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Our Ref: FCO-2598/4122

SNAP Fire Systems Pty Ltd Unit 3, 26 Navigator Place HENDRA QLD 4011

Attention: Mr Richard Cooke

SNAP FIRE COLLAR SYSTEMS Assessment Number FCO-2598 Your e-mail of 3 April 2012

#### **INTRODUCTION**

We have examined the information referenced by you with regard to the fire performance of your various fire collar systems. The information included

- our test report numbered FSP 0908 for a full-scale fire-resistance test conducted on 12 August 2002;
- our test report numbered FSP 0951 for a full-scale fire-resistance test conducted on 24 February 2003; and
- our test report numbered FSP 0958 for a full-scale fire-resistance test conducted 25 February 2003;
- our test report numbered FSP 0941 for a full-scale fire-resistance test conducted on 14 November 2002;
- our test report numbered FSP 0901 for a full-scale fire-resistance test conducted on 21 June 2002;
- our test report numbered FSP 0983 for a full-scale fire-resistance test conducted on 20 June 2003;
- our test report numbered FSP 1053 for a full-scale fire-resistance test conducted on 5 April 2004;
- our test report numbered FSP 1054 for a full-scale fire-resistance test conducted on 6 April 2004;
- our test report numbered FSP 1055 for a full-scale fire-resistance test conducted on 7 April 2004;
- our test report numbered FSP 1056 for a full-scale fire-resistance test conducted on 8 April 2004; and
- test report numbered FP 4640 for a full-scale fire-resistance test conducted on 18 October 2011 by BRANZ Ltd.

THIS ASSESSMENT SUPERSEDES ASSESSMENT NUMBERED FCO-2598 DATED 20 APRIL 2012

Clayton +61 3 9545 2777 • Highett +61 3 9252 6000 • Lindfield +61 2 9413 7000 • North Ryde +61 2 9490 5444 Queensland Centre for Advanced Technologies +61 73327 4444 • Tidbinbilla +61 2 6201 7819 • Yarralumla + 61 2 6281 8502 We have retained these documents and information.

### **ANALYSIS**

CSIRO has conducted a number of full-scale fire-resistance tests and these are listed, along with the configuration and performance criteria in Appendix A and Appendix C. Additionally numerous previous assessment reports have been issued related to extensions of the test results to cover alternative installations and pipes (see Appendix B).

As the result of the full-scale testing the following performance has been established

Cast-In Stack Application

Material	Diameter (mm)	Collar	Result	Report
HDPE	150	FS3S-150A	-/180/180	FSP 1132
HDPE	110	FSC100A	-/240/120	FSP 1053
HDPE	110	FSC100A	-/240/120	FSP 1062
HDPE	100	FS2S-100H	-/240/180	FSP 1091
HDPE	65	FS2S-100H	-/120/120	FSP 1116
HDPE	50	H505	-/240/240	FP 4640
PVC	315	FS3S-315A	-/180/180	FSP 1144
PVC	100	FSC100A	-/120/120	FSP 0983
PVC	100	FSC100A	-/240/180	FSP 1053
PVC	100	FSC100A	-/240/180	FSP 1062
PVC	100	FS2S-100A	-/240/240	FSP 1091
PVC	100	FS2S-100A	-/240/240	FSP 1091
PVC	65	FSC100A	-/120/120	FSP 0983
PVC	65	FS2S-100A	-/240/180	FSP 1116
PVC	50	FSC50A	-/120/120	FSP 0983
PVC	50	FSC50A	-/240/180	FSP 1053
PVC	50	FSC50A	-/240/180	FSP 1062
PVC	50	FS2S-50A	-/240/240	FSP 1116
PVC	50	FSC50A	-/180/180	FSP 1118
PVC	50	FS2S-50A	-/180/180	FSP 1134
Silent	100	FS2S-100H	-/240/240	FSP 1091

Material	Diameter (mm)	Collar	Result	Report
HDPE	100	FS2S-100H	-/180/180	FSP 1134
HDPE	100	FS2S-100HFW	-/180/180	FSP 1134
HDPE	50	FSC50A	-/180/180	FSP 1118
HDPE	50	FS2S-50HFW	-/180/180	FSP 1146
PVC	100	FSC100A	-/180/120	FSP 1053
PVC	100	FSC100A	-/180/120	FSP 1062
PVC	100	FS2S-100A	-/180/180	FSP 1132
PVC	100	FS2S-100AFW	-/180/180	FSP 1132
PVC	80	FS2S-100A	-/180/180	FSP 1120
PVC	80	FS2S-100AFW	-/180/180	FSP 1120
PVC	50	FS2S-50A	-/180/180	FSP 1120
PVC	50	FS2S-50AFW	-/180/180	FSP 1120
PVC	50	FS2S-50A	-/180/180	FSP 1134
PVC	50	FS2S-50AFW	-/180/180	FSP 1134
PVC	40	FS2S-50A	-/180/180	FSP 1120
	40	FS2S-50AFW	-/180/180	FSP 1120
Silent	80	FSC100A	-/180/180	FSP 1118
Silent	50	FS2S-50HFW	-/180/180	FSP 1146

Cast-In Floor Waste Application

Retro-Fit Stack Application

Material	Diameter (mm)	Collar	Result	Report
HDPE	110	FSC100B	-/180/180	FSP 1054
HDPE	110	FSC100B	-/180/180	FSP 1063
HDPE	100	FSC100B	-/90/90*	FSP 1130
HDPE	50	FSC50B	-/90/90*	FSP 1130
PVC	100	FSC100B	-/180/120	FSP 1054
PVC	100	FSC100B	-/180/180	FSP 1055
PVC	100	FSC100B	-/120/120*	FSP 1056
PVC	100	FSC100B	-/180/120	FSP 1063
PVC	100	FSC100B	-/180/180	FSP 1064
PVC	100	FSC100B	-/120/120*	FSP 1065
PVC	100	FSC100B	-/90/90*	FSP 1140
PVC	50	FSC50B	-/180/180	FSP 1054
PVC	50	FSC50B	-/180/180	FSP 1055
PVC	50	FSC50B	-/120/120*	FSP 1056
PVC	50	FSC50B	-/180/180	FSP 1063
PVC	50	FSC50B	-/180/180	FSP 1064
PVC	50	FSC50B	-/120/120*	FSP 1065
PVC	50	FSC50B	-/90/90*	FSP 1140
PVC	40	FSC50B	-/180/180	FSP 1054
PVC	40	FSC50B	-/180/180	FSP 1063

 $^{\ast}$  Penetration systems listed as -/120/120 and -/90/90 were tested in framed wall systems and are discounted for the purpose of this assessment.

SNAP primarily utilise two collar sizes, a 100-mm collar used for the protection of 65/80/90/100-mm diameter pipes and a 50-mm collar used for the protection of 40/50-mm pipes. Two additional tests have been conducted, one on a 150-mm diameter HDPE pipe protected by a 150-mm diameter collar designated FS3S-150A and a 315-mm diameter PVC pipe protected by a 315-mm diameter collar designated FS3S-315A.

