

**THE NETHERLANDS**
(N E D E R L A N D)**COMMUNICATION**

Concerning ⁽¹⁾:

- ~~approval granted~~
- ~~approval extended~~
- ~~approval refused~~
- ~~approval withdrawn~~
- ~~production definitely discontinued~~

of a type of CNG component pursuant to Regulation number 110.

Approval number: E4-110R-000039

Extension number: 04

1. CNG component considered:

~~Container(s) or cylinder(s)~~ ⁽¹⁾

~~Pressure indicator~~

~~Pressure relief valve~~

~~Automatic valve(s)~~

~~Excess flow valve~~

~~Gas tight housing~~

~~Pressure regulator(s)~~

~~Non-return valve(s)~~

~~Pressure relief device~~

~~Manual valve~~

~~Flexible fuel lines~~

~~Filling unit or receptacle~~

~~Gas injector(s)~~

~~Gas flow adjuster~~

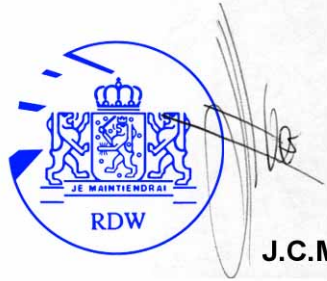
~~Gas/air mixer~~

~~Electronic control unit~~

~~Pressure and temperature sensor(s)~~

~~CNG filter(s)~~



2. Trade name or mark : Emer S.p.A (Series VALE: VALE127, VALE128, VALE129, VALE130, VALE131, VALE127RM, VALE 128RM, VALE129RM, VALE130RM, VALE131RM, Vale4xx)
3. Manufacturer's name and address : Emer S.p.A.
Via Roma 104/A
25060, Collebeato (Brescia)
Italy
4. If applicable, name and address of manufacturer's representative :
5. Submitted for approval on : December 2008
6. Technical service responsible for conducting approval tests : Kiwa Nederland b.v.
P.O.Box 137
7300 AC Apeldoorn
The Netherlands
7. Date of report issued by that service : January 2009
8. Number of report issued by that service : 121393/1, 124614
9. Approval : ~~granted/refused/extended/withdrawn~~⁽¹⁾
10. Reason(s) of extension (if applicable) : The new version is similar to the already approved one in the following parts:
Aeration system, lateral connections, fuse plug, excess flow valve and burst disc (in this case the nut is different, without the hexagon). There are changes in the external shape of the central part of the body and in the manual shut off valve ball seats and handle (see dt-e-vale128-rev01). New models have been introduced with check valve.
The materials are the same for all the components (body and sealing).
11. Place : Zoetermeer
12. Date : 12 - FEB - 2009
13. Signature :  **J.C.M. Hoes**
14. The documents filed with the application or extension of approval can be obtained upon request.

⁽¹⁾ Strike out what does not apply.

ADDENDUM

1. Additional information concerning the type-approval of a type of CNG components pursuant to Regulation number 110.
 - 1.1. Container(s) or cylinder(s)
 - 1.1.1. Dimensions :
 - 1.1.2. Material :
 - 1.2. Pressure indicator
 - 1.2.1. Working pressure(s) ⁽²⁾ :
 - 1.2.2. Material :
 - 1.3. Pressure relief valve (discharge valve)
 - 1.3.1. Working pressure(s) ⁽²⁾ :
 - 1.3.2. Material :
 - 1.4. Automatic valve(s)
 - 1.4.1. Working pressure(s) ⁽²⁾ :
 - 1.4.2. Material :
 - 1.5. Excess flow valve
 - 1.5.1. Working pressure(s) ⁽²⁾ :
 - 1.5.2. Material :
 - 1.6. Gas-tight housing
 - 1.6.1. Working pressure(s) ⁽²⁾ :
 - 1.6.2. Material :
 - 1.7. Pressure regulator(s)
 - 1.7.1. Working pressure(s) ⁽²⁾ :
 - 1.7.2. Material :
 - 1.8. Check valve(s) or non-return valve(s)
 - 1.8.1. Working pressure(s) ⁽²⁾ :
 - 1.8.2. Material :
 - 1.9. Pressure relief device (temperature triggered)
 - 1.9.1. Working pressure(s) ⁽²⁾ :
 - 1.9.2. Material :
 - 1.10. Manual valve
 - 1.10.1. Working pressure(s) ⁽²⁾ : 260 bar
 - 1.10.2. Material : Body is made out of CW612N H080 UNI
For details see drawing DT-E-VALE4--
 - 1.11. Flexible fuel lines
 - 1.11.1. Working pressure(s) ⁽²⁾ :
 - 1.11.2. Material :
 - 1.12. Filling unit or receptacle
 - 1.12.1. Working pressure(s) ⁽²⁾ :
 - 1.12.2. Material :
 - 1.13. Gas injector(s)
 - 1.13.1. Working pressure(s) ⁽²⁾ :



1.13.2.	Material	:
1.14.	Gas flow adjuster	:
1.14.1.	Working pressure(s) ⁽²⁾	:
1.14.2.	Material	:
1.15.	Gas/air mixer	:
1.15.1.	Working pressure(s) ⁽²⁾	:
1.15.2.	Material	:
1.16.	Electronic control unit (CNG-fuelling)	:
1.16.1.	Basic software principles	:
1.17.	Pressure and temperature sensor(s)	:
1.17.1.	Working pressure(s) ⁽²⁾	:
1.17.2.	Material	:
1.18.	CNG filter(s)	:
1.18.1.	Working pressure(s) ⁽²⁾	:
1.18.2.	Material	:

⁽²⁾ Specify the tolerance



File Issue: 007	REPORT HISTORY SHEETS	
Report Number: 121393/1	CNG components	Page: RHS 1/00

Report history:

This Report History Sheet has been included as a result of a modification and/or extension to the preceding report(s) and is inserted as a first page when opening this report. This sheet details the modification and/or extension applicable to the preceding report(s) and clearly states where these details can be found. A copy of this sheet has also been provided to the applicant/manufacture, in order to keep the reports identical.

Date:	Description:	Report No:	Job Ref:
10-02-2003	Initial report (New)	121393	121393
11-11-2003	Extension/modification E4-110R-000039 ext01: - New O-ring dimension with respect to VALE and VALB. O-ring material has not changed. Addition of gas tight housing with respect to type VALE. System is identical to type VBE, which is already approved.	121393	122263
23-02-2004	Extension E4-110R-000039 ext02: Series VALE will be extended with the following types: VALE128, VALE129 and VALE130, next to the already approved type VALE127. The main differences are the thread of the stem and the outlet connection. The extension does not require additional tests, as it doesn't affect the current approval. Furthermore the trade name or mark is changed into Emer S.r.L. (Series VALE).	121393/1	122477
24-07-2006	Extension E4-110R-000039 ext03: New screw for the manual valve VALE (type already homologated with Mark valve (122258). Also VALE 131 is added to the certificate (already approved as a combination of different options). Furthermore the name of mark is changed into Emer S.p.A.	121393/1	123173
27-01-2009	Extension E4-110R-000039 ext04 and ISO15500 MECH9 ext01: The new version is similar to the already approved one in the following parts: Aeration system, lateral connections, fuse plug, excess flow valve and burst disc (in this case the nut is different, without the hexagon). There are changes in the external shape of the central part of the body and in the manual shut off valve ball seats and handle (see dt-e-vale128-rev01). New models have been introduced with check valve. The materials are the same for all the components (body and sealing).	121393/1	124614
	Further details can be found under TAB 3		

Signed by Test Engineer:

Name: Edwin Brandwagt



Date: January 2009



Job Reference: 124614	Initials: 	0-2-09
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File Issue: 007	MODIFICATION/EXTENSION SHEETS	
Report Number: 121393/1	CNG components	Page: MES 1/00

Test report of the examination of the modification and or extension to the:

CNG components
Series VALE

Tested and examined to:

Regulation 110 Uniform provisions concerning the approval of specific equipment of motor vehicles using CNG in their propulsion system.

Including:
Corrigendum 1
Amendment 1
Amendment 2
Amendment 3
Amendment 4
Amendment 5
Amendment 6
2007/29

This report should be used in conjunction with report(s) no: 121393 and 121393/1

Report contents:

Sheet

Modification/Extension Sheets

Summary Sheets

Identification Sheets

Result Sheets: Identification of EUT
Regulation 110

Any Drawings, Technical Descriptions and Correspondence as identified below

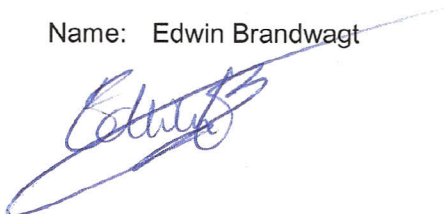
Code	# Pages
MES	5
SS	1
IS	1
RID	-
RM	5

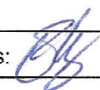
Note: The revision number of each page of this report is identified in the right heading of the page by means of the last 2 digits in the page number (e.g. HS 1/00, Heading Sheet page 1, revision 00).

