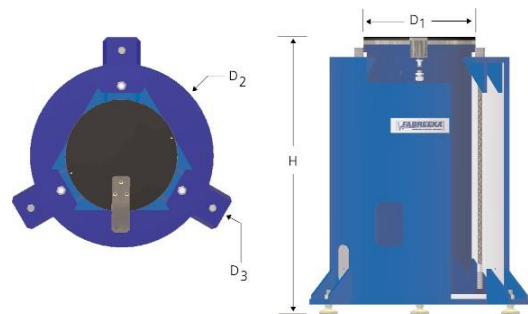


## Isolation Characteristics/Specifications Pendulum Isolators

Natural Frequency	(-15/-19)	(-36)	(-52/-60)
Vertical	1.3 - 1.5 Hz	0.9 - 1.0 Hz	0.7 - 0.9 Hz
Horizontal	1.3 - 1.5 Hz	0.6 - 0.7 Hz	0.4 - 0.5 Hz

Damping			
Vertical (Adj)	6% - 20%	6% - 20%	6% - 20%
Horizontal (Adj)	3% - 6%	3% - 6%	3% - 6%

## Isolator Dimensions\*



\*Verify actual dimensions with Fabreeka®. Dimensions subject to change.

Type	D1	D2	H		D3	Max Lift in Capacity	
			Deflated	Max. Lift		lbs	Kg
PAL 21-15P	7.87 in 200 mm	11.00 in 279 mm	15.00 in 381 mm	15.40 in 391 mm	N/A	2,100	950
PAL 55-15P	10.25 in 260 mm	18.50 in 470 mm	15.00 in 381 mm	15.40 in 391 mm	23.75 in 603 mm	5,500	2,500
PAL 55-52P	10.25 in 260 mm	18.50 in 470 mm	52.00 in 1321 mm	52.40 in 1331 mm	23.75 in 603 mm	5,500	2,500
PAL 75-19P	11.63 in 295 mm	14.88 in 378 mm	19.00 in 483 mm	19.40 in 493 mm	N/A	7,500	3,400
PAL 133-36P	15.00 in 380 mm	24.50 in 622 mm	36.00 in 914 mm	36.40 in 924 mm	31.50 in 800 mm	3,300	6,030
PAL 133-60P	15.00 in 380 mm	24.50 in 622 mm	60.00 in 1524 mm	60.40 in 1534 mm	31.50 in 800 mm	3,300	6,030
PAL 255-36P	20.87 in 530 mm	30.50 in 775 mm	36.00 in 914 mm	36.45 in 926 mm	37.50 in 953 mm	5,500	11,560
PAL 255-60P	20.87 in 530 mm	30.50 in 775 mm	60.00 in 1524 mm	60.45 in 1536 mm	37.50 in 953 mm	5,500	11,560
PAL 416-36P	25.20 in 640 mm	36.50 in 927 mm	36.00 in 914 mm	36.45 in 926 mm	45.00 in 1143 mm	1,600	18,870
PAL 416-60P	25.20 in 640 mm	36.50 in 927 mm	60.00 in 1524 mm	60.45 in 1536 mm	45.00 in 1143 mm	1,600	18,870

<sup>1</sup>At maximum working pressure of 100 psi (7 bar)

## Pendulum Isolators

Specially designed diaphragms may be used to lower the horizontal natural frequency of an isolator to approach 1.5 Hz. Alternatively, natural frequencies as low as 0.4 Hz can be achieved using pendulums. The pendulum natural frequency is given by Eq 6, where L is equal to the length of the pendulum.

$$F_n = \frac{1}{2\pi} \sqrt{\frac{g}{L}} \quad \text{Eq 6}$$

At right, PAL 133-36P pneumatic isolators support a 80,000 lb reaction mass for a large NMR magnet. The vertical and horizontal natural frequencies are 1.0 Hz and 0.7 Hz.

