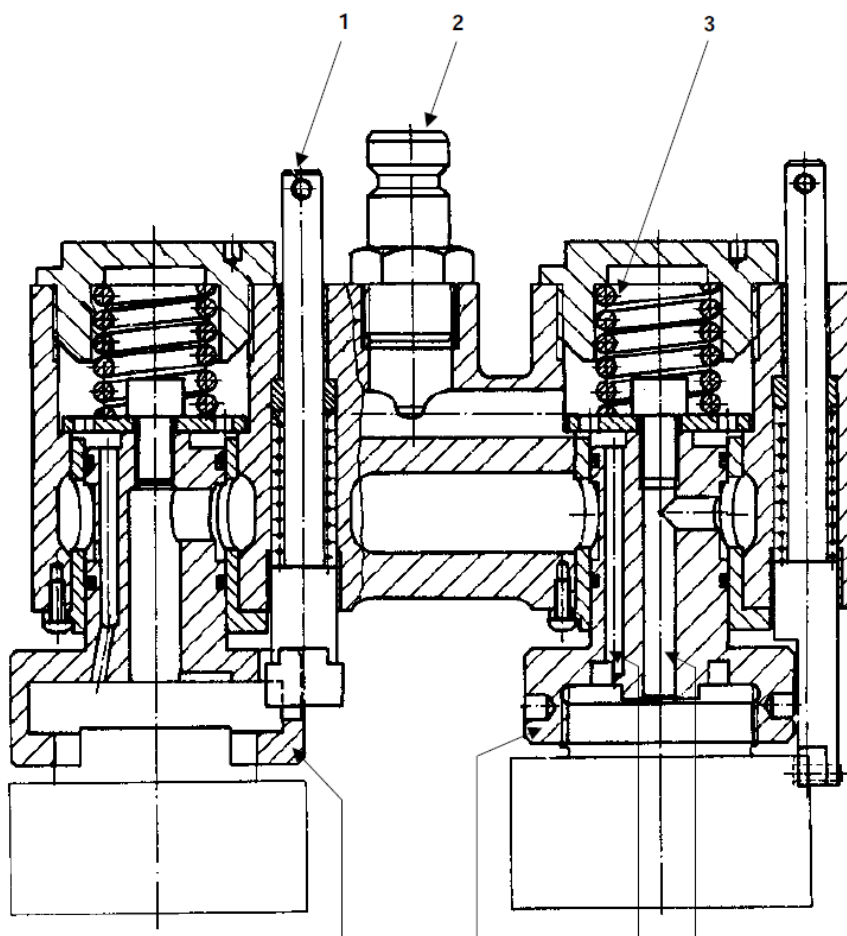


# Technical News Bulletin

Steinhausen, June 1994

---



## Quick-Change Blowhead Arms

- New arms are now optionally available for either the thread or bayonet type blowhead attachment.
- Thread-type adapter uses a nut, which is an integrated part of the adapter piston to ensure precise positioning and airtight mounting.
- The arms have no cooling air exhaust valves.

## Introduction

As described in the *Quick-Change Accessories Customer Information Manual ZG 225/0793E*, the range of blowhead arms has been completely redesigned on the basis of the former Finish Cooling Type Arm. In addition to the information in the Manual, this TNB provides further relevant details.

## System Description

Originally designed for thread-type blowhead attachment only, the new arms are now optionally available for either the thread or bayonet type blowhead attachment (**Fig. 1**). The arms are of lightweight design. Individual compression springs on each blowhead adapter piston equalize height differences on the mold equipment. Lock pins prevent the blowheads from rotating and secure their position relative to the mold parting line.

The bayonet type adapter uses a lock ring with a larger bearing area which is designed to extend blowhead life. The thread-type adapter uses a nut, which is an integrated part of the adapter piston, for blowhead attachment. This ensures precise positioning and airtight mounting.

Air supplies for final blow/internal cooling and finish cooling are connected individually to the arm by means of quick release couplings. The finish cooling air supply port(s) can be sealed to permit operation without the finish cooling feature. The arms can be converted from the thread-type to bayonet type blowhead attachment or vice versa by exchanging the adapter pistons and lock pins.

The arms have no cooling air exhaust valves. Adequately dimensioned exhaust ports must be drilled into the blowhead by the customer to ensure controlled cooling.

