ADDENDUM No. 2

Project:	BQWCHC – Trenton Health Hub	Project / File No:	250108
Project Address:	69 Catherine Street, Trenton	Date:	May 6, 2026
		Total No. of pages including attachments:	87

This addendum shall form part of, and be included in, the contract drawings and specifications originally issued for the abovenamed project and no consideration will be given to request for extras to this Contract due to the Contractor not being familiar with the Addendum. Please acknowledge receipt of the Addendum on the Bid Form.

The following attached information forms part of this Addendum:

Item:	Description:	No of Pages:
1.0	General Requirements	1
2.0	Architectural	6
3.0	Architectural Specifications	0
4.0	Mechanical/ Electrical	79
5.0	Architectural Specification	0

Kasian Architecture Ontario Incorporated

Jackie Prawecki		2026-05-06
Name and Title of Person Signing	Signature	Date

KASIAN ARCHITECTURE ONTARIO INCORPORATED

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ADDENDUM No. 2

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Project Address:	69 Catherine Street, Trenton	Date:	May 6, 2026
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1.0 General Requirements

1.1 Reference Specification 00 21 13 Instructions to Bidders:

1.1.1 **REVISE** 1.10.2 to read: Deliver bid before 2:00:00 p.m. local time **May 14, 2026**

2.0 Architectural

2.1 Reference Drawing 1/A-112 GROUND FLOOR PLAN – SOUTH, rev 5

2.1.1 **ADD:** Section call out tag 16/A-500.

2.1.2 **ADD:** Note for concrete pad for generator.

2.2 Reference Drawing 1/A-150 FINISHES PLAN, rev 4

2.2.1 **REVISE** Base finish for rooms 1.021, 1.026, 1.027, 1.029, 1.031, 1.032, 1.016, 1.013.

2.3 Reference Sheet A-500 PLAN AND SECTIONS DETAILS – INTERIORS, rev 5

2.3.1 **ADD:** detail 16/A-500 REINFORCED CONCRETE PAD to drawing sheet.

2.4 Reference Sheet A-601 DOOR & FRAME SCHEDULE, Rev 5

2.4.1 **REVISE** Frame material to WD for door D1.005 in DOOR & FRAME SCHEDULE.

2.5 Reference Sheet A-602 FINISHES SCHEDULE, rev 4

2.5.1 **REMOVE:** Epoxy Flooring EP-1 from the FINISH IDENTIFICATION SCHEDULE.

2.5.2 **ADD:** comment for ICB integral cove base.

2.6 Reference Sheet A-603 GLAZING SCHEDULE, rev 4

2.6.1 **REVISE** drawing 3/A-603 to include floor base below screen assembly. Perimeter of screen mullions to be continuous.

2.6.2 **REVISE** drawing 4/A-603 to include continuous mullions at perimeter of screen.

3.0 Specifications (architectural) – N/A

4.0 Mechanical/ Electrical – Refer to attached addendum No. ME-01

End of Addendum

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CONSTRUCTION PLAN LEGEND

AREA OUTSIDE OF IMMEDIATE PROJECT AREA SHOWN IN GREY FOR GRAPHIC CLARITY OF CONTEXT ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INCLUDE FOR THE ENTIRETY OF THE DEMOLITION AND NEW CONSTRUCTION SCOPE, AND ANY ANTICIPATED ADJACENT WORK TO ACHIEVE THE WORK AS DESCRIBED BY THE DRAWINGS.

DENOTES EXISTING CONSTRUCTION TO REMAIN

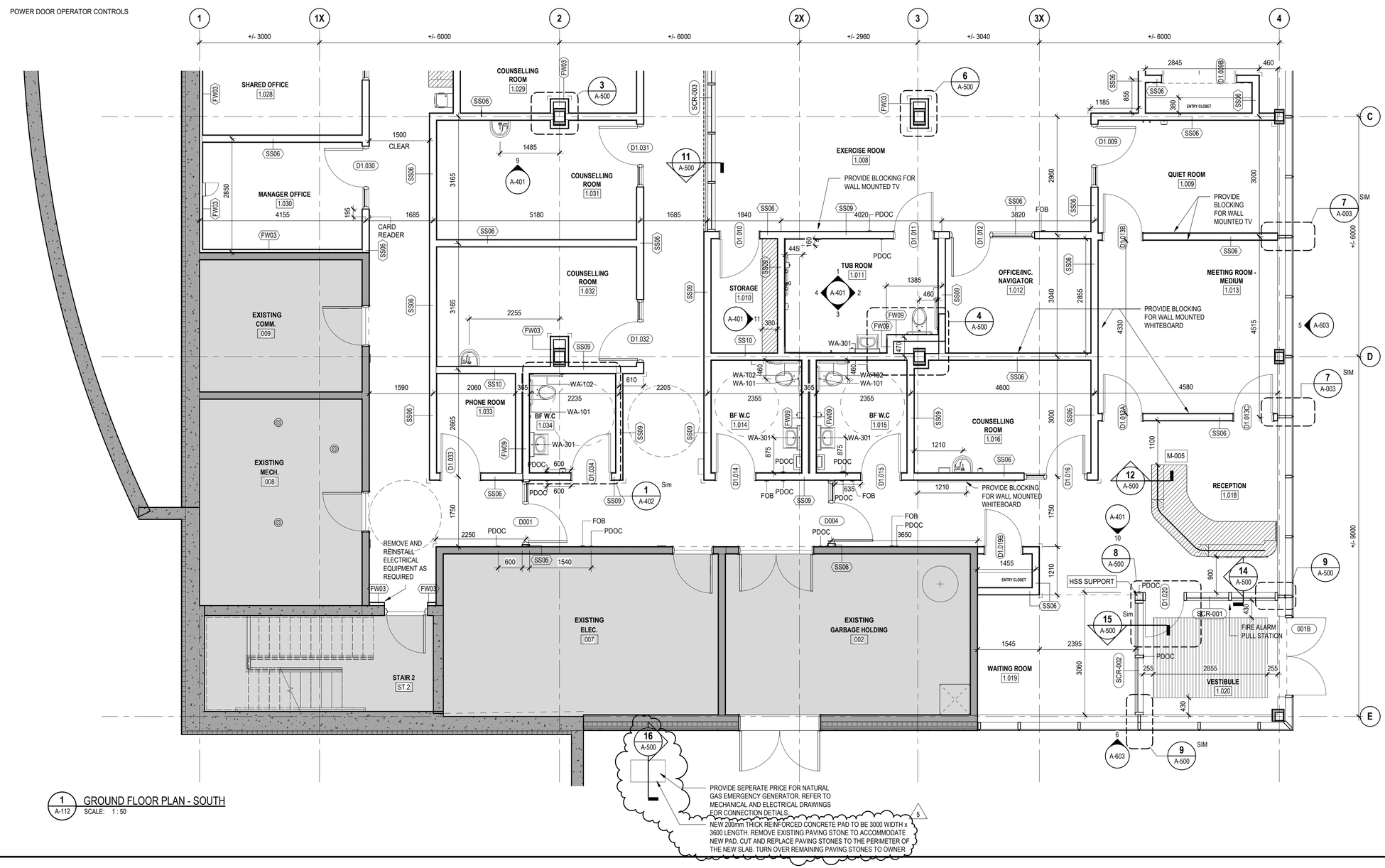
DENOTES NEW PARTITIONS

NEW MILLWORK IN CONTRACT, REFER TO INTERIOR ELEVATIONS AND MILLWORK SECTIONS

M-00X — MILLWORK TAG

0000A — DOOR TAG

PDOC — POWER DOOR OPERATOR CONTROLS



1 A-112 GROUND FLOOR PLAN - SOUTH
SCALE: 1 : 50

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2	2025-06-20	ISSUED FOR PERMIT APPLICATION	
1	2024-11-20	MOHCTC DESIGN DEVELOPMENT SUBMISSION	

