

PEGSON
TELSMITH

GYRASPHERE CRUSHERS



PEGSON

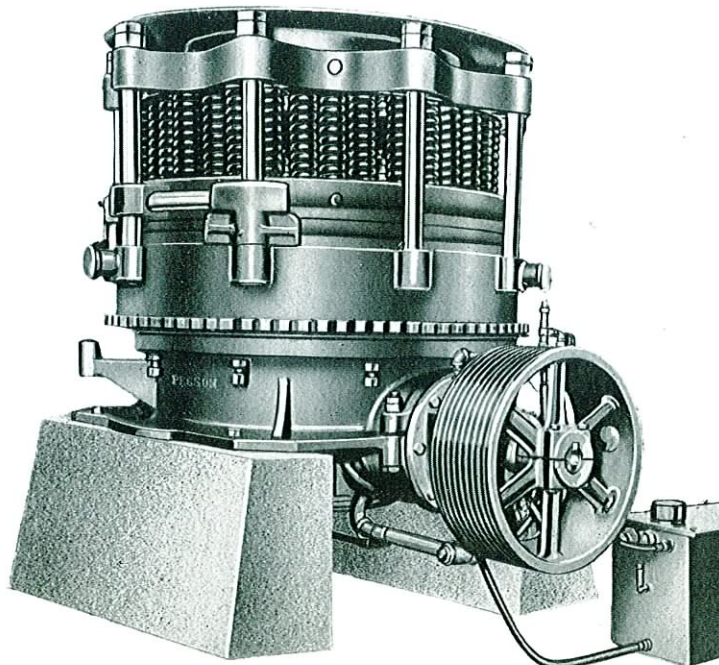
TELSMITH

GYRASPHERE CRUSHERS

Selection of a secondary crusher for the coarse or fine crushing of aggregates or ores requires many important considerations. To meet today's strict specifications the machine must be capable of producing a uniform product of the best cubical shape and size ; it must be modern and efficient ; easy to install, maintain, feed and operate ; turn out finished material in quality and quantity ; and keep production costs to the lowest possible figure. In all these respects, Pegson-Telsmith Gyrasphere Crushers have proved their superiority—on all kinds of crushing jobs all over the world.

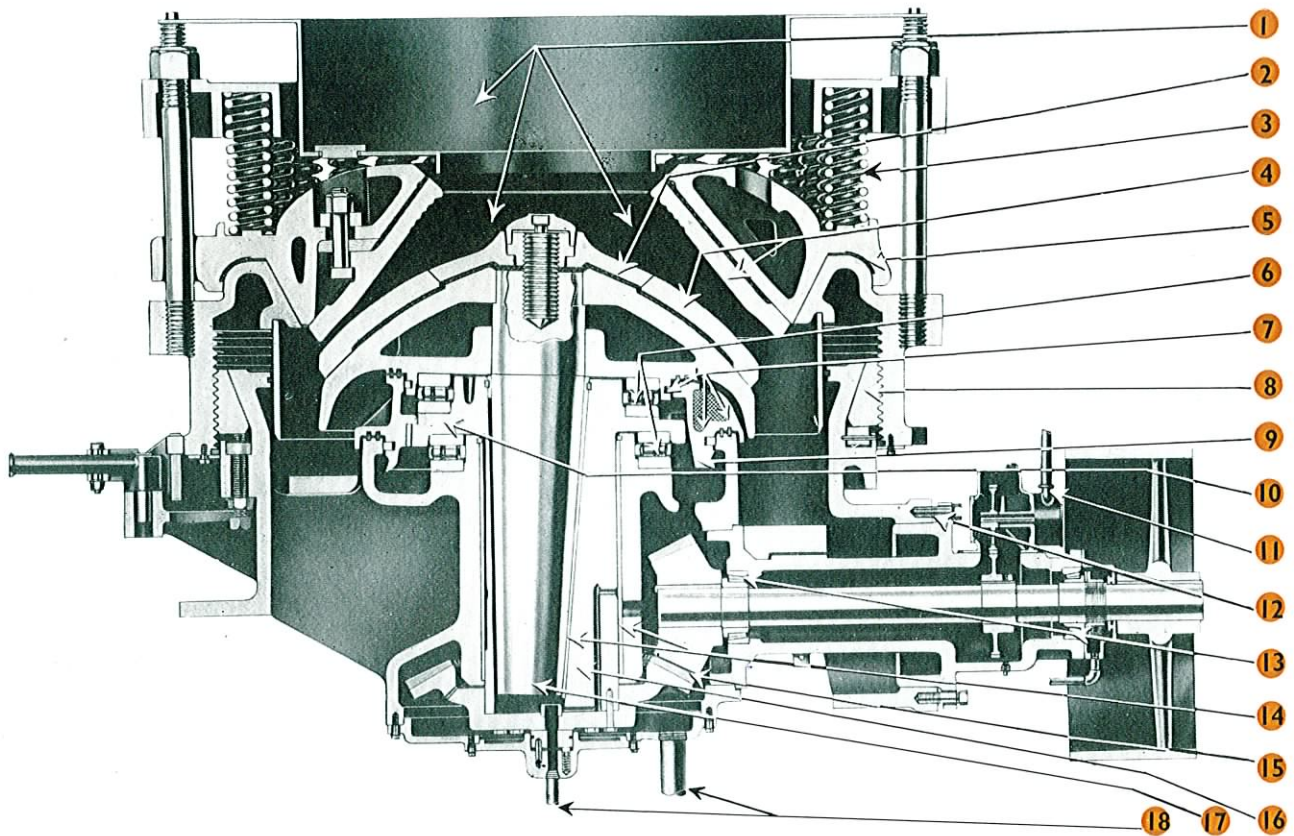
The eleven types of Pegson-Telsmith Gyraspheres available cover almost every secondary crushing requirement. The

