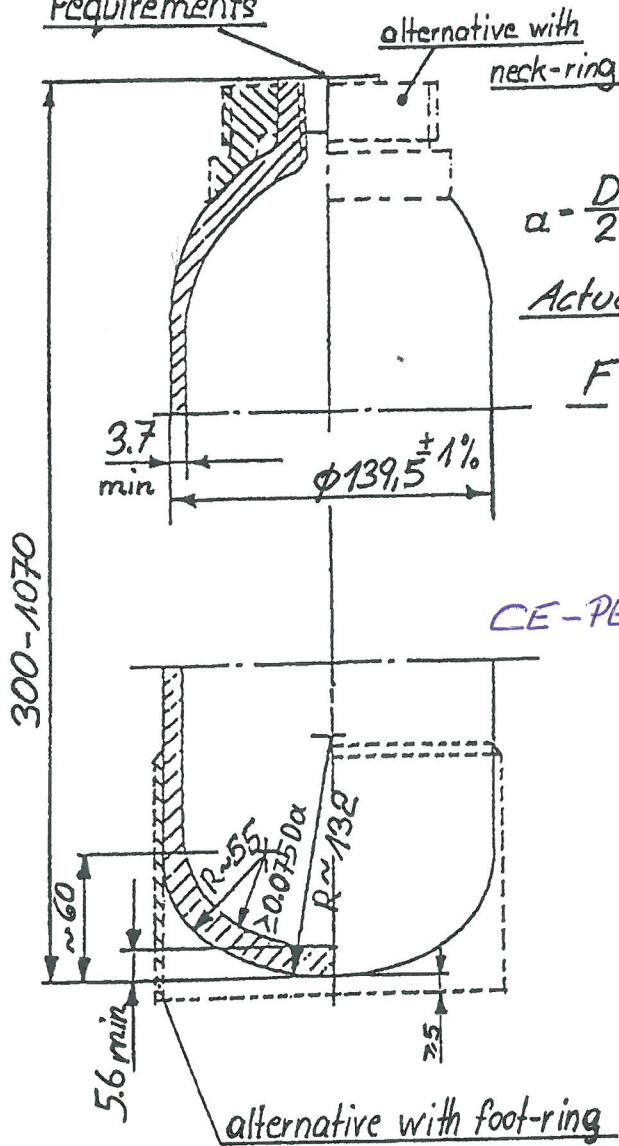


Threaded to customer's requirements



$$\alpha = \frac{D}{2} \left[1 - \sqrt{\frac{10 \cdot F \cdot Re - \sqrt{3} \cdot Ph}{10 \cdot F \cdot Re}} \right] = 3,69 \text{ mm}$$

Actual guaranteed minimum: 3,7 mm

$$F = \frac{0,65}{(Re/Rg)} = \frac{0,65}{(1044/1160)} = 0,722$$

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2015/10/22



CE-PED-B-WCA005-14-AUT

H. ZÖHREB
Surveyor
Bureau Veritas - Vienna



29/12/2004

+) Permanent and liquefied gases
(except H₂, CO and mixtures thereof)

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Worthington Cylinders GmbH

A-3291 Kienberg b. Gaming, Austria

Specification EN1964-2 / ISO9809-2	Material CrMo-Steel "VCL"	Yield point (Re) min. 1044 N/mm ²			
Type R-EXTRA-5	Heat treatment quenched and tempered	U.T.S. (Rg) min. 1160-1280 N/mm ²			
Name of gas (+)	Chemical composition	Elongation min. 12 % (L ₀ 5,65 √S ₀)			
Water capacity 3,0 - 13,4 l	C 0,32-0,36 % S ≤ 0,010 %	Impact value 150-V (-50°C) long ≥60 J/cm ²			
Filling weight according type of gas	Mn 0,60-0,80 % Cr 0,95-1,15 %	cross - J/cm ²			
Working pressure (PS)(PW) ≤300 bar	Si 0,15 - 0,30 % Mo 0,17-0,27 %	Drawn	Amend.	Rev.1	Rev.2
Test pressure (PT)(PH) 450 bar	P ≤ 0,015 % P+S ≤ 0,020 %	Name			
Weight empty approx. 4,3 - 14,5 kg	V+Nb+Ti+B+Zr ≤ 0,15 %	Date			
Notes Manufacturer's process : from tube	Replaced by drv.no.	Checked			
Burst pressure Pb ≥ 720 bar, Yield pressure B_y ≥ 624 bar	Drawn no.	R0300-R1340 1403720			



**ATTESTATION D'EXAMEN CE DE TYPE
EC TYPE-EXAMINATION CERTIFICATE
N° CE-PED-B-WCA 005-14-AUT-revB**

BUREAU VERITAS S.A., agissant dans le cadre de sa notification (numéro d'organisme notifié 0062), atteste que le type identifié ci-après, examiné selon les prescriptions du module B de l'annexe III de la directive "Equipements sous pression" N° 97/23/CE, est conforme aux dispositions correspondantes de la directive.

