



Drinking water application CHLORINSITU® III

The CHLORINSITU® III finds application in the treatment and disinfection of drinking water. The German DVGW and British DWI regulations require that installations that come into contact with drinking water must use certified components or must be fully certified. This manual contains WRAS or similar certificates for all non-metal components in the CHLORINSITU® III that come into contact with drinking water. A flow diagram of the CHLORINSITU® III is attached to this document.

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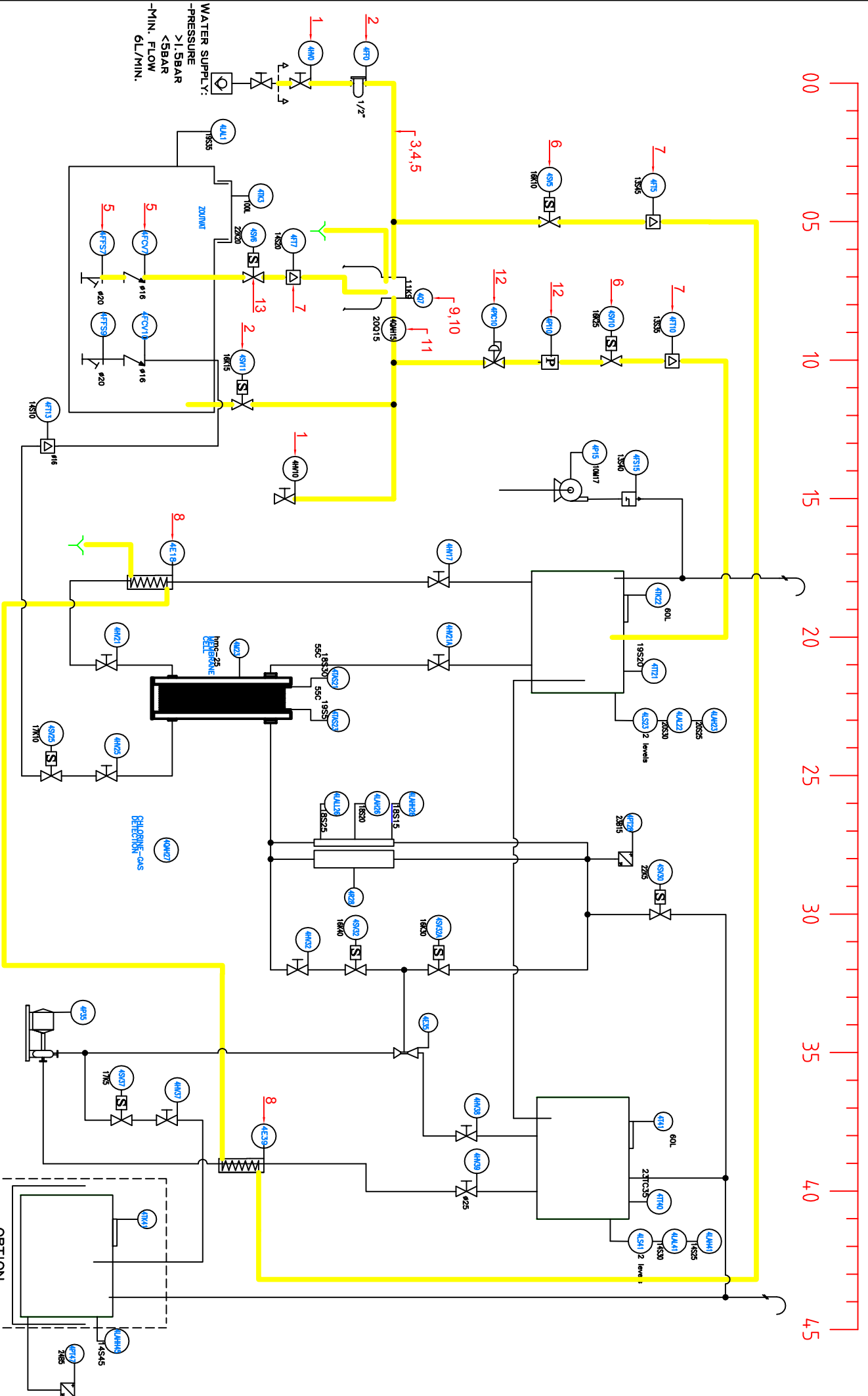
Scherpenzeel, 2015
Van den Heuvel Watertechnologie bv



Van den Heuvel
Watertechnologie bv

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P&I	Customer : VDHW STANDARD	Version no.:	Drawn by : Nick Roskam
Project : Chlorinsitu-III		V2.05	Date : 18-02-2015
Title : PROCESS AND INSTRUMENTATION DIAGRAM		Projectnr.:	Checked : Pages : 31
			Page: 4



WRAS Certificate Chlorinsitu®-III

Certificate	Certificate number	Status	Component	Supplier
BV546	1	x	Ball valve	GF
Polycgim Industrie	2	x	Strainer	Pro Water
WRAS PVCU	3	x	Piping PVCU/C	GF
WRAS Tangit	4	x	Glue	Tangit
WRAS Fittings PVCU	5	x	Fittings	GF
238 WRAS CERTIFICATE No 1403061	6	x	Solenoid valve	ASCO
WRAS	7	x	Flowmeter	Huba
	8	NA	Heat exchanger	Benhke
WRAS certificate threaded industrial tanks	9	x	Softener vessel	Pentair
FDA Europe	10	x	Hars	Lanxess
WRAS search	11	x	Hardness meter	CSB
5041303	12	x	Pressure reducer	Duco
WRAS PVC-U fittings-valves MAT LAB 392D	13	x	Solenoid valve	FIP