Signed by Test Engineer:

Name: Edwin Brandwagt

Date: January 2009




Job Reference: 124614	Initials: 	6-2-09
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File Issue: 007	MODIFICATION/EXTENSION SHEETS	
Report Number: 121393/1	CNG components	Page: MES 2/00

Sample designation:

Description	Reference no.	Date intake
Valve 400	C090018	19-01-2009
Valve 400	C090019	19-01-2009
Valve 410	C090020	19-01-2009
Valve 410	C090021	19-01-2009

Drawings and Technical Descriptions:

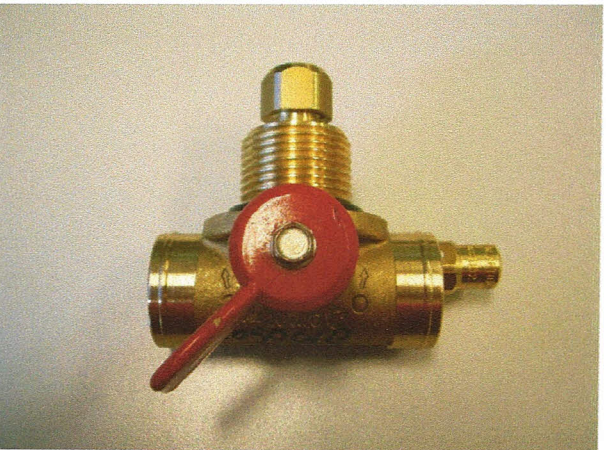
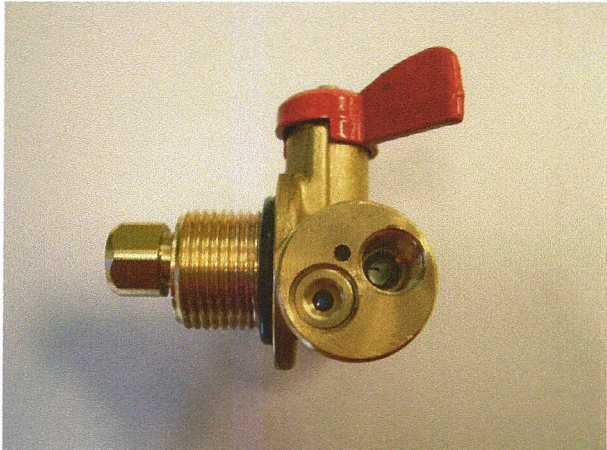
Description	# Pages	Date
DT-E-VALE4__	1	14-10-08
DT-E-VALE40__	1	15-10-08
DT_E_VALE40001	1	14-04-08
DT_E_VALE41001	1	04-04-08
DT-FLUS396	1	17-06-1996
DT-MCR100P01	1	10-04-07
DT-PFTI600	1	30-11-01



Job Reference: 124614	Initials: 	6-2-09
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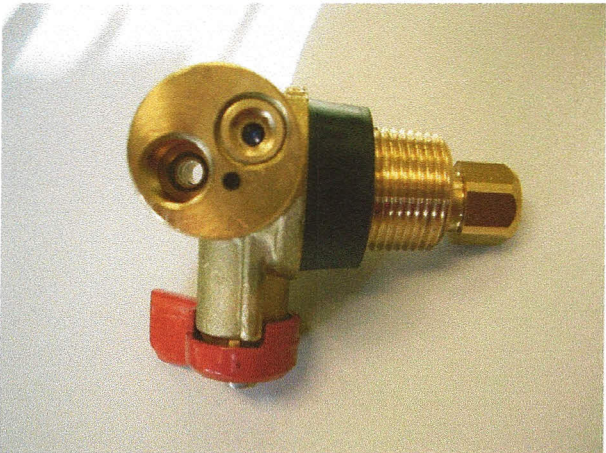
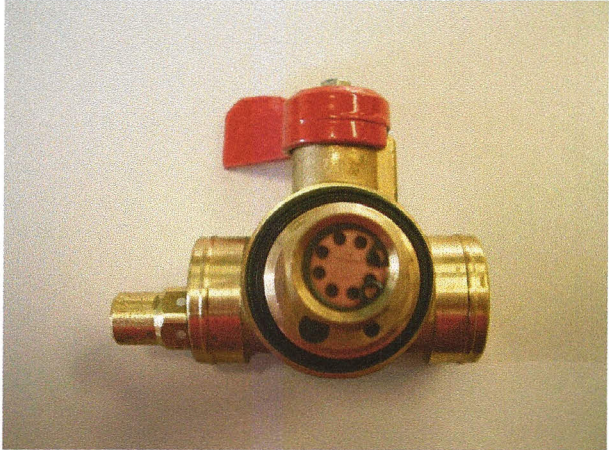
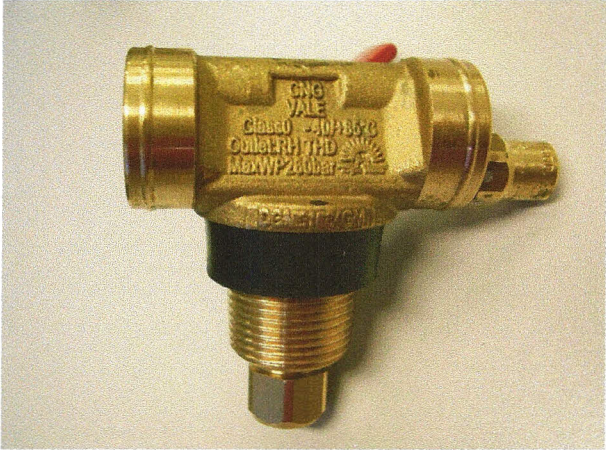
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Report Number: 121393/1	CNG components	Page: MES 3/00

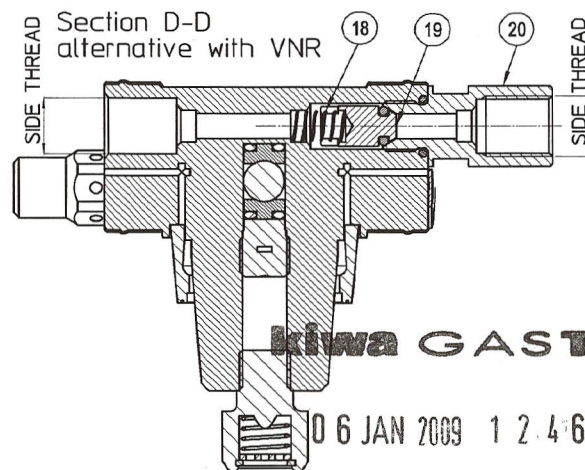
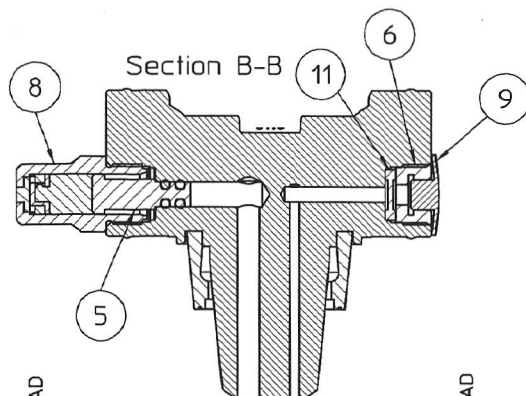
Vale400



File Issue: 007	MODIFICATION/EXTENSION SHEETS	
Report Number: 121393/1	CNG components	Page: MES 4/00

Vale410





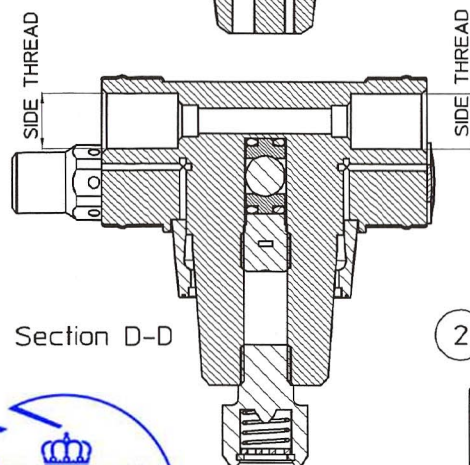
WEIGHT: ~ 0.57 kg

MARKINGS:
E4 110R-000039
CNG
EMER
-40°C / +85°C
WP 280 bar

TO BE PRINTING BY LASER:
-PRODUCTION DATE;
-LOT NUMBER;

VALE4.. VALE4..	3/4 IRAM
VALE4.. VALE4..	JIS B 8246
VALE4.. VALE4..	3/4 NPT
VALE4.. VALE4..	1 1/4 BS341
VALE420 VALE421	3/4 NGT
VALE417 VALE418	1" BS341
VALE410 VALE412	W 28.8-14 DIN 477
VALE4 CODE	VALVE STEM
AVAILABLE VALVE STEM	