CONSULTANT

PERMIT STAMP

SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
BRENDA LEE
LICENCE
6003

PROJECT

BQWCHC TRENTON HUB

Trenton, Ontario, Canada

DRAWING TITLE

GROUND LEVEL PLAN - SOUTH

DRAWING ISSUE

ISSUED FOR ADDENDUM 2

PROJECT NO.	PLOT DATE	DRAWN
250108	2025-08-13	GB
	SCALE: As indicated	REVIEWED: MP
DRAWING NO.		REVISION
A-112		5

WALL FINISHES NOTES

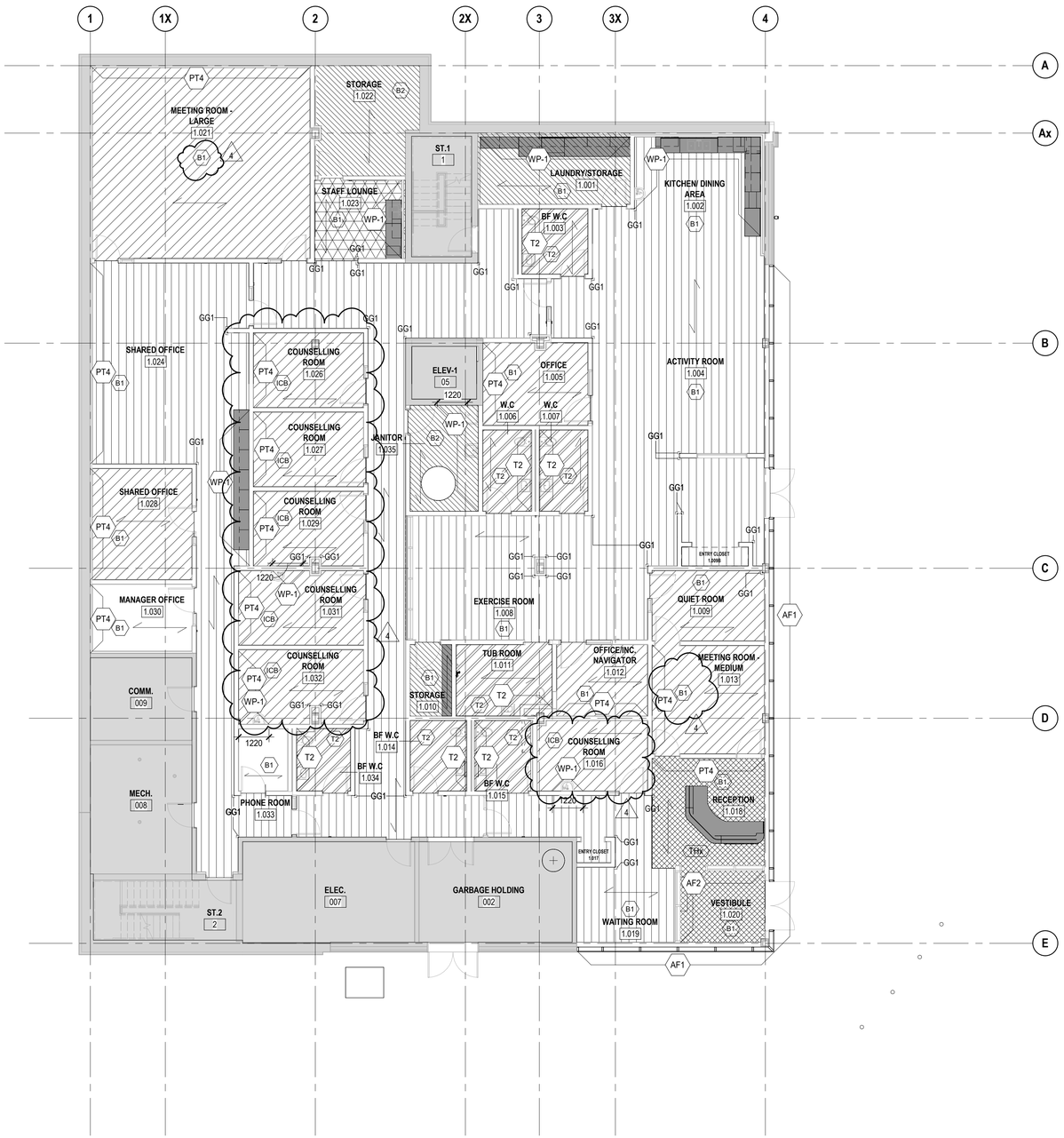
1. REFER TO FINISHS SCHEDULE FOR WALL FINISH DETAILS.
2. ALL WALLS TO BE PAINTED PT1 UNLESS NOTED OTHERWISE.
3. REFER TO DOOR AND FRAME SCHEDULE FOR DOOR AND FRAME FINISHES.
4. ALL EXISTING DOOR AND FRAME IN SCOPE SHALL BE REPAINTED. REFERENCE WALL FINISHES PLAN AND FINISHES SCHEDULE.
5. ALL WALL FINISHES SHALL HAVE A FLAME SPREAD RATING OF LESS THAN 150 AS PER O.B.C. REQUIREMENTS.
6. ALL EXISTING PARTITIONS AFFECTED BY DEMOLITION AND CONSTRUCTION TO BE REPAIRED, PATCHED AND MADE READY TO RECEIVE NEW FINISHES.
7. REMOVE ALL SURFACE APPLIED ACCESSORIES, COVER PLATES AND OTHER DEVICES PRIOR TO PREPARING PARTITIONS FOR NEW PAINT FINISHES. REINSTALL AFTER PAINTING IS COMPLETE.
8. SKIM COATING AND PRIMING OF PARTITIONS ARE REQUIRED FOR ALL LOCATIONS WHERE EXISTING BASE FINISHES HAVE BEEN REMOVED.
9. ALL WASHROOM AND AREAS EXPOSED TO WATER/HUMIDITY TO RECEIVE MILDEW-RESISTANT FINISHES.
10. ALL PAINTABLE FIRE HOSE CABINET DOORS AND SURROUNDS ARE TO BE PAINTED TO MATCH ADJACENT PARTITION COLOUR.
11. REFER TO MILLWORK PLANS FOR ELEVATIONS AND FINISHES RELATED TO WALLS/AREAS WHERE MILLWORK IS NOTED.
12. REFER TO PARTITION PLAN FOR ELEVATIONS
13. WHERE WALL FINISHES ARE NOTED ABOVE MILLWORK REFER TO MILLWORK ELEVATIONS

