TRF LIMITED
A TATA Enterprise

Hydraulic Cone Crushers

TECHNICAL SPECIFICATIONS

- High Capacity
- Uniform abrasion of bowl liner
- Easy replacement of mantle & bowl liner
- Easy adjustment of discharge setting
- Protection against uncrushable material during operation

Hydraulic Cone Crusher

TRF's Hydraulic Cone Crushers which apply a unique hydraulic control system are used in secondary and tertiary crushing.

Characteristics

Main characteristics of the hydraulic cone crusher are to support the crushing head (mantle and mantle core) through the centre shaft from the bottom by hydraulic cylinder and to adjust the discharge setting between mantle and bowl liner automatically and remotely by changing oil quantity in the hydraulic cylinder. This equipment consists of hydraulic cylinder provided at the lower part of frame, hydraulic unit connected with hydraulic cylinder by high pressure piping and control panel attachable to the optional place such as machine-side of operation room.

High Capacity

Crushing capacity has been increased and cubical product having excellent cubic type can be obtained as the unique mechanism is adopted and designed for the best crushing chamber and large throw of mantle. Choke-feed is possible resulting in the increment of crushing capacity and the improvement of the shape of crushed product.

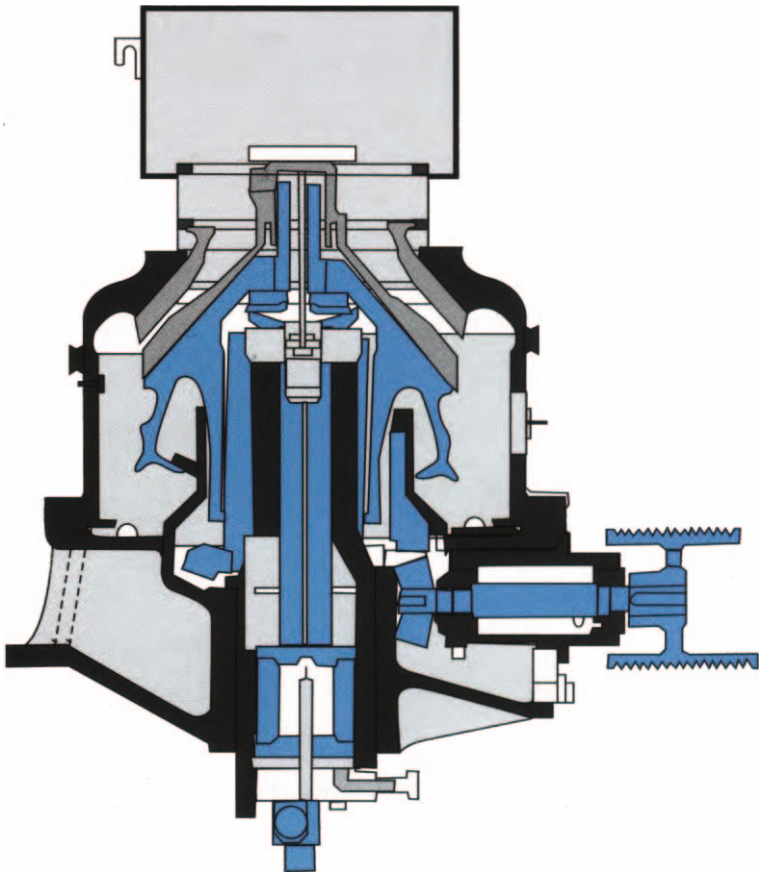
Partial abrasion of bowl liner will not occur

Raw materials are evenly fed to the whole circumference of crushing chamber by means of feed plate installed on the upper portions head. Even feeding can be ensured without any hindrance as spinder arm does not exist. Thus partial abrasion of bowl liner will not occur. Therefore, special distribution feeder is not necessary.

Easiness of adjustment of discharge setting

When mantle of crusher moves up and down, selsyn transmitter provided at the lower part of hydraulic cylinder transmits the degree of movement to selsyn receiver of control panel and automatically shows it on discharge setting indicator.