range includes 24", 36", 48", and 66" machines, each available as a Style S or FC model, and sizes 36"7S, 48"9S and 66"14S which have larger feed openings for intermediate duties. The Style S Gyrasphere is designed for coarse or medium crushing service and the FC for heavy duty fine crushing at discharge openings smaller than those usually recommended for the Style S. Construction of the two styles is the same in many respects and they use many of the same wearing parts. Their design, based on long experience of crusher manufacture and applications, embodies many exclusive features and advantages. These are indicated in the following pages with the range of Gyrasphere openings and capacities detailed on page 10.



Typical 24", 36" or 48" Style S. Gyrasphere Crusher.

STYLE S—36" and 48" Gyraspheres

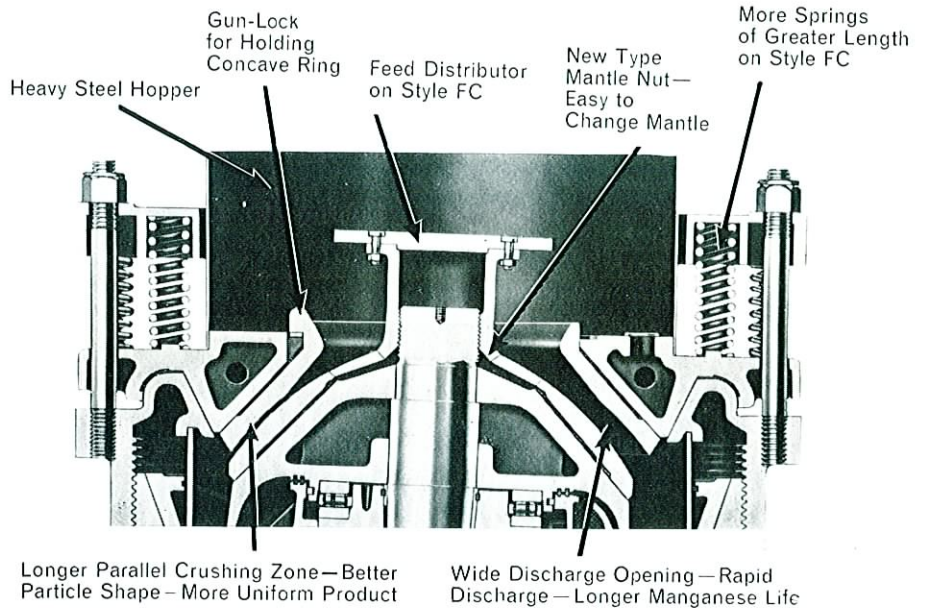
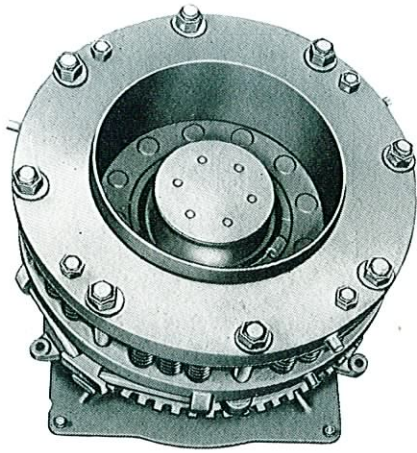