H	M12x1 pipe Ø8
G	M12x1.25
F	G 1/4"
C	1/4"-18 NPT
B	M12x1 pipe Ø1/4"
A	M12x1 pipe Ø6
SIDE THREADS	
AVAILABLE VALVE SIDE THREADS	



kiwa GASTEC

NORMAL WORKING PRESSURE: 280 BAR

BURST DISC BURSTING PRESSURE: 300/375 BAR

FUSE PLUG MELTING TEMPERATURE: 110 ± 10 DEG.C

MAXIMUM PRESSURE CAPACITY: 450 Kg/sq.cm

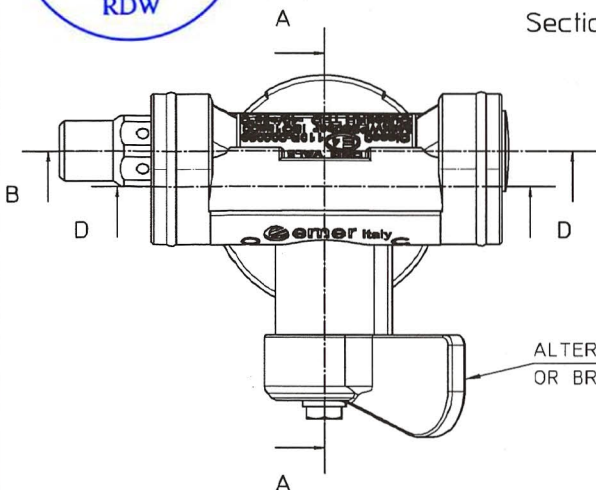
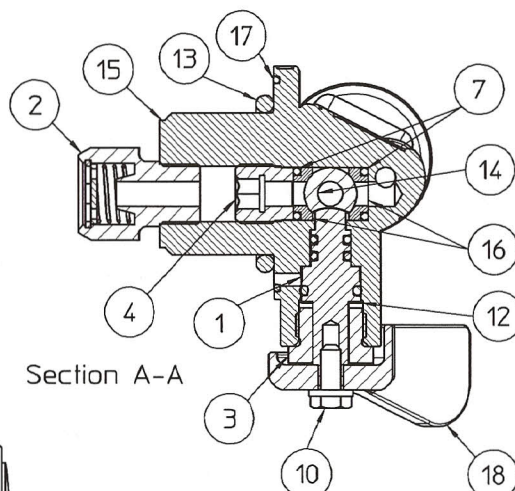
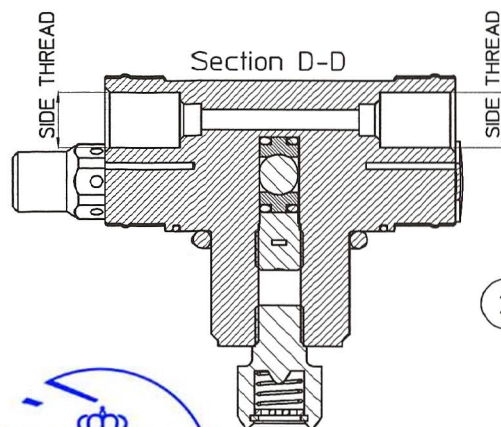
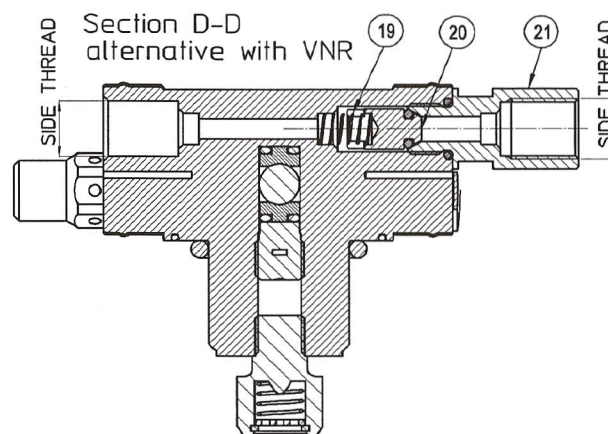
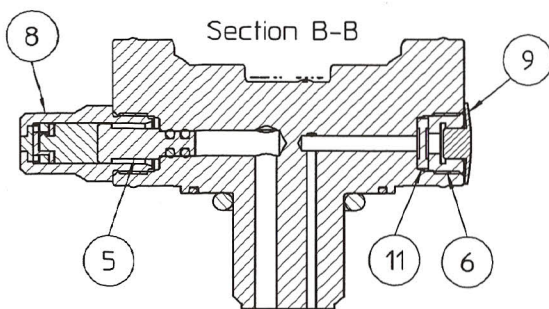
VALVE FOR CNG

Certification

ALTERNATIVE SYNTHETIC MATERIALS: MTW85 - HNBR - VITON - NBR - VULKOLLAN - PTFE
ALTERNATIVE METAL MATERIALS: CW612 - CW617 - CW614 - AISI303 - AISI316 - AISI316L - AYP - PR80
METALLIC PARTS GENERAL TREATMENTS: PAINTING, ZINC-PLATING, WHITE/BLACK/CHEMICAL-NICKELING

20	CHECK VALVE BODY	1	-	DT-MCR100P01
19	CHECK VALVE PISTON	2	-	DT-MCR100P01
18	SPRING'S VNR	1	AISI303	DT-MCR100P01
17	HANDWHELL	1	AI 99.5	DT-MCR100P01
16	SEAT SMALL SPHERE VBE	2	DELIRIN	DT-MCR100P01
15	MACHINED VALVE BODY	1	CW612N H080 UNI EN 12165:99	DT-VALE41001
14	RUBBER VALVE STEM RING	1	SUNPRENE	DT-MCR100P01
13	SPHERE Ø10.5	1	CW614N R430 UNI EN 12164:01	DT-MCR100P01
12	WASHER Ø12 Ø7.2	1	PTFE	DT-MCR100P01
11	BURST DISC TYPE S.W	1	-	DT-MCR100P01
10	SCREW M4x9 FOR HANDWHELL	1	INOX A2	DT-MCR100P01
9	PROTECTION CAP	1	COMM.	-
8	PFTI600	1	-	DT-PFTI600
7	ORING Ø6.35xØ1.78	2	HNBR / VITON	-
6	END COVER	1	CW614N R430 UNI EN 12164:01	DT-MCR100P01
5	PIN PFTI600	1	-	DT-PFTI600
4	SEATS SPHERES NUT	1	CW614N R430 UNI EN 12164:01	DT-MCR100P01
3	NUT FOR RUB FOR VALC400/450	1	CW614N R430 UNI EN 12164:01	DT-MCR100P01
2	COMPRESSIVO LIMITATORE DI FLUSSO MAGGIORATO	1	-	DT-FLUS396
1	DRILLED CUTOFF PIN	1	-	DT-MCR100P01

POS.	DENOMINAZIONE				N° PEZZI	MATERIALE/NORMA			N° DISEGNO	
	QUOTE SENZA INDICAZ. DI TOLLERANZA				MATERIALE			TRATTAMENTO		
	LUNGHEZZE ISO 2768-fK									
	>0 a 6		>6 a 30		>30 a 120		>120			
	± 0.05		± 0.1		± 0.15		± 0.2			
	Ang. Filettature Met ISO		RAGGI non quotati		SMUSSI non quotati		REPORT		CRITICA	
	MAS. FEM.		non quotati		non quotati		IMPORTANTE		PESO (g)	
	±30'		6g		R0.1-0.2		0.1-0.2x45°		564	
							S Cp-Cpk ≥1.67		C Cp-Cpk ≥1.33	
							+Tolleranze < ISO2768-fK		1:1	
	DISEGNATO				DENOMINAZIONE					
	DATA 14/10/08				ASSEMBLED TYPE VALE4 CONICAL					
	FIRMA DALLERA G.				DIFFERENT THREAD AND DIFF. CONNECTION					
					FORMATO A3				N° DISEGNO	
									REV	
									DT-E-VALE4__	
REV. MODIF. DATA FIRMA									00	
A termine di legge ci riserviamo la proprietà di questo disegno con divieto di riprodurlo o renderlo noto a terzi o a ditte concorrenti senza nostra autorizzazione										



kiwa GASTEC

06 JAN 2009 1 2 4 6 1 4

Certification
ALTERNATIVE OR BRASS HANDWHEEL

WEIGHT: ~ 0.58 kg

MARKINGS:
E4 110R-000039
CNG
EMER
-40°C / +85°C
WP 260 bar

TO BE PRINTING BY LASER:
-PRODUCTION DATE;
-LOT NUMBER;

NORMAL WORKING PRESSURE: 260 BAR
BURST DISC BURSTING PRESSURE: 300/375 BAR
FUSE PLUG MELTING TEMPERATURE: 110 ± 10 DEG.C
MAXIMUM PRESSURE CAPACITY: 450 Kg/sq.cm
VALVE FOR CNG

ALTERNATIVE SYNTHETIC MATERIALS: MTW85 - HNBR - VITON - NBR - VULKOLLAN - PTFE
ALTERNATIVE METAL MATERIALS: CW612 - CW617 - CW614 - AISI303 - AISI316 - AISI316L - AYP - PR80
METALLIC PARTS GENERAL TREATMENTS: PAINTING, ZINC-PLATING, WHITE/BLACK/CHEMICAL-NICKELING

VALE4.. VALE4..	1" 3/16 SAE-UN
VALE4.. VALE4..	M27X2
VALE400 VALE402	1" 1/8 12FX1" UNF
VALE4 CODE	VALVE STEM
AVAILABLE VALVE STEM	

H	M12x1 pipe Ø8
G	M12x1.25
F	G 1/4"
C	1/4"-18 NPT
B	M12x1 pipe Ø1/4"
A	M12x1 pipe Ø6
SIDE THREADS	
AVAILABLE VALVE SIDE THREADS	