Due to the relative consistency of the collar performance a degree of interpolation is possible provided the collars are divided into cast-in and retrofit collars and stack and floor waste applications as required by Clause 10.4.5 of AS 1530.4-2005

#### **OPINION/CONCLUSION**

Based on the demonstrated performance of a range of collar and pipe configurations as detailed above it is the opinion of this Division that the following systems, using Snap Fire Systems designation, installed into concrete slabs or masonry walls would be capable of achieving the listed fire-resistance levels if tested in accordance with AS 1530.4-2005

Material	Diameter (mm)	Collar	Result
HDPE	150	Snap Metal 150	-/180/180
HDPE	100	SNAP (H/L) (65-100) FWS	-/240/180
HDPE	90	SNAP (H/L) (65-100) FWS	-/120/120
HDPE	80	SNAP (H/L) (65-100) FWS	-/120/120
HDPE	65	SNAP (H/L) (65-100) FWS	-/120/120
HDPE	50	SNAP (H/L) (40-50) FWS	-/240/240
PVC	315	Snap Metal 315C	-/180/180
PVC	100	SNAP (H/L) (65-100) FWS	-/240/240
PVC	90	SNAP (H/L) (65-100) FWS	-/240/180
PVC	80	SNAP (H/L) (65-100) FWS	-/240/180
PVC	65	SNAP (H/L) (65-100) FWS	-/240/180
PVC	50	SNAP (H/L) (40-50) FWS	-/180/180
PVC	40	SNAP (H/L) (40-50) FWS	-/180/180
Silent	100	SNAP (H/L) (65-100) FWS	-/240/240

#### **Cast-In Stack Application**

Material	Diameter (mm)	Collar	Result
HDPE	100	SNAP (H/L) (65-100) FWS	-/180/180
HDPE	50	SNAP (H/L) (40-50) FWS	-/180/180
HDPE	40	SNAP (H/L) (40-50) FWS	-/180/180
PVC	100	SNAP (H/L) (65-100) FWS	-/180/180
PVC	90	SNAP (H/L) (65-100) FWS	-/180/180
PVC	80	SNAP (H/L) (65-100) FWS	-/180/180
PVC	65	SNAP (H/L) (65-100) FWS	-/180/180
PVC	50	SNAP (H/L) (40-50) FWS	-/180/180
PVC	40	SNAP (H/L) (40-50) FWS	-/180/180
Silent	80	SNAP (H/L) (65-100) FWS	-/180/180
Silent	50	SNAP (H/L) (40-50) FWS	-/180/180
Silent	40	SNAP (H/L) (40-50) FWS	-/180/180

## **Cast-In Floor Waste Application**

#### TERM OF VALIDITY

This assessment report will lapse on 31 July 2017. Should you wish us to re-examine this assessment with a view to the possible extension of its term of validity, would you please apply to us three to four months before the date of expiry. This division reserves the right at any time to amend or withdraw this report in the light of new knowledge.

Yours faithfully

for Garry E Collins Manager, Fire Testing and Assessments

13 July 2012

cument	code	Type	size	Application	Pipe	diameter	Particulars	Performance	Result
0908	FD150A	Cast-in	150 mm	200 mm concrete slab					-/240/240
0941	FD100A		100 mm	230 mm masonry wall					-/240/240
	FD150A		150 mm	230 mm masonry wall	-				-/240/240
0951	FD150D	- 1	150 mm	Timber-stud plasterboard ceiling					-/60/60
0963	FD150B		150 mm	Timber-stud plasterboard wall					-/120/120
2249	FD150D		150 mm	Timber-stud plasterboard ceiling					-/60/60
	FD150D		150 mm	Steel-stud plasterboard ceiling					-/60/60
	FD100D		100 mm	Timber-stud plasterboard ceiling					-/60/60
	FD100D		100 mm	Steel-stud plasterboard ceiling					-/60/60
2250	FD100A		100 mm	150 mm concrete wall					-/240/240
	FD100B		100 mm	100 mm concrete wall	-				-/240/240
	FD150B		150 mm	100 mm concrete wall	-				-/240/240
	FD150B	Cast-in	150 mm	150 mm concrete slab	-				-/240/240
2252	FD100D		100 mm	Plasterboard floor/ceiling system	PVC	100 mm	straight		-/60/60
	FD150D		150 mm	Plasterboard floor/ceiling system	PVC	150 mm	straight		-/60/60
0983	FSC50A	Cast-in	50 mm	150 mm concrete slab	PVC	50 mm	straight		-/120/120
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	straight		-/120/120
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	65 mm	straight		-/120/120
1053	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	joiner	-/240/188	-/240/180
	FSC100A	Cast-in	100 mm	150 mm concrete slab	HDPE	110 mm	straight	-/240/179	-/240/120
	FSC50A	Cast-in	50 mm	150 mm concrete slab	PVC	50 mm	90° bend	-/240/214	-/240/180
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	floor waste	-/205/144	-/180/120
1054	FSC100B	Retrofit surface mounted	100 mm	120 mm concrete slab	PVC	100 mm	straight	-/180/176	-/180/120
	FSC100B	Retrofit recessed	100 mm	120 mm concrete slab	HDPE	110 mm	straight	-/180/180	-/180/180
	FSC50B	Retrofit surface mounted	50 mm	120 mm concrete slab	PVC	50 mm	straight	-/180/180	-/180/180
	FSC50B	Retrofit recessed	50 mm	120 mm concrete slab	PVC	40 mm	straight	-/180/180	-/180/180
1055	FSC100B	Retrofit surface mounted	100 mm	220 mm masonry wall	PVC	100 mm	straight	-/199/199	-/180/180
	FSC50B	Retrofit surface mounted	50 mm	220 mm masonry wall	PVC	50 mm	straight	-/199/199	-/180/180
1056	FSC100B	Retrofit surface mounted	100 mm	Timber-stud plasterboard wall	PVC	100 mm	straight	-/121/121	-/120/120
	FSC50B	Retrofit surface mounted	50 mm	Timber-stud plasterboard wall	PVC	50 mm	straight	-/121/121	-/120/120
1062	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	joiner	-/240/188	-/240/180
	FSC100A	Cast-in	100 mm	150 mm concrete slab	HDPE	110 mm	straight	-1240/179	-/240/120
	FSC50A	Cast-in	50 mm	150 mm concrete slab	PVC	50 mm	90° bend	-/240/214	-/240/180
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	floor waste	-/205/144	-/180/120
1063	FSC100B	Retrofit surface mounted	100 mm	120 mm concrete slab	PVC	100 mm	straight	-/180/176	-/180/120
	FSC100B	Retrofit recessed	100 mm	120 mm concrete slab	HDPE	110 mm	straight	-/180/180	-/180/180
	FSC50B	Retrofit surface mounted	50 mm	120 mm concrete slab	PVC	50 mm	straight	-/180/180	-/180/180
	FSC50B	Retrofit recessed	50 mm	120 mm concrete slab	PVC	40 mm	straight	-/180/180	-/180/180
1064	FSC100B	Retrofit surface mounted	100 mm	230 mm masonry wall	PVC	100 mm	straight	-/199/199	-/180/180
	FSC50B	Retrofit surface mounted	50 mm	230 mm masonry wall	PVC	50 mm	straight	-/199/199	-/180/180
1065	FSC100B	Retrofit surface mounted	100 mm	Timber-stud plasterboard wall	PVC	100 mm	straight	-/121/121	-/120/120
	FSC50B	Retrofit surface mounted	50 mm	Timber-stud plasterboard wall	PVC	50 mm	straight	-/121/121	-M 20M 20