## Mold Equipment

All blowhead arms - SG, DG & TG - have the blowhead lock pin located at 45°, relative to the mold parting line. This results in a further step towards mold equipment standardization since the same blowheads can be used for all machine center distances configurations.

### *Bayonet Type Blowheads*

Existing blowheads can be used but require repositioning of the vents to relieve the blow pressure between the mold halves. If the internal cooling feature is required, exhaust ports must be drilled in the side of the blowheads. Single gob blowheads must be provided with a slot for the lock pin. Refer to the attached *Alteration Drawing 191-B-26787*.

*Data Sheet 191-B-26786* must be used as a basis for designing new blowheads.

### *Thread-Type Blowheads*

Existing thread-type blowheads can be used. To facilitate assembly, drill 4 holes at the side of the blowhead so that it can be tightened with a hook wrench. Refer to the attached *Data Sheet 191-B-26785* for the hole location and design of new blowheads.

## Installation

Refer to the *QCA Customer Information Manual ZG 225/0793E* for installation requirements and procedures.

The mounting parts used for the new blowhead arms are identical to those used for the previous arms.

The mounting sleeves are installed to the previous height and therefore require no readjustment if already installed. Due to its universal design, however, the new blowhead arms must be set to a different height above the blow mold, i.e. it must be set 5.5 mm (3.5 scale graduations) lower or 9.9 mm (6 scale graduations) higher compared with the previous arms with or without finish cooling.

Proceed as follows to permit interchangeability for the new arms and without readjusting the height setting:

### **Blowhead Arms without Finish Cooling 23-1426 and 191-9126**

Mill 9.9 mm from the arm register face to lower the arm by this amount in its support. Refer to Group 1 of the attached *Modification Drawing 200-C-265*.

**Blowhead Arms with Finish Cooling 23-1427 and 191-9127**

Raise the arm in its support by using a 5.5 mm thick spacer on the arm register face. Refer to Group 2 and 3 of the attached *Modification Drawing 200-C-265*.

Note that the height setting listings for the blowhead arms must be changed on the job change cards accordingly.

**Specifications**

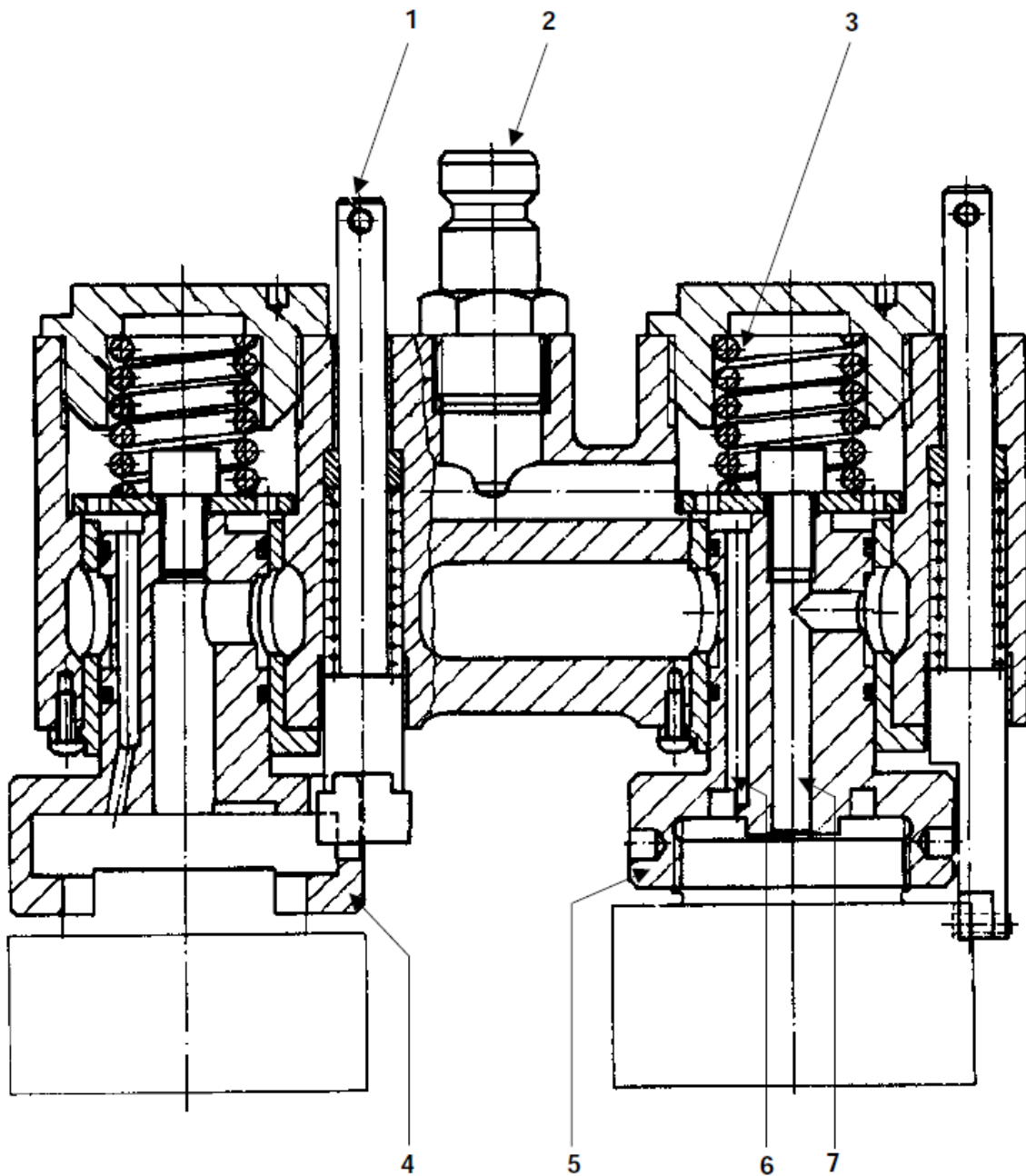
The table below gives the cross reference between the new and the previous QC blowhead arms which have been discontinued and are no longer available as complete units. Spare parts will be supplied until the end of 1996 but this does not include arm bodies for the discontinued products.