1. **Heavy Steel Hopper and Large, Unobstructed Feed Openings.**—Facilitate handling of large sized feed or slabby aggregate without bridging. A feeder or distributor plate is not required on the Style S Gyrasphere where the feed is usually large sized aggregate.
2. **Spherical Shaped Crushing Head.**—Gyrating at high speed with a long stroke assures maximum capacity and a uniform cubical product.
3. **Spring Relief.**—Heavy springs, adjustable for compression, allow the concave bowl to tilt automatically, relieving excessive pressures due to packing action of accumulated fines or to pass tramp iron. No adjustment is required after relief takes place.
4. **Manganese Steel Crushing Members.**—Wear evenly and maintain their spherical shape throughout their entire life.
5. **Spring Retained Concave Bowl.**—Allows finer adjustment of the discharge opening. Packing is instantly and automatically relieved. No adjustment is required after relief takes place.
6. **Heavy Duty Roller Bearings.**—Support the head on the eccentric and support the eccentric on the main frame, thus carrying the crushing pressures directly into the heavy main frame.
7. **Piston Rings and Flexible Labyrinth Seals.**—Most effective kind of seals to prevent entrance of grit or water and loss of lubricant.
8. **Discharge Opening Adjustment Mechanism.**—Convenient, easy to operate and sealed to prevent sticking. As the springs are located between the concave bowl and the frame adjustment member, crushing shocks do not affect adjusting mechanism.

9. **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. **The Exclusive Pegson-Telsmith "Cam and Lever" Crushing Action.**—A cam on the upper part of the eccentric between the main frame and the bottom of the crushing head works in unison with and supplements the eccentric and lever shaft. This cam and the heavy duty roller bearings do a large part of the crushing, thus reducing the strain on the shaft, the eccentric and their bearings.
11. **Self-Priming Internal Gear Pump.**—Driven by cut spur gears enclosed and running in oil, forces oil under pressure to all moving parts.
12. **Countershaft Box.**—Removable as a complete unit and is protected by a renewable shield.
13. **Heavy Countershaft.**—Equipped with tapered roller bearings. No outboard bearing is required.
14. **Large Diameter, Long Sleeve Eccentric Bearings.**—Made of machined lead-bronze and run in oil bath to ensure maximum bearing life.
15. **Cut Steel Drive Gears.**—Run in oil bath, ensure smooth, quiet operation and long life.
16. **Large, Heavy Eccentric.**—Properly counter-weighted, ensures smooth operation and long life.
17. **Large Diameter, Heavy Duty Main Shaft.**—Always properly aligned and has no oil holes to weaken it.
18. **The Main Oil Supply.**—Under regulated pressure, lubricates the shaft and eccentric bearings, the main drive gears, the countershaft bearings and the oil pump drive gears, then returns to large capacity oil tank, where it is filtered and cooled.



