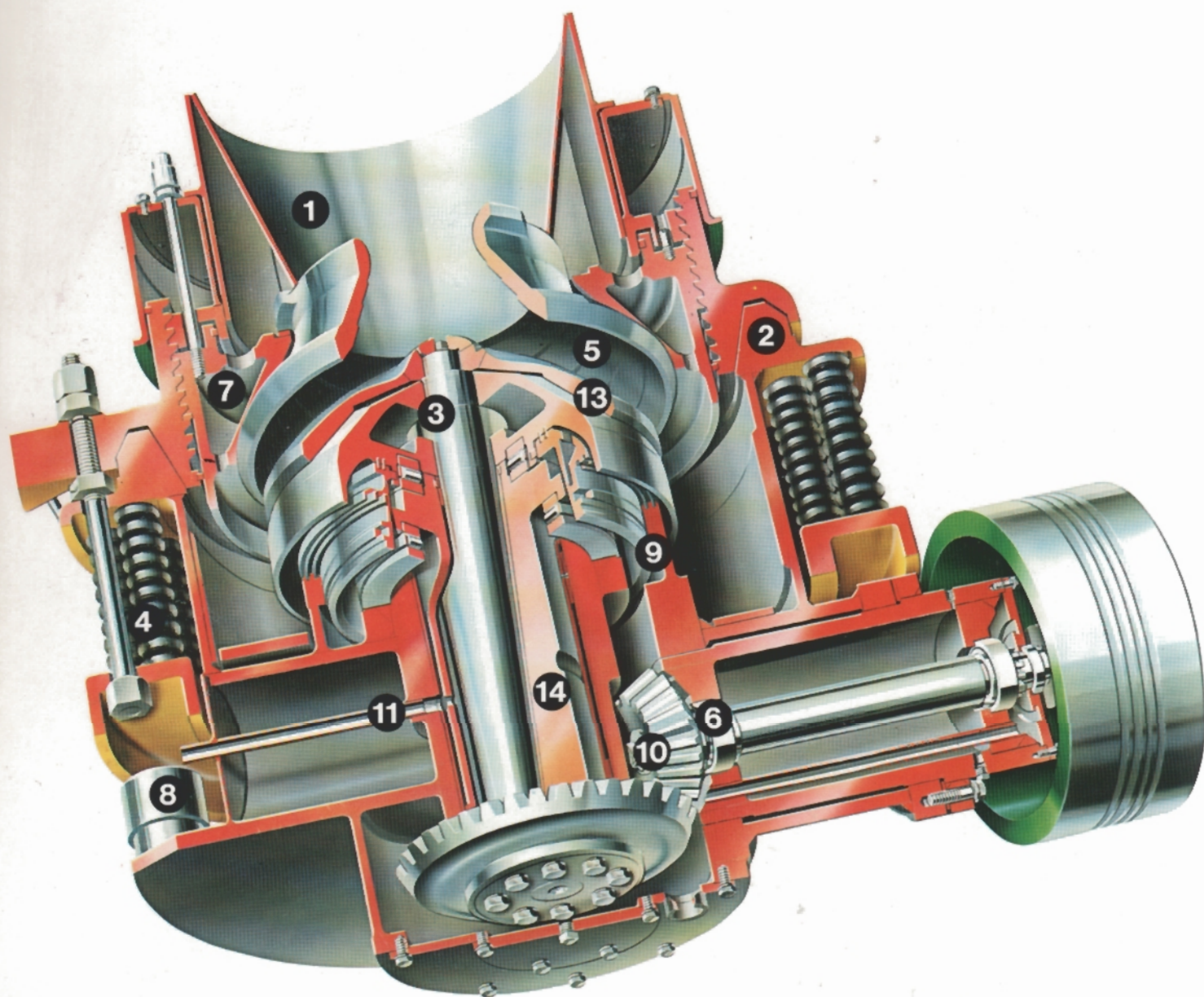


design and construction





1. Receiving Hopper

Constructed of heavy steel with large unobstructed feed opening to facilitate handling of large sized feed or slabby aggregate without 'bridging'. A feeder or distributor plate is not required on the 'S' style gyraspheres where the feed is usually large sized aggregate. The hopper is rigidly mounted on the upper section and is designed to follow the variation in settings.

