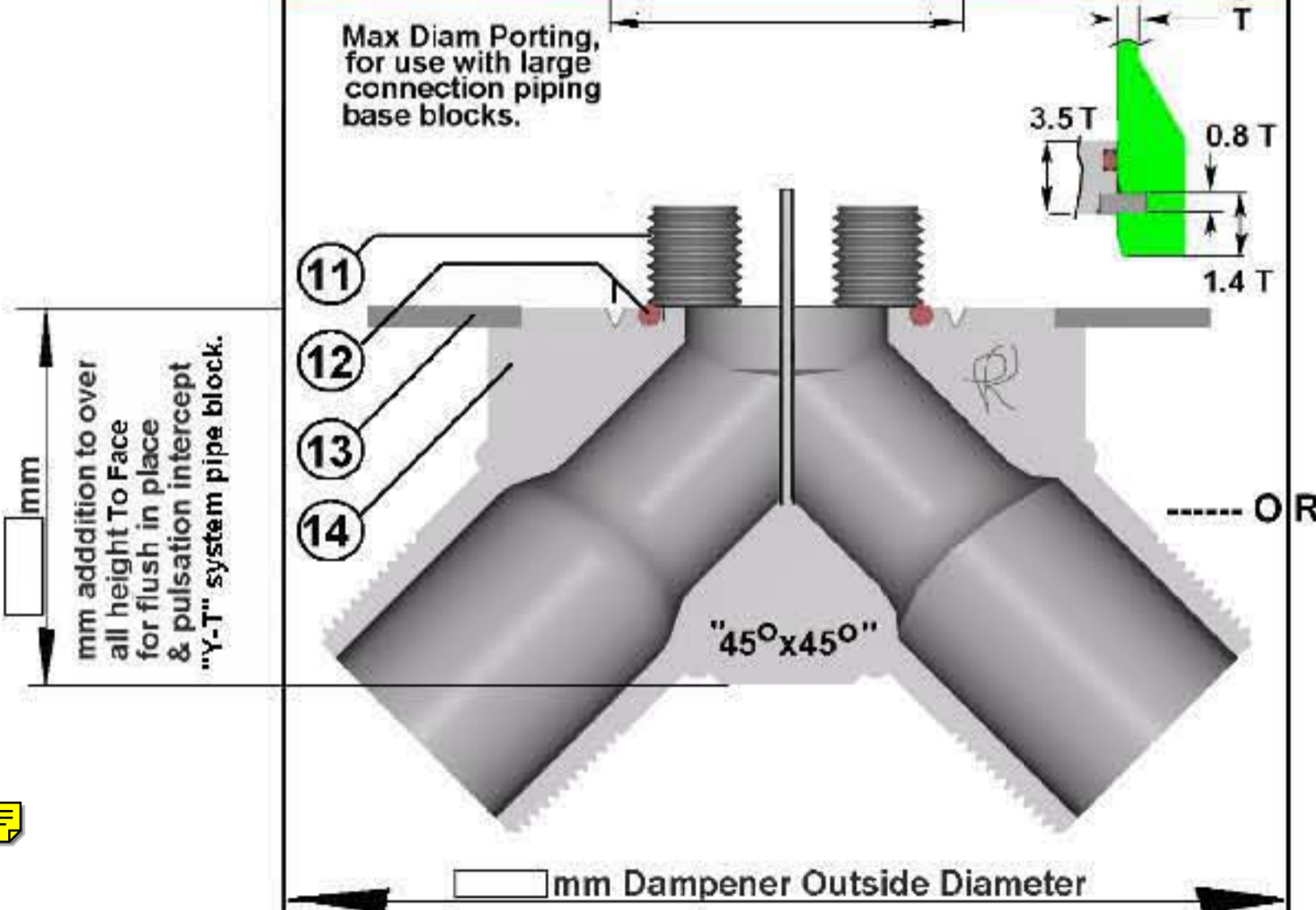