Appendix A

FCO-2598

FC00337	FSC100B	Retrofit surface-mounted or recessed	100 mm	120 mm concrete slah	PVC	65 mm	straight with or without join	-4180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	120 mm concrete slab	PVC	80 mm	straight, with or without join	-/180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	120 mm concrete slab	PVC	90 mm	straight, with or without join	-/180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	120 mm concrete slab	PVC	100 mm	straight, with or without join	-/180/120	FSP1054
	FSC50A	Cast-in	50 mm	150 mm concrete slab	PVC	40 mm	straight, with or without join	-/240/180	FSP1053
	FSC50A	Cast-in	50 mm	150 mm concrete slab	PVC	50 mm	straight, with or without join	-/240/180	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	65 mm	straight, with or without join	-/240/180	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	80 mm	straight, with or without join	-/240/180	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	90 mm	straight, with or without join	-/240/180	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	straight, with or without join	-/240/180	FSP1053
	FSC100B	Retrofit surface-mounted or recessed	100 mm	150 mm concrete slab	PVC	65 mm	floor waste	-/180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	150 mm concrete slab	PVC	80 mm	floor waste	-/180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	150 mm concrete slab	PVC	90 mm	floor waste	-/180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	150 mm concrete slab	PVC	100 mm	floor waste	-/180/120	FSP1054
	FSC50A	Cast-in	50 mm	200 mm concrete slab	PVC	40 mm	straight, with or without join	-/240/240	FSP1053
	FSC50A	Cast-in	50 mm	200 mm concrete slab	PVC	50 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	65 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	80 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	90 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	100 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	floor waste	-/180/120	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	90 mm	floor waste	-/180/120	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	80 mm	floor waste	-/180/120	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	65 mm	floor waste	-/180/120	FSP1053
	FSC50B	Retrofit on both sides of wall	50 mm	220 mm masonry wall	PVC	40 mm	straight	FRL of wall syst	tem FSP1055
	FSC50B	Retrofit on both sides of wall	50 mm	220 mm masonry wall	PVC	50 mm	straight	FRL of wall syst	tem FSP1055
	FSC100B	Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	65 mm	straight, with or without join	FRL of wall syst	tem FSP1055
	FSC100B	Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	80 mm	straight, with or without join	FRL of wall syst	tem FSP1055
	FSC100B	Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	90 mm	straight, with or without join	FRL of wall syst	tem FSP1055
	FSC100B	Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	100 mm	straight, with or without join	FRL of wall syst	tem FSP1055
	FSC50B	Retrofit on both sides of wall	50 mm	Timber-stud plasterboard wall	PVC	40 mm	straight	FRL of wall syst	tem FSP1056
	FSC50B	Retrofit on both sides of wall	50 mm	Timber-stud plasterboard wall	PVC	50 mm	straight	FRL of wall syst	tem FSP1056
	FSC100B	Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	65 mm	straight, with or without join	FRL of wall syst	tem FSP1056
	FSC100B	Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	80 mm	straight, with or without join	FRL of wall syst	tem FSP1056
	FSC100B	Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	90 mm	straight, with or without join	FRL of wall syst	tem FSP1056
	FSC100B	Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	100 mm	straight, with or without join	FRL of wall syst	tem FSP1056
	FSC100B	Retrofit surface-mounted or recessed	100 mm	120 mm concrete slab	HDPE	65-110 mr	n straight	-/180/120	FSP1054
	FSC50B	Retrofit surface-mounted or recessed	50 mm	120 mm concrete slab	PVC	40 mm	straight, with or without join	-/180/180	FSP1054
	FSC50B	Retrofit surface-mounted or recessed	50 mm	120 mm concrete slab	PVC	40 mm	straight, with or without join	-/180/180	FSP1054
	FSC100A	Cast-in	100 mm	150 mm concrete slab	HDPE	65-110 mr	n straight	-/240/180	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	HDPE	65-110 mr	n straight	-/240/240	FSP1053
FC02397	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	100 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	90 mm	straight, with or without join	-/240/240	FSP1053

