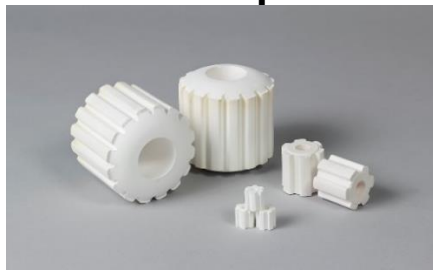


## CHRISTY CATA-COGS™ “Low Pressure Drop” Fluted Rings



Christy's CATA-COGS™ are specialty hold down and support media which can dramatically reduce pressure drop in reactors such as Water Shift Converters due to their significantly increased void fraction when compared to ceramic or alumina balls. CATA-COGS™ are available in both our 99% alumina and ceramic formulations.

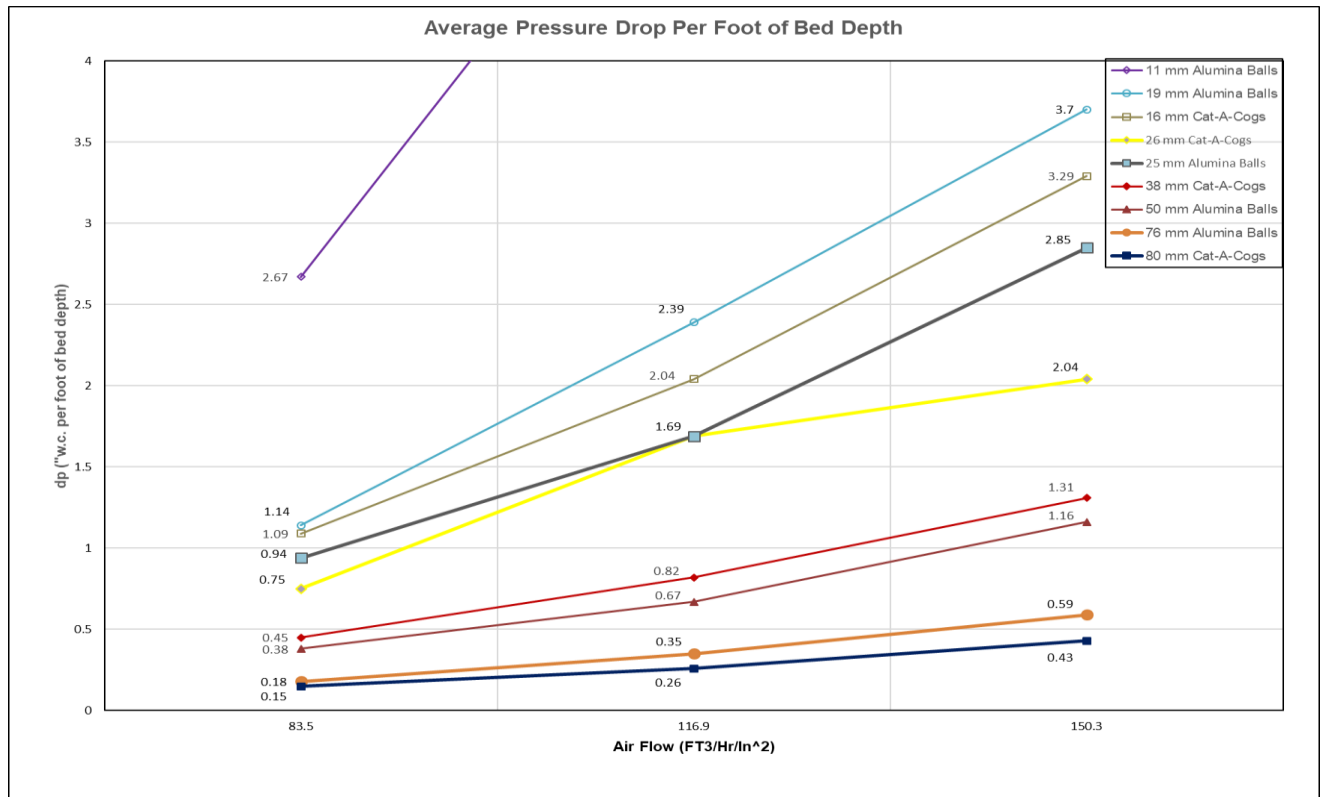
### 99% Alumina CATA-COGS™

TYPICAL CHEMICAL ANALYSIS (wt. %)	
Alumina, Al <sub>2</sub> O <sub>3</sub>	> 99.0
Silica, SiO <sub>2</sub>	< 0.25
Iron, Fe <sub>2</sub> O <sub>3</sub>	< 0.2
Titania, TiO <sub>2</sub>	< 0.5
Calcia, CaO	< 0.2
Soda, Na <sub>2</sub> O	< 0.5
TYPICAL PHYSICAL PROPERTIES	
Avg Radial Crush Strength, lb-f (kg-f) 16 x 16 mm	500 (227)
26 x 26 mm	>2000 (907)
38 x 38 mm	>2000 (907)
76 x 76 mm	>3000 (1361)
85 x 85 mm	>3000 (1361)
Loose Fill Density, lbs/ft <sup>3</sup> (kg/m <sup>3</sup> ) 16 x 16 mm	95 (1522)
26 x 26 mm	97 (1554)
38 x 38 mm	100 (1602)
76 x 76 mm	104 (1666)
85 X 85 mm	80 (1281)
Maximum Use Temperature, °F (°C)	3272 (1800)
Water Absorption (Typical), wt%	1

### Ceramic CATA-COGS™

TYPICAL CHEMICAL ANALYSIS (wt. %)	
Alumina, Al <sub>2</sub> O <sub>3</sub>	18 - 28
Silica, SiO <sub>2</sub>	63 -75
Titania, TiO <sub>2</sub>	< 2
Calcia, CaO	< 1
Alkalies, Na <sub>2</sub> O	1 - 4
Leachable Iron	<0.001
TYPICAL PHYSICAL PROPERTIES	
Avg Radial Crush Strength, lb-f (kg-f) 16 x 16 mm	300 (136)
38 x 38 mm	1200 (544)
85 x 85 mm	2500 (1133)
Loose Fill Density, lbs/ft <sup>3</sup> (kg/m <sup>3</sup> ) 16 x 16 mm	55 (881)
38 x 38 mm	55 (881)
85 X 85 mm	60 (961)
Maximum Use Temperature, °F (°C)	1800 (982)
Water Absorption (Typical), wt%	1

## CHRISTY CATA-COGS™



The above data are based on controlled testing. Individual test results may vary; therefore these data may not be used for specification purposes. **NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, ARE MADE REGARDING THE DATA OR PRODUCTS SHOWN ABOVE.**  
 Revised: February 26, 2019