2. Main Frame

Heavy steel construction provides the stability required to withstand prolonged and rigorous crushing pressures.

3. Cam and Lever Crushing action

Exclusive to Pegson-Telsmith, the cam and lever crushing action contributes to the low power requirements of gyrasphere crushers and to their inexpensive upkeep. A cam on the upper part of the eccentric between the two large heavy-duty roller bearings provides a double wedge crushing action. The crushing head is gyrated by this cam as well as by the lever action of the longshaft.

4. Spring Relief

Heavy springs, adjustable for compression, allow the concave bowl to tilt automatically, relieving excessive pressure due to packing action of accumulated fines or the passing of tramp iron.

5. Crushing Surfaces

All crushing surfaces are of high quality Manganese steel. The crusher head being of spherical shape is designed to gyrate at high speed with a long stroke, assuring maximum throughput of uniform cubical shape. All Pegson-Telsmith gyrasphere crushers have a wide discharge opening to reduce manganese wear. Moving parts are kept in perfect alignment by the use of roller thrust bearings.

6. Counter Shaft

Of single unit assembly, the counter shaft rotates in two taper roller bearings mounted in the unit and transfers the turning movement of a multi-v-belt driven flywheel, fastened at one end, to the bevel gear, through a bevel pinion fastened at the other end.

7. Concave Support Bowl

This device holds the concave ring in place by bolts or wedges. Manual or hydraulically assisted rotation of the support bowl in the upper frame varies the crusher gap for the production settings required.

8. Unblocking Jack System (Optional)

Pressure on the tension bolts lifts the upper frame and clears the crusher chamber by parting the crushing surfaces.

9. Rotary Seal

The Pegson-Telsmith patented rotary seal converts reciprocating or gyratory motion into rotary motion and allows perfect protection of all inside wearing parts by piston ring and labyrinth seals.

10. Drive Gears

Cut steel drive gears oil lubricated ensures smooth, quiet operation and long life.

11. Lubrication

Under regulated pressure, the oil supply lubricates the shaft and eccentric bearings, the main drive gears and the countershaft bearings, then returns to the large capacity tank where it is filtered for recirculation.

12. Distributor Plates

For FC fine crushing applications, the gyrasphere is fitted with a feed distributor plate for even distribution of the aggregates within the crushing chamber ensuring a uniform product. The FC also incorporates a different shaped crushing head and concave ring.

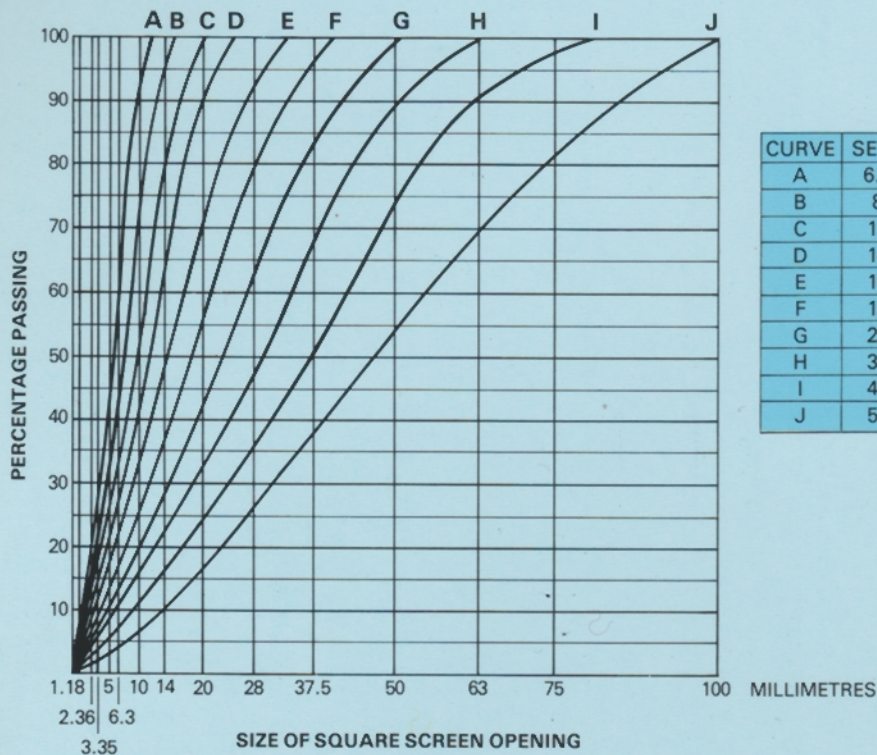
13. Crushing Head

Carries the mantle crushing member which is secured to the main shaft. The assembly rotates in a thrust roller bearing and a tapered bronze sleeve in the eccentric.