Appendix B

FSC100A     Cast-In       FSC100B     Rethoff surface-mounted or recess       FSC100C	100 mm 100 mm 100 mm 100 mm 100 mm 100 mm 100 mm 1100 mm 1100 mm 1100 mm ssed 100 mm ssed 100 mm	200 mm concrete slab 200 mm concrete slab 200 mm concrete slab 150 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab	P P P P P P P P P P P P P P P P P P P	80 mm 65 110 mm 65 110 mm 65 110 mm 65 110 mm 65 mm 65 mm 90 mm 80 mm 100 mm 90 mm 91 mm	straight, with or without join straight, with or without join of a straight, with or without join floor waste floor waste	-/240/240 -/240/240 -/240/240 -/240/180 -/240/180 -/240/180	FSP1053 FSP1053 FSP1053 FSP1053 FSP1053
FSC100A     Cast-In       FSC100B     Retroff surface-mounted or recess	100 mm 100 mm	200 mm concrete slab 120 mm concrete slab 120 mm concrete slab 150 mm concrete slab 130 mm concrete slab		65 mm 65-110 mm 100 mm 90 mm 85 mm 65 mm 85-110 mm 85-110 mm 85 mm 90 mm 90 mm 90 mm	straight, with or without join tstraight, with or without join straight, with or without join straight, with or without join straight, with or without join straight, with or without join n straight, with or without join floor waste floor waste	-/240/240 -/240/240 -/240/180 -/240/180 -/240/180	FSP1053 FSP1053 FSP1053 FSP1053
FSC100A     Cast-In       FSC100B     Retroff sufface-mounted or recess	100 mm 100 mm 100 mm 100 mm 100 mm 100 mm 100 mm 100 mm 100 mm ssed 100 mm ssed 100 mm	200 mm concrete slab 150 mm concrete slab 120 mm concrete slab	HDP PVC PVC PVC PVC PVC PVC PVC PVC PVC PV	65-110 mm 90 mm 90 mm 65 mm 65 mm 100 mm 90 mm 100 mm 90 mm 90 mm 90 mm	I straight, with or without join straight, with or without join straight, with or without join straight, with or without join 1 straight, with or without join 10 or waste 10 or waste	-/240/240 -/240/180 -/240/180 -/240/180	FSP1053 FSP1053 FSP1053
FSC100A     Cast-In       FSC100B     Retroff sufface-mounted or recess	100 mm 100 mm 100 mm 100 mm 100 mm 100 mm 100 mm ssed 100 mm ssed 100 mm ssed 100 mm	<ul> <li>150 mm concrete slab</li> <li>120 mm concrete slab</li> </ul>		100 mm 90 mm 85 mm 85 110 mm 85 110 mm 90 mm 85 mm 85 mm 90 mm 90 mm	straight, with or without join straight, with or without join straight, with or without join straight, with or without join loor waste floor waste floor waste	-/240/180 -/240/180 -/240/180	FSP1053
FSC100A     Cast-In       FSC100B     Retroff sufface-mounted or recess	100 mm 100 mm 100 mm 100 mm 100 mm 100 mm ssed 100 mm ssed 100 mm ssed 100 mm	150 mm concrete slab       120 mm concrete slab       120 mm concrete slab		90 mm 80 mm 65 mm 65-110 mm 90 mm 90 mm 90 mm 90 mm 90 mm	straight, with or without join straight, with or without join straight, with or without join a straight, with or without join floor waste floor waste floor waste	-/240/180 -/240/180	FQD1062
FSC100A     Cast-In       FSC100B     Retroff surface-mounted or recess	100 mm 100 mm 100 mm 100 mm 100 mm 100 mm ssed 100 mm ssed 100 mm ssed 100 mm	150 mm concrete slab       120 mm concrete slab       120 mm concrete slab       120 mm concrete slab	PVC PVC PVC PVC PVC PVC PVC PVC PVC PVC	80 mm 65 mm 65-110 mm 90 mm 80 mm 80 mm 90 mm 90 mm	straight, with or without join straight, with or without join is straight, with or without join floor waste floor waste floor waste	-/240/180	2022-101
FSC100A     Cast-in       FSC100B     Retroff sufface-mounted or recess	100 mm 100 mm 100 mm 100 mm 100 mm ssed 100 mm ssed 100 mm ssed 100 mm	<ul> <li>150 mm concrete slab</li> <li>120 mm concrete slab</li> <li>120 mm concrete slab</li> <li>120 mm concrete slab</li> </ul>	PVC PVC PVC PVC PVC PVC PVC	65 mm 65-110 mm 90 mm 80 mm 65 mm 100 mm 90 mm 80 mm	straight, with or without join 1 straight, with or without join 10 or waste 10 or waste 10 or waste		FSP1053
FSC100A     Cast-in       FSC100B     Retroff surface-mounted or recess	100 mm 100 mm 100 mm 100 mm 100 mm 1858ed 100 mm issed 100 mm issed 100 mm	<ul> <li>150 mm concrete slab</li> <li>120 mm concrete slab</li> <li>120 mm concrete slab</li> <li>120 mm concrete slab</li> </ul>	HDPE PVC PVC PVC PVC	65-110 mm 100 mm 80 mm 65 mm 100 mm 90 mm 80 mm	<ul> <li>straight, with or without join floor waste floor waste floor waste</li> </ul>	-/240/180	FSP1053
FSC100A     Cast-In       FSC100A     Cast-In       FSC100A     Cast-In       FSC100A     Cast-In       FSC100B     Retroff surface-mounted or recess	100 mm 100 mm 100 mm 100 mm ssed 100 mm ssed 100 mm ssed 100 mm	150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 120 mm concrete slab	PVC PVC PVC PVC PVC	100 mm 90 mm 85 mm 100 mm 80 mm 80 mm	floor waste floor waste floor waste floor waste	-/240/180	FSP1053
FSC100A     Cast-in       FSC100A     Cast-in       FSC100A     Cast-in       FSC100B     Cast-in       FSC100B     Retroff surface-mounted or recess	100 mm 100 mm 100 mm sssed 100 mm sssed 100 mm sssed 100 mm	150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 120 mm concrete slab	PVC PVC PVC PVC PVC	90 mm 85 mm 90 mm 80 mm 80 mm 80 mm 80 mm	floor waste floor waste floor waste	-/180/120	FSP1053
FSC100A         Cast-In           FSC100A         Cast-In           FSC100A         Cast-In           FSC100B         Retroff surface-mounted or recess	100 mm 100 mm sssed 100 mm sssed 100 mm sssed 100 mm	<ol> <li>150 mm concrete slab</li> <li>120 mm concrete slab</li> <li>120 mm concrete slab</li> <li>120 mm concrete slab</li> </ol>	PVC PVC PVC PVC	80 mm 85 mm 90 mm 80 mm 80 mm	floor waste floor waste	-/180/120	FSP1053
FSC100A         Cashin           FSC100B         Retroff surface-mounted or recess	100 mm sssed 100 mm sssed 100 mm sssed 100 mm	<ol> <li>150 mm concrete slab</li> <li>150 mm concrete slab</li> <li>150 mm concrete slab</li> <li>150 mm concrete slab</li> <li>120 mm concrete slab</li> <li>120 mm concrete slab</li> <li>120 mm concrete slab</li> <li>120 mm concrete slab</li> </ol>	PVC PVC PVC	65 mm 100 mm 80 mm 80 mm	floor waste	-/180/120	FSP1053
FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess	ssed 100 mm ssed 100 mm ssed 100 mm	150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab	PVC PVC PVC	100 mm 90 mm 80 mm	floor mode	-/180/120	FSP1053
FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess	ssed 100 mm	150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab	PVC PVC DVC	90 mm 80 mm	HUUI WASIE	-/180/120	FSP1054
FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess recess	ssed 100 mm	150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab	PVC PVC	80 mm	floor waste	-/180/120	FSP1054
FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess recently and surface-mounted or recess		150 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab	PVC	0.6 mm	floor waste	-/180/120	FSP1054
FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess	essed 100 mm	120 mm concrete slab 120 mm concrete slab 120 mm concrete slab			floor waste	-/180/120	FSP1054
FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess FSC100B Retroff surface-mounted or recess	essed 100 mm	120 mm concrete slab 120 mm concrete slab	PVC	100 mm	straight, with or without join	-/180/120	FSP1054
FSC100B Retroft surface-mounted or recess FSC100B Retroft surface-mounted or recess	ssed 100 mm	120 mm concrete slab	PVC	90 mm	straight, with or without join	-/180/120	FSP1054
FSC100B Retrofit surface-mounted or recess	ssed 100 mm		PVC	80 mm	straight, with or without join	-/180/120	FSP1054
FOCADO Detroit and a monthly a	ssed 100 mm	120 mm concrete slab	PVC	65 mm	straight, with or without join	-/180/120	FSP1054
	ssed 100 mm	120 mm concrete slab	HDPE	65-110 mm	n straight, with or without join	-/180/120	FSP1054
FSC100B Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	100 mm	straight, with or without join	FRL of wall syster	1 FSP1055
FSC100B Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	90 mm	straight, with or without join	FRL of wall syster	1 FSP1055
FSC100B Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	80 mm	straight, with or without join	FRL of wall syster	1 FSP1055
FSC100B Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	65 mm	straight, with or without join	FRL of wall syster	1 FSP1055
FSC100B Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	100 mm	straight, with or without join	FRL of wall syster	1 FSP1056
FSC100B Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	90 mm	straight, with or without join	FRL of wall syster	1 FSP1056
FSC100B Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	80 mm	straight, with or without join	FRL of wall syster	1 FSP1056
FSC100B Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	65 mm	straight, with or without join	FRL of wall syster	1 FSP1056
FSC50A Cast-in	50 mm	200 mm concrete slab	PVC	50 mm	straight, with or without join	-/240/240	FSP1053
FSC50A Cast-in	50 mm	200 mm concrete slab	PVC	40 mm	straight, with or without join	-/240/240	FSP1053
FSC50A Cast-in	50 mm	150 mm concrete slab	PVC	50 mm	straight, with or without join	-/240/180	FSP1053
FSC50A Cast-in	50 mm	150 mm concrete slab	PVC	40 mm	straight, with or without join	-/240/180	FSP1053
FSC50B Retrofit surface-mounted or recess	ssed 50 mm	120 mm concrete slab	PVC	50 mm	straight, with or without join	-/180/180	FSP1054
FSC50B Retrofit surface-mounted or recess	essed 50 mm	120 mm concrete slab	PVC	40 mm	straight, with or without join	-/180/180	FSP1054
FSC50B Retrofit on both sides of wall	50 mm	220 mm masonry wall	PVC	50 mm		FRL of wall syster	1 FSP1055
FSC50B Retrofit on both sides of wall	50 mm	220 mm masonry wall	PVC	40 mm		FRL of wall syster	1 FSP1055
FSC50B Retrofit on both sides of wall	50 mm	Timber-stud plasterboard wall	PVC	50 mm		FRL of wall syster	1 FSP1056
FSC50B Retrofit on both sides of wall	50 mm	Timber-stud plasterboard wall	PVC	40 mm		FRL of wall syster	1 FSP1056