FLOOR FINISHES NOTES

1. REFER TO FINISH SCHEDULE FOR FINISH DETAILS.
2. ALL FLOOR FINISHES SHALL HAVE A FLAME SPREAD RATING OF LESS THAN 150 AS REQUIRED BY O.B.C.
3. ALL FLOORING FINISHES SHALL OCCUR UNDER THE CENTERLINE OF DOORS UNLESS NOTED OTHERWISE.
4. FEATHER CONCRETE FLOORS WITH CONCRETE TOPPING AS REQUIRED TO BRING ADJACENT MATERIAL FLUSH.
5. COORDINATE ALL FLOORING WORK, INCLUDING THE WORK SUPPLIED AND INSTALLED BY OTHER CONTRACTORS.
6. WHERE NEW FLOORS ARE TO BE INSTALLED, ENSURE ANY HOLES IN SLAB ARE PATCHED, BUMPS SANDED, SLAB IS LEVELLED AND PREPARED TO RECEIVE NEW FLOOR FINISH.
7. EXISTING CONCRETE FLOORS, WITHIN SCOPE, SHALL BE CLEANED. REMOVE ANY RESIDUE.
8. FLOOR FINISHES SHALL BE EXTENDED UNDER MILLWORK UNITS AND APPLIANCES.
9. AT SHOWERS, SLOPE FLOOR AS REQUIRED TO ENSURE PROPER DRAINAGE AT SHOWER FLOOR DRAINS
10. REFER TO COLOUR AND FINISHES SCHEDULE FOR FULL PRODUCT SPECIFICATIONS.
11. ANY AREAS THAT DO NOT MEET THE ABOVE CRITERIA TO BE BROUGHT TO THE DESIGNERS ATTENTION FOR CLARIFICATION.
12. ALL FINISHED FLOORS TO BE PROTECTED WITH APPROVED FLOOR PROTECTION BOARD OR MATS (EG. MASONITE BOARD, RAM BOARD BUILDER BOARD) IF ONGOING CONSTRUCTION IS OCCURING ON OR ADJACENT TO ROOMS WITH NEWLY INSTALLED FLOORING. REFER TO SPECIFICATIONS.

WALL + FLOOR FINISHES LEGEND

- PTx — PAINT
- TLx — TILE
- VFx: — VINYL FLOORING
- WP-x: — WALL PROTECTION
- CGx: — CORNER GUARD
- THx — DENOTES THRESHOLD
- DENOTES FINISH ORIENTATION/ DIRECTION
- PTx — DENOTES FEATURE WALL FINISH
- Bx — DENOTES BASE FINISH
- ICB — DENOTES INTEGRAL COVE BASE
- DENOTES MILLWORK
- DENOTES WALL PROTECTION
- VF1
- VF2
- VF3
- VF4
- T1
- VCT1



1 A-150 FINISHES PLAN
SCALE: 1 : 100

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PROJECT

BQWCHC TRENTON HUB

Trenton, Ontario, Canada

DRAWING TITLE

FINISHES PLAN

DRAWING ISSUE

ISSUED FOR ADDENDUM 2

PROJECT NO.	PLOT DATE	DRAWN
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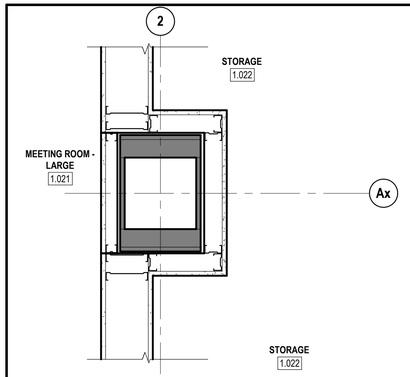
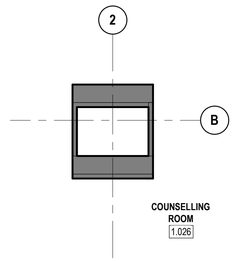
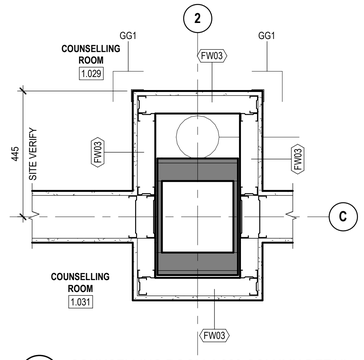
	SCALE: As indicated	REVIEWED: JP
DRAWING NO.		REVISION
A-150		4



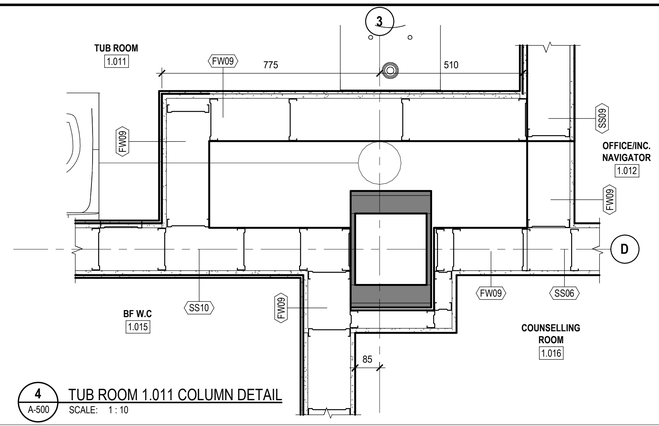
1 A-500 LARGE MEETING ROOM COLUMN DETAIL
SCALE: 1 : 10



2 A-500 COUNSELLING ROOM 1.026 COLUMN DETAIL
SCALE: 1 : 10



3 A-500 COUNSELLING ROOM 1.029 COLUMN DETAIL
SCALE: 1 : 10



4 A-500 TUB ROOM 1.011 COLUMN DETAIL
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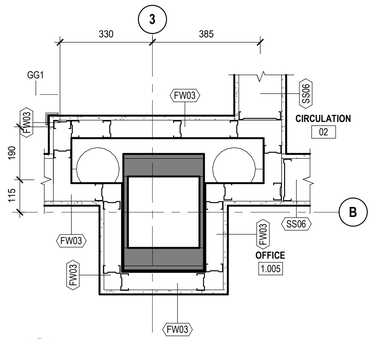

5 A-500 OFFICE 1.005 COLUMN DETAIL
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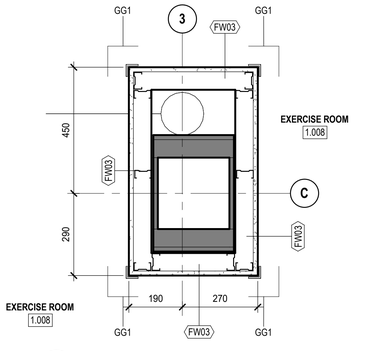

