

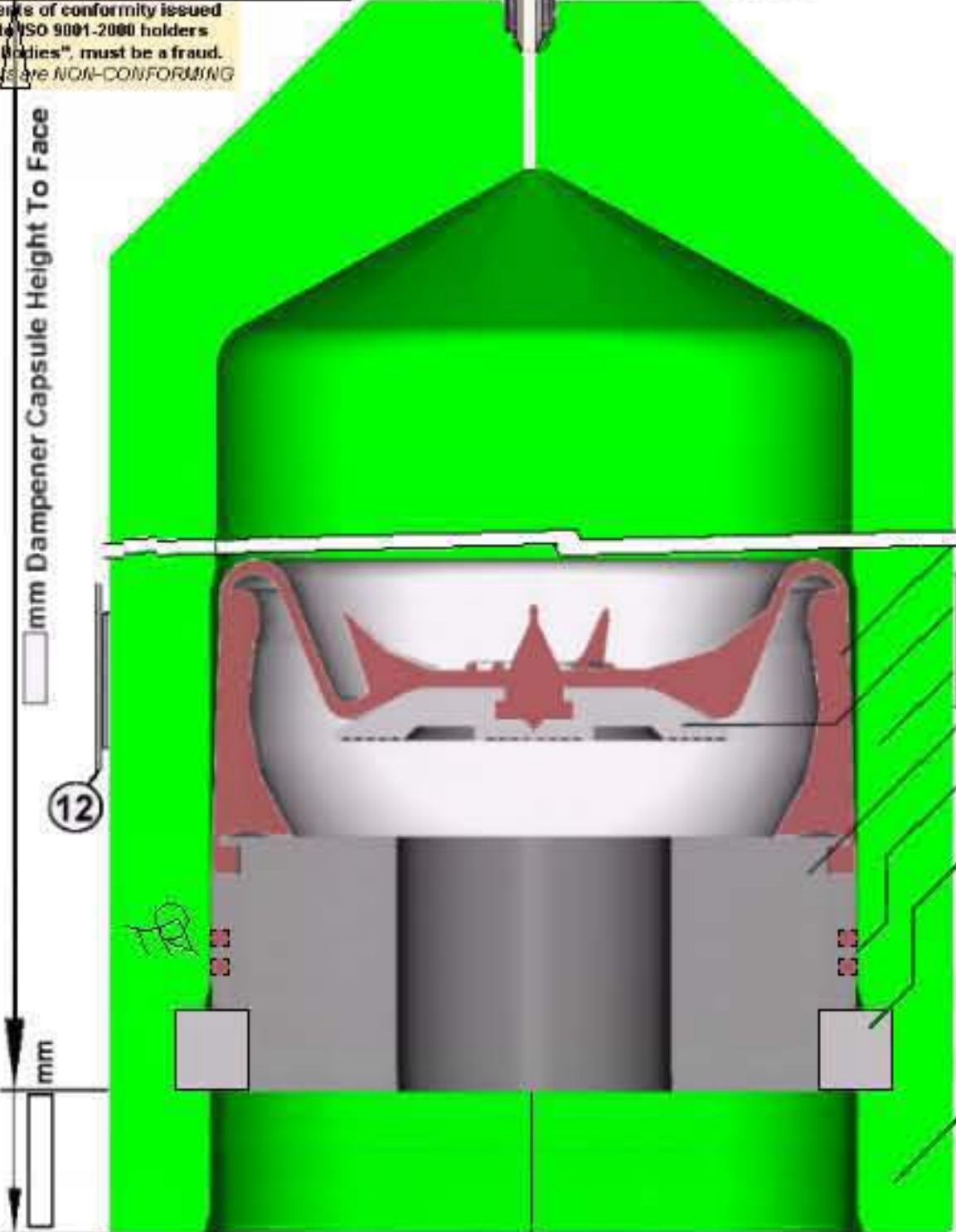
# "PIPEHUGGER HP" by PULSEGUARD & Typical "Phr" Series Pulsation Damper, with options.

