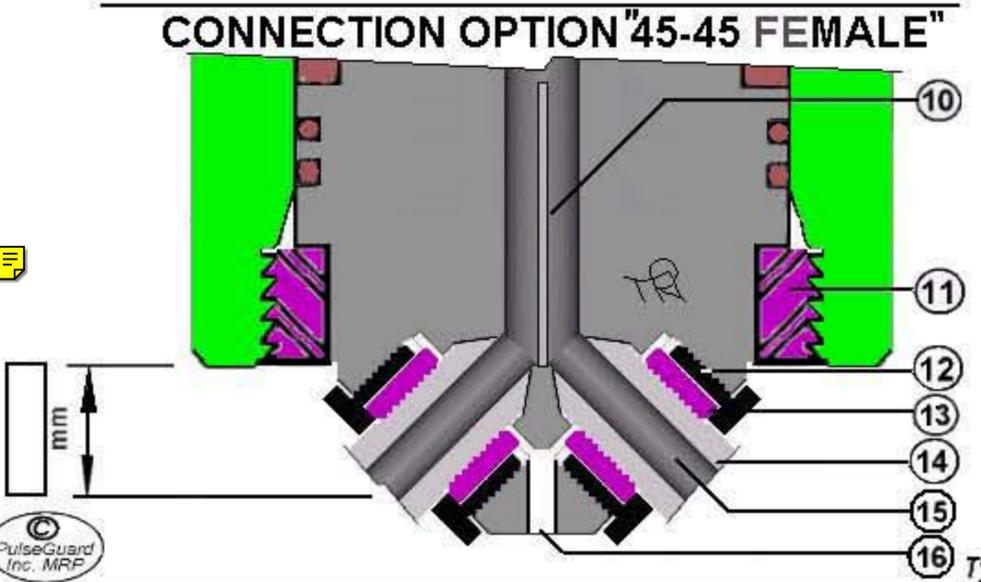
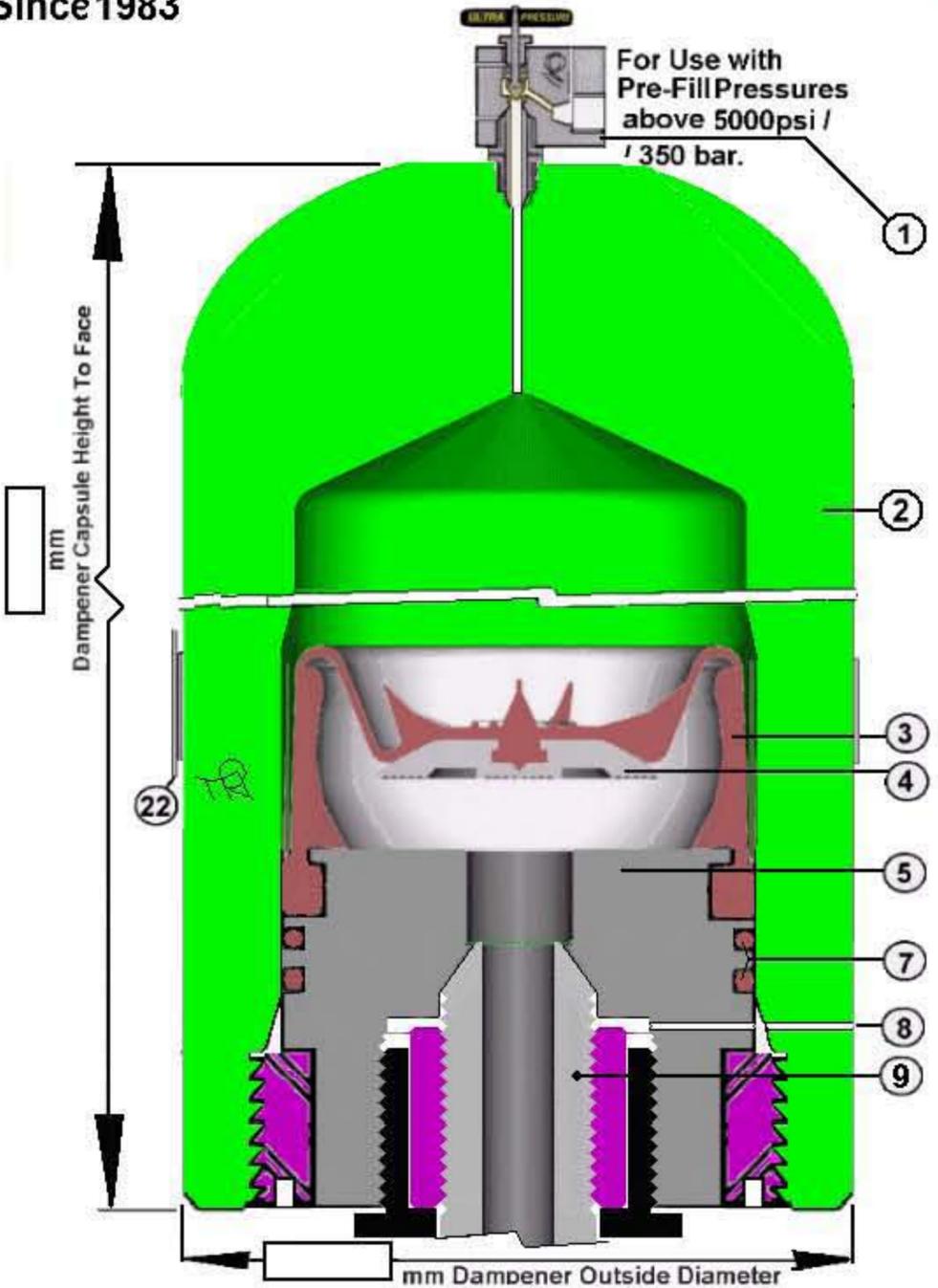