6 A-500 EXERCISE ROOM 1.008 COLUMN DETAIL
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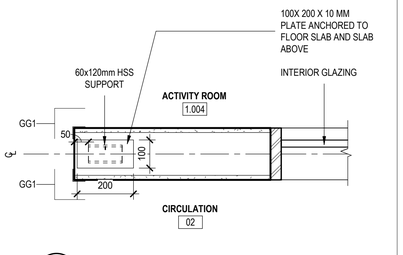
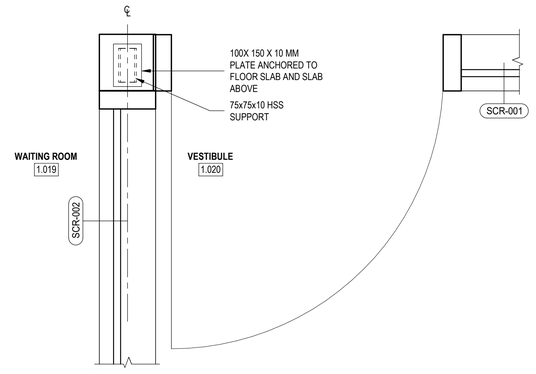
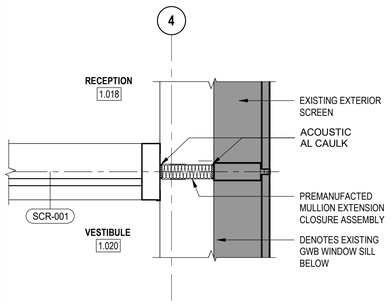


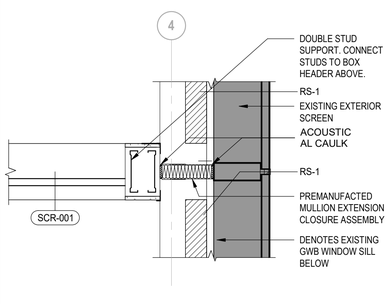
7 A-500 ACTIVITY ROOM 1.004 HSS PLAN DETAIL
SCALE: 1 : 10



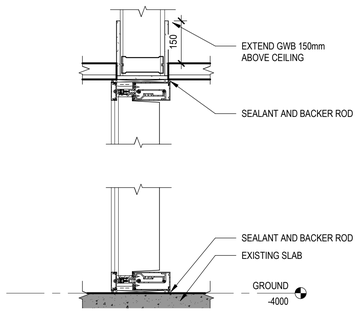
8 A-500 VESTIBULE 1.020 HSS PLAN DETAIL
SCALE: 1 : 10



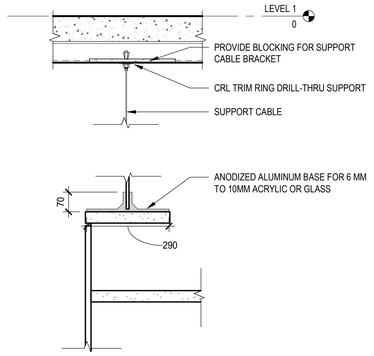
9 A-500 TYP. INTERIOR SCREEN TO EXISTING EXTERIOR SCREEN
SCALE: 1 : 10



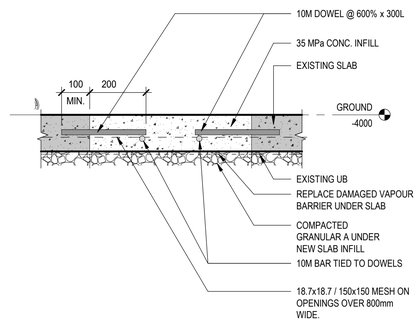
10 A-500 TYP. INTERIOR SCREEN TO EXISTING EXTERIOR SCREEN (ABOVE SCREEN CONNECTION)
SCALE: 1 : 10



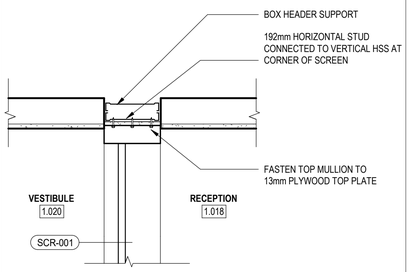
11 A-500 TYPICAL SCREEN FLOOR AND HEAD CONNECTION
SCALE: 1 : 10



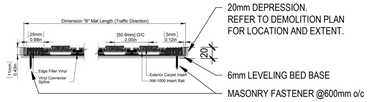
12 A-500 REC. DESK ACRYLIC PANELS MOUNTING DETIAL
SCALE: 1 : 10



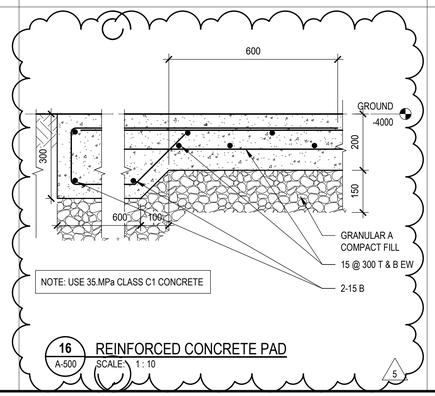
13 A-500 TYPICAL SLAB INFILL DETAIL
SCALE: 1 : 10



14 A-500 SCR-001 FREE END SUPPORT
SCALE: 1 : 10



15 A-500 PEDIMAT DETAIL
SCALE: 1 : 5



16 A-500 REINFORCED CONCRETE PAD
SCALE: 1 : 10

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PROJECT

BQWCHC TRENTON HUB

Trenton, Ontario, Canada

DRAWING TITLE

PLAN AND SECTION DETAILS - INTERIOR

DRAWING ISSUE

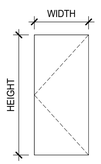
ISSUED FOR ADDENDUM 2

PROJECT NO.	PLOT DATE	DRAWN
250108	2025-08-13	GB
	SCALE: As indicated	REVIEWED: MP

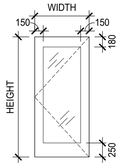
DRAWING NO. A-500

REVISION 5

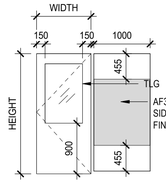
SINGLE SWING DOOR TYPES



SD1
SINGLE FLUSH DOOR

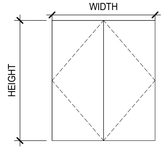


SD2
SINGLE FLUSH DOOR
WITH VIEWING WINDOW



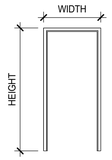
SD5
SINGLE FLUSH DOOR
WITH VIEWING WINDOW

DOUBLE SWING DOOR TYPES

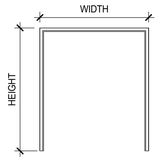


DD1
DOUBLE FLUSH DOOR

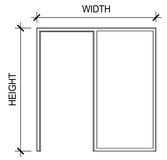
FRAME TYPES



F1
SINGLE LEAF FRAME



F2
DOUBLE LEAF FRAME



F3
SINGLE LEAF FRAME
WITH SD5

DOOR / FRAME LEGENDS & ABBREVIATIONS

LEGEND / ABBREVIATIONS

ALUM	ALUMINUM
ANOD	ANODIZED
CLR	CLEAR
DCRON	DURACRON
DNAR	DURANAR
EXT	EXTERIOR
F	FRAME
G ( )	GLASS (type)
GA	GLAZED ALUMINUM
GALV	GALVANIZED
GWG	GEORGIAN WIRE GLASS
HCW	HOLLOW CORE WOOD
HM	HOLLOW METAL
HR	HOUR
INSUL	INSULATED
MIN	MINUTE
N/A	NOT APPLICABLE
NF	NO FRAME (FRAMELESS)
PC	POWDER COAT
PS	PRESSED STEEL
PTD	PAINTED
SCW	SOLID CORE WOOD
SS	STAINLESS STEEL
STL	STEEL
TSG	TEMPERED SAFETY GLASS
WD	WOOD
WV	WOOD VENEER

