

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

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

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

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

As the ASME have increased allowable working stress, enabling cheaper less safe vessels, so "U" certification business can be expanded competitively, and hence ASME income; and concurrently the European PED has no Safety Coefficients in its ESRs approved for cyclic duty snubber dampers, whilst allowing ductility as low as 14%, therefore we are unable to offer any suitability for purpose on "Coded" items, and must warn accordingly.

DECLARATION
 as required by
 PED Mandatory Essential
 Safety Requirement "ESR"
 - to use
 'SAFETY COEFFICIENTS'
 is not complied with
 because neither EN 5500
 EN 13445 have Safety
 Coefficients.



Typical-Water-Hammer-Alleviator-SUG.bmp

16	Data Plate	IDENTIFICATION / TRACEABILITY
15	Mounting Lugs	
14	Closure / manway , bladder loading	
12	Vessel open end flange	
11	Closure bolting	
10	Perforated cone	
9	Bladder	
8	Vessel shell cylinder	
7	Alternate to position 2 for pressure Gage	
6	Bladder small end anchor ,for tensioning.	
5	Lock nuts for bladder small end anchor	
4	2:1 S.E. Head	
3	Optional to position 2 air / nitrogen inlet	
2	bladder permeation / leakage detection / PH , or conductivity sensor port.	
1	Bladder installation pull through rod connection thread M 12	

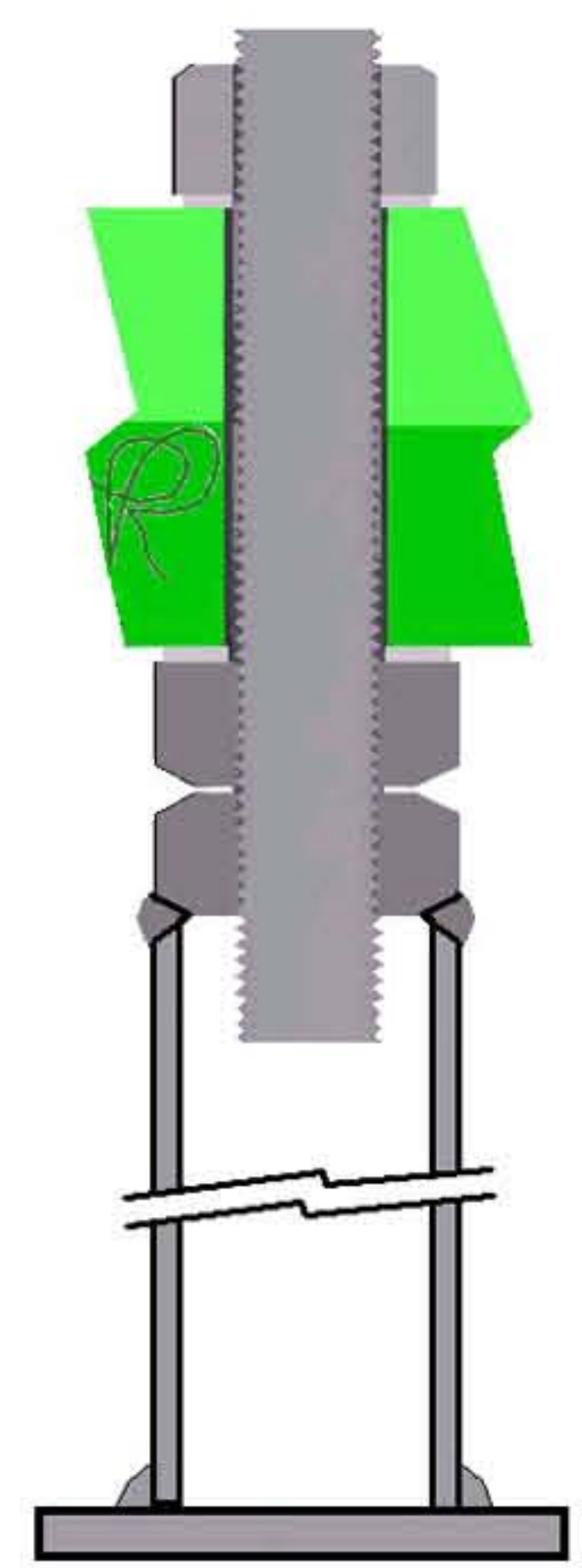
Item Nbr	Description / function	Internal "Heat/Cast No" PURCHASE No
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↑ BILL OF MATERIALS ↓

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 ▲

Sug / _____ Lt./ _____ bar/ _____ y _____ "O"/316L- _____ (eg, DN300 PN 16 or 12" 150#) 316L



Option, 4 Pipe Legs

- SHOCKGUARD** <http://www.shockguard.co.uk>
- SHOCKGUARD** <http://www.shock-guard.com>
- SHOCKGUARD** Waermeausdehnung-Kompensator. www.waermeausdehnung.com
- SHOCKGUARD** Druckschlagverhinderer www.schockabsorber.com
- SHOCKGUARD** Rohrleitungsschockabsorber
- SHOCKGUARD** suppressors & arrestors www.ShockGuard.us
- SHOCKGUARD** line shock alleviators Shock-alleviators.co.uk
- SHOCKGUARD** for pump start-up surge, Surge-alleviators.com
- SHOCKGUARD** noise caused by rapid valve closure www.water-hammer.com

ShockGuard is the USA registered trade mark of ShockGuard US Div.
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