

PD CEN/TR 13259:2013



BSI Standards Publication

Gas welding equipment — Industrial manual and machine blowpipes for flame heating, flame brazing and allied processes

bsi.

...making excellence a habit.™

National foreword

This Published Document is the UK implementation of CEN/TR 13259:2013. It supersedes PD 6633:1998 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee WEE/18, Gas welding and cutting appliances.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2013

Published by BSI Standards Limited 2013

ISBN 978 0 580 81659 8

ICS 25.160.30

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 November 2013.

Amendments issued since publication

Date	Text affected
-------------	----------------------

TECHNICAL REPORT
RAPPORT TECHNIQUE
TECHNISCHER BERICHT

CEN/TR 13259

October 2013

ICS 25.160.30

Supersedes CR 13259:1998

English Version

**Gas welding equipment - Industrial manual and machine
blowpipes for flame heating, flame brazing and allied processes**

Matériel de soudage aux gaz - Chalumeaux manuels et automatiques à usage industriel, pour le chauffage à la flamme, le brasage à la flamme et les techniques connexes

Gasschweißgeräte - Handgeführte Sonderbrenner und Maschinenbrenner für industrielle Prozesse zum Flammwärmen, Flammlöten und für verwandte Prozesse

This Technical Report was approved by CEN on 29 July 2013. It has been drawn up by the Technical Committee CEN/TC 121.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 Mixing systems	11
4.1 General.....	11
4.2 Injector blowpipe	11
4.3 Equal pressure blowpipe	11
4.4 Blowpipe with gas mixing nozzle.....	11
4.5 Blowpipe for aspirated air.....	11
4.6 Blowpipe with external mixing	13
5 Examples for the design of blowpipes	13
5.1 General.....	13
5.2 Manually guided blowpipes	13
5.3 Machine blowpipes – semi-automatic	15
5.4 Machine blowpipe - automatic.....	16
6 Hose connections	17
7 Materials	17
8 Description of operation and operational incidents	18
8.1 Description of mixtures and flames	18
8.1.1 Flame blow off at the flame	18
8.1.2 Neutral flame (only for acetylene)	18
8.1.3 Process-related flame (for all fuel gases)	18
8.1.4 Neutral mixture.....	18
8.1.5 Process-related mixture	18
8.2 Description of operational incidents	18
9 Marking	18
10 Requirements	18
10.1 General.....	18
10.2 Safety and operating requirements	19
10.2.1 Gas tightness	19
10.2.2 Valves.....	19
10.2.3 Adjustment of flame	19
10.2.4 Flow rate	19
10.2.5 Protection against gas backflow	19
10.2.6 Extinguishing behaviour and protection against flashback	19
10.2.7 Stability in wind.....	19
10.2.8 Thermal stability	19
11 Tests.....	20
11.1 General.....	20
11.2 Leak test	20
11.3 Test for stability in wind for fuel gas/compressed air and air-aspirated flames.....	20
11.4 Valve test	20
11.5 Gas backflow test	20
11.5.1 General.....	20

11.5.2	Testing the gas backflow of oxygen/compressed air into the fuel gas line .	21
11.5.3	Testing of flashback .	21
12	Instruction manual .	22
Annex A	(informative) Terminology for heating blowpipes and examples of design .	23
Annex B	(informative) Approximated mixing ratios for process-related flame settings (adjustments) .	24
Bibliography	.	25

Foreword

This document (CEN/TR 13259:2013) has been prepared by Technical Committee CEN/TC 121 “Welding and allied processes”, the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes CR 13259:1998.

Introduction

Requests for official interpretations of any aspect of this Technical Report should be directed to the Secretariat of CEN/TC 121/SC 7 via the National Standards Body.

1 Scope

This Technical Report refers to manual blowpipes and stationary machine blowpipes with free burning flames for heat treatment of work pieces. These blowpipes are, due to their type of construction, designed for special applications and do not fall under the scope of EN ISO 5172 and EN ISO 9012.

This Technical Report contains technical regulations, specifications and tests.

Blowpipes are intended for gaseous fuels in connection with oxygen, compressed air or aspirated air.

Flow rates are not expressly limited and depend on the thermal process to be performed.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN ISO 5172:2006, *Gas welding equipment — Blowpipes for gas welding, heating and cutting — Specifications and tests (ISO 5172:2006)*

EN 29090, *Gas tightness of equipment for gas welding and allied processes (ISO 9090)*

EN ISO 9539, *Gas welding equipment — Materials for equipment used in gas welding, cutting and allied processes (ISO 9539)*

ISO 15296, *Gas welding equipment — Vocabulary — Terms used for gas welding equipment*