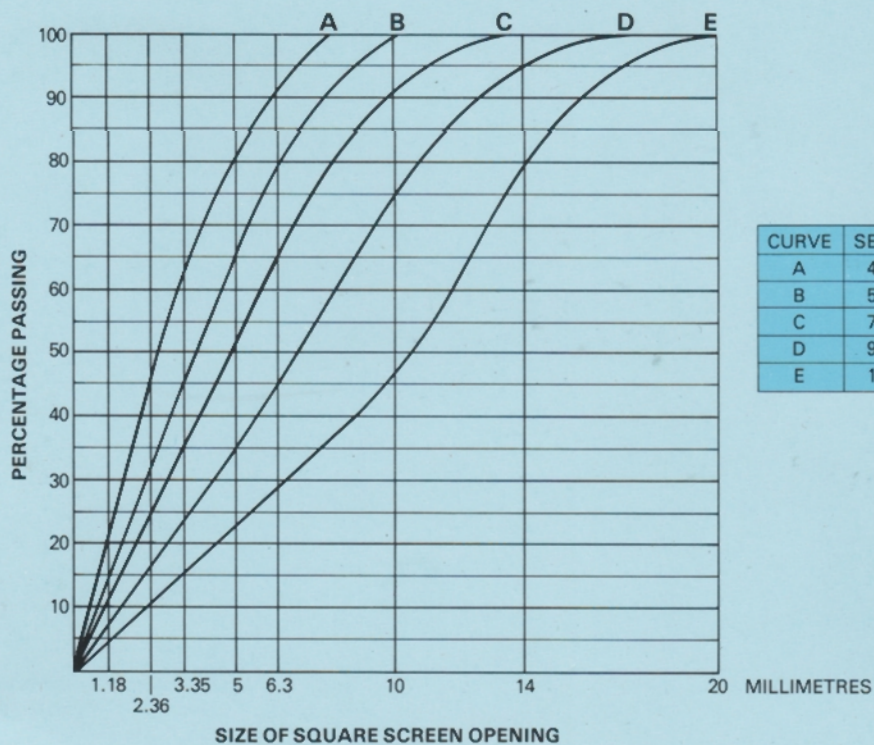
14. Eccentric

Driven by the bevel gear, rotates in a thrust roller bearing and a cylindrical bronze sleeve on the main frame.