QC Blowhead Arms Cross Reference					
Machine Type	Center Distance	New Blowhead Arms		Superseded Blowhead Arms	
		Thread Attachment	Bayonet Attachment	with Finish Cooling	without Finish Cooling
E & EF 4-1/4	SG	200-201 Gr. 1	200-201 Gr. 5	191-9127 Gr. 8	191-9126 Gr. 11
E & EF 5	SG	200-201 Gr. 2	200-201 Gr. 6	191-9127 Gr. 9	191-9126 Gr. 12
F & EF 5-1/2	SG	200-201 Gr. 3	200-201 Gr. 7	23-1427 Gr. 4	23-1426 Gr. 5
E & EF 4-1/4	DG 4-1/4"	200-202 Gr. 1	200-202 Gr. 5	191-9127 Gr. 3	191-9126 Gr. 3
E & EF 5	DG 5"	200-202 Gr. 2	200-202 Gr. 6	191-9127 Gr. 4	191-9126 Gr. 4
F & EF 5-1/2	DG 5-1/2"	200-202 Gr. 3	200-202 Gr. 7	23-1427 Gr. 1	23-1426 Gr. 2
F 6-1/4 & AIS	DG 6-1/4"	200-202 Gr. 4	200-202 Gr. 8	23-1427 Gr. 2	23-1426 Gr. 3
E & EF 4-1/4	TG 3"	200-203 Gr. 1	200-203 Gr. 5	191-9127 Gr. 7	191-9126 Gr. 10

New assembly numbers have been assigned to the blowhead mounting parts to comply with Emhart's new Bill of Material (BOM) system.

The Mounting Parts Cross Reference Table (below) gives the cross reference between the new and superseded part numbers. The detail parts listed under the new and superseded part numbers are identical.

<b>Mounting Parts Cross Reference</b>			
<b>Machine Type</b>	<b>New Part no.</b>	<b>Superseded Part no.</b>	<b>Note</b>
E & EF 4-1/4, E & EF 5	200-200 Gr. 1	191-9126 Gr. 9	Parts under new and superseded numbers are identical
E & EF 5-1/2, F 6-1/4, AIS	210-178 Gr. 1	23-1426 Gr. 7	