Since 1980

**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

ULTRA PRESSURE

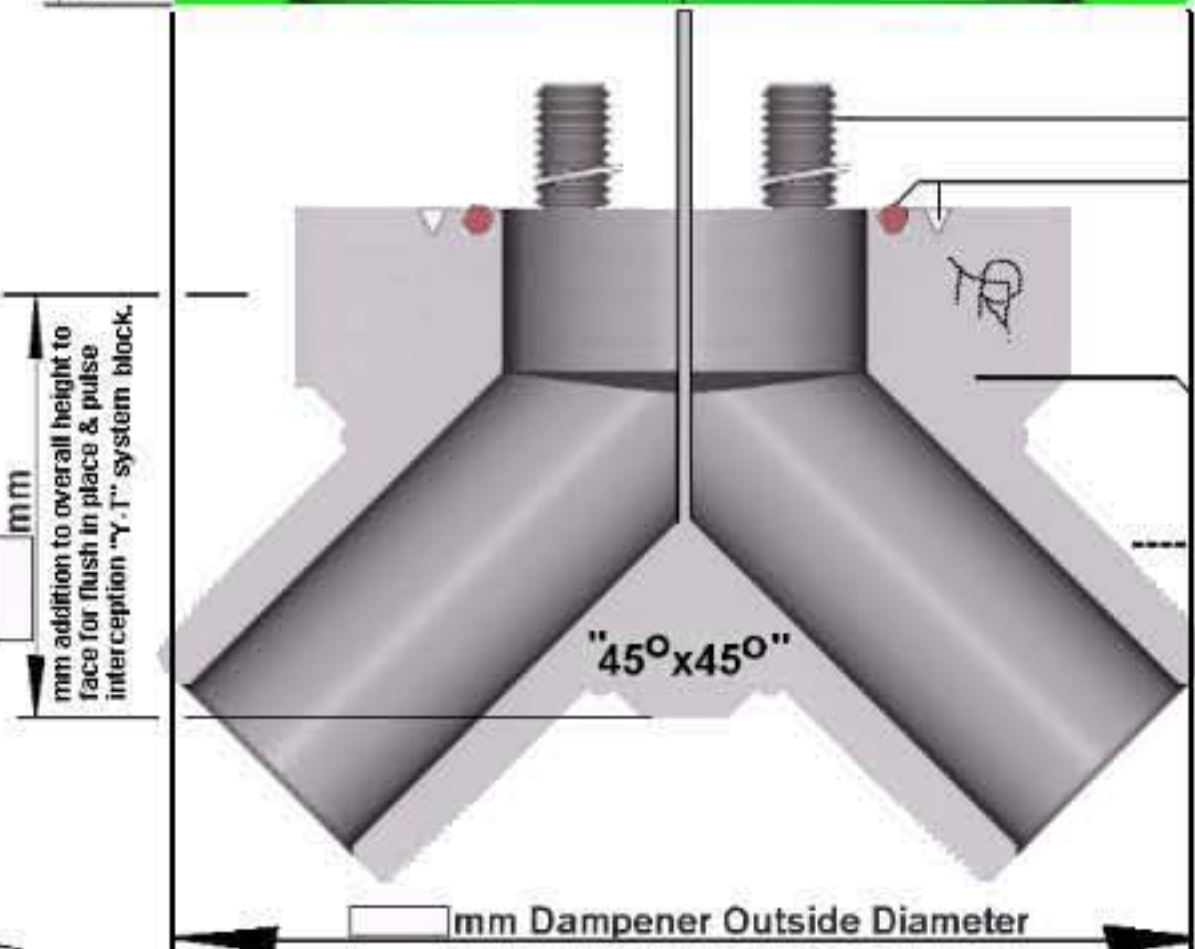
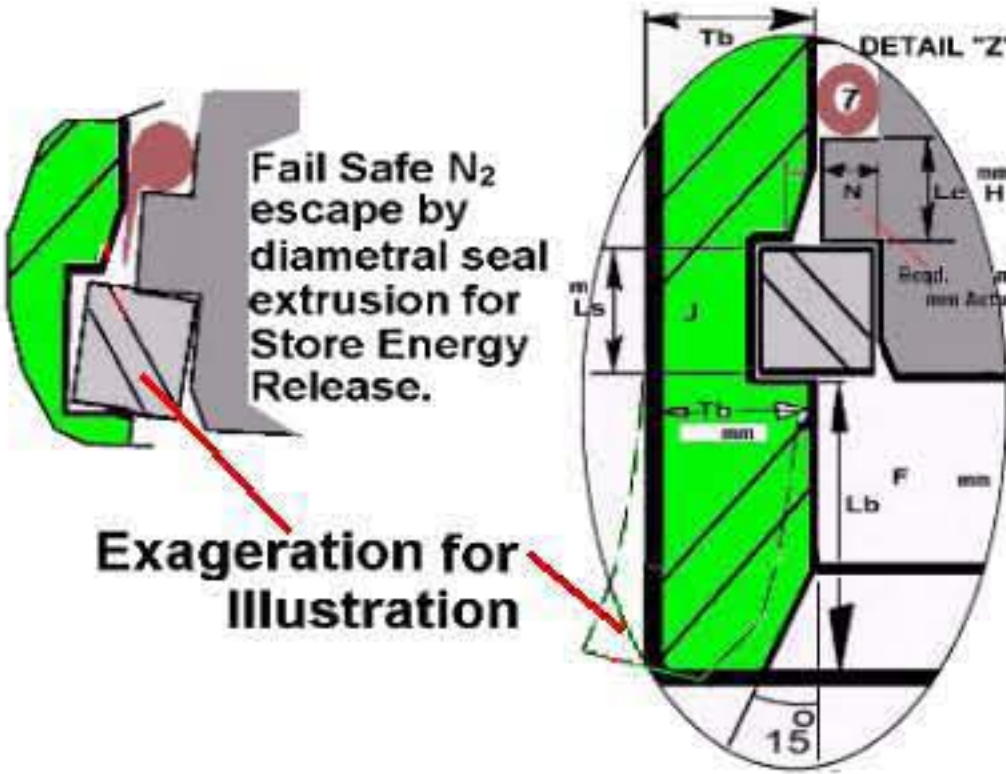
For Use with  
 Pre-Fill Pressures  
 above 5000psi /  
 / 350 bar.