DOOR TYPES LEGEND

BF	BIFOLD DOOR
CD	COILING DOOR
CS	COUNTER SHUTTER
DD	DOUBLE SWING DOOR
GA	GLAZED ALUMINUM DOOR
GL	GLASS DOOR
HD	HANGAR DOOR
ID	IMPACT DOOR
OH	OVERHEAD DOOR
RE	REVOLVING DOOR
RO	ROLLING DOOR
RR	RAPID ROLL DOOR
SD	SINGLE SWING DOOR
SL	SLIDING DOOR
SP	SPECIAL DOOR (define and detail)

CORE LEGEND

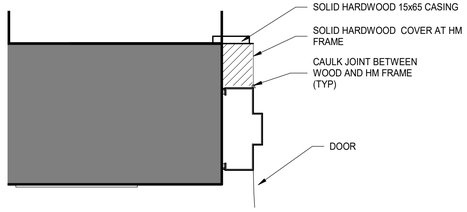
GYP	GYPSUM
HC	HOLLOW CORE
HO	HONEY-COMB
ISO	POLYISOCYANURATE
MF	MINERAL FIBRE
PO	POLYSTYRENE
SC	SOLID CORE
UR	POLYURETHANE

DUTY LEGEND

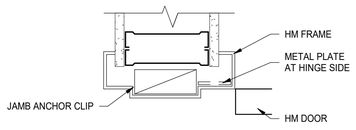
MED	MEDIUM
STD	STANDARD
HVY	HEAVY
X-HVY	EXTRA HEAVY

DOOR AND FRAME GENERAL NOTES

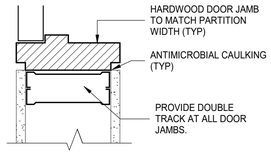
1. REFER TO SPECIFICATIONS OR FINISH IDENTIFICATION SCHEDULE FOR DESCRIPTION OF FINISHES AND COLOURS



1 A-601 TYPICAL DOOR JAMB AT STAIRS
SCALE: 1 : 5



2 A-601 TYPICAL PLAN DETAIL - HM FRAME
SCALE: 1 : 5



3 A-601 TYPICAL PLAN DETAIL - WOOD FRAME
SCALE: 1 : 5

DOOR & FRAME SCHEDULE PHASE 1

DOOR NO.	DOOR TYPE	DOOR PARAMETERS: DIMENSIONS WIDTH	HEIGHT	THK	DOOR MATERIAL	DOOR FINISH	FRAME PARAMETERS: FRAME TYPE	OVERALL WIDTH	OVERALL HEIGHT	FRAME MATERIAL	GLASS TYPE	GLASS THK	FRAME FINISH	OPENING PARAMETERS: OPENING FRR (MINUTES)	ACCESS CONTROL	B.F Push Button	OTHER REQUIREMENTS
001A	EXISTING	1935	2135	45										(none)	No	Yes	DOOR CONTACT, ELECTRIC DOOR OPERATOR
001B	EXISTING	1935	2135	45										(none)	Yes	Yes	DOOR CONTACT, ACCESS CONTROL LOCK, ELECTRIC DOOR OPERATOR. RELOCATE EXISTING PDOC
D001	SD5	965	2135	45	HM	PTD	F3	1560	2185	HM	TLG	6mm	PTD	(none)	Yes	Yes	FOB, KICKPLATE, OVERHEAD DOOR STAY, FOB, ELECTRIC DOOR OPERATOR
D1.001	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)	Yes		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS
D1.003	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)	No	Yes	KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, ELECTRIC DOOR OPERATOR
D1.005	SD5	965	2135	45	SCW	WV	F3	2115	2185	WD	TLG	6mm	WV	(none)	Yes		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP
D1.006	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)	Yes	Yes	KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, ELECTRIC DOOR OPERATOR
D1.007	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)	Yes	Yes	KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, ELECTRIC DOOR OPERATOR
D1.009	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP, FOB (BOTH SIDES)
D1.009B	DD1	1830	2135	35	SCW	WV	F2	1065	2185	WD	(none)	(none)	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS
D1.010	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)	Yes		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS
D1.011	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)		Yes	KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, ELECTRIC DOOR OPERATOR
D1.012	SD5	965	2135	45	SCW	WV	F3	2115	2185	WD	TLG	6mm	WV	(none)	Yes		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP, FOB
D1.013A	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP
D1.013B	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)	No		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP
D1.013C	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP
D1.014	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)	Yes	Yes	KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, ELECTRIC DOOR OPERATOR
D1.015	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)	Yes	Yes	KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, ELECTRIC DOOR OPERATOR
D1.016	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP
D1.019B	SD1	915	2135	35	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS
D1.020	SD2	965	2135	45	SCW	WV	F1	1065	2185	WD	TLG	6mm	WV	(none)		Yes	SELF CLOSER + POSITIVE LATCH MECHANISM, ELECTRIC DOOR OPERATOR
D1.021A	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)	Yes		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP, FOB
D1.021B	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)	Yes		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP, FOB
D1.022	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)	Yes		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, FOB
D1.026	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP
D1.027	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP
D1.028	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)	Yes		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP, FOB
D1.029	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP
D1.030	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)	Yes		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP, FOB
D1.031	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP
D1.032	SD5	965	2135	45	SCW	WV	F3	1560	2185	WD	TLG	6mm	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, DOOR SWEEP
D1.033	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)			KICKPLATE, COMPLETE WITH ACOUSTIC SEALS
D1.034	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)		Yes	KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, ELECTRIC DOOR OPERATOR
D1.035	SD1	965	2135	45	SCW	WV	F1	1065	2185	WD	(none)	(none)	WV	(none)	Yes		KICKPLATE, COMPLETE WITH ACOUSTIC SEALS, FOB
D002	SD5	965	2135	45	HM	PTD	F3	1560	2185	HM	TLG	6mm	PTD	(none)	Yes	No	FOB, KICKPLATE, OVERHEAD DOOR STAY, FOB, ELECTRIC DOOR OPERATOR
D003	SD5	965	2135	45	HM	PTD	F3	1560	2185	HM	TLG	6mm	PTD	(none)	Yes	No	FOB, KICKPLATE, OVERHEAD DOOR STAY, FOB (BOTH SIDES), ELECTRIC DOOR OPERATOR
D004	SD5	965	2135	45	HM	PTD	F3	1560	2185	HM	TLG	6mm	PTD	(none)	Yes	Yes	FOB, KICKPLATE, OVERHEAD DOOR STAY, FOB, ELECTRIC DOOR OPERATOR