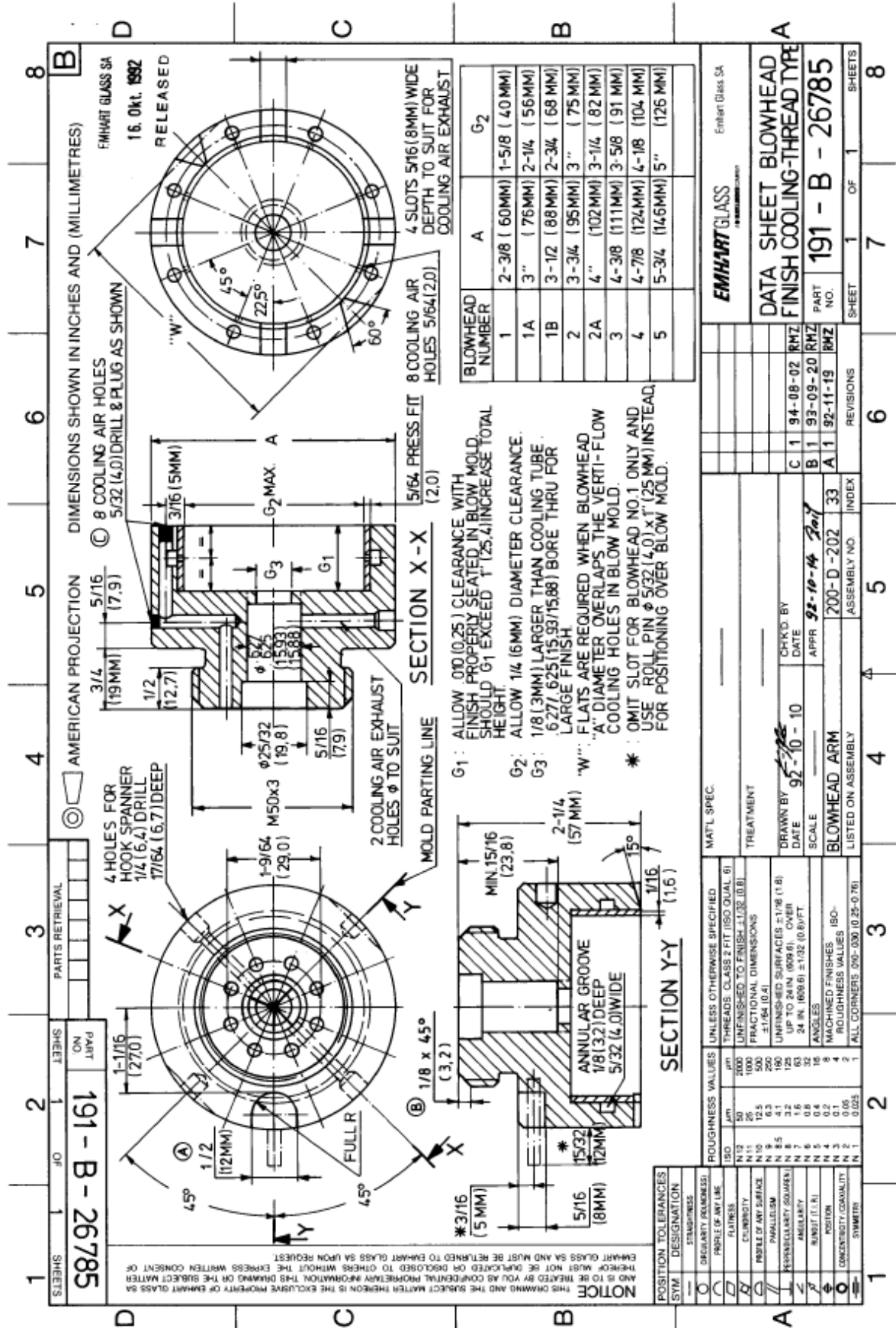
**Fig. 1:** Cross Section of DG 4 -1/4" Blowhead Arm (Bayonet and Thread Type shown)

**Caption:**

1. Lock Pin

5. Thread Adapter & Piston

- 2. Air Connection for Finish Cooling
- 3. Compression Spring
- 4. Bayonet Adapter & Piston
- 6. Air Supply for Finish Cooling
- 7. Air Supply for Final Blow