Date	12-1-2015
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WRAS[®]

Water Regulations Advisory Scheme

This certifies that

GEORGE FISCHER SALES LTD

*has had the undermentioned product examined, tested
and found, when correctly installed, to comply with
the requirements of the United Kingdom Water Supply
(Water Fittings) Regulations/Scottish Water Byelaws.*

TYPE 546 PVC-U BALL VALVE (DN10 - DN100)

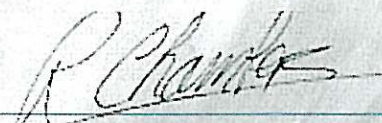
Reference should be made to the accompanying acceptance letter for installation requirements

*The product so mentioned will be listed in the
Water Fittings and Materials Directory
for a period until:*

7 FEBRUARY 2012

0702085

Certificate No.


Chairman, Test and Assessment Group


Secretary

WRAS
**APPROVED
PRODUCT**

CERTIFICATE

Product : Polychim Industrie - Polypropylene homopolymers A10TB, H10TB

Date : April 2011

Polychim Industrie hereby certifies that its above listed, produced and commercialized homopolymer polypropylene products have been tested to be in conformity with the European Directive 2002/72/EC and the European Regulation 10/2011 relating to plastics materials and articles intended to come into contact with foodstuffs.

Tests have been carried out at the University of Ghent according to :

European directive 2002/72/EEC.

The test carried out is the normal test for general packing applications (10 days at 40 °C).

Overall migration :

According to the directives 2002/72/EEC and his amendments 2004/1/EEC - 2004/19/EEC – 2005/79/EEC – 2007/19/EEC – 2008/39/EC, 82/711/EEC, 85/572/EEC, EC regulation N°1935/2004 and N°975/2009, the overall migration limit, for which a maximum value of 10 mg/dm² or 60 mg/kg is set, has to be controlled on the finished articles intended to come into contact with foodstuffs at a temperature and for an exposure time that corresponds to the worst foreseeable conditions of contact. The conversion process can affect the OM, and accordingly, only the converter can guarantee to the food packager that the limit is not exceeded.

Specific migration limit(s) :

Specific restrictions are placed on certain additives in addition to those on overall migration introduced in 2002/72/EEC.

Compliance with end-use regulations of Polychim Industrie S.A.S. polypropylene in food contact applications may be subject to further specific approval by regulatory organizations and remains the sole responsibility of the part manufacturer. Polychim Industrie S.A.S. remains at your service to provide information concerning the use of Polychim Industrie polypropylene upon request.

Valid for 1 year from date.

Page 1 of 2

The technical information provided by Polychim Industrie S.A.S. herein is presented in good faith, to the best of our knowledge and based on information we believe is reliable. However no warranty of merchantability or fitness for a particular purpose is implied or expressed for present or future as Polychim Industrie S.A.S. reserves the right to change the composition of its products in order to enhance merchantability and/or performance. Nor will Polychim Industrie S.A.S. be liable for any direct, indirect, special, incidental, or consequential loss or damage, regardless of legal theory, negligence or strict liability.

This document contains confidential information of Polychim Industrie S.A.S that is not to be used, disclosed or reproduced in whole or in part except as authorized in writing by Polychim Industrie S.A.S.

CERTIFICATE

Product : Polychim Industrie - Polypropylene homopolymers A10TB, H10TB

Date : April 2011

There is one substance used in the production process for PP homopolymers A10TB, H10TB subject to a specific migration limit in accordance with European Regulation 10/2011.

4-Ethoxybenzoic acid, ethyl ester
CAS n°023676-09-7
SML : 3.6 mg/kg
Quantity : 150 ppm max.

We hope this information is helpful to you and will be used for that typical purpose.

Valid for 1 year from date.

Page 2 of 2

The technical information provided by Polychim Industrie S.A.S. herein is presented in good faith, to the best of our knowledge and based on information we believe is reliable. However no warranty of merchantability or fitness for a particular purpose is implied or expressed for present or future as Polychim Industrie S.A.S. reserves the right to change the composition of its products in order to enhance merchantability and/or performance. Nor will Polychim Industrie S.A.S. be liable for any direct, indirect, special, incidental, or consequential loss or damage, regardless of legal theory, negligence or strict liability.

This document contains confidential information of Polychim Industrie S.A.S that is not to be used, disclosed or reproduced in whole or in part except as authorized in writing by Polychim Industrie S.A.S.

Our Ref: HL/M1303064
Test Report: M105552/A

16th December 2013



George Fischer Sales UK Limited,
Paradise Way,
Coventry,
CV2 2ST

WATER REGULATIONS ADVISORY SCHEME (WRAS)
MATERIAL APPROVAL

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS 6920-1:2000 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

POLYVINYLCHLORIDE (PVC, PVC-U AND CPVC) – COMPONENTS

5300

+GF+ PVC-U Pipe. Dark grey coloured, extruded PVC-U pipe. For use with water up to 60°C.

