

UK PROTECT

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B	29/11/17	L.LAZARTE Support Engr.	R. HAFFNER Proj. Engr.	D3	Amended Template	S. BOARDMAN Eng. Mgr.																																																				
Revision	Date	Prepared by & Job Title	Checked by & Job Title	Status	Reasons for revision	Approved by & Title																																																				
CLIENT NNB GenCo		1 ST PARTNER NNB GenCo		2 ND PARTNER EDF																																																						
CONTRACTOR REF. No HPC-101836/09/002				CONTRACTOR WBS CODE: 40.000609																																																						
CONTRACTOR COMPANY NAME: Pall Corporation				CONTRACT NUMBER – UK6301 QRA Related Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																																																						
APPLICABILITY: - 1: Document related to Unit 1 - 2: Document related to Unit 2 - 9: Document that applies to buildings/systems common to units 1 & 2 - 0: documents that relate exclusively to buildings or systems that are common to the whole site (e.g. parkings, ancillary buildings...)				<table border="1"> <tr> <th colspan="8">NUCL/REP/EPR/UKEPR</th> </tr> <tr> <th colspan="4">HPC (doc: HK)</th> <th colspan="4">SZC (doc: SZ)</th> </tr> <tr> <td>0</td><td>1</td><td>2</td><td>9</td> <td>0</td><td>1</td><td>2</td><td>9</td> </tr> <tr> <td></td><td>X</td><td>X</td><td>X</td> <td></td><td></td><td></td><td></td> </tr> </table>		NUCL/REP/EPR/UKEPR								HPC (doc: HK)				SZC (doc: SZ)				0	1	2	9	0	1	2	9		X	X	X					BUILDING HN SYSTEM APG																				
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DOCUMENT SUB-TYPE: DTS- DATASHEET				EDF CLASSIFICATION CODE: TBC																																																						
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EDF Accessibility:		Interne <input checked="" type="checkbox"/>		Restreint <input type="checkbox"/>		Confidentiel <input type="checkbox"/>																																																				
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UK PROTECT
Datasheet of Equipment Specifications-Type A1
HPC-UK6301-UO-ALL-DTS-100008

HPC-101836/09/002

Rev. D

REVISIONS		
Revision	Date	Description
A	05/10/2017	First Issue
B	29/11/2017	Amended template
C	30/01/2018	Incorporate comments from UK6301BEC00030BEOL - RD FOB
D	15/05/2018	Incorporate comments from UK6301BEC00080BEOL - RD FOB

A - ACCEPTED



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1.3	APG8240FI DATASHEET	8
1.4	APG8280FI DATASHEET	10

A - ACCEPTED

1 DATASHEET TYPE A1

1.0 REFERENCES

- [1] HPC-ECEMAX-AU-ALL-SPT-000356, Rev G, Contract UK6301 - BNI Filters - Book of Special Technical Specifications (BSTS)
- [2] HPC-ECEMAX-AU-ALL-SPT-001248, Rev D, UK6301 - BNI Filters - LDRC
- [3] HPC-ECECSX-AU-APG-NOT-000586, Rev B, Steam Generator Blowdown System (APG [SGBS]) - Sizing Report
- [4] HPC-ECECSX-AU-APG-SDM-000505, Rev B, SDM – APG [SGBS]: P4 – System Flow Diagram
- [5] EDEEM120122, Rev C, UK EPR – Conformity Assessment Process and Safety Requirements for Nuclear Pressure Equipment
- [6] HPC-UK6301-U0-ALL-CHR-100005-A- Exemption Request for Bolting Material

1.1 APG7103FI DATASHEET

1.1.1 Supplier Feedback

Requirement Data Sheet reference and revision	HPC-CNENXX-AU-ALL-DTS-200758 Rev C
Installation plan reference	HPC-UK6301-AU-APG-DRW-100002 Rev B
Mechanical & hydraulic calculation note	HPC-UK6301-AU-APG-CAL-100002 Rev C/ HPC-UK6301-U0-ALL-CAL-100007 Rev B

1.1.1.1 Manufacturing Data

Outer diameter	508	mm
Overall length (without nozzles)	1649	mm
Shell length	1138	mm
Type of head / bottom	FLAT/TORISPHERICAL	
Length of filter elements	765	mm
Diameter of filter elements	67	mm
Quantity of filter elements	27	
Dimensions of assembled filter element	Ø488 X 882	L*I*h
Weight of the basket	82	Kg
Total weight in operation condition	741	Kg

1.1.1.2 General Design Parameters

Design and manufacturing code	EN 13445-2009 + Addenda 2011	
Design Pressure	-1/20	bar g
Design Temperature	0/100	°C
Test pressure	28.6	bar g
Test temperature	20	°C
PER category	0	
Special test (helium, vacuum, ...)	N/A	
Maximum Allowable Weight Empty	491	kg
Maximum Allowable Weight During operation	741	kg
Maximum Allowable Weight During pressure test	741	kg
Lifespan	60	years

