

## Differences Between GFP and GFP-55 (Graphite Fiber Reinforced PTFE)

Bal Seal has created a replacement product known as GFP-55.

RECIPROCATING TEST CONDITIONS	GFP	GFP-55
Pressure	6000 psi (422 kg/cm <sup>2</sup> )	6000 psi (422 kg/cm <sup>2</sup> )
Piston Material	Sapphire	Sapphire
Speed	6 feet/min	6 feet/min
Media	Water	Water
Seal Life before Failure	840 hours	1250 hours

Bal Seal Tests using Gilson 321 HPLC Reciprocating Pumps, (Ref QRDP 1001).

MECHANICAL PROPERTIES	GFP	GFP-55
Tensile strength per ASTM D 638	2,530 psi average (178 kg/cm <sup>2</sup> )	2,750 psi average (193 kg/cm <sup>2</sup> )
Elongation Per ASTM D 638	225% average	210% average

Results represent minimum of 20 data points.

K Wear Factor in Air	GFP	GFP-55
Bal Seal MT-56 (Modified Thrust Washer)	$66 \times 10^{-10} \frac{\text{in}^3 - \text{min}}{\text{ft} - \text{lbs} - \text{hr}}$	$74 \times 10^{-10} \frac{\text{in}^3 - \text{min}}{\text{ft} - \text{lbs} - \text{hr}}$

Test Conditions: Speed = 75 fpm (0.38 m/s), Pressure =667 psi (47 kg/cm<sup>2</sup>)

It is essential that the customer run evaluation testing under actual service conditions with a sufficient safety factor to determine if the proposed, supplied or purchased Bal Seal Engineering products are suitable for the intended purpose and to confirm expected results. Bal Seal Engineering shall not be liable for any loss or damage of any kind or nature that may result from the use of, reference to, or reliance on the information contained herein, including but not limited to consequential, special (including loss of profits) direct, indirect, incidental or similar damages, even if Bal Seal Engineering has been advised of the possibility of such damages.  
© 2012 Bal Seal Engineering. M59 (RR 623-66) (Rev NC)

U.S. Address 19650 Pauling Foothill Ranch, CA 92610-2610 • Telephone: (949) 460-2100• Fax: (949) 460-2300  
BV Address: VIDA Building, 1st Floor • Kabelweg 57 • 1014 BA Amsterdam • The Netherlands • Telephone: 31 20 638 65 23 • Fax: 31 20 625 60 18  
Bal Seal Engineering is certified to ISO 9001 | [www.balseal.com](http://www.balseal.com)