When changing discharge opening, mantle freely goes up and down as hydraulic pump acts for upward control an electro-magnetic valve acts for downward control by the operation of setting control switch while looking at discharge setting indicator. Therefore, automatic setting adjustment is possible more easily, quickly and accurately than hydraulic clamping and resetting device of the coventional symons type crusher. The adjustment of discharge setting is possible either at the time of machine stoppage, no load operation, or load operation.



SECTIONAL ARRANGEMENT

The abrasion loss of mantle and bowl liner is indicated

As the abrasion loss of mantle and bowl liner is indicated on the dial of control box, the correction of discharge setting is easy and the time to arrange spare part can be predicted.

In case of foreign matter entering, safe operation is possible

Even when uncrushable such as tramp iron has entered, it is discharged outside the machine by the hydraulically controlled automatic discharge mechanism.

In case the machine stops during operation due to the electric failure etc., discharge is possible

Even if the machine stops during operation under load due to electric failure etc., raw material in crushing chamber can be discharged by moving crushing head up and down with hydraulic mechanism before restarting at the current retransmission. Therefore, the operation can be resumed in a short time.

Easy replacement of mantle and bowl liner

When replacing consumable parts such as mantle and bowl liner, the replacement can be carried out easily in short time as bearing and spider arm do not exist in the upper part of crushing chamber.

Features :

- Simple and Rigid construction
- Speedy installation with special hydraulic system
- High mobility on standard trailer
- Cost saving for foundation work

CAPACITY (T/H)

40 - inch Cone Crusher

Model Number	Feed opening (Closed side)	Shape of crushing chamber	Discharge Setting (Closed side) (mm)							Max feed size (mm)	Motor (KW)
			6	9	12	15	20	25	30		
4002 1/2 M	65	Fine	69	80	87	94	106			47x62x90	95 ~ 110
4002 1/2 L				84	96	105	117				
4005 M	125	Medium			88	99	112	124	137	82x109x158	
4005 L					97	110	124	138	152		
4007 M	175	Coarse				101	119	132	146	112x149x216	
4007 L							125	146	161		

50 - inch Cone Crusher

Model Number	Feed opening (Closed side) (mm)	Shape of crushing chamber	Discharge Setting (Closed side) (mm)								Max feed size (mm)	Motor (KW)
			6	9	12	15	20	25	30	40		
5003 S	75	Fine	96	111	121	131	148				54x 72x 104	130 ~ 150
5003 M				120	138	150	168					
5003 L					142	163	163					
5006 S	150	Medium		111	128	138	158	174	192		99x132x191	
5006 M					140	159	179	200	220			
5006 L						164	194	216	238			
5009 S	225	Coarse				140	166	185	204	241	144x192x278	
5003 M							180	210	232	275		
5009 M							195	228	251	298		

60 - inch Cone Crusher

Model Number	Feed opening (Closed side) (mm)	Shape of crushing chamber	Discharge Setting (Closed side) (mm)								Max feed size (mm)	Motor (KW)
			9	12	15	20	25	30	40	50		
6004 S	100	Fine	150	172	186	210	233	256			62x82x119	190 ~ 220
6004 M				195	211	235	265	292				
6004 L					222	263	293	322				
6008 S	200	Medium Fine			164	218	242	266	315		131x174x252	
6008 M					209	248	276	304	360			
6008 L						261	305	335	392			
6010 S	250	Medium Coarse			190	226	251	276	327		161x214x310	
6010 M						245	286	315	373			
6010 L							301	348	412			
6012 S	300	Coarse				223	260	287	340	392	190x254x365	
6012 M							283	327	387	447		
6012 L								343	428	494		

72 - inch Cone Crusher

Model Number	Feed opening (Closed side) (mm)	Shape of crushing chamber	Discharge Setting (Closed side) (mm)								Max feed size (mm)	Motor (KW)
			9	12	15	20	25	30	40	50		
7205 S	125	Fine	217	249	270	304	337	371			87x117x168	270 ~ 300
7205 M				272	309	348	388	428				
7205 L					320	379	421	463				
7209 S	225	Medium Fine			265	314	350	385	456	527	147x1978x284	
7209 M						344	403	443	525	606		
7209 L							417	482	571	660		
7212 S	300	Medium Coarse			277	328	364	402	475	548	197x259x369	
7212 M						358	418	460	545	630		
7212 L							433	501	593	685		
7212 S	375	Coarse				322	377	415	492	568	237x317x456	
7212 M							413	478	565	653		
7212 L								493	615	710		