APPROVAL NUMBER: 1310538

APPROVAL HOLDER: GEORGE FISCHER SALES UK LIMITED

The Scheme reserves the right to review approval. This approval is valid between October 2013 and October 2018.

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: www.wras.co.uk/directory

Yours faithfully

A handwritten signature in blue ink, appearing to read 'J Furnival', is written over a horizontal line.

Jason Furnival
Approvals & Enquiries Manager
Water Regulations Advisory Scheme

WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

Manufacturers or applicants may only quote in their sales literature terms which are used in this letter, namely that; 'the material as listed, having passed the tests of effect on water quality, is suitable for use in contact with wholesome water'

This may be abbreviated to 'Water Regulations Advisory Scheme - Approved Material' or 'WRAS Approved Material'.

The scope of an Approval does not extend to rebranded materials unless otherwise agreed by the Scheme.

Use of the WRAS Approved Material Logo

The WRAS Approved Material logo is registered under the Trade Marks Acts 1994

Approval holders may use the WRAS Approved Material logo and make reference to any approval issued by WRAS Ltd. in respect of a particular material or range of materials provided the approval is, and remains valid.

Approval holders are entitled to use the logo on the packing, promotional literature and point of sale advertising Approved Materials.

Modifications to existing Approvals

It is a condition of WRAS Material Approval that **NO** changes or modifications to the Approved Material, be made without the Approval Holder first notifying WRAS Ltd. Full details of the proposed changes must be provided to the Scheme. Failure to comply with this condition will immediately invalidate a previously granted Approval.

Re-Approval

WRAS will write to you 1 year before the approval expires asking whether you would like to renew it. Please complete the relevant section of the MA3 application form which will be included with the letter and return to WRAS (via e-mail or post).

Please note it is the responsibility of the Approval Holder to ensure the Approval remains valid. WRAS Ltd. accepts no liability for the delay in granting approval where this is caused by circumstances outside of the Scheme's control.

Our Ref: HL/M1302119
Test Report: M105552/E



19th September 2013

George Fischer Sales Limited,
Paradise Way,
Coventry,
CV2 2ST

WATER REGULATIONS ADVISORY SCHEME (WRAS)
MATERIAL APPROVAL

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS 6920-1:2000 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

POLYVINYLCHLORIDE (PVC, PVC-U AND CPVC)

5300

GF PVCU Fittings. Dark grey coloured, injection moulded PVCU fittings manufactured from PVC-10 Grey. For use with water up to 60°C.

APPROVAL NUMBER: 1309523

APPROVAL HOLDER: GEORGE FISCHER SALES LIMITED

The Scheme reserves the right to review approval. This approval is valid between September 2013 and September 2018.

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: www.wras.co.uk/directory

Yours faithfully

A handwritten signature in blue ink, appearing to read 'J Furnival', is written over a horizontal line.

Jason Furnival
Approvals & Enquiries Manager
Water Regulations Advisory Scheme

WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

Manufacturers or applicants may only quote in their sales literature terms which are used in this letter, namely that; 'the material as listed, having passed the tests of effect on water quality, is suitable for use in contact with wholesome water'

This may be abbreviated to 'Water Regulations Advisory Scheme - Approved Material' or 'WRAS Approved Material'.

The scope of an Approval does not extend to rebranded materials unless otherwise agreed by the Scheme.

Use of the WRAS Approved Material Logo

The WRAS Approved Material logo is registered under the Trade Marks Acts 1994

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Approval holders are entitled to use the logo on the packing, promotional literature and point of sale advertising Approved Materials.

Modifications to existing Approvals

It is a condition of WRAS Material Approval that **NO** changes or modifications to the Approved Material, be made without the Approval Holder first notifying WRAS Ltd. Full details of the proposed changes must be provided to the Scheme. Failure to comply with this condition will immediately invalidate a previously granted Approval.

Re-Approval

WRAS will write to you 1 year before the approval expires asking whether you would like to renew it. Please complete the relevant section of the MA3 application form which will be included with the letter and return to WRAS (via e-mail or post).

Please note it is the responsibility of the Approval Holder to ensure the Approval remains valid. WRAS Ltd. accepts no liability for the delay in granting approval where this is caused by circumstances outside of the Scheme's control.

Our Ref: HL/M120292
Test Report: M105317/B

24th august 2012

George Fischer Sales Ltd.
Paradise Way,
Coventry,
CV2 2ST

WATER REGULATIONS ADVISORY SCHEME (WRAS)
MATERIAL APPROVAL

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS 6920-1:2000 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

SOLVENT CEMENTS

5560

Tangit All Pressure. Grey coloured solvent cement intended to join PVC-U pipe and fittings. Apply as per manufacturer's instructions. Cure for 20 days at 23°C. For use with water up to 23°C.

APPROVAL NUMBER: 1206557

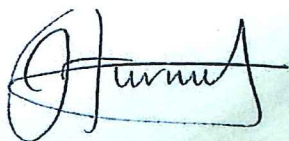
APPROVAL HOLDER: GEORGE FISCHER SALES LTD.

The Scheme reserves the right to review approval. This approval is valid between June 2012 and June 2017.

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: www.wras.co.uk/directory

Yours faithfully



Jason Furnival
Approvals & Enquiries Manager
Water Regulations Advisory Scheme

WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

Manufacturers or applicants may only quote in their sales literature terms which are used in this letter, namely that; 'the material as listed, having passed the tests of effect on water quality, is suitable for use in contact with wholesome water'

This may be abbreviated to 'Water Regulations Advisory Scheme - Approved Material' or 'WRAS Approved Material'.