POSITION TOLERANCES		ROUGHNESS VALUES		MATERIAL SPEC.	
SYM	DESIGNATION	UNIT	VALUES	UNLESS OTHERWISE SPECIFIED	
$\phi$	REGULARITY (FORMOSITY)	IN	150	THREADS: CLASS 2 FIT (ISO DUAL 6)	EMHART GLASS
$\phi$	FLATNESS	MIL	50	LINE-FINISHED TO FINISH $\pm$ 0.01	Emhart Glass SA
$\phi$	CIRCULARITY	IN	1000	FRACTIONAL DIMENSIONS	
$\phi$	PARALLELISM	IN	200		
$\phi$	PERPENDICULARITY	IN	150	UNFINISHED SURFACES: $\pm$ 1/8 (1.6)	
$\phi$	ANGULARITY	IN	125	UP TO 24 IN. (609.6)	
$\phi$	RUNOUT (L.A.)	IN	50	24 IN. (609.6) $\pm$ 1/32 (0.8) VFT	
$\phi$	POSITION	IN	5	ANGLES	
$\phi$	CONCENTRICITY	IN	4	MACHINED FINISHES	
$\phi$	SYMMETRY	IN	2	ROUGHNESS VALUES ISO-	
			1	ALL CORNERS: R0.00 (0.25-0.76)	