BUREAU VERITAS S.A., acting within the scope of its notification (notified body number 0062), attests that the type identified hereunder has been examined against the provisions of annex III, module B, of the Pressure Equipment directive n° 97/23/EC, and found to satisfy the provisions of the directive which apply to it.

Fabricant (Nom) / Manufacturer (Name) :	Worthington Cylinders GmbH
Adresse / Address:	Beim Flaschenwerk 1, A-3291 Kienberg b. Gaming, AUSTRIA
Marque commerciale / Branding name:	
Description de l'équipement / Equipment description:	VESSEL; SEAMLESS STEEL CYLINDER (intended for Breathing Apparatus) Drawing:R0300-R1340 140 37 20
Identification du type approuvé / Identification of approved type:	Seamless Steel Cylinder Volume 6,0 litre; Dn:140,0mm; Length:520mm; PS<= 300bar; PT 450bar; TS-50/+65°C; Fluid Group:1+2 (cf. Operating Instruction PED 2004-004)
Versions couvertes par le type approuvé / Versions covered by the approved type:	Seamless Steel Cylinder Volume 3,0litre-13,4litre; Dn:140,0mm; Length: 300mm-1070mm; PS<=300bar, PT 450bar, TS-50/+65°C

La liste des parties pertinentes de la documentation technique est annexée à la présente attestation.
A list of the relevant parts of the technical documentation is annexed to this certificate.

Cette attestation, d'une durée de validité de 10 ans renouvelables sur demande, est valable jusqu'au (MM/JJ/AAAA) :
This certificate, which is valid for 10 years and renewable upon request, is valid until (MM/DD/YYYY) :
12/27/2024

La présente attestation est présumée nulle et le fabricant supportera seul les conséquences de son utilisation, en cas de modification apportée à l'équipement susceptible de remettre en cause sa conformité aux exigences essentielles de sécurité ou à ses conditions d'utilisation prévues et, de manière générale, si le fabricant ne respecte pas, notamment, l'une ou l'autre des obligations mises à sa charge par la Directive 97/23/CE du 29 mai 1997 telle que transposée dans le(s) droit(s) national(aux) applicable(s).
This certificate shall be deemed to be void and the manufacturer shall alone bear any consequences pursuant to its use, in case of modification to the equipment where this may affect conformity with the essential safety requirements or the prescribed conditions for use of the equipment, and generally where the manufacturer fails in particular to comply with any of his obligations under directive nr 97/23/EC of 29 May 1997 as transposed in the applicable law(s).

Etabli à / Made at	Le (MM/JJ/AAAA) / On (MM/DD/YYYY)	Approuvé et Enregistré en / Approved and Recorded in	Signé par / Signed by	Signature autorisée par Organisme Notifié Signature authorised by Notified Body No. 0062
BRIGNAIS	10/22/2015	France	Michael Heigl	
Code d'enregistrement / Registration code: 2015/294.12.421/P				

La présente attestation est soumise aux Conditions Générales de Service de Bureau Veritas jointes à la demande d'intervention signée par le demandeur. This certificate is subject to the terms of Bureau Veritas General Conditions of Service attached to the agreement signed by the applicant.



Annexe à l'attestation d'examen CE de type
Annex to the EC type-examination certificate
N° CE-PED-B-WCA 005-14-AUT-revB

Liste des parties pertinentes de la documentation technique
List of the relevant parts of the technical documentation

Technical description PED 2014-005
Drawing R0300-R1340 140 37 20
Design Standard: ISO 9809-2 :2000, EN 1964-2 :2001
Solution for the ESSENTIAL SAFETY REQUIREMENTS PED 2004-004
Drawing and Calculation: R0300-R1340 140 37 20
Test Report N.O.: 64965,64987
QUALITY PROCEDURE IMVA9.407, IMVA9.411
OPERATING INSTRUCTION PED 2004-004

Note: -) This certificate cancels and replaces CE-PED-B-WCA005-14-AUT-rev.A for the reason of amend pressure/temperature value and revised revision note