The scope of an Approval does not extend to rebranded materials unless otherwise agreed by the Scheme.

Use of the WRAS Approved Material Logo

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Approval holders are entitled to use the logo on the packing, promotional literature and point of sale advertising Approved Materials.

Modifications to existing Approvals

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Re-Approval

WRAS will write to you 1 year before the approval expires asking whether you would like to renew it. Please complete the relevant section of the MA3 application form which will be included with the letter and return to WRAS (via e-mail or post).

Please note it is the responsibility of the Approval Holder to ensure the Approval remains valid. WRAS Ltd. accepts no liability for the delay in granting approval where this is caused by circumstances outside of the Scheme's control.



This certifies that

ASCO JOUCOMATIC LTD

has had the undermentioned product examined, tested and found, when correctly installed, to comply with the requirements of the United Kingdom Water Supply (Water Fittings) Regulations/Scottish Water Byelaws.

'SCG238A044BW' & 'SCG238A046BW' SOLENOID VALVES (NON-WHOLESOME WATER USE ONLY)

This certificate by itself is not evidence of a valid WRAS Approval. Confirmation of the current status of an approval must be obtained from the WRAS Directory (www.wras.co.uk/directory)

*The product so mentioned will be listed in the
Water Fittings and Materials Directory
for a period until:*

31 MARCH 2019

1403061

Certificate No.

A handwritten signature in black ink, appearing to read 'K. Dacey', written over a horizontal line.

Chairman, Product Approval Group

A handwritten signature in black ink, appearing to read 'J. Arnold', written over a horizontal line.

Secretary

WRAS
**APPROVED
PRODUCT**

WRAS[®]

Water Regulations Advisory Scheme

This certifies that

HUBA CONTROL AG

has had the undermentioned product examined, tested and found, when correctly installed, to comply with the requirements of the United Kingdom Water Supply (Water Fittings) Regulations/Scottish Water Byelaws.

TYPE 200, 201, 210, 211, 230, 235 & 236 FLOW SENSORS

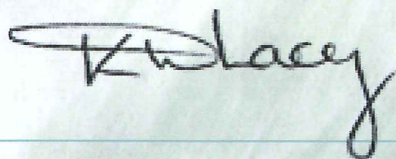
This certificate by itself is not evidence of a valid WRAS Approval. Confirmation of the current status of an approval must be obtained from the WRAS Directory (www.wras.co.uk/directory)

*The product so mentioned will be listed in the
Water Fittings and Materials Directory
for a period until:*

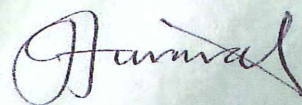
30 APRIL 2019

1404069

Certificate No.



Chairman, Product Approval Group



Secretary

WRAS
**APPROVED
PRODUCT**



This certifies that

PENTAIR INTERNATIONAL

*has had the undermentioned product examined, tested
and found, when correctly installed, to comply with
the requirements of the United Kingdom Water Supply
(Water Fittings) Regulations/Scottish Water Byelaws.*

`C' & `RT' RANGES OF VESSELS

*This certificate by itself is not evidence of a valid WRAS Approval. Confirmation of the current
status of an approval must be obtained from the WRAS Directory (www.wras.co.uk/directory)*

*The product so mentioned will be listed in the
Water Fittings and Materials Directory
for a period until:*

30 APRIL 2019

1404336

Certificate No.

A handwritten signature in black ink, appearing to read 'K. Lacey', written over a horizontal line.

Chairman, Product Approval Group

A handwritten signature in black ink, appearing to read 'J. Arnold', written over a horizontal line.

Secretary

WRAS
**APPROVED
PRODUCT**

LANXESS Deutschland GmbH / 51369 Leverkusen, Germany

To whom it may concern

**Food Contact Statement
Lewatit® S 1567**

With respect to Europe

Regulation (EC) 1935/2004 (Framework Regulation)

We hereby confirm that the above-mentioned product, when used and preconditioned according to the manufacturer's instructions, meets the relevant requirements laid down in Regulation (EC) No 1935/2004 of the European Parliament and of the Council of 27 October 2004 on materials and articles intended to come into contact with food and repealing Directives 80/590/EEC and 89/109/EEC.

Regulation (EU) 10/2011 (Plastics Regulation)

Please be informed, that ion exchange products are explicitly excluded from the scope of the European Plastics Regulation.

Council of Europe Resolution ResAP (2004)3

Above mentioned Lewatit® product is manufactured in accordance with a certified Quality Assurance System and in accordance with the recommendations of the Resolution ResAP (2004)3 of the Council of Europe on ion exchange and adsorbents resins used in the processing of foodstuffs. Particularly only substances are used for manufacturing which are listed in the technical document no. 1 of the Resolution.

Commission Regulation (EC) 2023/2006 (GMP)

We inform you that the production of the above-mentioned product is systematically reviewed with regards to good manufacturing practice (GMP) using the ISO 9001 system as well as our internal HACCP system, and following the Cefic SOIA internal guideline specifically dedicated to GMP. Therefore we can state that the above-mentioned product meets the relevant requirements laid down in Commission Regulation (EC) 2023/2006.