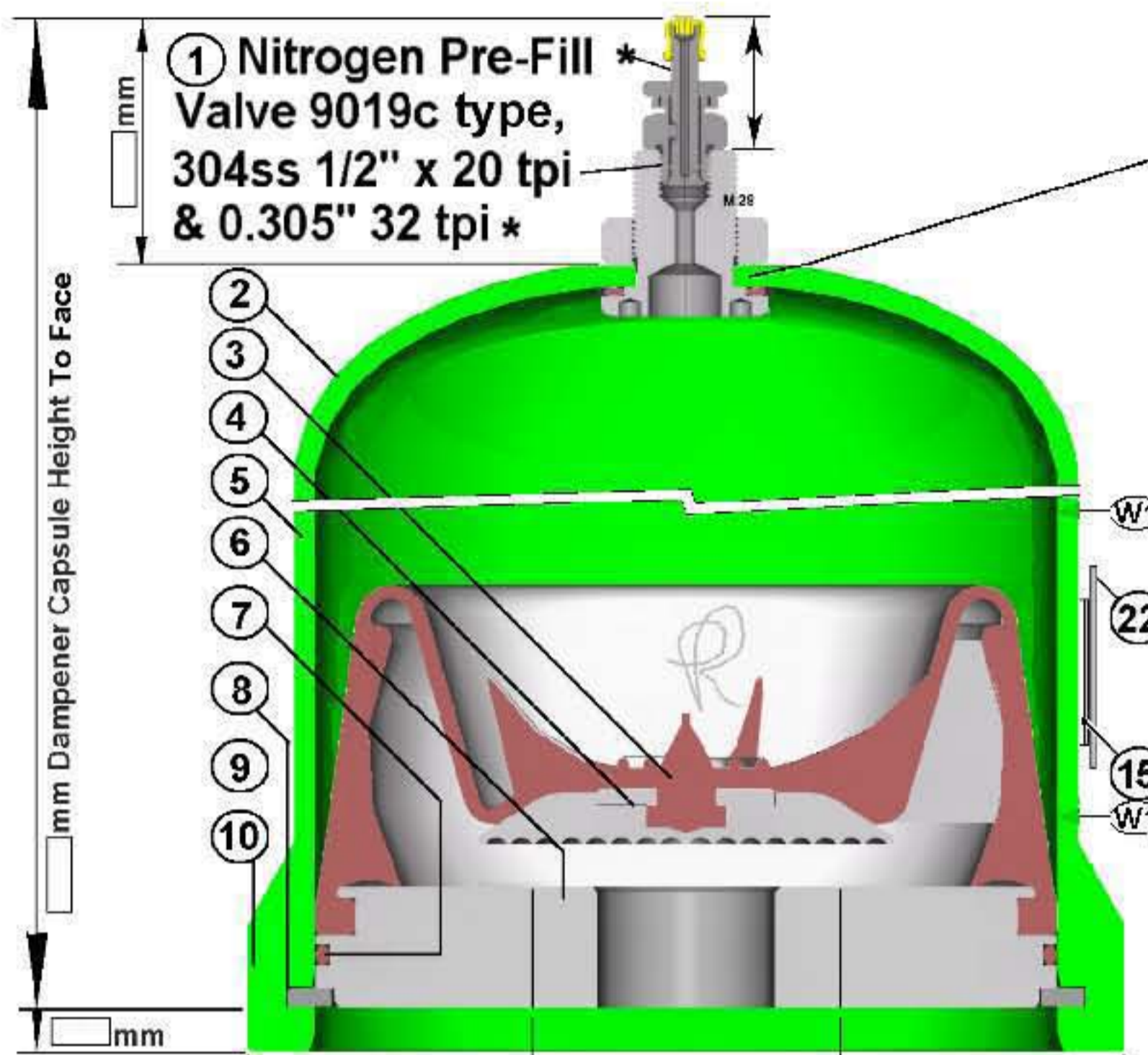