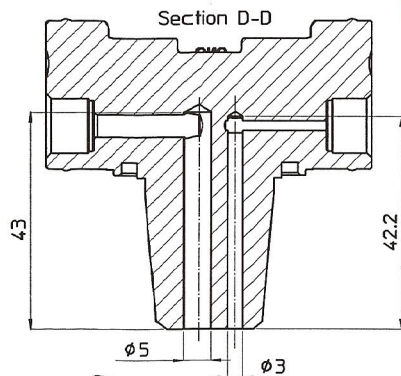
21	CHECK VALVE BODY	1	-	DT-MCR100P01
20	CHECK VALVE PISTON	1	-	DT-MCR100P01
19	SPRING'S VNR	2	AISI 303	DT-MCR100P01
18	HANDWHEEL	1	Al 99.5	DT-MCR100P01
17	ORing Ø40xØ1.5	1	HNBR / VITON	-
16	SEAT SMALL SPHERE VBE	2	DELIN	DT-MCR100P01
15	MACHINED VALVE BODY	1	CW612N H080 UNI EN 12165:99	DT-VALE40001
14	SPHERE Ø10.5	1	CW614N R430 UNI EN 12164:01	DT-MCR100P01
13	ORing Ø28xØ3.5	1	HNBR / VITON	-
12	WASHER Ø12 Ø7.2	1	PTFE	DT-MCR100P01
11	BURST DISC TYPE S.W	1	-	DT-MCR100P01
10	SCREW M4x9 FOR HANDWHEEL	1	INOX A2	DT-MCR100P01
9	PROTECTION CAP	1	COMM.	-
8	PRD TYPE PFTI600	1	-	DT-PFTI600
7	ORing Ø6.35xØ1.78	2	HNBR / VITON	-
6	BURST DISC END COVER	1	CW614N R430 UNI EN 12164:01	DT-MCR100P01
5	PIN PRD TYPE PFTI600	1	-	DT-PFTI600
4	SEATS SPHERES NUT	1	CW614N R430 UNI EN 12164:01	DT-MCR100P01
3	NUT FOR RUB FOR VALC400/450	1	CW614N R430 UNI EN 12164:01	DT-MCR100P01
2	EXCESS FLOW VALVE FLUS396	1	-	DT-FLUS396
1	DRILLED CUTOFF PIN	1	-	DT-MCR100P01

POS.		DENOMINAZIONE				N° PEZZI		MATERIALE/NORMA			N° DISEGNO	
		QUOTE SENZA INDICAZ. DI TOLLERANZA				MATERIALE			TRATTAMENTO			
		LUNGHEZZE ISO 2768-fK				CLASSE IMPORTANZA QUOTE			PESO (g)		SCALA	
		>0 a 6 >6 a 30 >30 a 120 >120 ± 0.05 ± 0.1 ± 0.15 ± 0.2										
		Ang. Filettature M6xJ50		RAGGI		SMUSSI		REPORT	CRITICA	IMPORTANTE	576	1:1
		MAS. FEM.		non quotati		non quotati		S Cp-Cpk	C Cp-Cpk	+ Tolleranze		
±30°		6g 6H		R0.1-0.2		0.1-0.2x45°		≥1.67	≥1.33	≤ ISO2768-fK		
		DISEGNATO		CONTROLLATO		DENOMINAZIONE						
		DATA		15/10/08		15/10/08		ASSEMBLED TYPE VALE4 CYLINDRICAL DIFFERENT THREAD AND DIFF. CONNECTION				
		FIRMA		DALLERA G.		DALLERA G.						
				® emer Sp.A. BRESCIA ITALIA		FORMATO A3		N° DISEGNO			REV.	
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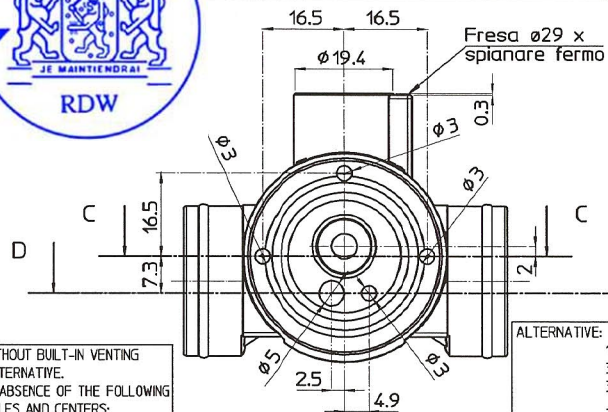
REV. MODIF. DATA FIRMA

emer SpA.
BRESCIA
ITALIA

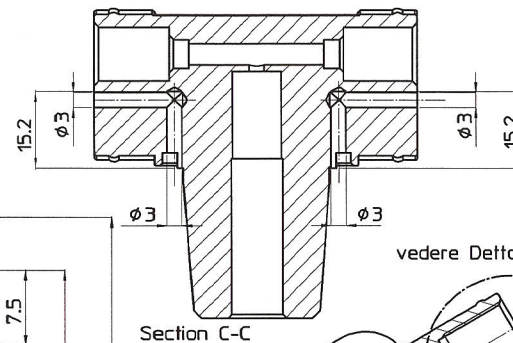
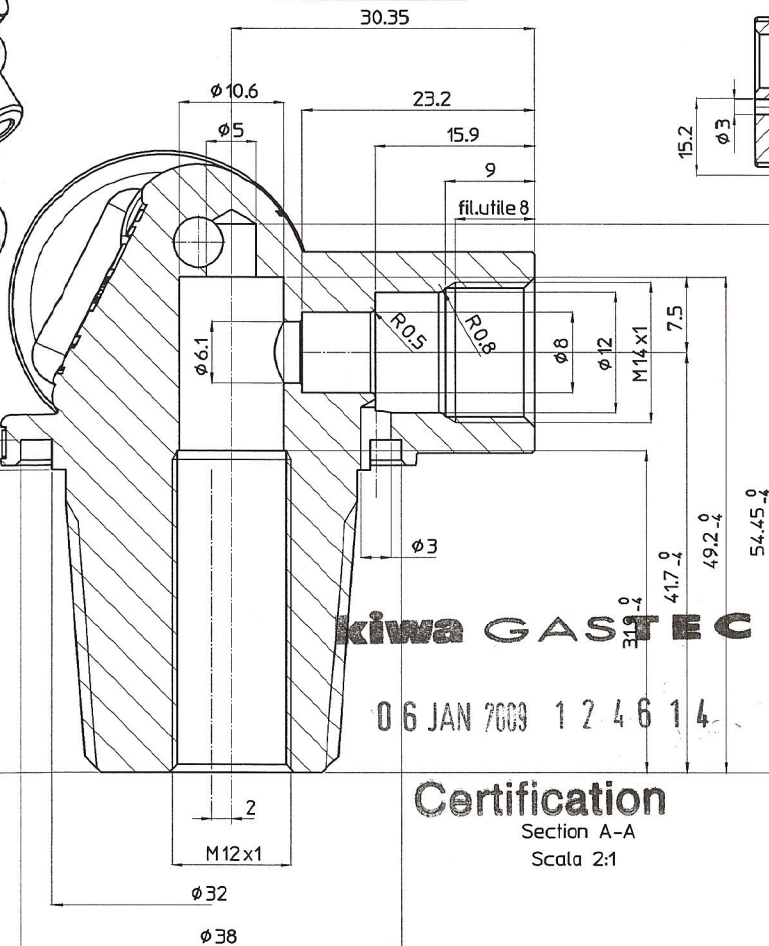
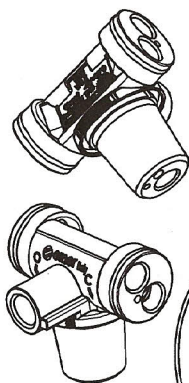
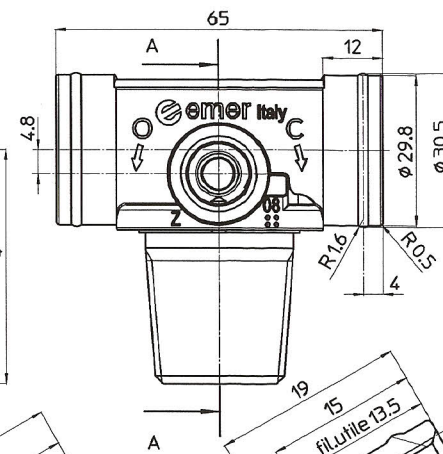
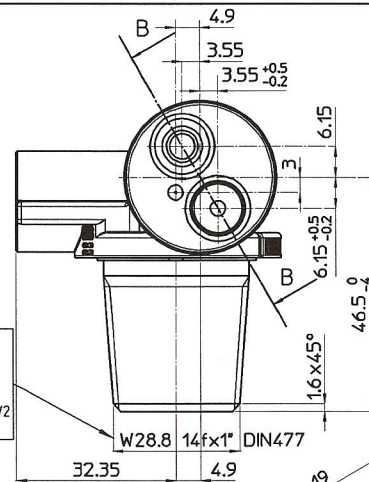
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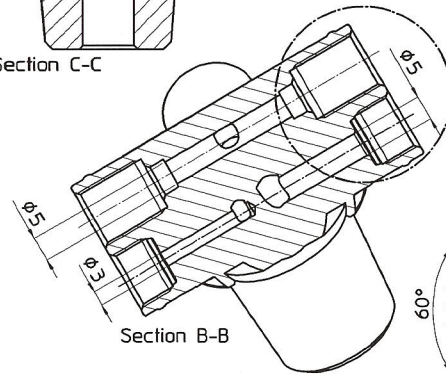
WITHOUT BUILT-IN VENTING
ALTERNATIVE.
IN ABSENCE OF THE FOLLOWING
HOLES AND CENTERS:
N°4 ø3 holes in Section C-C
Hole ø3 in Section A-A
Centers ø3ø32x25