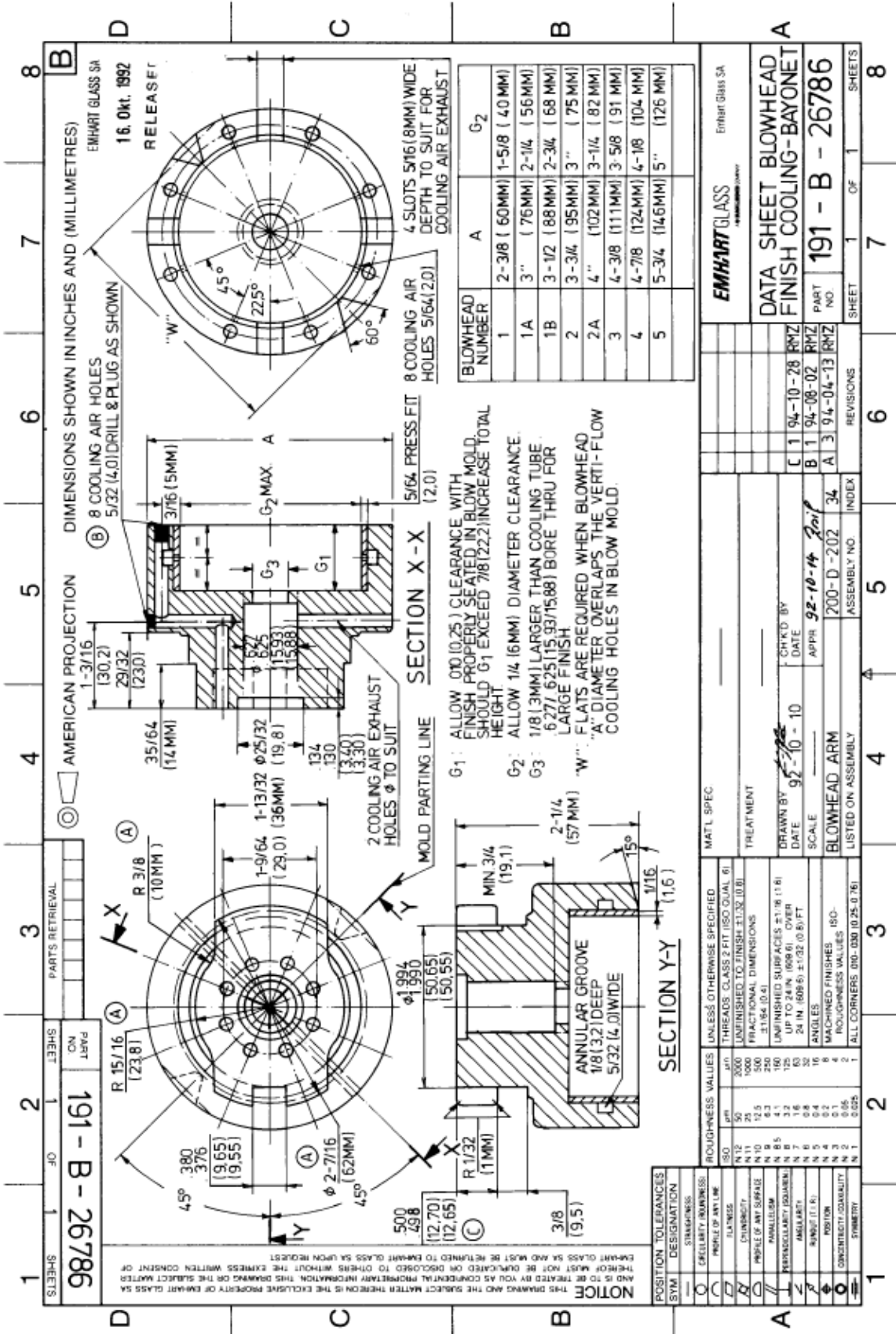
  

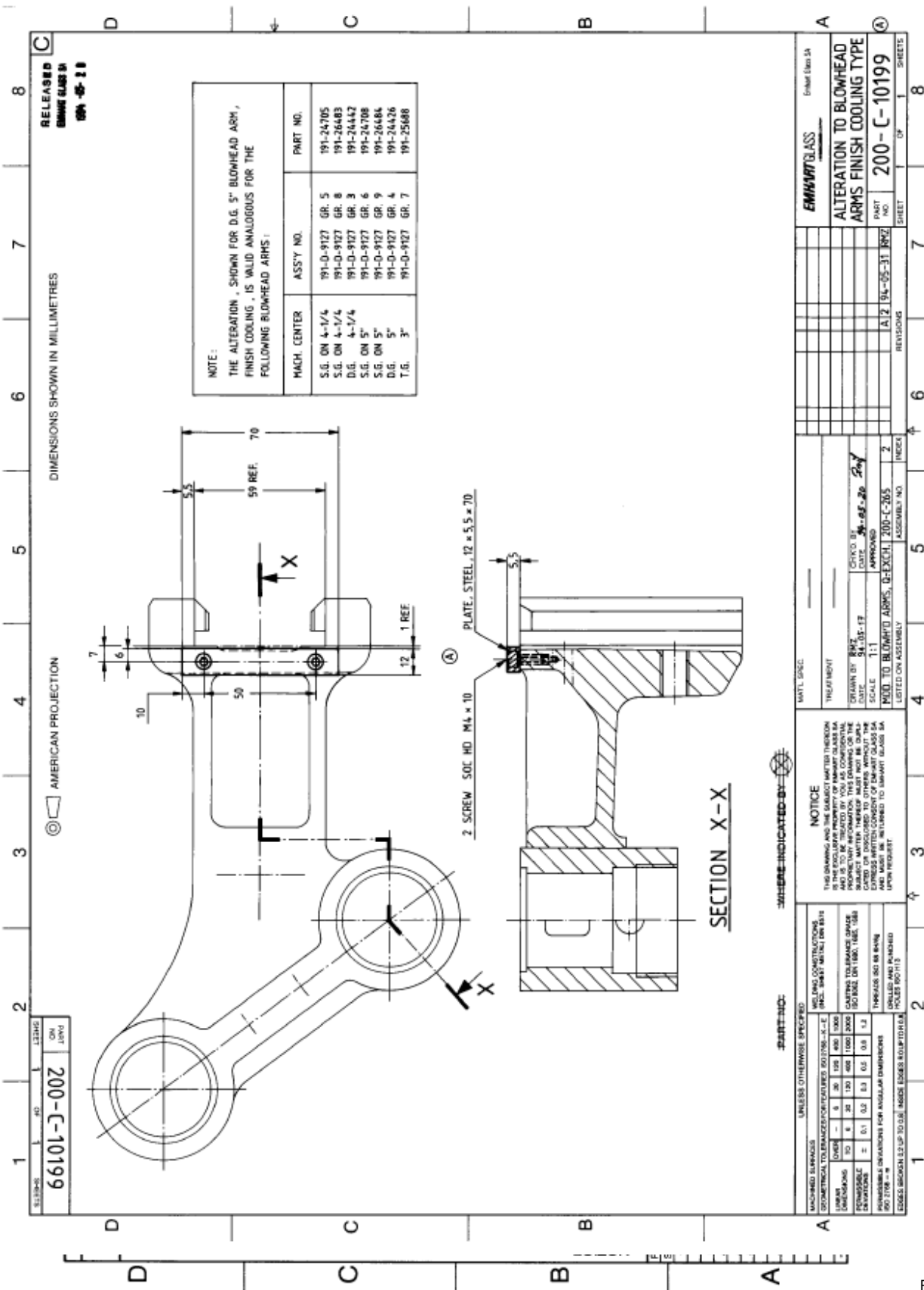
REVISIONS	INDEX	ASSEMBLY NO.	DATE	CHK'D BY	TREATMENT
C 1	94-08-02 RMZ	200-D-202	92-10-10		
B 1	93-09-20 RMZ				
A 1	92-11-19 RMZ				