April 26, 2012

LANXESS Deutschland GmbH
Gritt Hamsen
Industrial & Environmental Affairs
Product Stewardship
G19 / R. 503
51369 Leverkusen, Germany

Phone+49 214 30-27330
Fax+49 214 30-25671
gritt.hamsen@lanxess.com
www.lanxess.com

Executive Board:
Dr. Axel C. Heitmann
(Chairman)
Dr. Werner Breuers
Dr. Bernhard Düttmann
Dr. Rainier van Roesel

Chairman of the Supervisory
Board:
Dr. Rolf Stomberg

Registered Office: Leverkusen
Local Court Köln
HRB 52600
VAT ID no. DE 814 000 384

With respect to USA

FDA

We confirm that **Lewatit® S 1567** is in chemical compliance with FDA 21 CFR §173.25. Please note that a resin which meets the requirements with respect to its composition must be pre-treated by the user in accordance with the manufacturer's instructions and must comply with the extraction limits described under 21 CFR §173.25(c). For **Lewatit® S 1567** the exemptions in 21 CFR §173.25 (d)(1) apply.

Gritt Hamsen

April 26, 2012

Food Contact Statement

Page 2 of 2

Drinking water certifications

Lewatit® S 1567 is tested and certified under BS 6920 by WRAS (UK) and is also approved by the Water Quality Association (WQA) according to ANSI/NSF 61 Standard "Drinking Water System Components - Health Effects". Additionally **Lewatit® S 1567** is approved by the French authorities (Direction Générale de la Santé, DGS).

Please note:

The user of **Lewatit® S 1567** is responsible to check the ability of the resin for the intended use.

Lewatit® S 1567 corresponds with the technical data and recommendations given in the relevant Lewatit Product Information and Technical Information.

For further information concerning the application, please contact your local LANXESS Affiliate.

Yours sincerely,

LANXESS Deutschland GmbH



Gritt Hamsen

Industrial & Environmental Affairs

Product Stewardship

This information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.

Products & Materials Database Search Results

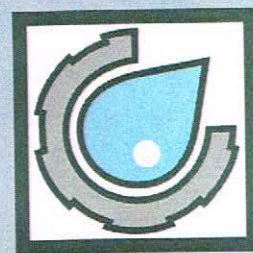
1. WRAS Approval Number: 1401503 - Approved Material

+GF+ PVCC Pipe. Light grey coloured, extruded PVC-C pipe. For use with water up to 85°C.

- **Section:** 5300 Polyvinylchloride (PVC, PVC-U and CPVC)
- **Section Subtitle:** Components - only lead free PVC-U listed in this section.
- **WRAS Approval Number:** 1401503
- **Supplier:** George Fischer Sales Ltd | [View All Listings by this Company](#)

Safety Valves

- $\frac{3}{4}$ x $\frac{3}{4}$
- $\frac{3}{4}$ x 1



DUCO

division by FORTAC

APPENDAGES



DUCO



DUCO VEILIGHEIDSVENTIELEN EN DUCO BOILERVERVENTIELEN

Toepassing

DUCO Veiligheidsventielen en DUCO Boilerventielen worden toegepast voor de beveiliging tegen overdruk in centrale verwarmings- en drinkwatersystemen.

Bij de keuze van een DUCO Veiligheidsventiel dient het op het veiligheidsventiel vermelde vermogen groter te zijn dan het nominale ketelvermogen. De insteldruk en het maximale vermogen waarvoor het ventiel geschikt is, zijn op het ventiel aangegeven.

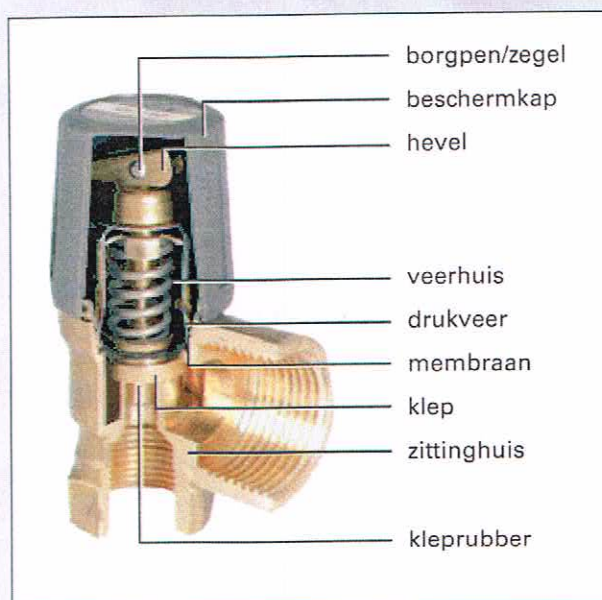
Bij de keuze van een DUCO Boilerventiel dienen de ter plaatse geldende normen, voorschriften en waterdrukken altijd in acht te worden genomen. De DUCO Boilerventielen kunnen worden toegepast in combinatie met elektrische, gasgestookte en indirect gestookte boilers tot 5.000 liter



