1
2' SH 610 mm	Fine	5	27	40	13	34	47
	Coarse	5	38	50	13	45	56
3' SH 914 mm	Fine	3	12	40	31	40	65
	Medium	5	33	60	25	42	71
	Coarse	6	50	76	25	69	91
	Extra-coarse	8	65	90	20	77	102
4' SH 1219 mm	Fine	5	28	60	47	70	102
	Medium	6	39	67	47	68	100
	Coarse	9	71	100	39	98	127
	Extra-coarse	13	112	144	39	138	170
4 1/4' SH 1295 mm	Fine	5	28	63	59	82	117
	Medium	6	42	72	59	79	109
	Coarse	9	74	106	53	118	150
	Extra-coarse	13	103	135	46	136	174
5 1/2' SH 1676 mm	Fine	6	36	71	54	84	119
	Medium	8	57	87	54	102	132
	Coarse	12	100	131	44	124	155
	Extra-coarse	16	150	184	44	178	212

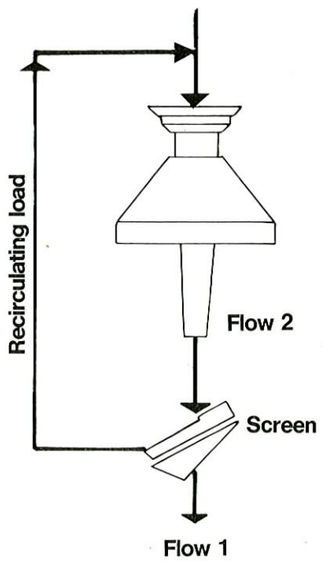
Production tph at respective settings								
3	5	6	8	10	13	16	19	25
	15	18	22	25	35			
	15	18	22	25	35			
25	35	40	52	62	75			
	35	42	55	65	80	95		
		47	60	75	92	110	120	
			70	85	105	125	145	
	55	65	80	95	115	130		
		65	85	100	120	140		
				110	135	155	170	
					145	165	185	205
	60	72	90	105	125	145		
		72	95	110	130	150		
				120	150	170	190	210
					160	180	200	225
		105	135	160	190	210		
			145	170	200	225	240	
					210	235	255	280
						255	275	300

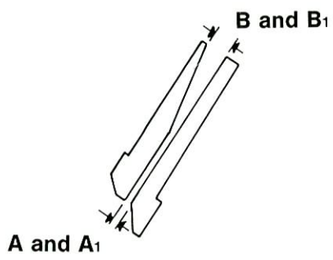


Closed circuit performance

Closed circuit		SHORTHEAD					
Size	Cavity	Minimum recommended setting A	Aperture at minimum setting A		Maximum recommended setting A_1	Aperture at maximum setting A_1	
			closed B	open B		closed B_1	open B_1
2' SH	Fine	5	27	40	13	34	47
610 mm	Coarse	5	38	50	13	45	56
3' SH	Fine	3	12	40	31	40	65
914 mm	Medium	5	33	60	25	42	71
	Coarse	6	50	76	25	69	91
	Extra-coarse	8	65	90	20	77	102
4' SH	Fine	5	28	60	47	70	102
1219 mm	Medium	6	39	67	47	68	100
	Coarse	9	71	100	39	98	127
	Extra-coarse	13	112	144	39	138	170
4 1/4' SH	Fine	5	28	63	59	82	117
1295 mm	Medium	6	42	72	59	79	109
	Coarse	9	74	106	53	118	150
	Extra-coarse	13	103	135	46	136	174
5 1/2' SH	Fine	6	36	71	54	84	119
1676 mm	Medium	8	57	87	54	102	132
	Coarse	12	100	131	44	124	155
	Extra-coarse	16	150	184	44	178	212

Under certain conditions the Symons Standard Cone Crusher can be operated in closed circuit. We will be pleased to study any specific application you may have.





Production tph based in closed circuit operation													
5		6,3		10		12,5		16		20		25	
Recommended setting for closed circuit													
5		6		8		10		13		16		19	
1	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
10	18	12	20	19	24	22	27	30	38				
10	18	12	20	19	24	22	27	30	38				
23	38	24	44	45	57	54	68	64	82				
23	38	28	46	47	60	57	71	68	88	81	104		
		31	52	51	66	66	82	78	100	93	120	108	132
				60	77	75	93	90	115	107	137	131	159
36	60	43	72	68	88	84	104	98	126	111	143		
		43	72	73	93	88	110	103	132	120	154		
						97	120	115	148	133	170	153	187
								125	160	140	180	165	205
40	66	48	80	78	100	92	115	107	137	125	160		
		48	80	82	105	97	120	110	143	128	165		
						105	132	128	165	145	187	171	209
								137	176	155	200	180	220
		75	115	115	150	141	176	163	209	180	231		
				125	160	150	187	172	220	193	247	216	264
								180	231	201	258	230	280
										219	280	248	302

NB : these figures are for materials with a density of 1.6.
Feed size, material hardness and moisture content of feed all affect capacity.

Best results are obtained if the material to be processed and the specification of the final product are considered in selecting the setting.