# "PIPEHUGGER UP" by PULSEGUARD

Since 1983

## ULTRA PRESSURE Series Pulsation Damper, & Options

316L, or A20, Tit2, Hasteloy etc wetted metal parts + EP, Nitrile, Hypalon, Fluorel etc bladder.



We are able to warrant safety when following our own 30 year proven methods :-  
 We can not accept end user statement that design pressure is working presure

Where Allowable Working Stress = S  
 Design Pressure P = MAWP + 10% + 15%  
 Joint Efficiency = E RV RVAcc

RV is for relief safety valve set pressure  
 RVacc for relief valve accumulation pressure

E is 1.0 No Welds, or radiographed.  
 E is 0.7 Welded but not radiographed.

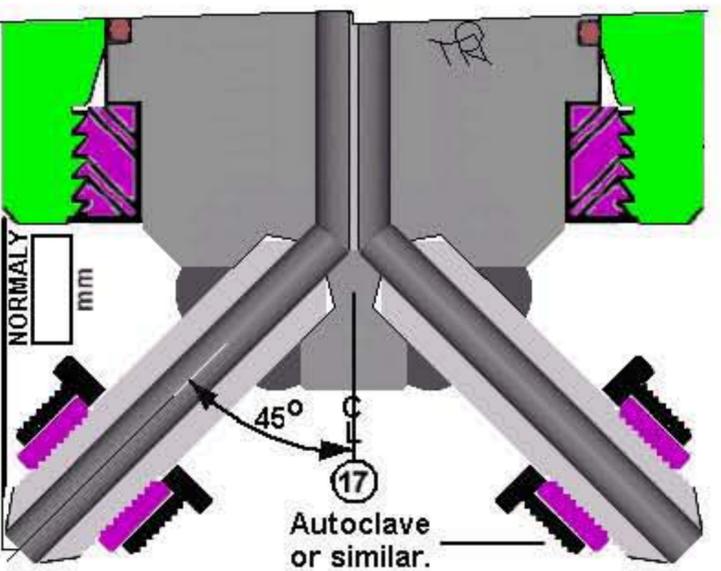
$$T = \frac{\text{Design Pressure} \times \text{Radius Internal}}{S(\text{From Pt. II D 1992}) \times E - (0.6P)}$$

The ASME have increased allowable working stresses, enabling cheaper less safe vessels, so that their "U" certification business can be expanded against international competition, and the income of ASME International increased. In any event Div. 1 is for up to 3000 psi service.