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REV.	YYYY-MM-DD	REVISION / DRAWING ISSUE	REVIEW
5	2026-05-05	ISSUED FOR ADDENDUM 2	
4	2026-04-07	ISSUED FOR TENDER	
3	2025-07-23	ISSUED FOR MOH 3.3	
2	2025-06-20	ISSUED FOR PERMIT APPLICATION	
1	2024-11-20	MOHCTC DESIGN DEVELOPMENT SUBMISSION	

CONSULTANT

PERMIT STAMP

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BRENDA LEE
LICENCE
6003

PROJECT

BQWCHC TRENTON HUB

Trenton, Ontario, Canada

DRAWING TITLE

DOOR & FRAME SCHEDULE

DRAWING ISSUE

ISSUED FOR ADDENDUM 2

PROJECT NO.	PLOT DATE	DRAWN
250108	2025-08-13	GB
	SCALE: As indicated	REVIEWED: JP

DRAWING NO. A-601

REVISION 5

FINISH IDENTIFICATION SCHEDULE

CODE	ITEM	DESCRIPTION	MANUFACTURER	SERIES	COLOUR	COMMENTS
ACOUSTICAL CEILING TILE						
ACT-1	ACOUSTICAL CEILING TILE					REFER TO SPECIFICATIONS.
ACOUSTICAL WOOD PANEL						
WD1	ACOUSTICAL WOOD PANEL	RECEPTION/ WAITING AREA	ATKAR	AU.DIGROOVE AG10-280	FLAT CUT WALNUT	STANDARD CLEAR LACQUER FINISH
APPLIED FILM						
AF1	APPLIED FILM	EXTERIOR GLAZING BAND	3M	FASARA GLASS FINISHES	SH2MAOW - OPAQUE WHITE	APPLIED TO THE INTERIOR SIDE OF EXISTING EXTERIOR GLAZING AT 1000 AFF
AF2	APPLIED FILM	VESTIBULE GLAZING PRIVACY FILM	3M	TBD		
AF3	APPLIED FILM	SIDELIGHT SAFTEY FILM	3M	TBD		
BASE FINISH						
B1	BASE FINISH	RUBBER BASE	ROPPE	WALL BASE	195 LIGHT GREY	102 HEIGHT (NO SMALL PIECES)
B2	BASE FINISH	RUBBER BASE	ROPPE	WALL BASE	150 DARK GREY	102 HEIGHT (NO SMALL PIECES)
ICB	BASE FINISH	INTEGRAL COVE BASE				SITE-FABRICATED INTEGRAL COVE BASE
CORNER GUARD						
CG1	CORNER GUARD	CORNER GUARD	INPRO	SURFACE MOUNTED STAINLESS STEEL CORNER GUARD	BRUSHED STAINLESS STEEL FINISH	TOP OF BASE TO 1200 AFF
GROUT						
GR1	GROUT	EPOXY GROUT	MAPEI		27 SILVER	GROUT TO BE 1/16" TO BE USED WITH TT-1
PAINT						
PT1	PAINT	GENERAL WALL PAINT	SHERWIN WILLIAMS	SW 7007	BRIGHT WHITE CEILING	EGGSHELL FINISH
PT2	PAINT	WALL PAINT	SHERWIN WILLIAMS	SW 0013	MAJOLICA GREEN	EGGSHELL FINISH
PT3	PAINT	WALL PAINT	SHERWIN WILLIAMS	SW 9062	BLUEBIRD FEATHER	EGGSHELL FINISH
PT4	PAINT	WALL PAINT	SHERWIN WILLIAMS	SW 6187	ROSEMARY	EGGSHELL FINISH
PT5	PAINT	WALL PAINT	SHERWIN WILLIAMS	SW 9148	SMOKY AZURITE	EGGSHELL FINISH
PT6	PAINT	WALL PAINT	SHERWIN WILLIAMS	SW 2854	CARIBBEAN CORAL	EGGSHELL FINISH
PT7	PAINT	WALL PAINT	SHERWIN WILLIAMS	SW 7657	TINDMITH	EGGSHELL FINISH
PLASTIC LAMINATE						
PLAM1	PLASTIC LAMINATE	KITCHEN MILLWORK	ARBORITE		SULAWESI DUNES W-461 EV	
SOLID SURFACE						
SS1	SOLID SURFACE	MILLWORK COUNTERTOP	DUPONT - CORIAN		ANTARCTICA	
THRESHOLD						
TH1	THRESHOLD	VINYL FLOORING TO VINYL FLOORING	SCHLUTER OR EQUAL			WHERE VINYL FLOORING MEETS VINYL FLOORING, SEAMS TO BE HEAT WELDED TOGETHER TO ENSURE FLUSH TRANSITION.
TH2	THRESHOLD	TILE TO VINYL FLOORING	SCHLUTER OR EQUAL			WHERE TILE MEETS VINYL FLOORING, MATERIALS TO BE FEATHERED AS REQUIRED TO ENSURE FLUSH TRANSITION.
TH3	THRESHOLD	VCT TO VINYL FLOORING	SCHLUTER OR EQUAL			WHERE VCT MEETS VINYL FLOORING, MATERIALS TO BE FEATHERED AS REQUIRED TO ENSURE FLUSH TRANSITION.
TILE						
T1	TILE	FLOOR	OLYMPIA TILE	UPTOWN	HAMILTON MEDIUM GREY BC.UT.HMT.1224.MT	305mm x 610mm
T2	TILE	WALL	OLYMPIA TILE	COLOUR & DIMENSIONS COLLECTION	SILVER GREY QT.CD.SGR.0416.BR	BRIGHT - 100mm 405mm
T3	TILE	WALL - BACKSPLASH	OLYMPIA TILE	VITRO SLIM - STACKED MOSAICS	BONE KV.VS.BON.0206.GL	2"x6"
T4	TILE	WALL - ACCENT	OLYMPIA TILE	COLOUR & DIMENSIONS COLLECTION	TURQUOISE QT.CD.TQS.0416.BR	BRIGHT - 100mm 405mm
VINYL COMPOSITE TILE						
VCT-1	VINYL COMPOSITE TILE	STORAGE ROOM	ARMSTRONG	IMPERIAL TEXTURE STANDARD EXCELON	51860 SOFT COOL GRAY	305mm x 305mm
VINYL SHEET FLOORING						
VF1	VINYL SHEET FLOORING	FLOOR	ARMSTRONG FLOORING	HETEROGENEOUS DESIGNER SERIES - DECORART REJUVENATIONS - STONERUN	34510 SOLIDIFIED STONE	ALL EDGES TO BE HEAT WELDED AS PER MANUFACTURERS SPECIFICATIONS.
VF2	VINYL SHEET FLOORING	FLOOR	ARMSTRONG FLOORING	HETEROGENEOUS DESIGNER SERIES - DECORART REJUVENATIONS - AMBIGU	38514 METROPOLIS BROADWAY	ALL EDGES TO BE HEAT WELDED AS PER MANUFACTURERS SPECIFICATIONS.
VF3	VINYL SHEET FLOORING	FLOOR	MANNINGTON COMMERCIAL	PARADIGM COLLECTION - FLOW	CALLIBER PAR308	ALL EDGES TO BE HEAT WELDED AS PER MANUFACTURERS SPECIFICATIONS.
VF4	VINYL SHEET FLOORING	FLOOR	PATCRAFT	HOLISTIC 1422V	MIST 00104	ALL EDGES TO BE HEAT WELDED AS PER MANUFACTURERS SPECIFICATIONS.
WALL PROTECTION						
WP-1	WALL PROTECTION	RIGID SHEET WALL COVERING	ALTRO WHITE ROCK	STANDARD	LINEN LRV83	FROM FLOOR TO 1500 mm A.F.F. WITH SANITARY SEALANT AS SPECFIED BY MANUFACTURER, TO MATCH LINEN LRV83. (1500H x 1200 SHEETS).