DATA SHEET BLOWHEAD FINISH COOLING-THREAD TYPE	PART NO.	SHEET	OF	SHEETS
191 - B - 26785	1	1	1	8







RELEASED  
EMMART GLASS SA  
94-05-11

66101-C-10199

200-C-10199

AMERICAN PROJECTION

DIMENSIONS SHOWN IN MILLIMETRES

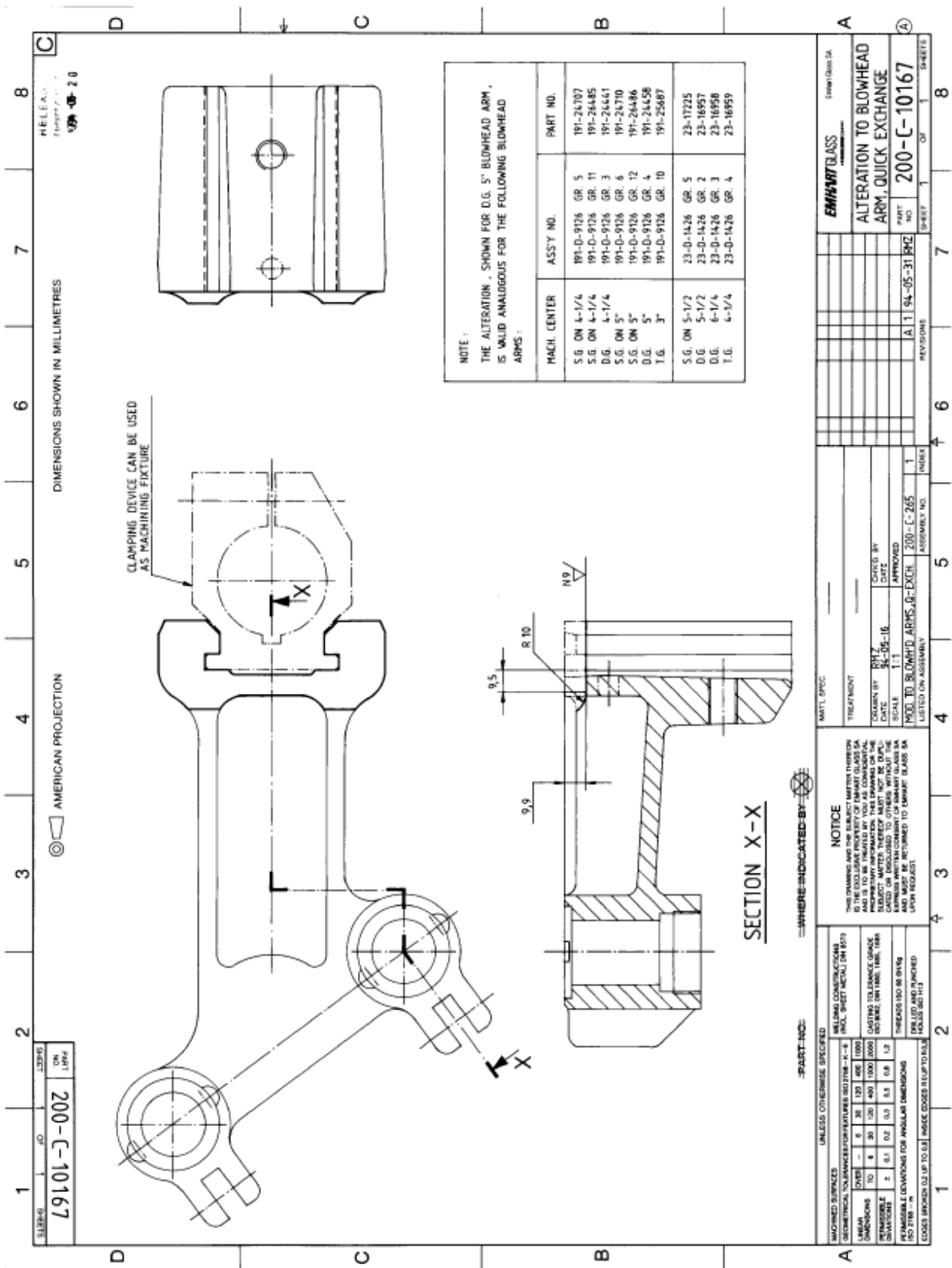
MATERIAL SPECIFICATION		TREATMENT	
MAT'L. SPEC.		TREATMENT	
DESIGNED BY	94-05-17	DESIGNED BY	94-05-17
APPROVED	1-1	APPROVED	94-05-20
SCALE	1:1	SCALE	1:1
LISTED ON ASSEMBLY		LISTED ON ASSEMBLY	
ASSEMBLY NO.		ASSEMBLY NO.	