Pulsation Damper Bladder liquid inside Stainless wetted Low Pressure

"PIPEHUGGER LP" by PULSEGUARD Typical "Peg" Series Pulsation Damper, with options. Since 1978 316L, or A20, Tit2, Hasteloy etc wetted metal parts + EP, Nitrile, Hypalon, Fluorel etc bladder.

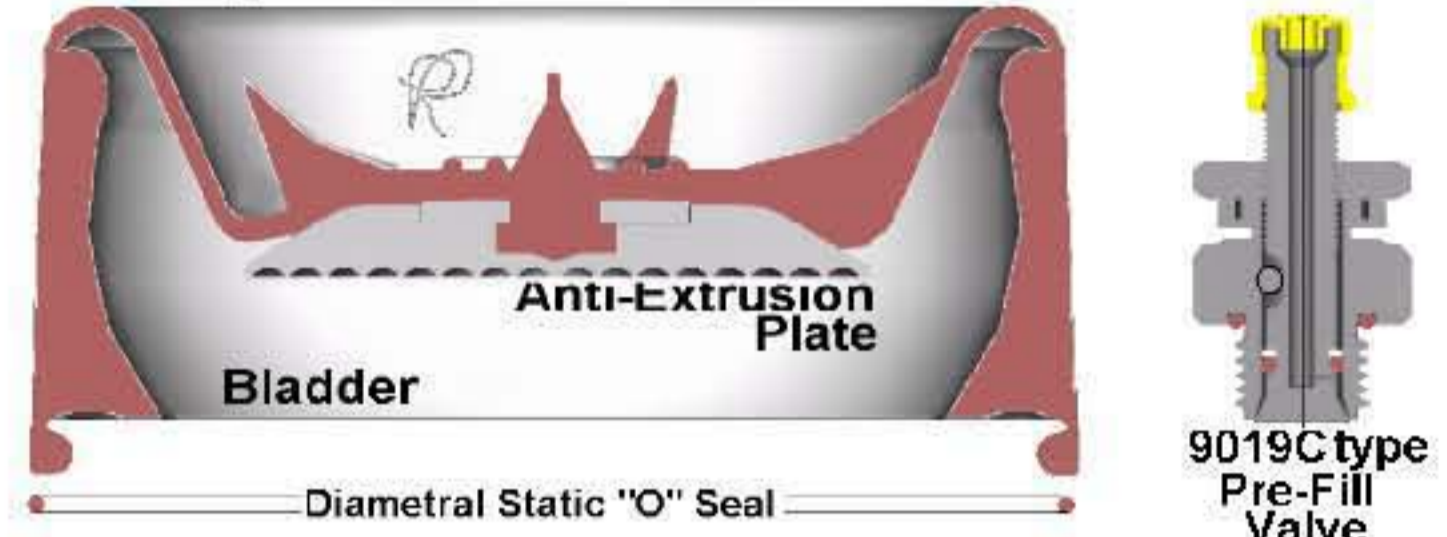


PT Nbr. 009-R (1a)
 Gas overload FAIL SAFETY
 Stored energy release.
 Not permitted by unsafe codes :-
 PED en5500 or 13445
 and ASME VIII Div I

DECLARATION
 as required by PED
 Mandatory Essential Safety
 Requirement "ESR" - to use
 "SAFETY COEFFICIENTS"
 is not complied with because
 neither EN 5500 nor EN 13445
 have Safety Coefficients.

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

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

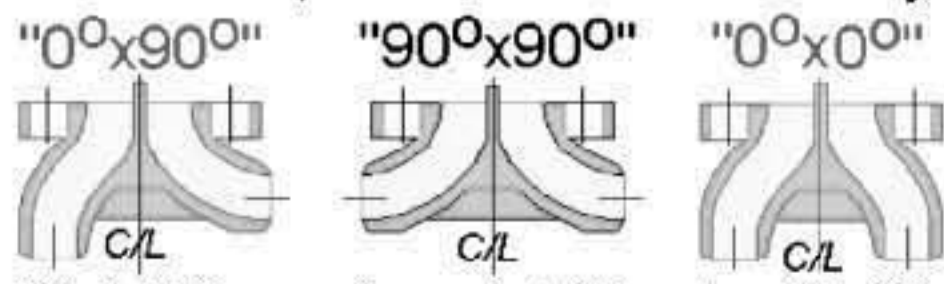


W1	GTAW Argon Purge Full Penetration Root & Fill /309ss	IDENTIFICATION / TRACEABILITY
22	Stainless Data Plate on stainless banding.	
18		
17		
16		
15	Stainless banding.	
14	"PB 45°x45°" machined from billet	
13	Retaining Plate used with small bases on large dampners	
12	Face "O" seal with escapement groove for any leakage pressure build up.	
11	Socket Head Cap Screws, 4 Places. Diam. Lgth UH	
10	Open Mouth "Skirt" from pipe.	
8	Lock Ring, tamper-proof	
7	"Base Plug" - static diametral seal "O" ring	
6	End Closure / "base plug" - liquid contact part.	
5	Seamless Shell Body Tube	
4	Anti Extrusion Plate	
3	Liquid Bladder "D--- y---" (mm Dia x mm high)	
2	2:1 SE Head	
1a	PT Nbr. 009-R Fail Safe Depressurization	
1	Nitrogen Pre-Fill Valve 9019c type,	

Item Nbr	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
 Peg / / ___ / ___ p/D ___ / "O"/316L- ___ + PB ___ x ___ M NPT 316L

----- O R ----- 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.

PulseGuard <http://www.PulseGuard.com>
PulseGuard für Deutschland <http://www.PulseGuard.co.uk>
PulseGuard, de langue Francaise www.pulsationdaempfer.com
PulseGuard, en Espanol/ sud Amerique amortiguador-de-pulsaciones.com
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 UK --44(0)161-480-9625 USA ---1910-270-2737