Nominal range of mass flow rate	N/A	kg/s
Pressure drop at nominal flow rate	N/A	bar
Max. allowable ΔP across filter element for a clean filter (according to EN 13443-2)	0.105	bar

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Max. allowable ΔP across filter element for a fouled filter	2.5	bar
Filtration rate (according to EN 13443-2)	1	μm
Retention efficiency (according to EN 13443-2)	99.98	%

1.1.1.3 Miscellaneous

Insulation	No
Heating / Tracing	No

1.1.1.4 Materials and Coating

Shell material	EN 1.4301/1.4307-Dual Certified
Head material	EN 1.4301/1.4307-Dual Certified
Other pressure retaining parts	EN 1.4301/1.4307-Dual Certified
Internals	EN 1.4301/1.4307-Dual Certified
Filter element	304 stainless steel end caps & core, epoxy resin bonded; acrylic bonded glass fibre media, PP netting; EPDM gaskets
Bolts – pressure connecting parts	Z5CND17-12 ^[6]
Nuts – pressure connecting parts	X12Cr13
Washers – pressure connecting parts	A2
Seals / gaskets	EPDM (EP18/H/75))
Surface protection inside	Pickled and Passivated
Surface protection outside	Pickled and Passivated
Surface protection bolts/nuts	N/A
External coating series (PIC, PID ...) according to SCW	N/A



1.2 APG7113FI DATASHEET

1.2.1 SUPPLIER FEEDBACK

Requirement Data Sheet reference and revision	HPC-CNENXX-AU-ALL-DTS-200758 Rev C
Installation plan reference	HPC-UK6301-AU-APG-DRW-100002 Rev B
Mechanical & hydraulic calculation note	HPC-UK6301-AU-APG-CAL-100002 Rev C/ HPC-UK6301-UO-ALL-CAL-100007 Rev B

1.2.1.1 Manufacturing Data

Outer diameter	508	mm
Overall length (without nozzles)	1649	mm
Shell length	1138	mm
Type of head / bottom	FLAT/TORISPHERICAL	
Length of filter elements	765	mm
Diameter of filter elements	67	mm
Quantity of filter elements	27	
Dimensions of assembled filter element	Ø488 X 882	L*I*h
Weight of the basket	82	Kg
Total weight in operation condition	741	Kg

1.2.1.2 General Design Parameters

Design and manufacturing code	EN 13445-2009 + Addenda 2011	
Design Pressure	-1/20	bar g
Design Temperature	0-100	°C
Test pressure	28.6	bar g
Test temperature	20	°C
PER category	0	
Special test (helium, vacuum, ...)	N/A	
Maximum Allowable Weight Empty	491	kg
Maximum Allowable Weight During operation	741	kg
Maximum Allowable Weight During pressure test	741	kg
Lifespan	60	years
Nominal range of mass flow rate	N/A	kg/s
Pressure drop at nominal flow rate	N/A	bar
Max. allowable ΔP across filter element for a clean filter (according to EN 13443-2)	0.105	bar
Max. allowable ΔP across filter element for a fouled filter	2.5	bar
Filtration rate (according to EN 13443-2)	1	μm
Retention efficiency (according to EN 13443-2)	99.98	%



Add checking cases data if any.

1.2.1.3 Miscellaneous

Insulation	No
Heating / Tracing	No

1.2.1.4 Materials and Coating

Shell material	EN 1.4301/1.4307-Dual Certified
Head material	EN 1.4301/1.4307-Dual Certified
Other pressure retaining parts	EN 1.4301/1.4307-Dual Certified
Internals	EN 1.4301/1.4307-Dual Certified
Filter element	304 stainless steel end caps & core, epoxy resin bonded; acrylic bonded glass fibre media, PP netting; EPDM gaskets
Bolts – pressure connecting parts	Z5CND17-12 ^[6]
Nuts – pressure connecting parts	X12Cr13
Washers – pressure connecting parts	A2
Seals / gaskets	EPDM (EP18/H/75))
Surface protection inside	Pickled and Passivated
Surface protection outside	Pickled and Passivated
Surface protection bolts/nuts	N/A
External coating series (PIC, PID ...) according to SCW	N/A



1.3 APG8240FI DATASHEET

1.3.1 SUPPLIER FEEDBACK

Requirement Data Sheet reference and revision	HPC-CNENXX-AU-ALL-DTS-200758 Rev C
Installation plan reference	HPC-UK6301-AU-APG-DRW-100003 Rev C
Mechanical & hydraulic calculation note	HPC-UK6301-AU-APG-CAL-100003 Rev C/ HPC-UK6301-UO-ALL-CAL-100007 Rev B