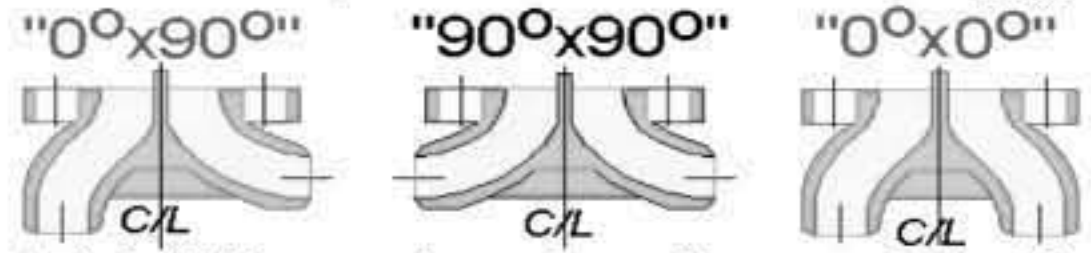
We are able to warrant safety when following our own 30 year proven methods :-  
 We can not accept end user statement that design pressure is working pressure  
 Where Allowable Working Stress = S  
 Design Pressure P = MAWP + 10% + 15%  
 Joint Efficiency = E RV RVAcc  
 RV is for relief safety valve 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.  
 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 warranted safely suitable for purpose.



**PulseGuard "Y-T" block**, best flanging to system. In place of System "T", better flushing, & intercepts Pressure wave pulsation. For 37.5° butt weld only.



Called - Weld connection angles to this system fitting C/L  
**PulseGuard "Top-Hat"**  
 Allows flushing of pipe "crud" and pipe hydro-test before damper bolt on. May also replace damper during service.

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



Item Nbr	Description / function	Internal "Heat/Cast No" PURCHASE No
22	Stainless Data Plate on stainless banding.	IDENTIFICATION / TRACEABILITY
19		
18		
17		
16		
15	Stainless Data Plate on stainless banding.	
14	"PB 45°x45°" machined from billet	
13	NOT SHOWN Retaining Plate used with small bases on large dampners	
12	Face "O" seal with escapement groove for any leakage pressure build up.	
11	Socket Head Cap Screws, 4 Places. Diam. Lgth UH	
10	Full Diameter Opening, ease of service.	
8	Lock Ring, tamper-proof, 3 segments of circle.	
7	"Base Plug" - static diametral seals "O" ring	
6	End Closure / "base plug" - liquid contact part.	
5	Body From Solid Billet	
4	Anti Extrusion Plate	
3	Liquid Bladder "D--- y---" (mm Dia x mm high)	
2	2:1 SE Head	
1	Nitrogen Pre-Fill Valve 9019c type,	

Item Description / function Internal "Heat/Cast No" PURCHASE No  
 ↑ BILL OF MATERIALS ↓

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/ / \_/ \_/ \_/ p/D \_/ "O"/316L- \_ + PB \_ "x" M NPT 316L

**PulseGuard** <http://www.PulseGuard.com>  
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