4

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4	2026-05-05	ISSUED FOR ADDENDUM 2	
3	2026-04-07	ISSUED FOR TENDER	
2	2025-06-20	ISSUED FOR PERMIT APPLICATION	
1	2024-11-20	MOHCTC DESIGN DEVELOPMENT SUBMISSION	

CONSULTANT

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SEAL

ONTARIO ASSOCIATION OF ARCHITECTS
BRENDA LEE
LICENCE
6003

PROJECT

BQWCHC TRENTON HUB

Trenton, Ontario, Canada

DRAWING TITLE

FINISH SCHEDULE

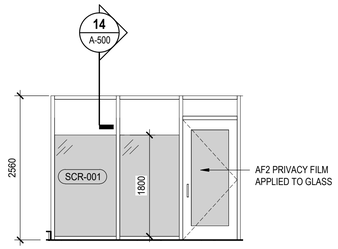
DRAWING ISSUE

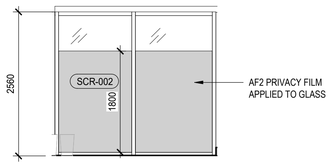
ISSUED FOR ADDENDUM 2

PROJECT NO.	PLOT DATE	DRAWN
250108	2025-08-13	GB
	SCALE	REVIEWED
		JP

DRAWING NO. A-602

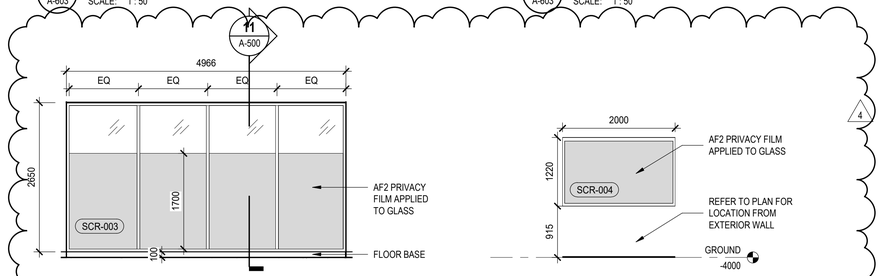
REVISION 4





1 A-603 INTERIOR SCREEN ELEVATION SCR-001
SCALE: 1 : 50

2 A-603 INTERIOR SCREEN ELEVATION SCR-002
SCALE: 1 : 50



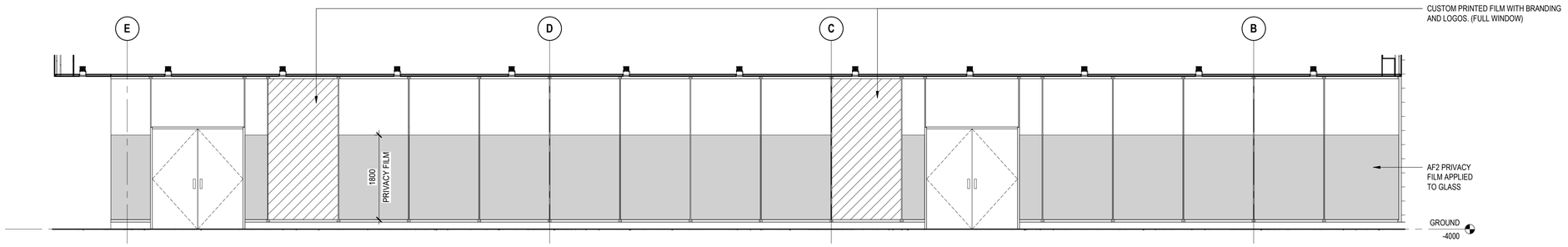
3 A-603 INTERIOR SCREEN ELEVATION SCR-1.008
SCALE: 1 : 50

4 A-603 INTERIOR SCREEN ELEVATION SCR-004
SCALE: 1 : 50

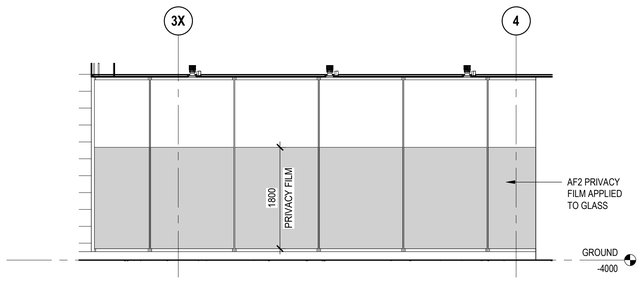
INTERIOR SCREEN (SCR) SCHEDULE					
	FRAME PARAMETERS		GLASS PARAMETERS		
SCREEN NO.	MTL	FINISH	TYPE	THK	COMMENTS
SCR-001	ALUM	ANODIZED	TLG	12mm	
SCR-002	ALUM	ANODIZED	TLG	12mm	
SCR-003	HM	PTD	TLG	12mm	
SCR-004	HM	PTD	TLG	12mm	

GLAZING LEGEND

TLG 12mm TEMPERED LAMINATED GLASS PER SECTION 08 80 00



5 A-603 EXISTING EAST SCREEN ELEVATION
SCALE: 1 : 50



6 A-603 EXISTING SOUTH SCREEN ELEVATION
SCALE: 1 : 50

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REV.	YYYY-MM-DD	REVISION / DRAWING ISSUE	REVIEW
4	2026-05-05	ISSUED FOR ADDENDUM 2	
3	2026-04-07	ISSUED FOR TENDER	
2	2025-06-20	ISSUED FOR PERMIT APPLICATION	
1	2024-11-20	MOHCTC DESIGN DEVELOPMENT SUBMISSION	

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BRENDA LEE
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PROJECT

BQWCHC TRENTON HUB

Trenton, Ontario, Canada

DRAWING TITLE

GLAZING SCHEDULE

DRAWING ISSUE

ISSUED FOR ADDENDUM 2

PROJECT NO.	PLOT DATE	DRAWN
250108	2025-08-13	GB
	SCALE 1 : 50	REVIEWED JP

DRAWING NO. A-603

REVISION 4

ADDENDUM NO. ME-01

Attention: Michael Paquette
Kasian Architecture Ontario Inc.

Address: 69 Catherine St., Quinte West, ON

Date: May 6, 2026

Project #: CE-5608

Project: BQWCHC Trenton Health Hub

Cc. ---

Please amend the drawings and specifications for the above noted project as described below. Identify this addendum on the tender form to insure a complete tender form.