Concurrently European Pressure Equipment Directive, the "DEP" enforced by criminal law, has no "SAFETY COEFFICIENTS" in its "ESRs" -Essential Safety Requirements- approved for soft cyclic duty snubber dampers, whilst also allowing ductility as low as 14%.  
 These codes prevent code dampers being waranted safely suitable for purpose.

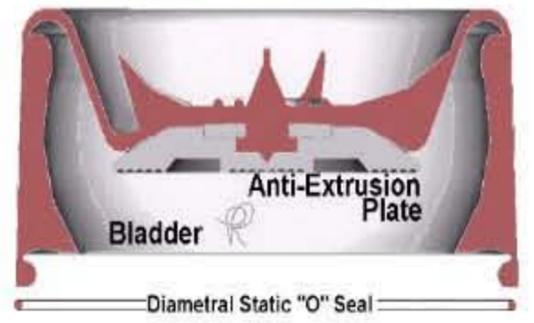
### CONNECTION OPTION "45-45 MALE"

TechLock / GL / SL / etc HUBS also available



**PED CONFORMITY**  
 DECLARATION as required by the PED  
 ESSENTIAL SAFETY REQUIREMENTS  
 "ESRs" state at 2 Design, under 2.1 the use of "SAFETY COEFFICIENTS".  
 As Euro Norm 5500, and harmonised pressure vessel code 13445 do not have proven safety coefficients to apply, NO ONE complies with ESRs.  
 Above statement applies to us also.  
 Any documents of conformity issued particularly to ISO 9001-2000 holders by "Notified Bodies", must be a fraud.  
 ALL Dampers are NON-CONFORMING

A full Spares Kit Consists of : Pt Nbr. SK/-----



22	Stainless Data Plate on stainless banding.	IDENTIFICATION / TRACEABILITY
18		
17	60° Male Connections Coned are easier to refurbish, but make seal & bag service harder.	
16	Escape hole, leakage overload prevention.	
15	45°x45° to Center Line - Connection Orientation	
14	60° Cone Ended Heavy Wall tube	
13	Left Hand Threaded Tube Ring	
12	Hollow Nut	
11	Buttress Thread Ring	
10	Twin Port Thru-Flow "Interceptor" with weir plate	
9	Single Connection, Autoclave Type.	
8	Escape hole, leakage overload prevention.	
7	"Base Plug" - static diametral seals "O" ring	
5	End Closure / "base plug" - liquid contact part.	
4	Anti Extrusion Plate	
3	Liquid Bladder "D--- y---" (mm Dia x mm high)	
2	Body From Solid Billet	
1	Nitrogen Pre-Fill Valve - Customer choice.	

Item Nbr	Description / function	Internal "Heat/Cast No" PURCHASE No
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Scale : Please do not print without "MAINTAIN ASPECT RATIO" on, Use A3 paper on A3 paper. Landscape 420mm wide  
 Part Nbr. / Drawing Ref : \_\_\_\_\_ Date \_\_\_\_\_ th 200-- Rev Nbr 1  
 Phr/ / \_il\_ p/D \_/"O"/316L- \_ + PB \_"x\_" M NPT 316L

**PulseGuard** <http://www.PulseGuard.com>  
**PulseGuard für Deutschland** <http://www.PulseGuard.co.uk>  
**PulseGuard, de langue Francaise** [www.pulsationdaempfer.com](http://www.pulsationdaempfer.com)  
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