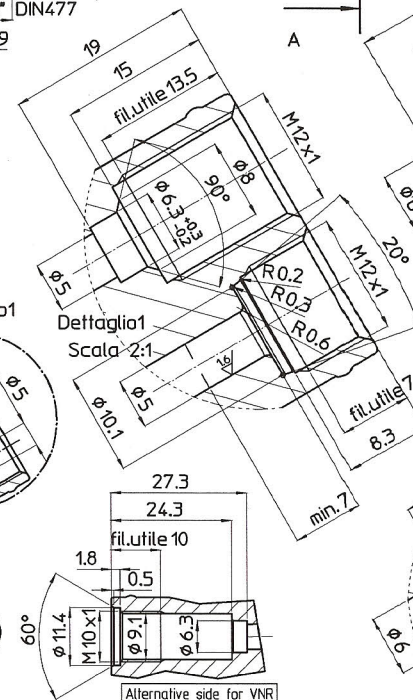
ALTERNATIVE: 1" BS341
1 1/4 BS341
3/4" NGT
3/4" NPT
JIS-B-8246-V2
3/4" IRAM



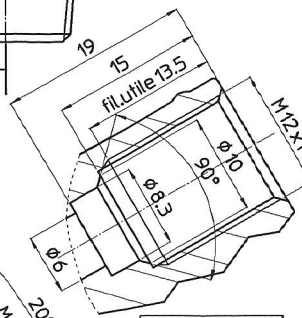
Section C-C



Section B-B

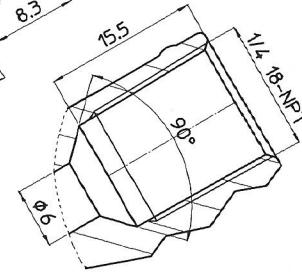


Dettaglio1
Scala 2:1



ALTERNATIVE FOR ø8
PIPE CONNECTION

ALTERNATIVE FOR
1/4 18-NPT CONNECTION

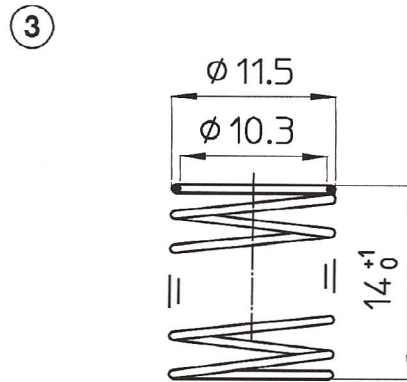


06 JAN 7009 124614

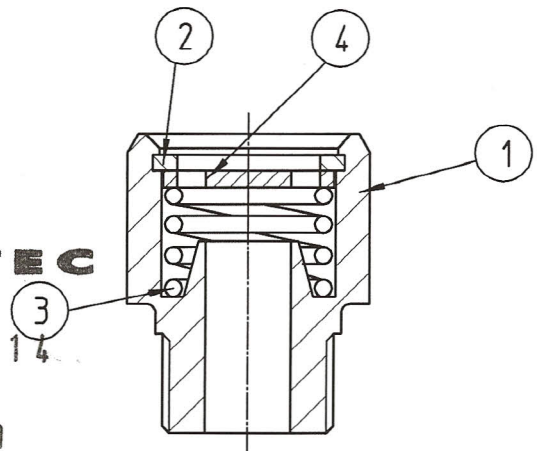
Certification
Section A-A
Scala 2:1

POS.	DENOMINAZIONE	N° PEZZI	MATERIALE/NORMA	N° DISEGNO
	QUOTE SENZA INDICAZ. DI TOLLERANZA		MATERIALE	TRATTAMENTO
	>0 a 6 ± 0.2	>6 a 30 ± 0.2	>30 a 120 ± 0.3	>120 ± 0.5
	Ang. Filettature MefrISO MAS. FEM. 6g 6H	RAGGI non quotati R0.1-0.2	SMUSSI non quotati 0.1-0.2x45°	
	REPORT S Cp-Cpk ±0.1	CRITICA C Cp-Cpk ≥1.33	IMPORTANTE +	
	DISEGNATO DATA FIRMA	CONTROLLATO DATA FIRMA	DENOMINAZIONE BODY TYPE VALE4 CONICAL DIFFERENT THREAD AND DIFF. CONNECTION	FORMATO A3 N° DISEGNO REV.
	REV. MODIF. DATA FIRMA		emmer SpA BRESCIA ITALIA	DT-E-VALE41001 00

A termine di legge ci riserviamo la proprietà di questo disegno con divieto di riproduzione o renderlo noto a terzi o a ditte concorrenti senza nostra autorizzazione

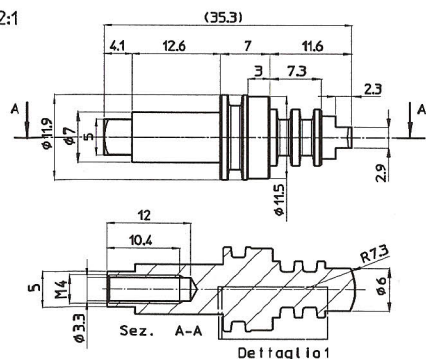


DIAMETRO DEL FILO Ø 0.6 mm
N° SPIRE TOTALI = 5
N° SPIRE UTILI = 3
SPIRE TERMINALI A CONTATTO
SENSO DI AVVOLGIMENTO DESTRO
LUNGHEZZA MASSIMA A BLOCCO 3.85 mm

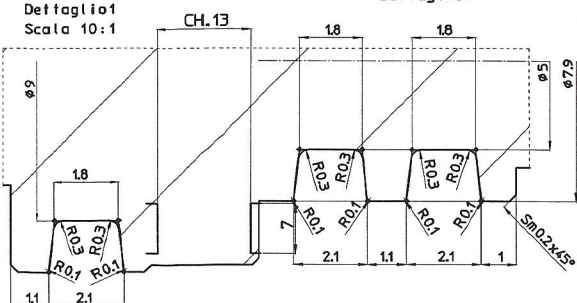


A termine di legge ci riserviamo la proprietà di questo disegno con divieto di riprodurlo o renderlo noto a terzi o a ditte concorrenti senza nostra autorizzazione

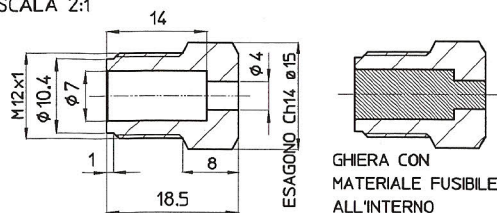
ALB0003 scala 2:1



Dettaglio 1
Scala 10:1

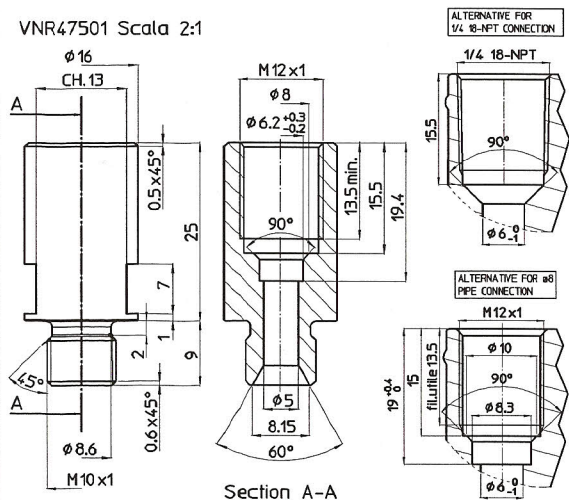


GHI0014 SCALA 2:1



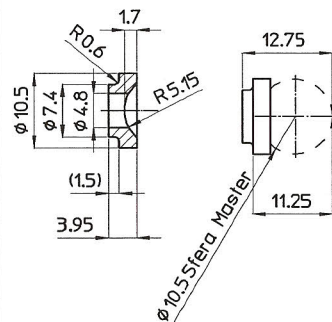
GHIERA CON
MATERIALE FUSIBILE
ALL'INTERNO

VNR47501 Scala 2:1

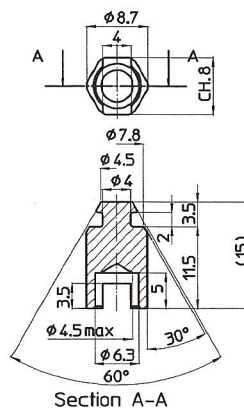


Section A-A

VBE46015 scala 2:1

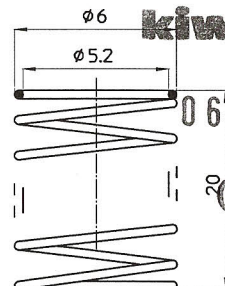


PIS0008 Scala 2:1



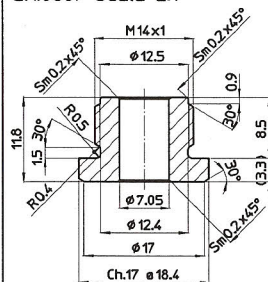
Section A-A

PIE93004 fuori scala

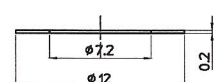


DIAMETRO DEL FILO $\phi 0.4$ mm
PASSO 3 mm
SPIRE TERMINALI A CONTATTO
SENSO DI AVVOLGIMENTO DESTRO
MOLLA ASSESTATA A BLOCCO