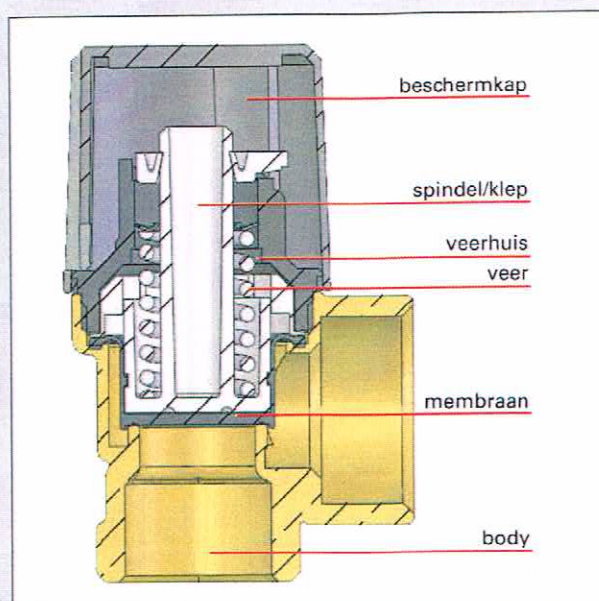
Productrange

In onze productrange voeren we drie soorten veiligheids- en boilerventielen

- **1/2" veiligheden:** voorzien van een solide, kunststof knop waarmee u met een draaiende beweging de klep kunt lichten. De dop is aan de bovenzijde voorzien van een type-aanduiding, waarop de insteldruk staat vermeld.
- **3/4" en 1" veiligheden:** voorzien van een afneembare beschermkap. Onder deze kap bevindt zich een hefboom waarmee u, met behulp van een schroevendraaier, eenvoudig de klep kunt lichten.
- **1 1/4" tot en met 2" veiligheden:** voorzien van een hefboom/hendel waarmee u de klep kunt lichten.



Doorsnede van respectievelijk de 3/4" K20, 3/4" K(M), 3/4" KM, 3/4" KE en 3/4" x 1"K.



Doorsnede van de 3/4" K, 3/4" KEC en 3/4" KC22

Bardruk

DUCO Veiligheidsventielen en DUCO Boilerventielen worden 100% individueel gecontroleerd op de vermelde openingsdruk. Deze fabrieksinstelling kan op een later moment niet meer worden gewijzigd.

CE

Alle DUCO Veiligheidsventielen en Boilerventielen zijn voorzien van een CE-markering. Ook de insteldruk en het maximale vermogen waarvoor het ventiel geschikt is, staan op het ventiel aangegeven.

TÜV

De DUCO Veiligheidsventielen en DUCO Boilerventielen $\frac{1}{2} \times \frac{3}{4}$, $\frac{3}{4} \times 1$, $1 \times 1\frac{1}{4}$, $1\frac{1}{4} \times 1\frac{1}{2}$, $1\frac{1}{2} \times 2$ en $2 \times 2\frac{1}{2}$ in de bardrukken 2.5, 3, 6, 8 en 10 bar zijn voorzien van een TÜV keur.

Werking

Voor al onze veiligheden geldt:

- dat de installatiedruk onder de klep zit en niet op het membraan;
- dat het membraan belet dat het bovenste deel van de veiligheid, inclusief de veer, nat wordt. Hierdoor wordt corrosie en kalkafzetting vermeden;
- dat de kleppen zijn voorzien van een opstaande rand. Deze rand remt aanvankelijk de vrije doorstroming af, zodat na het lichten van de klep een druk wordt uitgeoefend op het gehele rubberoppervlak en niet alleen maar op het deel dat zich binnen de klepzittingsrand bevindt.

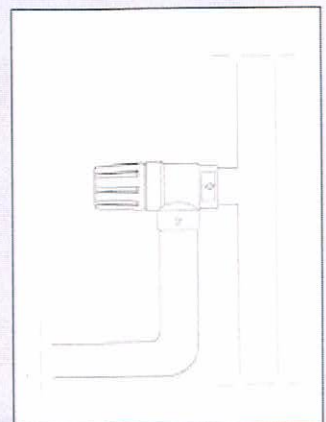
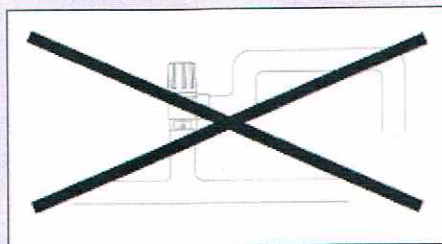
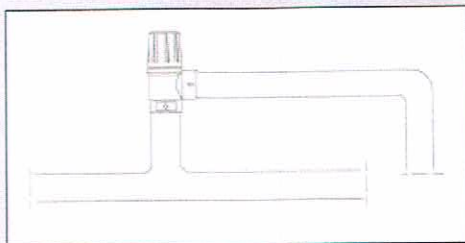
Als gevolg hiervan wordt de klep met een veel grotere kracht naar boven gedrukt dan het geval was juist vóór het moment van openen. De klep opent abrupt tot vrijwel de maximale doorlaat (pop-action), zodat met een geringe drukoverschrijding een zeer hoge afblaascapaciteit wordt bereikt. Omgekeerd sluit de klep ook plotseling en volledig af, wanneer de druk beneden de openingsdruk daalt.

Montage

Een veiligheid dient zodanig te worden gemonteerd dat al het water uit het zittinghuis kan wegstromen via de afvoeraansluiting.