## Appendix C

FSP1091	FS2S-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	100 mm	straight	-/240/240
	FS2S-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	100 mm	90° bend	-/240/240
	FS2S-100H	Cast-in	65/80/90/100 mm	150 mm concrete slab	HDPE	100 mm	straight	-/240/180
	FS2S-100H	Cast-in	65/80/90/100 mm	150 mm concrete slab	Silent	100 mm	straight	-/240/240
FSP1116	FS2S-100H	Cast-in	65/80/90/100 mm	150 mm concrete slab	HDPE	65 mm	straight	-/120/120
	FS2S-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	65 mm	straight	-/240/180
	FS2S-50A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	50 mm	90° bend	-/240/240
FSP1118	FSC-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	Silent	80 mm	straight with floor grate	-/180/180
	FSC-50A	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	straight	-/180/180
	FSC-50A	Cast-in	40/50 mm	150 mm concrete slab	HDPE	50 mm	straight with floor grate	-/180/180
FSP1120	FS28-50A	Cast-in	40/50 mm	150 mm concrete slab	PVC	40 mm	straight with floor grate	-/180/180
	FS2S-50AFW	Cast-in	40/50 mm	150 mm concrete slab	PVC	40 mm	straight with floor grate	-/180/180
	FS2S-50A	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	bend with floor grate	-/180/180
	FS2S-50AFW	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	bend with floor grate	-/180/180
	FS2S-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	80 mm	trap and floor grate	-/180/180
	FS2S-100AFW	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	80 mm	trap and floor grate	-/180/180
FSP1130	FSC-100B	Retrofit to ceiling	65/80/90/100 mm	Timber-frame plasterboard ceiling	HDPE	100 mm		-/90/90
	FSC-50B	Retrofit to ceiling	40/50 mm	Timber-frame plasterboard ceiling	HDPE	50 mm		-/90/90
FSP1132	FS3S-150A	Cast-in	150 mm	150 mm concrete slab	HDPE	150 mm	straight	-/180/180
	FS2S-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	100 mm	trap and floor grate	-/180/180
	FS2S-100AFW	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	100 mm	trap and floor grate	-/180/180
FSP1134	FS28-50A	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	trap and floor grate	-/180/180
	FS2S-50AFW	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	trap and floor grate	-/180/180
	FS28-100H	Cast-in	65/80/90/100 mm	150 mm concrete slab	HDPE	100 mm	trap and floor grate	-/180/180
	FS2S-100HFW	Cast-in	65/80/90/100 mm	150 mm concrete slab	HDPE	100 mm	trap and floor grate	-/180/180
	FS2S-50A	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	straight	-/180/180
FSP1140	FSC-100B	Retrofit to ceiling	65/80/90/100 mm	Timber-frame plasterboard ceiling	PVC	100 mm		-/90/90
	FSC-50B	Retrofit to ceiling	40/50 mm	Timber-frame plasterboard ceiling	PVC	50 mm		-/90/90
FSP1144	FS3S-315A	Cast-in	315 mm	150 mm concrete slab	PVC	315 mm	straight	-/180/180
FSP1146	FS2S-50HFW	Cast-in	40/50 mm	150 mm concrete slab	HDPE	50 mm	trap and floor grate	-/180/180
	FS28-50HFW	Cast-in	40/50 mm	150 mm concrete slab	Silent	50 mm	trap and floor grate	-/180/180

cument	code	Type	size	Application	Pipe	diameter	Particulars	Performance	Result
0908	FD150A	Cast-in	150 mm	200 mm concrete slab					-/240/240
0941	FD100A		100 mm	230 mm masonry wall					-/240/240
	FD150A		150 mm	230 mm masonry wall	-				-/240/240
0951	FD150D	- 1	150 mm	Timber-stud plasterboard ceiling					-/60/60
0963	FD150B		150 mm	Timber-stud plasterboard wall					-/120/120
2249	FD150D		150 mm	Timber-stud plasterboard ceiling					-/60/60
	FD150D		150 mm	Steel-stud plasterboard ceiling					-/60/60
	FD100D		100 mm	Timber-stud plasterboard ceiling					-/60/60
	FD100D		100 mm	Steel-stud plasterboard ceiling					-/60/60
2250	FD100A		100 mm	150 mm concrete wall					-/240/240
	FD100B		100 mm	100 mm concrete wall	-				-/240/240
	FD150B		150 mm	100 mm concrete wall	-				-/240/240
	FD150B	Cast-in	150 mm	150 mm concrete slab	-				-/240/240
2252	FD100D		100 mm	Plasterboard floor/ceiling system	PVC	100 mm	straight		-/60/60
	FD150D		150 mm	Plasterboard floor/ceiling system	PVC	150 mm	straight		-/60/60
0983	FSC50A	Cast-in	50 mm	150 mm concrete slab	PVC	50 mm	straight		-/120/120
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	straight		-/120/120
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	65 mm	straight		-/120/120
1053	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	joiner	-/240/188	-/240/180
	FSC100A	Cast-in	100 mm	150 mm concrete slab	HDPE	110 mm	straight	-/240/179	-/240/120
	FSC50A	Cast-in	50 mm	150 mm concrete slab	PVC	50 mm	90° bend	-/240/214	-/240/180
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	floor waste	-/205/144	-/180/120
1054	FSC100B	Retrofit surface mounted	100 mm	120 mm concrete slab	PVC	100 mm	straight	-/180/176	-/180/120
	FSC100B	Retrofit recessed	100 mm	120 mm concrete slab	HDPE	110 mm	straight	-/180/180	-/180/180
	FSC50B	Retrofit surface mounted	50 mm	120 mm concrete slab	PVC	50 mm	straight	-/180/180	-/180/180
	FSC50B	Retrofit recessed	50 mm	120 mm concrete slab	PVC	40 mm	straight	-/180/180	-/180/180
1055	FSC100B	Retrofit surface mounted	100 mm	220 mm masonry wall	PVC	100 mm	straight	-/199/199	-/180/180
	FSC50B	Retrofit surface mounted	50 mm	220 mm masonry wall	PVC	50 mm	straight	-/199/199	-/180/180
1056	FSC100B	Retrofit surface mounted	100 mm	Timber-stud plasterboard wall	PVC	100 mm	straight	-/121/121	-/120/120
	FSC50B	Retrofit surface mounted	50 mm	Timber-stud plasterboard wall	PVC	50 mm	straight	-/121/121	-/120/120
1062	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	joiner	-/240/188	-/240/180
	FSC100A	Cast-in	100 mm	150 mm concrete slab	HDPE	110 mm	straight	-1240/179	-/240/120
	FSC50A	Cast-in	50 mm	150 mm concrete slab	PVC	50 mm	90° bend	-/240/214	-/240/180
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	floor waste	-/205/144	-/180/120
1063	FSC100B	Retrofit surface mounted	100 mm	120 mm concrete slab	PVC	100 mm	straight	-/180/176	-/180/120
	FSC100B	Retrofit recessed	100 mm	120 mm concrete slab	HDPE	110 mm	straight	-/180/180	-/180/180
	FSC50B	Retrofit surface mounted	50 mm	120 mm concrete slab	PVC	50 mm	straight	-/180/180	-/180/180
	FSC50B	Retrofit recessed	50 mm	120 mm concrete slab	PVC	40 mm	straight	-/180/180	-/180/180
1064	FSC100B	Retrofit surface mounted	100 mm	230 mm masonry wall	PVC	100 mm	straight	-/199/199	-/180/180
	FSC50B	Retrofit surface mounted	50 mm	230 mm masonry wall	PVC	50 mm	straight	-/199/199	-/180/180
1065	FSC100B	Retrofit surface mounted	100 mm	Timber-stud plasterboard wall	PVC	100 mm	straight	-/121/121	-/120/120
	FSC50B	Retrofit surface mounted	50 mm	Timber-stud plasterboard wall	PVC	50 mm	straight	-/121/121	-M 20M 20