screen analysis



GYRASPHERE

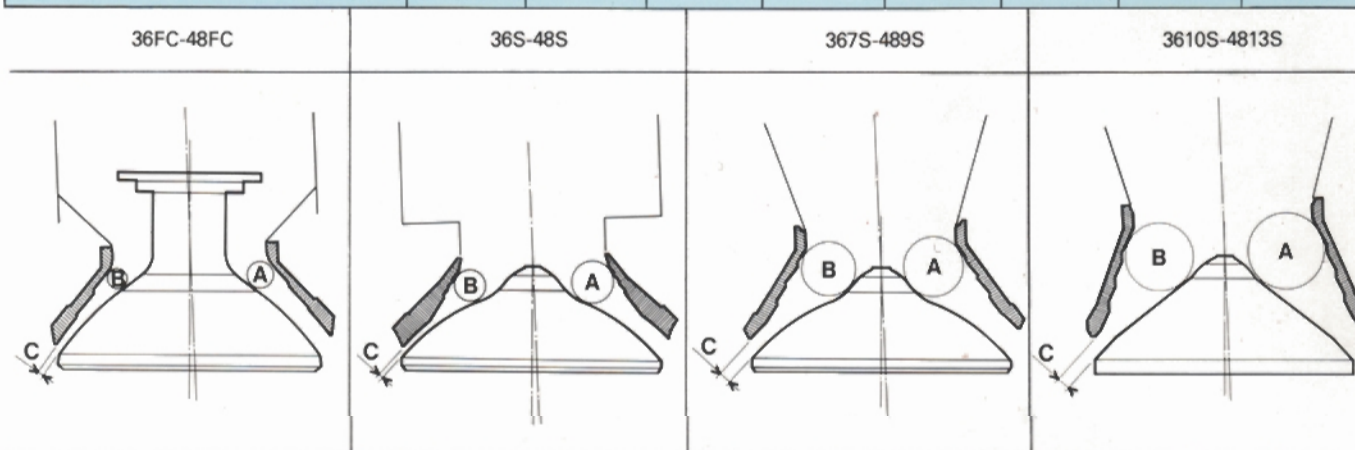


GYRASAND

capacities and openings

GYRASPHERE

Model	36FC	36s	367s	3610s	48FC	48s	489s	4813s
STANDARD HEAD								
Feed Opening — Large Dimension A	76mm	133mm	178mm	258mm	102mm	190mm	254mm	332mm
Feed Opening — Small Dimension B	51mm	117mm	165mm	240mm	73mm	161mm	229mm	315mm
Minimum Setting C	8mm	12mm	19mm	40mm	10mm	19mm	25mm	50mm
MEDIUM BOWL								
Feed Opening — Large Dimension A	55mm	114mm	—	—	76mm	140mm	—	—
Feed Opening — Small Dimension B	34mm	95mm	—	—	50mm	114mm	—	—
Minimum Setting C	6.5mm	11mm	—	—	8mm	14mm	—	—
OUTPUT — Tonnes per hour	CLOSED CIRCUIT	OPEN CIRCUIT			CLOSED CIRCUIT	OPEN CIRCUIT		
SETTING PRODUCT SIZE								
6.5mm 0-12	35-40							
8mm 0-16	40-50				70-85			
9mm 0-18	45-55				80-95			
11mm 0-20	55-65	40-50			90-110			
12mm 0-23	65-75	45-55			100-120			
14mm 0-25		55-70			120-140	90-110		
19mm 0-45		65-80	65-80		130-150	120-140		
25mm 0-50		85-100	85-100			140-170	140-170	
35mm 0-65		110-130	110-130			180-220	180-220	
38mm 0-70			135-150	135-150		220-250	220-250	
45mm 0-80			150-170	150-170			270-300	
50mm 0-100				170-200			290-320	290-320
60mm 0-110							330-350	330-350

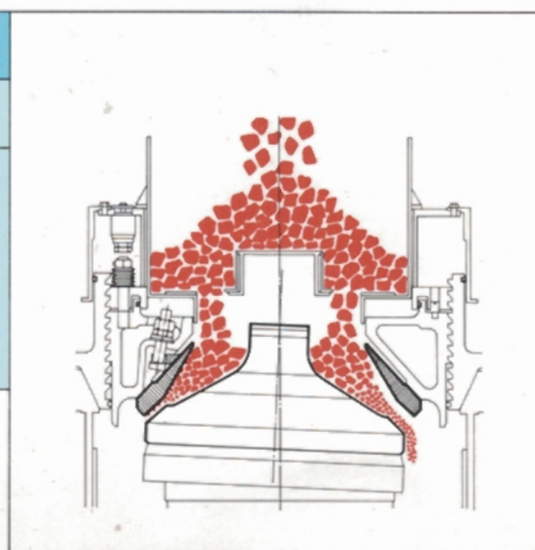


GYRASAND

MODEL			36GS		48GS
OUTPUT			RECOMMENDED FEED SIZE	OUTPUT	RECOMMENDED FEED SIZE
Setting	Product Size	tonnes per hour	mm	tonnes per hour	mm
4	0-8	35-40	8-25/30	55-60	8-30/35
5	0-10	42-50	8-30/35	65-75	10-30/35
7	0-12	48-55	10-35/40	75-90	12-35/45
9	0-16	55-65	15-35/40	90-100	15-40/50
10	0-18	65-75	15-35/40	110-120	18-40/50
11	0-20			120-130	18-40/50