Kies de afvoerleiding zo dat het afblazen van de veiligheid nagenoeg geen drukverhoging kan veroorzaken in het ventielhuis. Drukverhoging kan van invloed zijn op de afblaasdruk en daarnaast drukstoten in de afvoerleiding veroorzaken.

Voorkom onder alle omstandigheden dat de afvoerleiding verstopt raakt als gevolg van, bijvoorbeeld, bevrozing.



Belangrijk

- Monteer het ventiel altijd conform de ter plaatse geldende voorschriften;
- het boilerventiel dient in de koudwateraansluitleiding van de boiler en zo dicht mogelijk bij de boiler te worden gemonteerd;
- het onnodig aanspreken van het DUCO-ventiel moet worden voorkomen omdat anders het risico van vuil tussen klep en zitting wordt vergroot (aftappen, drukloos maken of ontluchten van de installatie niet via het ventiel);
- de uitstroombopening van het ventiel mag niet worden geblokkeerd.

Gebruiksvoorschrift

Onze producten hebben alstoeppingsgebied de cv- en drinkwaterinstallaties. Ze zijn bedoeld om het systeem tegen overdruk te beveiligen. Het bedoelde medium voor onze producten is dan ook water.

Het verdient de aanbeveling de producten droog te bewaren. Tijdens opslag dienen de producten zeker niet te worden blootgesteld aan condities buiten de toelaatbare waarden (PS = 12 bar, TS = 120°C).

De maximale capaciteit van het veiligheidsventiel staat op het ventiel. Deze moet groter zijn dan het vermogen van de ketel (in kW). Bij ontbreken van de aanduiding op het ventiel gelden onderstaande waarden.

Ventielinlaat		CV		Boilerventielen 6, 8 en 10 bar	Inhoud boiler l
inch	DN	3 bar	5 bar	Vermogen boiler kW	
1/2"	15	100	130	75	200
3/4"	20	200	260	150	1000
1"	25	500	700	250	5000
1 1/4"	32	700	950	350	-
1 1/2"	40	900	1300	600	-
2"	50	1300	1900	900	-

Aansluitingen: de pijl op het ventielhuis geeft de richting aan van inlaat naar uitlaat.

De levensduur wordt deels bepaald door de samenstelling van het te vervoeren medium. In het uiterste geval kan dit er toe leiden dat het product na enige tijd wordt aangetast. Dit zal hoogstwaarschijnlijk het geval zijn op de dunste doorsnede van het product (de zitting). Hierdoor zal het ventiel gaan lekken aan de uitgang en de afvoer in stromen. Het verdient de aanbeveling het product periodiek te controleren op lekkage op de uitgang.

Maatregelen ter beveiliging tegen te hoge druk:

- de draaiknop of hefboom van het ventiel niet demonteren om de werking van het ventiel niet negatief te beïnvloeden als gevolg van vuil. Vervang het ventiel als een van beide onderdelen ontbreekt
- blokkeer de uitlaat van het ventiel niet met een stop of een dichtmassa zoals cement of siliconenkit
- houd de klep van het veiligheidsventiel nooit vast met een schroevendraaier of enig ander gereedschap
- mocht een afblaasleiding te veel weerstand bieden, voorzie deze dan van een onderbrekingsinrichting, zoals een trechter

Beveiliging tegen te lage temperatuur: monteer het ventiel op een vorstvrije plaats. Beveiliging tegen te hoge temperatuur: is het ventiel blootgesteld aan temperaturen boven de maximale waarde (TS), bijvoorbeeld door stoom uit een 'op hol' geslagen ketel of door vuur, vervang het dan.

Gebruiksveiligheid:

- voorkom bij het overstorten van een veiligheidsventiel persoonlijk letsel (verbranding). Zeer heet water/stoom, kan uit de uitlaatzijde van het ventiel komen
- een veiligheidsventiel in gebruik kan erg warm worden - voorkom verbranding
- bij inspectie van het veiligheidsventiel dient het systeem drukloos te zijn om verbranding te voorkomen
- ventielen bedoeld voor grotere installaties kunnen grote hoeveelheden (=massa) media afblazen. Houd hiermee rekening en plaats zo nodig een afblaasleiding

Specificaties DUCO veiligheidsventielen tot 5 Bar

Model	TÜV	Bar	kW
3/4"		1,5	83
3/4"		2,0	98
3/4"		2,5	113
3/4"		3,0	128
3/4"		3,5	143
3/4"		4,0	158
3/4"		5,0	188
3/4" x 1"		1	90
3/4" x 1"		1,8	150
3/4" x 1"		2	160
3/4" x 1"	✓	2,5	100
3/4" x 1"	✓	3	100
3/4" x 1"		3,5	240
3/4" x 1"		4	250
3/4" x 1"		4,5	260
3/4" x 1"		5	275

Specificaties DUCO boilerventielen 6 tot 10 bar

Model	TÜV	Bar	kW	Inh.boiler (l)
3/4"		6	150	1.000
3/4"		7	150	1.000
3/4"		8	150	1.000
3/4"		9	150	1.000
3/4"		10	150	1.000
3/4" x 1"	✓	6	150	1.000
3/4" x 1"		7	150	1.000
3/4" x 1"	✓	8	150	1.000
3/4" x 1"		9	150	1.000
3/4" x 1"	✓	10	150	1.000

Kwaliteit (CE - ISO - TÜV)