Appendix A

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FC00337	FSC100B	Retrofit surface-mounted or recessed	100 mm	1.20 mm concrete slah	PVC	65 mm	straight with or without join	-4180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	120 mm concrete slab	PVC	80 mm	straight, with or without join	-/180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	120 mm concrete slab	PVC	90 mm	straight, with or without join	-/180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	120 mm concrete slab	PVC	100 mm	straight, with or without join	-/180/120	FSP1054
	FSC50A	Cast-in	50 mm	150 mm concrete slab	PVC	40 mm	straight, with or without join	-/240/180	FSP1053
	FSC50A	Cast-in	50 mm	150 mm concrete slab	PVC	50 mm	straight, with or without join	-/240/180	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	65 mm	straight, with or without join	-/240/180	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	80 mm	straight, with or without join	-/240/180	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	90 mm	straight, with or without join	-/240/180	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	straight, with or without join	-/240/180	FSP1053
	FSC100B	Retrofit surface-mounted or recessed	100 mm	150 mm concrete slab	PVC	65 mm	floor waste	-/180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	150 mm concrete slab	PVC	80 mm	floor waste	-/180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	150 mm concrete slab	PVC	90 mm	floor waste	-/180/120	FSP1054
	FSC100B	Retrofit surface-mounted or recessed	100 mm	150 mm concrete slab	PVC	100 mm	floor waste	-/180/120	FSP1054
	FSC50A	Cast-in	50 mm	200 mm concrete slab	PVC	40 mm	straight, with or without join	-/240/240	FSP1053
	FSC50A	Cast-in	50 mm	200 mm concrete slab	PVC	50 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	65 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	80 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	90 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	100 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	100 mm	floor waste	-/180/120	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	90 mm	floor waste	-/180/120	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	80 mm	floor waste	-/180/120	FSP1053
	FSC100A	Cast-in	100 mm	150 mm concrete slab	PVC	65 mm	floor waste	-/180/120	FSP1053
	FSC50B	Retrofit on both sides of wall	50 mm	220 mm masonry wall	PVC	40 mm	straight	FRL of wall syst	tem FSP1055
	FSC50B	Retrofit on both sides of wall	50 mm	220 mm masonry wall	PVC	50 mm	straight	FRL of wall syst	tem FSP1055
	FSC100B	Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	65 mm	straight, with or without join	FRL of wall syst	em FSP1055
	FSC100B	Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	80 mm	straight, with or without join	FRL of wall syst	tem FSP1055
	FSC100B	Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	90 mm	straight, with or without join	FRL of wall syst	tem FSP1055
	FSC100B	Retrofit on both sides of wall	100 mm	220 mm masonry wall	PVC	100 mm	straight, with or without join	FRL of wall syst	tem FSP1055
	FSC50B	Retrofit on both sides of wall	50 mm	Timber-stud plasterboard wall	PVC	40 mm	straight	FRL of wall syst	tem FSP1056
	FSC50B	Retrofit on both sides of wall	50 mm	Timber-stud plasterboard wall	PVC	50 mm	straight	FRL of wall syst	tem FSP1056
	FSC100B	Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	65 mm	straight, with or without join	FRL of wall syst	tem FSP1056
	FSC100B	Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	80 mm	straight, with or without join	FRL of wall syst	tem FSP1056
	FSC100B	Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	90 mm	straight, with or without join	FRL of wall syst	em FSP1056
	FSC100B	Retrofit on both sides of wall	100 mm	Timber-stud plasterboard wall	PVC	100 mm	straight, with or without join	FRL of wall syst	tem FSP1056
	FSC100B	Retrofit surface-mounted or recessed	100 mm	120 mm concrete slab	HDPE	65-110 mr	n straight	-/180/120	FSP1054
	FSC50B	Retrofit surface-mounted or recessed	50 mm	120 mm concrete slab	PVC	40 mm	straight, with or without join	-/180/180	FSP1054
	FSC50B	Retrofit surface-mounted or recessed	50 mm	120 mm concrete slab	PVC	40 mm	straight, with or without join	-/180/180	FSP1054
	FSC100A	Cast-in	100 mm	150 mm concrete slab	HDPE	65-110 mr	n straight	-/240/180	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	HDPE	65-110 mr	n straight	-/240/240	FSP1053
FC02397	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	100 mm	straight, with or without join	-/240/240	FSP1053
	FSC100A	Cast-in	100 mm	200 mm concrete slab	PVC	90 mm	straight, with or without join	-/240/240	FSP1053