1.3.1.1 Manufacturing Data

Outer diameter	457	mm
Overall length (without nozzles)	1326	mm
Shell length	829	mm
Type of head / bottom	FLAT/TORISPHERICAL	
Length of filter elements	508	mm
Diameter of filter elements	67	mm
Quantity of filter elements	18	
Dimensions of assembled filter element	Ø437 X 623	L*I*h
Weight of the basket	56	Kg
Total weight in operation condition	649	Kg

1.3.1.2 General Design Parameters

Design and manufacturing code	EN 13445-2009-ADDENDA 2011	
Design Pressure	-1/20	bar g
Design Temperature	0/100	°C
Test pressure	28.6	bar g
Test temperature	20	°C
PER category	0	
Special test (helium, vacuum, ...)	N/A	
Maximum Allowable Weight Empty	501	kg
Maximum Allowable Weight During operation	649	kg
Maximum Allowable Weight During pressure test	649	kg
Lifespan	60	years

Nominal range of mass flow rate	N/A	kg/s
Pressure drop at nominal flow rate	N/A	bar
Max. allowable ΔP across filter element for a clean filter (according to EN 13443-2)	0.060	bar
Max. allowable ΔP across filter element for a fouled filter	2.5	bar
Filtration rate (according to EN 13443-2)	5	μm
Retention efficiency (according to EN 13443-2)	99.98	%

1.3.1.3 Miscellaneous



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Insulation	No
Heating / Tracing	No

1.3.1.4 Materials and Coating

Shell material	EN 1.4301/1.4307-Dual Certified
Head material	EN 1.4301/1.4307-Dual Certified
Other pressure retaining parts	EN 1.4301/1.4307-Dual Certified
Internals	EN 1.4301/1.4307-Dual Certified
Filter element	304 stainless steel end caps & core, epoxy resin bonded; acrylic bonded glass fibre media, PP netting; EPDM gaskets
Bolts – pressure connecting parts	Z5CND17-12 ^[6]
Nuts – pressure connecting parts	X12 Cr13
Washers – pressure connecting parts	A2
Seals / gaskets	EPDM (EP 18/H/75)
Surface protection inside	Pickled & Passivated
Surface protection outside	Pickled & Passivated
Surface protection bolts/nuts	N/A
External coating series (PIC, PID ...) according to SCW	N/A



1.4 APG8280FI DATASHEET

1.4.1 SUPPLIER FEEDBACK

Requirement Data Sheet reference and revision	HPC-CNENXX-AU-ALL-DTS-200758 Rev C
Installation plan reference	HPC-UK6301-AU-APG-DRW-100003 Rev C
Mechanical & hydraulic calculation note	HPC-UK6301-AU-APG-CAL-100003 Rev C/ HPC-UK6301-UO-ALL-CAL-100007 Rev B

1.4.1.1 Manufacturing Data

Outer diameter	457	mm
Overall length (without nozzles)	1326	mm
Shell length	829	mm
Type of head / bottom	FLAT/TORISPHERICAL	
Length of filter elements	508	mm
Diameter of filter elements	67	mm
Quantity of filter elements	18	
Dimensions of assembled filter element	Ø437 X 623	L*I*h
Weight of the basket	56	Kg
Total weight in operation condition	649	Kg

1.4.1.2 General Design Parameters

Design and manufacturing code	EN 13445-2009-ADDENDA 2011	
Design Pressure	-1/20	bar g
Design Temperature	0/100	°C
Test pressure	28.6	bar g
Test temperature	20	°C
PER category	0	
Special test (helium, vacuum, ...)	N/A	
Maximum Allowable Weight Empty	501	kg
Maximum Allowable Weight During operation	649	kg
Maximum Allowable Weight During pressure test	649	kg
Lifespan	60	years
Nominal range of mass flow rate	N/A	kg/s
Pressure drop at nominal flow rate	N/A	bar
Max. allowable ΔP across filter element for a clean filter (according to EN 13443-2)	0.060	bar
Max. allowable ΔP across filter element for a fouled filter	2.5	bar
Filtration rate (according to EN 13443-2)	5	µm
Retention efficiency (according to EN 13443-2)	99.98	%

Add checking cases data if any.



1.4.1.3 Miscellaneous

Insulation	No
Heating / Tracing	No

1.4.1.4 Materials and Coating

Shell material	EN 1.4301/1.4307-Dual Certified
Head material	EN 1.4301/1.4307-Dual Certified
Other pressure retaining parts	EN 1.4301/1.4307-Dual Certified
Internals	EN 1.4301/1.4307-Dual Certified
Filter element	304 stainless steel end caps & core, epoxy resin bonded; acrylic bonded glass fibre media, PP netting; EPDM gaskets
Bolts – pressure connecting parts	Z5CND17-12 ^[6]
Nuts – pressure connecting parts	X12 Cr13
Washers – pressure connecting parts	A2
Seals / gaskets	EPDM (EP 18/H/75)
Surface protection inside	Pickled & Passivated
Surface protection outside	Pickled & Passivated
Surface protection bolts/nuts	N/A
External coating series (PIC, PID ...) according to SCW	N/A