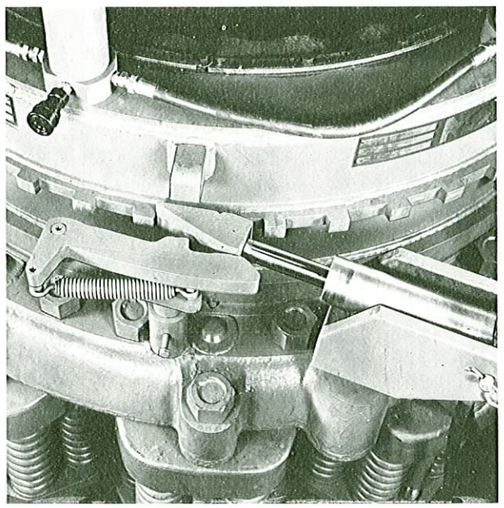
Column 1 gives tph finished product (screen undersize).

Column 2 gives tph passing through the crusher.

Hydraulic

Hydraulics, optional or standard, enable a single operator to clear and reset the machine in less than a minute.

Resetting :



– Two hydraulic jacks which rotate the adjustment cap and bowl in either direction ensure accurate resetting of the machine

– If clamping pressure falls, an hydraulic safety device ensures the required offset to keep the correct level.
If the pressure goes on to decrease, a bowl lock stops the rotation.

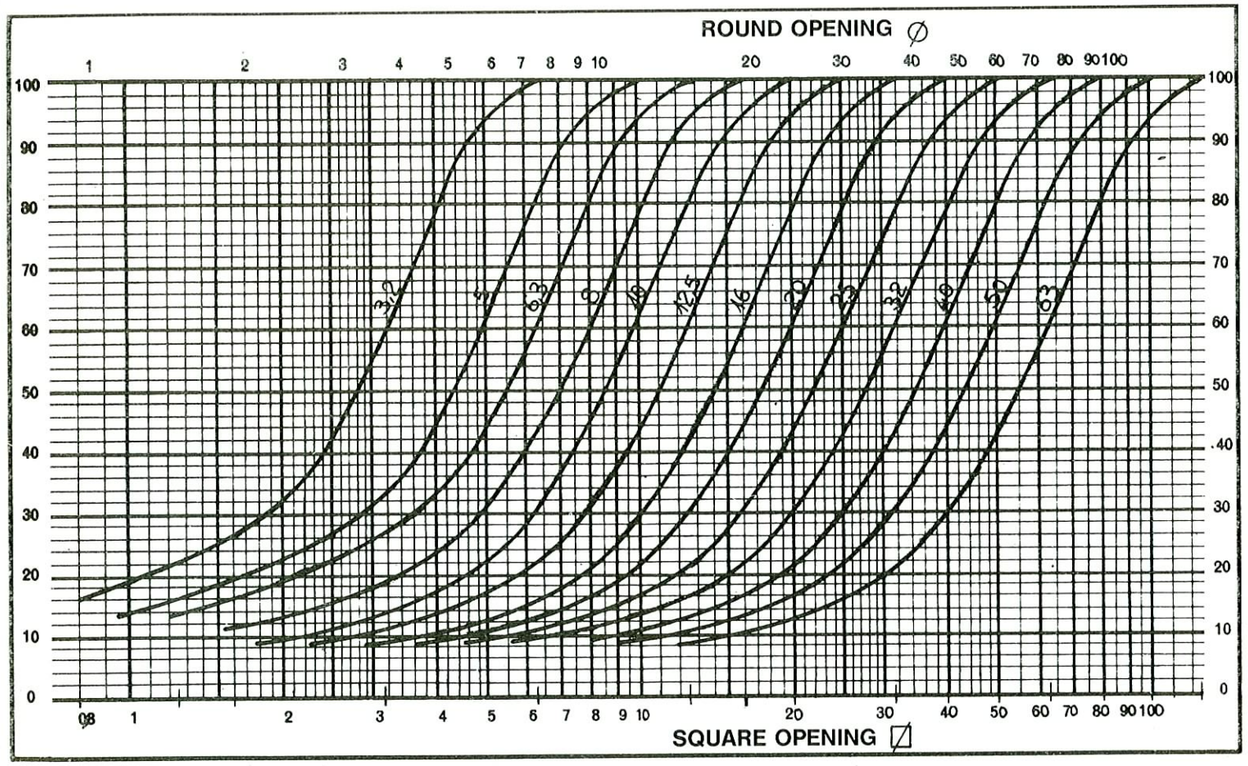
Clearing

The hydraulics enable the crushing chamber to be lifted if the machine stalls under load.

	TYPE (Standard and Shorthead)	2′	3′	4′	4 1/4′	5 1/2′
HYDRAULICS	**Clearing :**					
	– Hand pump	B	B	B	B	A
	– Electric unit	A	B	B	B	C
	Resetting :					
	– Operating without load	A	B	B	B	C
	– Operating under load	A	B	B	B	B

A : not available
B : optional
C : standard equipment

Granulometric scale



Average granulometric scale for aggregate product, open circuit

These average curves may vary according to the feed method, the cavity, density, feed size, moisture content and friability of the material. Actual graphs can only be produced by testing.