# Appendix B

FSC100ACast-in100 mm200 mm concrete slabFSC100ACast-in100 mm200 mm concrete slabFSC100ACast-in100 mm150 mm concrete slabFSC100BRetroft surface-mounted or recessed100 mm120 mm concrete slabFSC100BRetroft surface-mounted or recessed100 mm12	200 mm concrete slab 200 mm concrete slab 200 mm concrete slab 150 mm concrete slab 120 mm concrete slab	VC 890 VVC 851 VVC 851 VVC 851 VVC 900 VVC 800 VVC 901 VVC 901 VVC 901 VVC 801 VVC 801	m straight, with or withou straight, with or withou 10 mm straight, with or withou mm straight, with or withou m straight, with or withou m straight, with or withou im floor waste mm	100in 100 100in 10	7/240/240 F 7/240/240 F 7/240/240 F 7/240/240 F 7/240/180 F 7/240/180 F 7/240/180 F 7/240/180 F 7/240/180 F 7/240/180 F 7/180/120 F 7/180/	SP1053 SP1053 SP1053 SP1053 SP1053 SP1053 SP1053 SP1053 SP1053 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1055 SP1055 SP1053 SP1054 SP10553 SP10553 SP10553 SP10553 SP10553 SP10554 SP10553 SP10554 SP105554 SP10555555555555555555555555555555555555
FSC100ACast-In100 mm200 mm concrete slabFSC100ACast-In100 mm200 mm concrete slabFSC100ACast-In100 mm150 mm concrete slabFSC100BRetroft sufface-mounted or recessed100 mm150 mm concrete slabFSC100BRetroft sufface-mounted or recessed100 mm150 mm concrete slabFSC100BRetroft sufface-mounted or recessed100 mm120 mm concrete slabFSC100BRetroft sufface-mounted or recessed100 mm12	200 mm concrete slab 200 mm concrete slab 150 mm concrete slab 120 mm concrete slab	VC         65           HDPE         651           HDPE         651           VC         100           VC         90	time straight, with or withoud mine floor waste mine straight, with or withou mine straight withou mine straight with or withou mine straight w	100in 100in 100in 100in 100in 100in 100in 100in 100in 100in 100in 100in 100in	//24.0/240     F       //24.0/240     F       //24.0/240     F       //24.0/180     F       //28.0/120     F	SP1053 SP1053 SP1053 SP1053 SP1053 SP1053 SP1053 SP1053 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1055 SP1053 SP10555 SP10555 SP10555 SP10555 SP10555 SP105555 SP105555 SP10555
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FSC100A     Cast-In     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab </td <td>150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 220 mm merete slab</td> <td>40PE 65-1 200 100 100 100 100 100 100 100 100 100</td> <td>10 mm straight, with or withou mm floor waste mm straight, with or withou mm straight, with or withou</td> <td>100in</td> <td>7.24.01180 1.18.0120 5.118.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.50.0020 7.50.000000000000000000000000000000000</td> <td>SP1053 SP1053 SP1053 SP1053 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054</td>	150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 220 mm merete slab	40PE 65-1 200 100 100 100 100 100 100 100 100 100	10 mm straight, with or withou mm floor waste mm straight, with or withou mm straight, with or withou	100in	7.24.01180 1.18.0120 5.118.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.18.0120 7.50.0020 7.50.000000000000000000000000000000000	SP1053 SP1053 SP1053 SP1053 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054
FSC100A     Cast-In     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     20 mm masonny wall       FSC100B     Retroft on both sldes of wall	150 mm concrete slab 150 mm concrete slab 120 mm concrete slab	VC 100 VC 901 VC 901 VC 901 VC 901 VVC 901 VCC	mm floor waste im floor waste im floor waste mm floor waste mm floor waste mm floor waste mm floor waste mm straight, with or withou mm straight with or withou 110 mm straight with or withou	10 11 11 11 11 11 11 11 11 11 11 11 11 1	/180/120 F /180/120 F	SP1053 SP1053 SP1053 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054
FSC100A         Cast-In         100 mm         150 mm concrete slab           FSC100A         Cast-In         100 mm         150 mm concrete slab           FSC100B         Cast-In         100 mm         150 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface	150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 160 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 220 mm moncrete slab	VC 901 VC 901 VC 651 VC 651 VC 851 VC 901 VC	im floor waste mim floor waste mim floor waste mim floor waste mim floor waste mim floor waste mim straight, with or withou mim straight, with or withou mim straight, with or withou mim straight, with or withou mit or withou mit or withou 110 mm straight, with or or withou	10 11 11 11 11 11 11 11 11 11 11 11 11 1	1180/120 F 1180/120 F	SP1053 SP1053 SP1053 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054
FSC100A         Cast-in         100 mm         150 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroit surface-mounted or recessed         100 mm         20 mm masonry wall           FSC100B         Retroit on both sides of wall         100 mm         220 mm masonry wall	150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 220 mm msonry wall	VC 80 1 VC 85 1 VC 90 1 VC 90 1 VC 90 1 VC 80 1 VC	im floor waste mim floor waste mrm floor waste im floor waste mm floor waste mm floor waste mm straight, with or withou mm straight, with or withou mm straight, with or withou 110 mm straight, with or withou	1 their and the second se	1/180/120 F 1/180/120 F	SP1053 SP1053 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054
FSC100A     CasE-In     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     150 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     120 mm concrete slab       FSC100B     Retroft surface-mounted or recessed     100 mm     20 mm masonry wall       FSC100B     Retroft surface-mounted or recessed     100 mm     220 mm masonry wall       FSC100B     Retroft on both sides of wall     100 mm     220 mm masonry wall       FSC100B     Retroft on both sides of wall     100 mm     220 mm masonry wall       FSC100B     Retroft on both sides of wall     100 mm     220 mm masonry wall	150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 220 mm msconny wall	VC 851 VC 901 VC 901 VC 901 VC 901 VC 901 VC 901 VC 901 VC 801 VC	im floor waste min floor waste im floor waste im floor waste im floor waste min straight, with or withou min straight, with or withou min straight, with or withou min straight, with or withou 110 mm straight with or withou		/180/120 F /180/120 F /180/120 F /180/120 F /180/120 F /180/120 F /180/120 F /180/120 F /180/120 F	SP1053 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054
FSC100B         Retroft surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         220 mm masony wall           FSC100B         Retroft on both sldes of wall         100 mm         220 mm masony wall           FSC100B         Retroft on both sldes of wall         100 mm         220 mm masony wall           FSC100B         Retroft on both sldes of wall         100 mm         220 mm masony wall <td>150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 220 mm masonry wall</td> <td>VC 100 VVC 80 100 VVC 651 100 VVC 651 100 VVC 90 100 VVC 80 100 VV</td> <td>mm floor waste mm floor waste mm floor waste mm floor waste mm straight, with or withou mm straight, with or withou mm straight, with or withou mm straight, with or withou mm straight, with or withou</td> <td>1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>1180/120 F 1180/120 F 1180/120 F 1180/120 F 1180/120 F 1180/120 F 1180/120 F 1180/120 F</td> <td>SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054</td>	150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 150 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 220 mm masonry wall	VC 100 VVC 80 100 VVC 651 100 VVC 651 100 VVC 90 100 VVC 80 100 VV	mm floor waste mm floor waste mm floor waste mm floor waste mm straight, with or withou mm straight, with or withou mm straight, with or withou mm straight, with or withou mm straight, with or withou	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1180/120 F 1180/120 F 1180/120 F 1180/120 F 1180/120 F 1180/120 F 1180/120 F 1180/120 F	SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054
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FSC100B         Retroft surface-mounted or recessed         100 mm         150 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall	150 mm concrete slab 120 mm concrete slab 220 mm masonry wall	VC 65 1 VC 100 VC 90 1 VC 80 1 VC 65 1 UDPE 65 1	am floor waste mm straight, with or withou nm straight, with or withou nm straight, with or withou nm straight, with or withou nd straight, with or withou	tjoin tioin tioin tioin	/180/120 F /180/120 F /180/120 F /180/120 F	SP1054 SP1054 SP1054 SP1054 SP1054 SP1054 SP1054
FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         20 mm concrete slab           FSC100B         Retroft on both sides of wall         100 mm         220 mm masony wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masony wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masony wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masony wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masony wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masony wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masony wall	120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 220 mm masonry wall	VC 100 VC 90 r VC 80 r VC 65 r HDPE 65-1	rmm straight, with or withou nm straight, with or withou nm straight, with or withou nm straight, with or withou 110 mm straight with or withou	tjoin tjoin tioin	/180/120 F /180/120 F /180/120 F	SP1054 SP1054 SP1054 SP1054 SP1054
FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall	120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 220 mm masonry wall	VC 90 n VC 80 n VC 65 n HDPE 65-1	nm straight, with or withou nm straight, with or withou nm straight, with or withou 110 mm straight, with or withou	tjoin -// tjoin -// tioin -//	-/180/120 F	SP1054 SP1054 SP1054 SP1054 SP1054
FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         20 mm concrete slab           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall	120 mm concrete slab 120 mm concrete slab 120 mm concrete slab 220 mm masonry wall	VC 80 n VC 65 n 4DPE 65-1	nm straight, with or withou nm straight, with or withou 110 mm straight. with or withou	t join -// t join -//	/180/120 F	SP1054 SP1054 SP1054
FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft on both sldes of wall         100 mm         220 mm masonity wall           FSC100B         Retroft on both sldes of wall         100 mm         220 mm masonity wall           FSC100B         Retroft on both sldes of wall         100 mm         220 mm masonity wall           FSC100B         Retroft on both sldes of wall         100 mm         220 mm masonity wall           FSC100B         Retroft on both sldes of wall         100 mm         220 mm masonity wall           FSC100B         Retroft on both sldes of wall         100 mm         220 mm masonity wall           FSC100B         Retroft on both sldes of wall         100 mm         220 mm masonity wall	120 mm concrete slab 120 mm concrete slab 220 mm masonty wall	VC 65 n HDPE 65-1	nm straight, with or withou 110 mm straight, with or withou	tioin -/	-/180/120 F	SP1054 SP1054
FSC100B         Retroft surface-mounted or recessed         100 mm         120 mm concrete slab           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall	120 mm concrete slab 220 mm masonry wall	HDPE 65-1	110 mm straight, with or withou			SP1054
FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall	220 mm masonry wall	100 100		tjoin -//	-/180/120 F	
FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         210 mm masonry wall		-VC 100	mm straight, with or withou	tjoin	FRL of wall system F	SP1055
FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall	220 mm masonry wall	VC 90 n	nm straight, with or withou	t join FF	FRL of wall system F	SP1055
FSC100B         Retroft on both sides of wall         100 mm         220 mm masonry wall           FSC100B         Retroft on both sides of wall         100 mm         Timber-stud plasterboard wall	220 mm masonry wall	VC 80 n	nm straight, with or withou	t join FI	FRL of wall system F	SP1055
FSC100B Retrofit on both sides of wall 100 mm Timber-stud plasterboard wall	220 mm masonry wall	VC 65 n	nm straight, with or withou	t join FI	FRL of wall system F	SP1055
	Timber-stud plasterboard wall	VC 100	mm straight, with or withou	t join FI	FRL of wall system F	SP1056
FSC100B Retroft on both sides of wall 100 mm Timber-stud plasterboard wall	Timber-stud plasterboard wall	VC 90 n	nm straight, with or withou	t join FI	FRL of wall system F	SP1056
FSC100B Retroft on both sides of wall 100 mm Timber-stud plasterboard wall	Timber-stud plasterboard wall	VC 80 n	nm straight, with or withou	t join FI	FRL of wall system F	SP1056
FSC100B Retroft on both sides of wall 100 mm Timber-stud plasterboard wall	Timber-stud plasterboard wall	oVC 65 n	nm straight, with or withou	t join FI	FRL of wall system F	SP1056
FSC50A Cast-in 50 mm 200 mm concrete slab	200 mm concrete slab	VC 50 n	nm straight, with or withou	t join -12	-/240/240 F	SP1053
FSC50A Cast-in 50 mm 200 mm concrete slab	200 mm concrete slab	VC 40 n	nm straight, with or withou	t join -12	-/240/240 F	SP1053
FSC50A Cast-in 50 mm 150 mm concrete slab	150 mm concrete slab	VC 50 n	nm straight, with or withou	t join -12	-/240/180 F	SP1053
FSC50A Cast-in 50 mm 150 mm concrete slab	150 mm concrete slab	oVC 40 n	nm straight, with or withou	tjoin -7.	-/240/180 F	SP1053
FSC50B Retroft surface-mounted or recessed 50 mm 120 mm concrete slab	120 mm concrete slab	VC 50 r	nm straight, with or withou	tjoin -//	-/180/180 F	SP1054
FSC50B Retrofit surface-mounted or recessed 50 mm 120 mm concrete slab	120 mm concrete slab	VC 40 n	nm straight, with or withou	t join -//	-/180/180 F	SP1054
FSC50B Retroft on both sides of wall 50 mm 220 mm masoniy wall	220 mm masonry wall	VC 50 n	nm	Ē	FRL of wall system F	SP1055
FSC50B Retroft on both sides of wall 50 mm 220 mm masonry wall	220 mm masony wall	VC 40 n	uu	Ē	FRL of wall system F	SP1055
FSC50B Retroft on both sides of wall 50 mm Timber-stud plasterboard wall	Timber-stud plasterboard wall	VC 50 r	mm	Ē	FRL of wall system F	SP1056
FSC50B Retroft on both sides of wall 50 mm Timber-stud plasterboard wall	Timber-stud plasterboard wall	oVC 40 n	nm	Ē	FRL of wall system F	SP1056