STYLE FC — 36" and 48" Gyraspheres

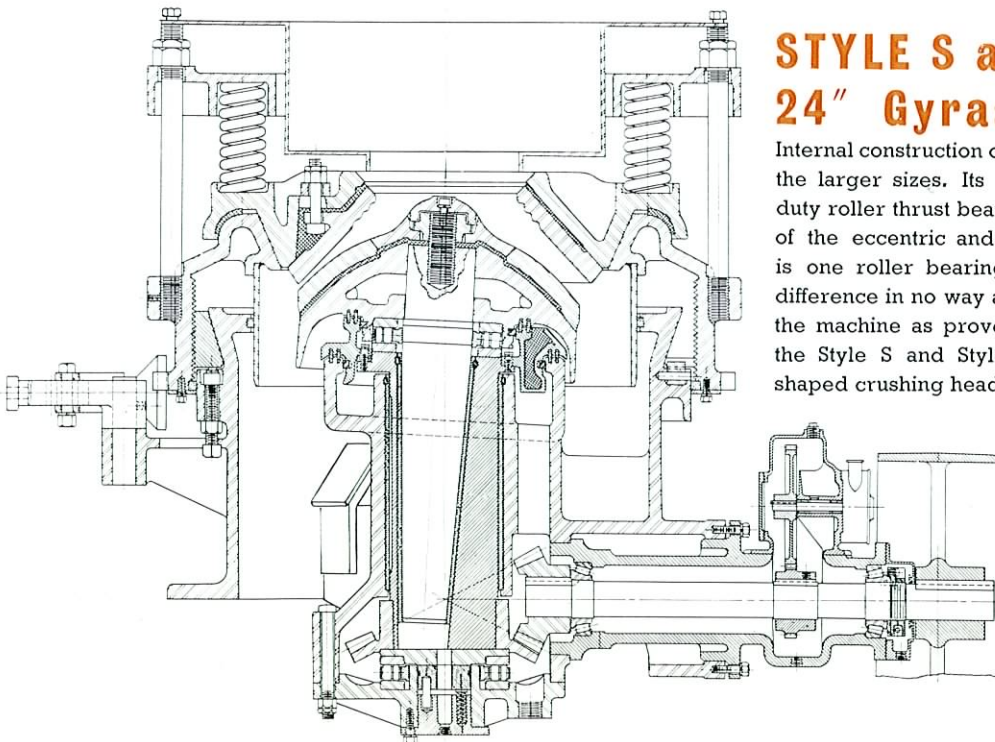


The Style FC Fine Crushing Gyrasphere is equipped with a distributor plate which gyrates with the crushing head and evenly distributes the feed around the entire circumference of the feed opening. This action results in a more uniform crushed product. The Style FC also incorporates a different shaped crushing head and concave ring, the modified angle between these members being the most effective for fine crushing whilst the longer, parallel crushing zone through

which the material passes gives a finer, more even-shaped product. A special mantle nut and gun-lock type concave ring make the mantle and ring automatically self-tightening and simplify changing of the parts. Additionally, the Style FC Gyrasphere is fitted with longer and a larger number of springs than the Style S machine to compensate for the greater crushing pressures encountered in fine crushing.

STYLE S and FC 24" Gyraspheres

Internal construction of the 24" Gyrasphere differs slightly from the larger sizes. Its smaller dimensions do not allow heavy duty roller thrust bearings to be located between both the top of the eccentric and the bottom of the head. Thus there is one roller bearing at the bottom of the eccentric. This difference in no way affects the efficiency and performance of the machine as proved over many years of operation. Both the Style S and Style FC 24" Gyraspheres have similarly shaped crushing heads.





SPECIFICATIONS

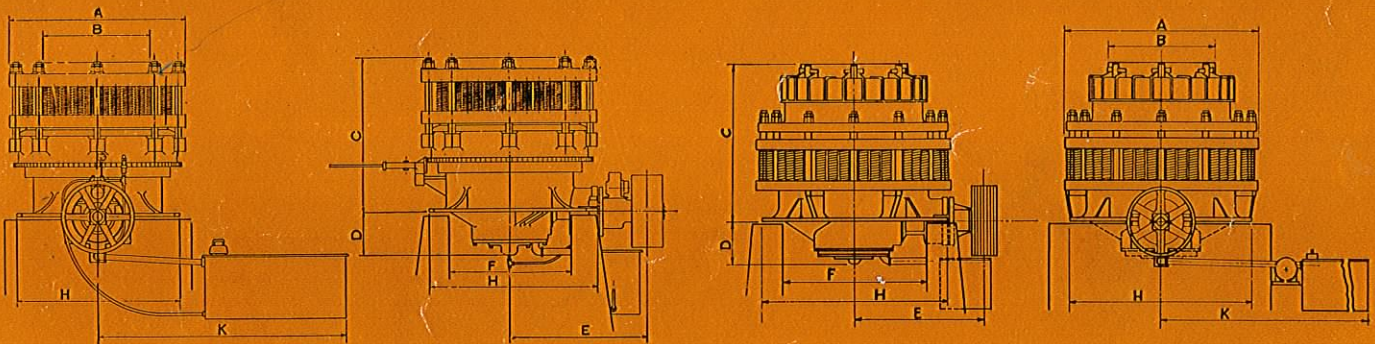
MAIN FRAME MEMBERS.—Annealed cast steel.
CRUSHING HEAD.—Annealed cast steel.
MAIN SHAFT.—Alloy steel quenched and drawn, turned and ground.
COUNTERSHAFT.—Alloy steel turned and ground.
HEAD SUPPORT THRUST BEARINGS.—Cylindrical roller bearings with tool steel roller and races.
COUNTERSHAFT ROLLER BEARINGS.—Tapered roller bearings.
ECCENTRIC BEARINGS.—Lead-bronze sleeves.
MANTLE AND CONCAVE BOWL.—Manganese steel.
ECCENTRIC.—Meehanite.