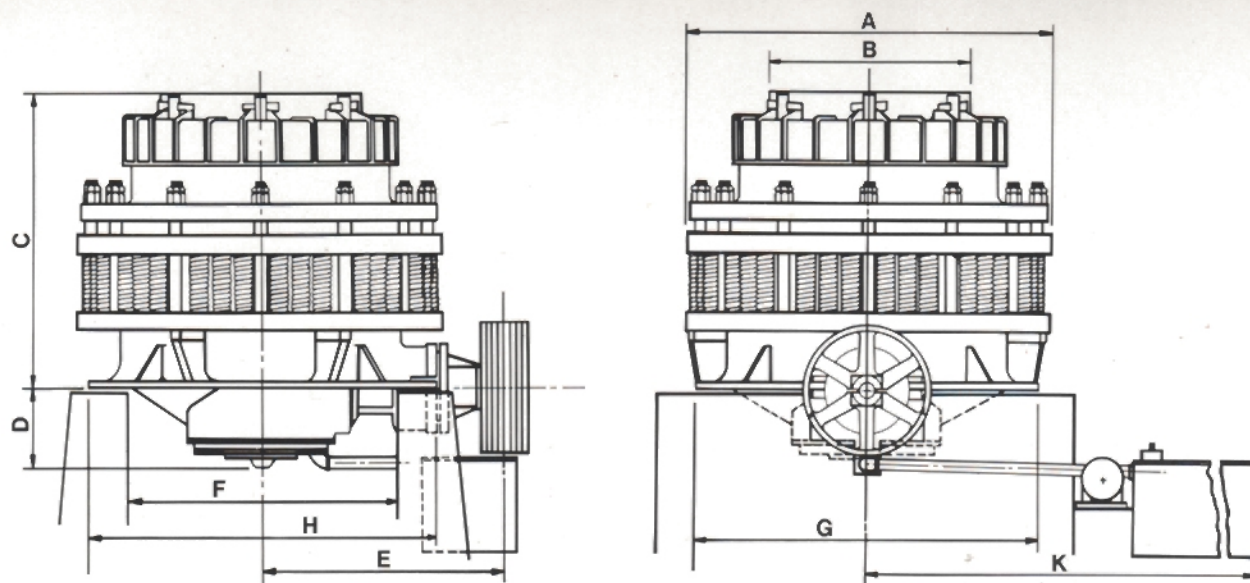
Outputs are for closed circuit operation

The capacities shown are expressed in tonnes and are based on clean, dry, graded material weighing loose approximately 1600 kg/m³ (100 lbs/ft³) and having a specific gravity of 2.6-2.8. Capacities may vary according to the size of feed, compressive strength, toughness, friability, moisture content and method of feed. All grain sizes are defined using a square mesh.



For operation below the minimum settings specified please consult Pegson Ltd.

dimensions



size and model	36 fc	36 s	36 7s	36 10s	48 fc	48 s	48 9s	48 13s	36 gs	48 gs
DIMENSIONS in mm A	2200	2200	2200	2200	2450	2450	2450	2450	2200	2450
B	897	897	897	897	1165	1165	1165	1165	897	1165
C	1730	1730	1730	1730	1955	1955	1955	1955	1730	1955
D	360	360	360	360	435	435	435	435	360	435
E	1200	1200	1200	1200	1425	1425	1425	1425	1200	1425
F	1190	1190	1190	1190	1223	1223	1223	1223	1190	1223
G	1600	1600	1600	1600	2080	2080	2080	2080	1600	2080
H	1600	1600	1600	1600	2005	2005	2005	2005	1600	2005
K	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200