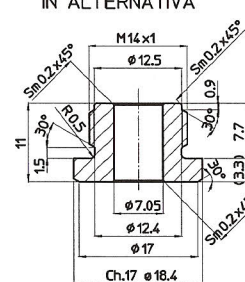
GHI0007 scala 2:1



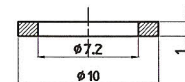
IN ABBINAMENTO A
VALB30022 scala 4:1



IN ALTERNATIVA

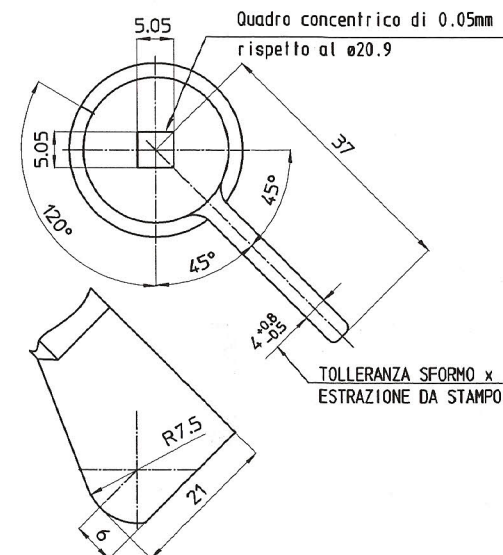
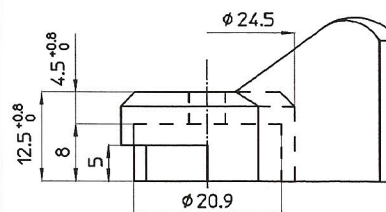


IN ABBINAMENTO A
VBE46017 scala 4:1



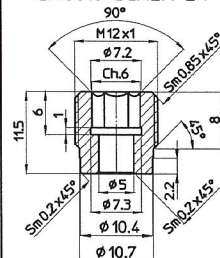
VOL0002 Aluminium scale 2:1

ALTERNATIVE VERSION BRASS OR PA6+30%FV

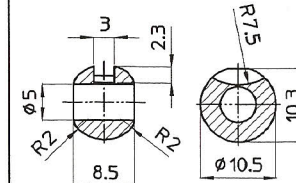


TOLLERANZA SFORMO x
ESTRAZIONE DA STAMPO

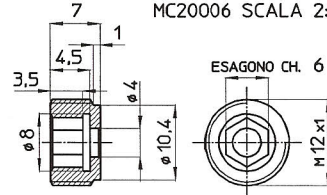
GHI0010 SCALA 2:1

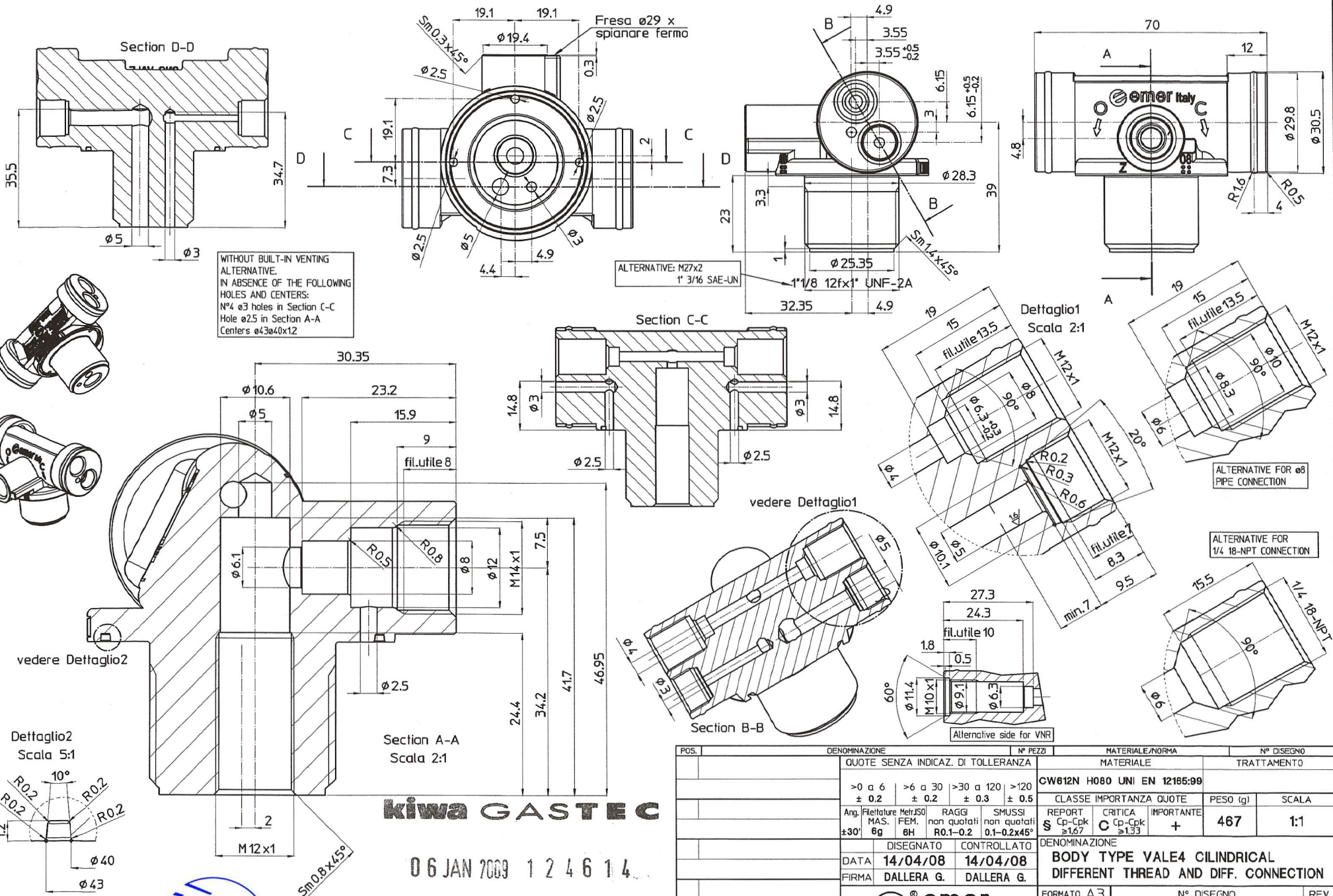


VALE11004 scala 2:1



MC20006 SCALA 2:1

[illegible]



WITHOUT BUILT-IN VENTING
ALTERNATIVE.
IN ABSENCE OF THE FOLLOWING
HOLES AND CENTERS:
N°4 Ø3 holes in Section C-C
Hole Ø2.5 in Section A-A
Centers Ø43Ø40x12

ALTERNATIVE: M27x2
1" 3/16 SAE-UN

ALTERNATIVE FOR Ø8
PIPE CONNECTION

ALTERNATIVE FOR
1/4 18-NPT CONNECTION

Alternative side for VNR

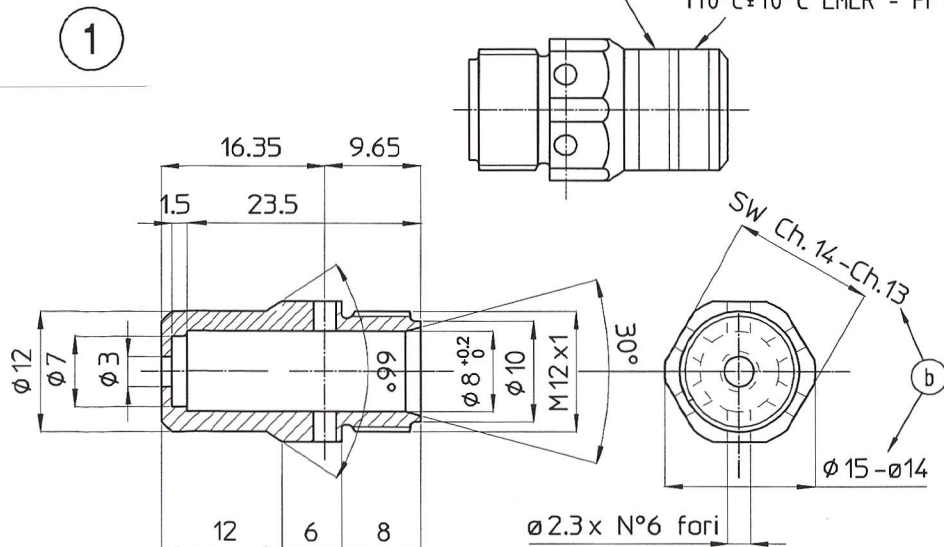
POS.	DENOMINAZIONE	N° PEZZI	MATERIALE/NORMA	N° DISEGNO
	QUOTE SENZA INDICAZ. DI TOLLERANZA		MATERIALE	TRATTAMENTO
	>0 a 6 ± 0.2	>6 a 30 ± 0.2	>30 a 120 ± 0.3	>120 ± 0.5
	Ang. Filettature MetrISO MAS. 6g ±30°	FEM. 6H R0.1-0.2	RAGGI non quotati 0.1-0.2x45°	SMUSSI non quotati 0.1-0.2x45°
	REPORT S	CRITICA C	IMPORTANTE +	PESO (g) 467
	DATA 14/04/08	CONTROLLATO 14/04/08	DENOMINAZIONE	SCALA 1:1
	FIRMA DALLERA G.	FIRMA DALLERA G.	BODY TYPE VALE4 CILINDRICAL DIFFERENT THREAD AND DIFF. CONNECTION	
REV. MODIF. DATA FIRMA			FORMATO A3	N° DISEGNO
				REV.