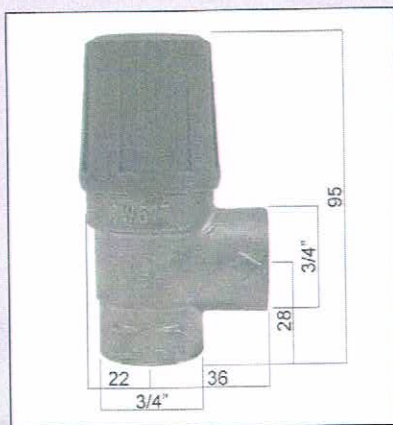
Alle DUCO ventielen voldoen aan de eisen uit de Richtlijn Drukapparatuur "Richtlijn 97/23/EG - Module B/Module D" (Pressure Equipment Directive (PED) 97/23/EC). Het gehanteerde kwaliteitssysteem voldoet bovendien aan de NEN-EN-ISO 9001:2000 norm.

TÜV-keur volgens de TRD-721.

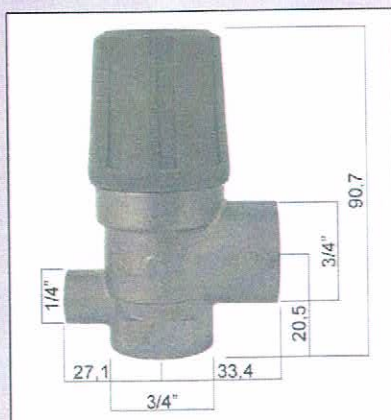




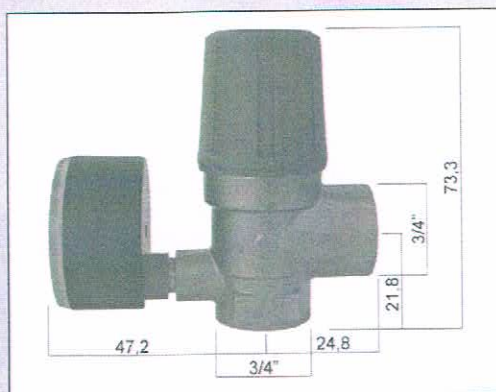
3/4" K



3/4" K20



3/4" K(M)



3/4" KM

Our Ref: HL/NA
Test Report: MAT/LAB 392D

3rd October 2011

Durapipe UK,
Walsall Road,
Norton Canes,
Cannock,
Staffs.
WS11 9NS

WATER REGULATIONS ADVISORY SCHEME (WRAS)
MATERIAL APPROVAL

The material referred to in this letter is suitable for contact with wholesome water for domestic purposes having met the requirements of BS 6920-1:2000 'Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water'.

The reference relates solely to its effect on the quality of the water with which it may come into contact and does not signify the approval of its mechanical or physical properties for any use.

POLYVINYLCHLORIDE (PVC, PVC-U AND CPVC) – COMPONENTS

5300

FIP PVC-U fittings and valves. Grey coloured, injection moulded components manufactured from PVC-U. For use with water up to 23°C.

APPROVAL NUMBER: 1109516

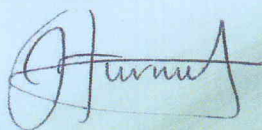
APPROVAL HOLDER: DURAPIPE UK

The Scheme reserves the right to review approval. This approval is valid between September 2011 and September 2016.

An entry, as above, will accordingly be included in the Water Fittings Directory on-line under the section headed, "Materials which have passed full tests of effect on water quality".

The Directory may be found at: www.wras.co.uk/directory

Yours faithfully



Jason Furnival
Approvals & Enquiries Manager
Water Regulations Advisory Scheme

WRAS MATERIAL APPROVAL - MATERIALS WHICH HAVE PASSED FULL TESTS OF EFFECT ON WATER QUALITY

The material referred to in this letter is suitable for contact with water for domestic purposes. **Approval of this material does not signify the approval of its mechanical or physical properties for any use.**

Manufacturers or applicants may only quote in their sales literature terms which are used in this letter, namely that; 'the material as listed, having passed the tests of effect on water quality, is suitable for use in contact with wholesome water'

This may be abbreviated to 'Water Regulations Advisory Scheme - Approved Material' or 'WRAS Approved Material'.

The scope of an Approval does not extend to rebranded materials unless otherwise agreed by the Scheme.

Use of the WRAS Approved Material Logo

The WRAS Approved Material logo is registered under the Trade Marks Acts 1994

Approval holders may use the WRAS Approved Material logo and make reference to any approval issued by WRAS Ltd. in respect of a particular material or range of materials provided the approval is, and remains valid.

Approval holders are entitled to use the logo on the packing, promotional literature and point of sale advertising Approved Materials.

Modifications to existing Approvals

It is a condition of WRAS Material Approval that **NO** changes or modifications to the Approved Material, be made without the Approval Holder first notifying WRAS Ltd. Full details of the proposed changes must be provided to the Scheme. Failure to comply with this condition will immediately invalidate a previously granted Approval.

Re-Approval

WRAS will write to you 1 year before the approval expires asking whether you would like to renew it. Please complete the relevant section of the MA3 application form which will be included with the letter and return to WRAS (via e-mail or post).

Please note it is the responsibility of the Approval Holder to ensure the Approval remains valid. WRAS Ltd. accepts no liability for the delay in granting approval where this is caused by circumstances outside of the Scheme's control.