specifications

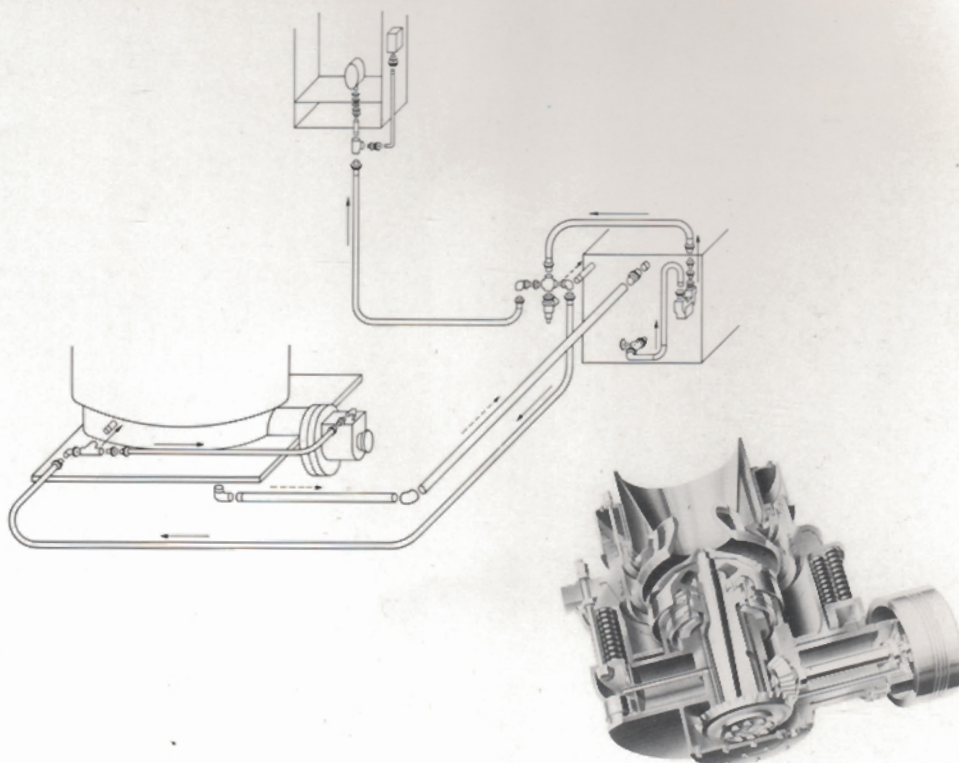
Required power in K W	75	55	75	90	110	90	110	160	90	160
Pulley size, diameter width, mm.	710 x 304	710 x 304	710 x 304	710 x 304	863 x 355	863 x 355	863 x 355	863 x 355	710 x 304	863 x 355
Pulley, r.p.m.	725	725	725	640	600	600	600	530	815	670
Weight of machine — kg	11400	11200	11400	11200	20400	20000	19800	19800	11200	20000
Weight of Machine — kg Packed for shipment	11950	11750	11950	11750	21700	21300	21100	21100	11750	21300
Volume in M.3 Packed for shipment	16	16	16	16	29.5	29.5	29.5	29.5	16	29.5

lubrication

Full time crushing with Pegson-Telsmith Gyraspheres is made possible by a combination of mechanical precision, quality design, robust construction, and an efficient lubrication system. The force-feed system provides lubrication under pressure to all moving parts. Pressure regulation and bypass valves provide controlled lubrication.

In most applications, with recommended maintenance practices, oil changes can be limited to twice a year. Pressure and temperature alarm systems are fitted as standard.

All Pegson-Telsmith Gyrasphere lubrication systems come as a packed deal, a large capacity oil tank complete with in built pump driven by separate electric motor, and water coolers.



Locking of concave bowl support **A**

The standard method of locking, in which tension bolts and manually fixed wedges are used, can be replaced by an hydraulic system. In this optional version the pre-set locking force is supplied by Belleville spring washers. To carry out adjustment the locking force is overcome by counter action from hydraulic cylinders.

Unblocking the crushing chamber **B**

In the case of a feed stoppage, the discharge gap may be opened by means of the unblocking jacks permitting:

- fast unjamming and restoration of feed
- removal of tramp metal without the need for an untimely shut-down

When the hydraulic system is released, the discharge opening is restored to its initial setting under the action of the springs. This is an optional system.

Rotation of the concave bowl support **C**

After unlocking, the support may be turned in either direction, i.e. screwed or unscrewed, to adjust the crusher elements for the desired product.

In the standard model this operation is carried out manually. It can be done automatically with the aid of a double-acting, pivoted, hydraulic cylinder equipped with a pawl with a release spring to ensure automatic engagement in the support ring notches.

optional hydraulic aids