A termine di legge ci riserviamo la proprietà di questo disegno con divieto di riprodurlo o renderlo noto a terzi o a ditte concorrenti senza nostra autorizzazione

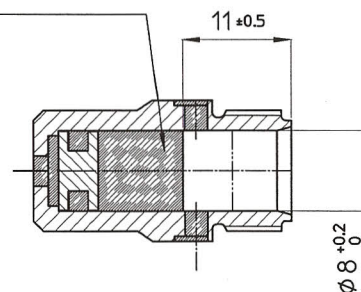
MARCATURA AL VERO:

③ 110 R - 003002
110°C ± 10°C EMER - PFT1600

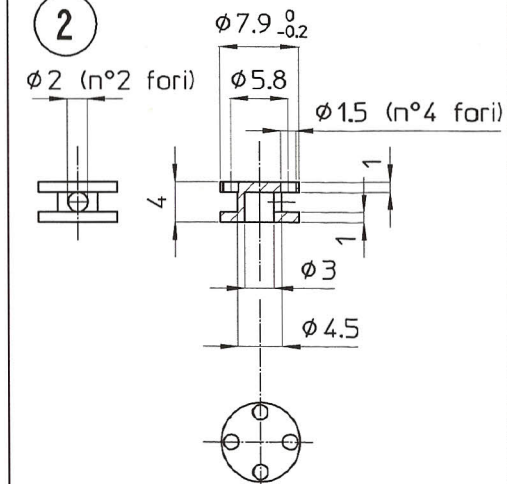


④

Materiale eutettico



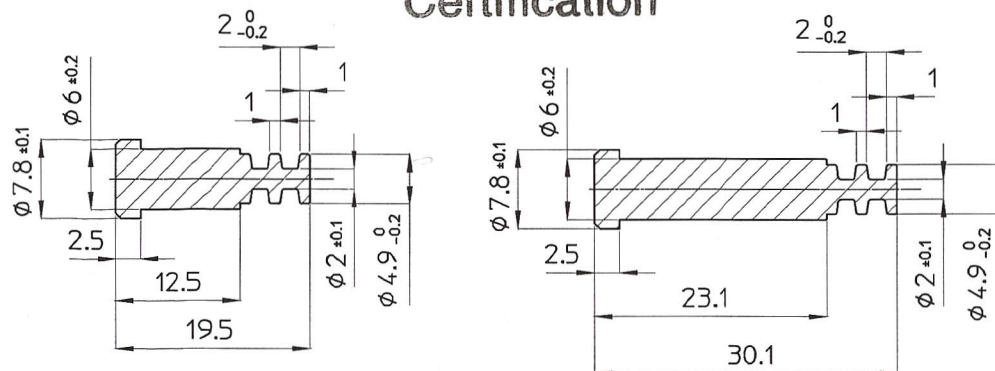
②



kiwa GASTEC

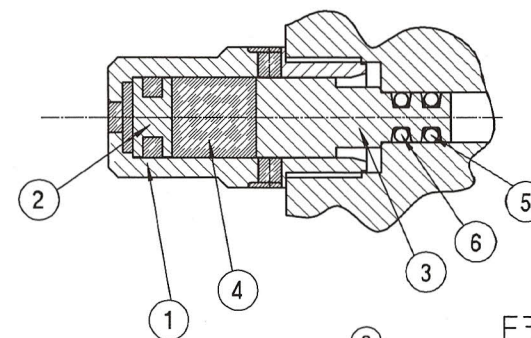
06 JAN 2009 124614

Certification



VERSIONE STANDARD (IN ALTERNATIVA)

VERSIONE ALLUNGATA (IN ALTERNATIVA)



E3 110R-003002

6	OR 1.78X1.78	1	NBR/HNBR/MTW	-	-
5	OR 1.78X1.78	1	NBR/HNBR/MTW	-	-
4	LEGA FONDATE	1	FA10GV	-	-
3	PISTONE	1	AISI303	-	-
2	GABBIA ANTIESTRUSIONE	1	9SMnPb36	UNI4838	-
1	GHIERA	1	P-CuZn40Pb2	UNI5705-65	-

POS.	DENOMINAZIONE	N° PEZZI	MATERIALE	NORMA	N° DISEGNO
-	QUOTE SENZA INDICAZ. DI TOLLER. +/- 0.2	-	-	-	-
-	TOLLERANZE GENERALI	-	-	-	-
-	ALBERI	-	-	-	-
-	ANGOLI	-	-	-	-
-	RAGGI	-	-	-	-
-	SMUSSI	-	-	-	-
-	DISEGNATO	CONTROLLATO	-	-	-
-	DATA	30/11/01	30/11/01	-	-
-	FIRMA	BALLINI	-	-	-

02	b	06/11/08	Dallera	-	-
01	a	20/01/05	Dallera	-	-
REV.	MODIF.	DATA	FIRMA	-	-

LOA	UNI	4842-77	-	-	-
QUOTE	QUOTE	AL TRE	NPEZZI	PESO	SCALA
▲	▲	QUOTE	6	-	2:1

DENOM.	COMPLESSIVO ELEMENTO FUSIBILE DI SICUREZZA PER SCARICO D.5mm	-	-
N° DISEGNO	DT-PFT1600	REV.	02

A termine di legge ci riserviamo la proprietà di questo disegno con divieto di riprodurlo o renderlo noto a terzi o a ditte concorrenti senza nostra autorizzazione

File Issue: 007	MODIFICATION/EXTENSION SHEETS	
Report Number: 121393/1	CNG components	Page: MES 5/00

Contents of correspondence sheets:

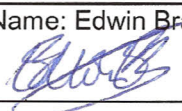
Reference

No correspondence added

Author

Pages Date

Modifications/extension to the product:

Modification/extension:	Extension E4-110R-000039 ext04 and ISO15500 MECH9 ext01		
Description:	The new version is similar to the already approved one in the following parts: Aeration system, lateral connections, fuse plug, excess flow valve and burst disc (in this case the nut is different, without the hexagon). There are changes in the external shape of the central part of the body and in the manual shut off valve ball seats and handle (see dt-e-vale128-rev01). New models have been introduced with check valve. The materials are the same for all the components (body and sealing).		
Relevant test(s):	Overpressure test, Durability test, leak tightness at 3 temperatures and internal leakage.		
Result of test(s):	Meets the requirements (see Result Sheets Regulation 110).		
Signed by Test Engineer:	Name: Edwin Brandwagt 	Date: January 2009	



Job Reference: 124614		Initials: 	6-2-09
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File Issue: 007	SUMMARY SHEETS	
Report Number: 121393/1	CNG components	Page: SS 1/00

This test report describes the examination of the extension of the Emer S.p.A. CNG component, Series VALE. The series VALE has been modified/extended as described in the Modification/Extension Sheets in this report.

The registered modifications/extensions to the VALE, meet(s) the requirements of:

Regulation 110 Uniform provisions concerning the approval of specific equipment of motor vehicles using CNG in their propulsion system.

Including:
 Corrigendum 1
 Amendment 1
 Amendment 2
 Amendment 3
 Amendment 4
 Amendment 5
 Amendment 6
 2007/29

This report should be used in conjunction with report(s) no: 121393 and 121393/1

See the Identification Sheets for all available types.

Signed in Acceptance:



Paul Dijkhof

Date: 06-02-2009

Project Manager Automotive Systems
 Kiwa Nederland b.v. (GASTEC Certification)

Notes:

The described test results are only valid for the tested materials and objects



Job Reference: 124614		Initials: 	6-2-09
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File Issue: 007	IDENTIFICATION SHEETS	
Report Number: 121393/1	CNG components	Page: IS 1/00

Type break down (including specifications):

Manual cylinder valve use for CNG applications:

- VALE127 (ball type manual valve)
- VALE128 (ball type manual valve)
- VALE129 (ball type manual valve)
- VALE130 (ball type manual valve)
- VALE131 (ball type manual valve)

- VALE127RM (screw type manual valve)
- VALE128RM (screw type manual valve)
- VALE129RM (screw type manual valve)
- VALE130RM (screw type manual valve)
- VALE131RM (screw type manual valve)

VALE4XX

Available valve stem

W 28.8-14 DIN 477
 1" BS341
 3/4 NGT
 1" 1/4 BS341
 3/4 NPT
 JIS B 8246
 3/4 IRAM
 1" 1/8 12FX1" UNF
 M27x2
 1" 3/16 SAE-UN

Available side threads

M12x1 pipe Ø6
 M12x1 pipe Ø1/4"
 1/4" – 18 NPT
 G 1/4"
 M12x1.25
 M12x1 pipe Ø8

Available burst disc

375 bar – VALB32218
 300 bar – VAL14133 (PIC92211)

Available check valve

VNR47501

Working pressure: 260 bar
 Temperature range: -40°C up to 85°C
 Fuse plug melting temperature: 110 +/- 10°C



File Issue: 003	RESULT SHEETS R110 CNG EQUIPMENT	
Report Number: 121393	OVERPRESSURE TEST	Page: RM 01/00

Product:	Manual tank valve 400 and 410
-----------------	--------------------------------------

Tested in accordance with:			
Approval requirement:	Regulation 110		
Annex:	5A		
Testing Equipment <i>(when no accuracy is specified the Gastec standard applies)</i>	Gastec no.	Calibrated (✓)	Operation OK (✓)
Hydraulic pressure equipment	111322	✓	✓
Pressure gauge, when tested pneumatically	110934		
Stopwatch	111324	✓	✓
Test Conditions			
<i>Safety precautions:</i>			
- safety rules for high pressures Gastec reference HP1			
- safety rules for use of gas cylinders,, reference CP16-3.			
		Complies (✓)	N.A. (✓)
- Test is to be performed before and after the durability test;		✓	
- The samples are filled with water and slowly pressurised;		✓	
- The samples surface shows no visible cracks as a result of this test;		✓	
- Retest a new sample with a pressure gauge with accuracy $\pm 5\%$, if samples have failed			✓