Appendix B (cont)

# Appendix C

P1091	FS2S-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	100 mm	straight	-/240/240	1
	FS2S-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	100 mm	90° bend	-/240/240	ľ
	FS2S-100H	Cast-in	65/80/90/100 mm	150 mm concrete slab	HDPE	100 mm	straight	-/240/180	
	FS28-100H	Cast-in	65/80/90/100 mm	150 mm concrete slab	Silent	100 mm	straight	-/240/240	
1116	FS2S-100H	Cast-in	65/80/90/100 mm	150 mm concrete slab	HDPE	65 mm	straight	-/120/120	
	FS2S-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	65 mm	straight	-/240/180	
	FS2S-50A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	50 mm	90° bend	-/240/240	
1118	FSC-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	Silent	80 mm	straight with floor grate	-/180/180	
	FSC-50A	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	straight	-/180/180	
	FSC-50A	Cast-in	40/50 mm	150 mm concrete slab	HDPE	50 mm	straight with floor grate	-/180/180	
01120	FS2S-50A	Cast-in	40/50 mm	150 mm concrete slab	PVC	40 mm	straight with floor grate	-/180/180	
	FS2S-50AFW	Cast-in	40/50 mm	150 mm concrete slab	PVC	40 mm	straight with floor grate	-/180/180	
	FS28-50A	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	bend with floor grate	-/180/180	
	FS2S-50AFW	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	bend with floor grate	-/180/180	
	FS2S-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	80 mm	trap and floor grate	-/180/180	
	FS2S-100AFW	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	80 mm	trap and floor grate	-/180/180	
1130	FSC-100B	Retrofit to ceiling	65/80/90/100 mm	Timber-frame plasterboard ceiling	HDPE	100 mm		06/06/-	
	FSC-50B	Retrofit to ceiling	40/50 mm	Timber-frame plasterboard ceiling	HDPE	50 mm		-190/90	
1132	FS3S-150A	Cast-in	150 mm	150 mm concrete slab	HDPE	150 mm	straight	-/180/180	
	FS2S-100A	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	100 mm	trap and floor grate	-/180/180	
	FS2S-100AFW	Cast-in	65/80/90/100 mm	150 mm concrete slab	PVC	100 mm	trap and floor grate	-/180/180	
1134	FS28-50A	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	trap and floor grate	-/180/180	
	FS2S-50AFW	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	trap and floor grate	-/180/180	
	FS2S-100H	Cast-in	65/80/90/100 mm	150 mm concrete slab	HDPE	100 mm	trap and floor grate	-/180/180	
	FS2S-100HFW	Cast-in	65/80/90/100 mm	150 mm concrete slab	HDPE	100 mm	trap and floor grate	-/180/180	
	FS2S-50A	Cast-in	40/50 mm	150 mm concrete slab	PVC	50 mm	straight	-/180/180	
1140	FSC-100B	Retrofit to ceiling	65/80/90/100 mm	Timber-frame plasterboard ceiling	PVC	100 mm		06/06/-	
	FSC-50B	Retrofit to ceiling	40/50 mm	Timber-frame plasterboard ceiling	PVC	50 mm		-190/90	
1144	FS3S-315A	Cast-in	315 mm	150 mm concrete slab	PVC	315 mm	straight	-/180/180	
1146	FS2S-50HFW	Cast-in	40/50 mm	150 mm concrete slab	HDPE	50 mm	trap and floor grate	-/180/180	
	FS2S-50HFW	Cast-in	40/50 mm	150 mm concrete slab	Silent	50 mm	tran and floor grate	-M 80M 80	