**NOTICE**  
THIS DRAWING AND THE SUBJECT MATTER THEREON IS THE EXCLUSIVE PROPERTY OF EMMART GLASS SA AND IS TO BE KEPT SECRET. THE DESIGN OR SUBJECT MATTER THEREON MUST NOT BE DISCLOSED OR REPRODUCED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF EMMART GLASS SA UPON REQUEST.

**UNLESS OTHERWISE SPECIFIED:**

FINISH	UNTIL	UNTIL	UNTIL	UNTIL	UNTIL
MACHINED SURFACES	± 0.1	± 0.15	± 0.2	± 0.3	± 0.5
CYRIL METRIC TOLERANCES FORTIFIED TO 1700-4-E	± 0.1	± 0.15	± 0.2	± 0.3	± 0.5
PRECISION SURFACES	± 0.05	± 0.07	± 0.1	± 0.15	± 0.2
PERMISSIBLE DEVIATIONS	± 0.1	± 0.15	± 0.2	± 0.3	± 0.5

PERMISSIBLE DEVIATIONS FOR ANGULAR DIMENSIONS  
EDGES BROADEN UP TO 0.5x UNLESS OTHERWISE SPECIFIED



**NOTE:**  
THE ALTERATION SHOWN FOR D.G. 5" BLOWHEAD ARM, IS VALID ANALOGOUS FOR THE FOLLOWING BLOWHEAD ARMS:

MACH. CENTER	ASS'Y NO.	PART NO.
S.G. ON 4-1/4	191-D-9126 GR. 5	191-24707
S.G. ON 4-1/4	191-D-9126 GR. 11	191-26485
D.G. 4-1/4	191-D-9126 GR. 3	191-24441
S.G. ON 5"	191-D-9126 GR. 6	191-24710
S.G. ON 5"	191-D-9126 GR. 12	191-24486
D.G. 5"	191-D-9126 GR. 4	191-24458
T.G. 3"	191-D-9126 GR. 10	191-25867
S.G. ON 5-1/2	23-D-1426 GR. 5	23-17225
D.G. 5-1/2	23-D-1426 GR. 2	23-16957
D.G. 6-1/4	23-D-1426 GR. 3	23-16958
T.G. 4-1/4	23-D-1426 GR. 4	23-16959

**EMHART GLASS** (Emhart Glass SA)

**ALTERATION TO BLOWHEAD ARM, QUICK EXCHANGE**

PART NO. **200-C-10167**

REVISIONS: 1 OF 8 SHEETS

DATE: 5-10-16

DESIGNED BY: RHY

CHECKED BY: DATE

SCALE: 1:1

APPROVED: MOD. TO BLOWHD ARMS, Q-EXCH. 200-C-265

LISTED ON ASSEMBLY: 200-C-265

ASSEMBLY NO. 1

INDEX: 1

WHERE INDICATED BY

UNLESS OTHERWISE SPECIFIED:

WELDED CONSTRUCTIONS (INCL. SHEET METAL OR B3)

GEOMETRICAL TOLERANCES/FORMATURES (SEE TABLE K-4)

LINEAR DIMENSIONS	0	30	120	400	1000
ANGULAR DIMENSIONS	±	±	±	±	±

CASTING TOLERANCES (INCL. SHEET METAL)

CLASS	10	4	30	120	400	1000	2000
LINEAR DIMENSIONS	±	±	±	±	±	±	±
ANGULAR DIMENSIONS	±	±	±	±	±	±	±

REFERABLE DIMENSIONS FOR ANGULAR DIMENSIONS (ISO 9790 - 4)

EDGES BROKEN UP TO 0.8 MM EDGE ROUNDED UP TO 0.4