MAIN DRIVE GEARS.—Steel with cut teeth.
COUNTERSHAFT BOX.—Cast iron.
OIL PUMP.—Internal gear, self-priming type, driven by cut spur gears, heat-treated, all enclosed and running in oil.
 On the 66" Gyraspheres the Oil Pump is a self-contained unit driven by a separate electric motor.
OIL TANK.—Steel plate with removable cover, equipped with baffle plates, replaceable filter bags, oil level gauge and drain plug.
DRIVE PULLEY.—Cast iron, flywheel type, with split hub and solid rim.
SPRINGS.—Special steel, heat-treated.

Styles 'S' and 'FC' in the same size of Gyrasphere use many of the same wearing parts. For instance, both use the same roller thrust bearings, the same lead-bronze eccentric bearings, piston ring and labyrinth seals, gears, countershaft, oil pump, eccentric and rotary seal ring. The manganese wearing parts are not the same.

Number and Style of Gyrasphere	24S	248S	24FC	36S	36FC	367S	48S	48FC	489S	66S	66FC	6614S
Power required, H.P. (Note 1)	30	30	38	70	80	80	100	125—150	125—150	200—250	200—300	200—300
Size of pulley, dia. × face, inches	24 × 10	24 × 10	24 × 10	28 × 12	28 × 12	28 × 12	36 × 14	36 × 14	36 × 14	40 × 15	40 × 15	40 × 15
Speed of pulley, R.P.M.	725	725	725	600	600	600	525	525	525	500	500	500
Net weight, lbs. approx.	9800	10000	10000	22900	24200	24200	42000	44300	44300	93250	95500	95500
Shipping weight, lbs. approx.	10000	10200	10200	23500	24700	24700	42700	45000	45000	94400	96700	96700
Cubic contents, cu. ft.	160	160	160	300	300	300	600	600	600	1800	1800	1500
Code Word	Yacht	Yak	Yearning	Yaud	Yuga	Yam	Yaupon	Yule	Yawl	Yarn	Yuman	Yap

Note 1. The horsepower required varies with the size of finished product, the capacity and the hardness of the rock. Wet sticky materials, excessive fines in feed and close discharge openings will tend to increase the horsepower requirements.



24", 36" and 48" Gyraspheres

66" Gyraspheres

Number and Style of Gyrasphere	24S	248S	24FC	36S	36FC	367S	48S	48FC	489S	66S	66FC	6614S
Dimension A, inches	50 $\frac{1}{2}$	50 $\frac{1}{2}$	50 $\frac{1}{2}$	67 $\frac{1}{2}$	67 $\frac{1}{2}$	67 $\frac{1}{2}$	86 $\frac{1}{2}$	86 $\frac{1}{2}$	86 $\frac{1}{2}$	122	122	122
Dimension B, "	26 $\frac{1}{2}$	26 $\frac{1}{2}$	26 $\frac{1}{2}$	44 $\frac{1}{2}$	44 $\frac{1}{2}$	44 $\frac{1}{2}$	55 $\frac{1}{2}$	55 $\frac{1}{2}$	55 $\frac{1}{2}$	63 $\frac{1}{2}$	63 $\frac{1}{2}$	63 $\frac{1}{2}$
Dimension C, "	49 $\frac{1}{2}$	49 $\frac{1}{2}$	49 $\frac{1}{2}$	59 $\frac{1}{2}$	59 $\frac{1}{2}$	59 $\frac{1}{2}$	67 $\frac{1}{2}$	67 $\frac{1}{2}$	67 $\frac{1}{2}$	84 $\frac{1}{2}$	84 $\frac{1}{2}$	84 $\frac{1}{2}$
Dimension D, "	11	11	11	15 $\frac{1}{2}$	15 $\frac{1}{2}$	15 $\frac{1}{2}$	18 $\frac{1}{2}$	18 $\frac{1}{2}$	18 $\frac{1}{2}$	22 $\frac{1}{2}$	22 $\frac{1}{2}$	22 $\frac{1}{2}$
Dimension E, "	42	42	42	52 $\frac{1}{2}$	52 $\frac{1}{2}$	52 $\frac{1}{2}$	63 $\frac{1}{2}$	63 $\frac{1}{2}$	63 $\frac{1}{2}$	75 $\frac{1}{2}$	75 $\frac{1}{2}$	75 $\frac{1}{2}$
Dimension F, "	35	35	35	47	47	47	61	61	61	85	85	85
Dimension H, "	47	47	47	62 $\frac{1}{2}$	62 $\frac{1}{2}$	62 $\frac{1}{2}$	81	81	81	109 $\frac{1}{2}$	109 $\frac{1}{2}$	109 $\frac{1}{2}$
Dimension K, "	77	77	77	105	105	105	130	130	130	168	168	168

All dimensions are subject to confirmation