Test Results	Requirement				sample no.: C090018		sample no.: C090020		sample no.:	
					before	After	before	after	before	after
Moment of test	Before/after Durability test									
Classification of component*	0	1	2	3	0	0	0	0		
Test pressure (kPa) *	1.5 x wp	2 x wp	2 x wp	2 x wp	390 bar	390 bar	390 bar	390 bar		
Test time	≥ 3 min				✓	✓	✓	✓		
Rupture	No				✓	✓	✓	✓		
Permanent distortion	No				✓	✓	✓	✓		
Test dated	To be monitored				19-01- 2009	20-01- 2009	19-01- 2009	20-01- 2009		

Conclusion		
Requirement	Complies (✓)	N.A. (✓)
Samples meet requirement	✓	
Remarks:		

Wp = working pressure

Job Reference: 124614	Initials: 
-----------------------	---

File Issue: 003	RESULT SHEET R110 CNG EQUIPMENT	
Report Number: 121393	DURABILITY TEST	Page: RM 02/00

Product:	Manual tank valve 400 and 410
-----------------	--------------------------------------

Tested in accordance with:			
Approval requirement:	Regulation 110		
Annex:	5L		
Testing Equipment (when no accuracy is specified the Gastec standard applies)	Gastec no.	Calibrated (✓)	Operation OK (✓)
Robot	105729	✓	✓
Life test device			
Pressure gauge	110934	✓	✓
Stopwatch	111324	✓	✓
Test Conditions			
<i>Safety precautions:</i> - safety rules for high pressures Gastec reference HP1 - safety rules for use of gas cylinders, reference CP16-3			
		Complies (✓)	N.A. (✓)
- The test is performed with a period of not less than 10 seconds;		✓	
- 96 % of the total cycles is performed at room temperature		✓	
- 2 % of the total cycles is performed at minimum temperature		✓	
- 2 % of the total cycles is performed at maximum temperature		✓	

Test Results	Requirement				sample no.: C090018	sample no.: C090020	sample no.:
Classification of component *	0	4	2	3	0	0	
Test pressure (kPa) *	Wp	Wp	Wp	Wp	260 bar	260 bar	
Date & time starting the test	To be monitored				19-01-2009	19-01-2009	
Date & time stopping the test	To be monitored				19-01-2009	19-01-2009	
Actual cycles performed *	Test cycles > 6.000 times Test cycles > 20.000 times				500 times	500 times	
Test to be performed after the endurance test are:							
External leakage	According to annex 5B				See RM 03/00	See RM 04/00	See RM
Seat leakage	According to annex 5C				See RM 05/00	See RM 05/00	See RM

Conclusion		
Requirement	Complies (✓)	N.A. (✓)
Samples meet requirement	✓	
Remarks:		

- * Cross out which is not applicable
- wp = working pressure
- wp = 260 bar

Job Reference: 124614	Initials: 
-----------------------	---

File Issue: 003	RESULT SHEET R110 CNG EQUIPMENT	
Report Number: 121393	EXTERNAL LEAKAGE TEST including high and low temperature	Page: RM 03/00

Product:	Manual tank valve 400 and 410
-----------------	--------------------------------------

Tested in accordance with:			
Approval requirement:	Regulation 110		
Annex:	5B		
Testing Equipment (when no accuracy is specified the Gastec standard applies)	Gastec no.	Calibrated(✓)	Operation OK (✓)
Oven	1638	✓	✓
Cooler	109817	✓	✓
Pressure gauge	110934	✓	✓
Leakage gauge			
Stopwatch	111324	✓	✓
Test Conditions			
Safety precautions:			
- safety rules for high temperature, Gastec reference HT1			
- safety rules for high pressures, Gastec reference HP1			
- safety rules for use of gas cylinders, reference CP16-3			
		Complies (✓)	N.A. (✓)
- The sample has conditioned for 8 hours (at least) at the test temperature;		✓	
- The sample is slowly pressurised after the 8 hours of conditioning at the test temperature;		✓	
- The test sample is submerged in the test fluid for at least 60 sec, preferred is 900 sec;		✓	
- When air bumble(s) are detected after 60 sec, leakage is considered to be > 15 cc/h.			✓

Test Results	Requirement				sample no.: C090018					
Test temperature					room temperature		85°C / 120°C*		-20°C / -40°C*	
Moment of test *	Corrosion / durability / Vibration / cycle test				before	after	Before	after	before	After
Classification of component *	0	4	2	3	0	0	0	0	0	0
Test pressure	1,5 x wp	2-x wp	2-x wp	2-x wp	390 bar	390 bar	1xwp= 260 bar	1xwp= 260 bar	1xwp= 260 bar	1xwp= 260 bar
External leakage	≤ 15cc/h				✓	✓	✓	✓	✓	✓
Test date	To be monitored				19-01-09	21-01-09	19-01-09	21-01-09	19-01-09	21-01-09

Conclusion		
Requirement	Complies(✓)	N.A. (✓)
Samples meets requirement	✓	
Remarks:		

- Cross out which is not applicable
- Wp = working pressure
- Wp = 260 bar

Job Reference: 124614	Initials: 
-----------------------	---

File Issue: 003	RESULT SHEET R110 CNG EQUIPMENT	
Report Number: 121393	EXTERNAL LEAKAGE TEST including high and low temperature	Page: RM 04/00

Product:	Manual tank valve 400 and 410
-----------------	--------------------------------------

Tested in accordance with:			
Approval requirement:	Regulation 110		
Annex:	5B		
Testing Equipment (when no accuracy is specified the Gastec standard applies)	Gastec no.	Calibrated(✓)	Operation OK (✓)
Oven	1638	✓	✓
Cooler	109817	✓	✓
Pressure gauge	110934	✓	✓
Leakage gauge			
Stopwatch	111324	✓	✓
Test Conditions			
Safety precautions:			
- safety rules for high temperature, Gastec reference HT1			
- safety rules for high pressures, Gastec reference HP1			
- safety rules for use of gas cylinders, reference CP16-3			
		Complies (✓)	N.A. (✓)
- The sample has conditioned for 8 hours (at least) at the test temperature;		✓	
- The sample is slowly pressurised after the 8 hours of conditioning at the test temperature;		✓	
- The test sample is submerged in the test fluid for at least 60 sec, preferred is 900 sec;		✓	
- When air bubble(s) are detected after 60 sec, leakage is considered to be > 15 cc/h.			✓

Test Results	Requirement				sample no.: C090018					
Test temperature					room temperature		85°C / 420°C *		-20°C / -40°C *	
Moment of test *	-Corrosion / durability / Vibration / cycle test				before	after	Before	after	before	After
Classification of component *	0	4	2	3	0	0	0	0	0	0
Test pressure	1,5 x wp	2-x wp	2-x wp	2-x wp	390 bar	390 bar	1xwp= 260 bar	1xwp= 260 bar	1xwp= 260 bar	1xwp= 260 bar
External leakage	≤ 15cc/h				✓	✓	✓	✓	✓	✓
Test date	To be monitored				19-01-09	21-01-09	19-01-09	21-01-09	19-01-09	21-01-09

Conclusion		
Requirement	Complies(✓)	N.A. (✓)
Samples meets requirement	✓	
Remarks:		

- Cross out which is not applicable
- Wp = working pressure
- Wp = 260 bar

Job Reference: 124614	Initials: 
-----------------------	---

File Issue: 003	RESULT SHEET R110 CNG EQUIPMENT	
Report Number: 121393	INTERNAL LEAKAGE TEST	Page: RM 05/00

Product:	Manual tank valve 400 and 410
-----------------	--------------------------------------

Tested in accordance with:			
Approval requirement:	Regulation 110		
Annex:	5C		
Testing Equipment <i>(when no accuracy is specified the Gastec standard applies)</i>	Gastec no.	Calibrated (✓)	Operation OK (✓)
Flow meter (for metal to metal seat only)			
Pressure gauge	110934	✓	✓
Leakage gauge			
Stopwatch	111234	✓	✓
Test Conditions			
Safety precautions: - Safety rules for high pressures Gastec reference HP1 - Safety rules for use of gas cylinders, reference CP16-3			
		Complies (✓)	N.A. (✓)
- Seat leakage is tested after testing the external leakage;		✓	
- The sample is submerged in water (metal to metal seats excluded) and slowly pressurised;		✓	
- Test is carried out at room temperature		✓	
- The test time is at least 120 sec, preferred is 900 sec;		✓	
- When air bubble(s) are detected after 120 sec, seat leakage is considered to be above the limits (for metal to metal seats leakage shall be less than 0,47 dm ³ /sec, as indicated below).			✓

Test Results	Requirement	sample no.: C090018		sample no.: C090020		sample no.:	
Moment of test	Corrosion test/temperature cycle test	before	after	before	after	before	after
Test pressure (kPa)	Between 0 and 1,5 x wp	390 bar	390 bar	390 bar	390 bar		
Seat leakage *	No air bubble(s) / < 0,47 dm ³ /sec	✓	✓	✓	✓		
Test date	To be monitored	19-01-09	21-01-09	19-01-09	21-01-09		

Conclusion		
Requirement	Complies (✓)	N.A. (✓)
Samples meet requirement	✓	
Remarks:		

- * Cross out which is not applicable
- Wp = working pressure
- Wp = 260 bar

Job Reference: 124614	Initials: EB 
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