84 - inch Cone Crusher

Model Number	Feed opening (Closed side) mm	Shape of crushing chamber	Discharge Setting (Closed side) (mm)									Max feed size (mm)	Motor (KW)
			9	12	15	20	25	30	40	50	60		
8405 S	125	Fine	297	341	368	415	462	508				90x120x172	300 ~ 370
8405 M				470	420	474	527	581					
8405 L					436	516	573	631					
8409 S	225	Medium Fine			381	431	480	528	625	722	819	150x200x288	
8409 M						493	548	604	715	826	937		
8409 L							596	656	777	998	1018		
8413 S	325	Medium Coarse				426	498	548	649	750	851	210x280x403	
8413 M							541	626	742	857	972		
8413 L								648	807	937	1057		
8417 S	425	Coarse					492	569	673	778	882	270x360x518	
8417 M								618	769	888	1008		
8417 L									796	966	1096		

Note :

1) Capacities are based on the cotinuous feeding of Medium hard rock with bulk density of 1.6 with a size larger than discharge setting

2) Motor KW may change according to the raw material.

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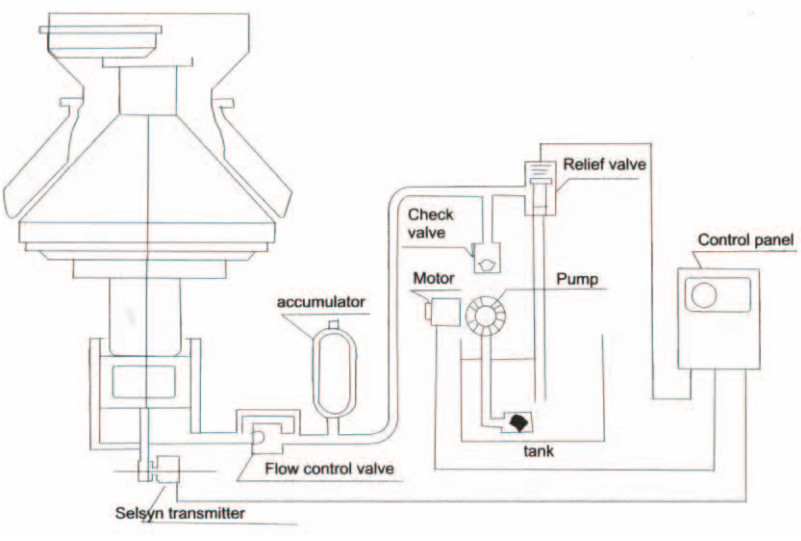
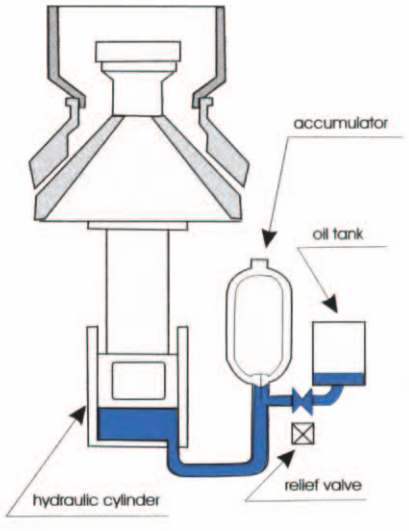
HYDRAULIC CONTROL CIRCUIT SYSTEM



NORMAL CRUSHING CONDITION



CONTROL PANEL

Dust & drop proof wall hanging type panel consisting control switches for discharge opening adjustment and oiling unit.

Discharge opening setting indicator

Vibration proof selsyn mechanism is incorporated inside and wear of mantle and bowl liner can be read.

Discharge opening adjustment switch

Zero-point adjusting knob to the set Indicator

HEAD OFFICE & WORKS

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