TENDER QUESTIONS

Question 1:

"Structured Cabling System – Is PANDUIT an acceptable manufacturer for the structured cabling system?"

Answer 1:

Panduit is an acceptable manufacturer for the structured cabling.

Question 2:

"It appears that they will be adding onto some of their existing security systems at this site, according to the spec. Unfortunately they don't mention the make / model of cameras desired, or what their existing head-end VMS is, so it will be hard to know what cameras are compatible and what camera licensing they require.

For the alarm system (EPPS), they mention a DSC Maxsys 4020 panel and an LED annunciator panel. Please note that the DSC Maxsys is considered end-of-life and should be replaced with the DSC Neo product line. They also no longer make an LED annunciator panel for the old Maxsys or the new Neo product, so that will have to be excluded. I don't see any keypad locations on the drawings, so perhaps they are existing? Do they have an existing EPPS system on-site ? If so, what is it. Do they need remote monitoring of the EPPS alarm system?"

Answer 2:

CCTV: The drawings indicate to provide new CCTV cameras to match existing and compatible with existing system and functionality to suit. The tender walkthrough provided the opportunity to obtain more information on the existing system. Existing system appears to be Watchnet NVR EN-64AI and cameras 5 MP MPIX-50IRBFT-IR28AI. Responsibility remains with contractor to confirm existing models on site and provide accordingly for ground floor fit up.

Security: The existing EPPS head end is already a DSC Neo located in the second floor comms room, see photo. The intent to is to extend the security coverage to suit the ground floor fit up to match the upper floors, tied into the existing system. Provide accordingly. There is one existing keypad that can

remain for Vestibule 1.020, provide one additional keypad for the entrance doors into the area for Activity room 1.004/Exercise room 1.008.

Question 3:

"In Section 23 07 13 (Mechanical Insulation) under 3.2.2.1 white aluminum jacketing is specified to be applied to exposed thermally insulated piping that is below 3m. Aluminum jacketing is not available in any colour other than natural aluminum. As an alternative, would you accept white PVC to be applied to all thermally insulated exposed piping?"

Answer 3:

PVC insulation covers as specified are acceptable.

Question 4:

"In Section 23 07 13 (Mechanical Insulation) under 3.2.3.5 white aluminum jacketing is specified to be applied to exposed thermally insulated ducts that are below 3m. Aluminum jacketing is not available in any colour other than natural aluminum. As an alternative, would you accept a smooth white five ply laminate, high performance cladding system with acrylic pressure sensitive self-adhesive (Ventureclad 1577CW-WM)?"

Answer 4:

PVC insulation covers as specified are acceptable.

Question 5:

"Do acoustically lined ducts require thermal insulation? Typically, acoustically lined ducts are not thermally insulated. Please confirm if this is required."

Answer 5:

Acoustically lined ducts do not require thermal insulation.

Question 6:

"Can you please confirm who the BAS controls contractor is?"

Answer 6:

Refer to Control Notes on Drawing M09 for list of approved controls sub-contractors.

Question 7:

"As per section 23 31 00, existing duct systems, who is responsible for installing duct sanitizing ports? Would this be under a duct cleaner scope?"

Answer 7:

Refer to specification section 23 31 00 Sentence 3.2.3.2. & 3.2.3.3

Question 8:

"As per mechanical specification any work outside the mechanical rooms need to be completed afterhours. Please confirm this requirement."

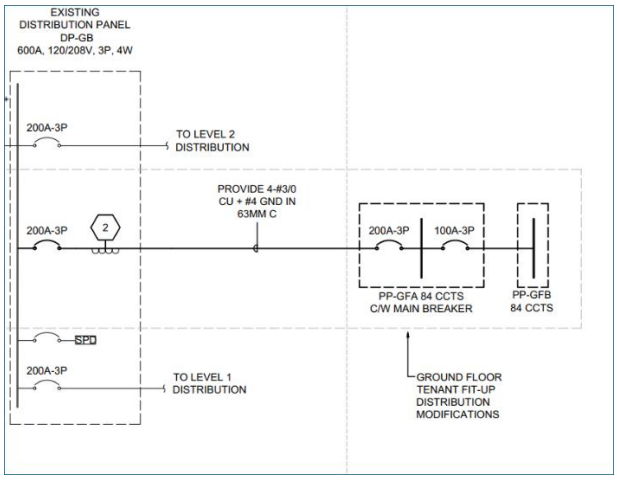
Answer 8:

Any work performed on Levels 2 or 3 or the roof that would interrupt normal working conditions shall be done outside of the occupant's normal working hours.

Question 9:

"Our suppliers are asking for some information on the existing metering please see below for RFIs. Please advise the manufacturer of the existing submetering system as per note 2 on the SLD:"

2. PROVIDE NEW 200A 3P HFD SERIES BREAKER IN DP-GB FOR NEW TENANT PANELS. PROVIDE NEW SUBMETERING TO MATCH EXISTING METERS FOR EXISTING FLOOR TENANTS. COORDINATE WITH EXISTING THIRD PARTY METERING VENDOR AND PROVIDE AS REQUIRED.



Answer 9:

Existing looks to be a Carma Metering system.

Question 10:

"The notes indicate to reuse existing mains and branch piping where possible and to modify as required for the new layout. However, we're not seeing any existing piping shown on the plan—only three heads in the mechanical room, which we're assuming are existing as they're the only ones indicated."

Answer 10:

Refer to sprinkler system record submittal package associated with the base building construction, issued for information.

Question 11:

"There's a note to remove all existing sprinkler heads within the area of work, but the plan doesn't appear to show any beyond those noted. Please provide existing sprinkler piping layout."

Answer 11:

Refer to sprinkler system record submittal package associated with the base building construction, issued for information.

Question 12:

"The scope indicates modifications and additions to an existing video management system; however, the specifications do not identify the current system's manufacturer or model."

Answer 12:

The drawings indicate to provide new CCTV cameras to match existing and compatible with existing system and functionality to suit. The tender walkthrough provided the opportunity to obtain more information on the existing system. Existing system appears to be Watchnet NVR EN-64AI and cameras 5 MP MPIX-50IRBFT-IR28AI. Responsibility remains with contractor to confirm existing models on site and provide accordingly for ground floor fit up.

Question 13:

"There is no mention of the required video storage retention period. With the increase from 4 to 7 cameras, additional storage capacity may be needed."

Answer 13:

Allow accordingly to maintain existing system video retention period for expanded number of cameras.

Question 14:

"The project notes 7 existing card reader doors and 15 new ones to be added. Are the existing doors connected to a Kantech system? If so, should we be expanding the existing system or providing a new Kantech license?"

Answer 14:

Expand Kantech system. Provide new door controllers as required for quantity of doors.

Question 15:

"Are we required to provide new servers or workstations for the access control system?"

Answer 15:

Owner to provide as required.

Question 16:

"Are we required to provide a network switch for the video management system or will it be provided by the client?"

Answer 16:

Consider switch existing or provided by owner.

Question 17:

"Will the system require remote offsite access for which we will need coordination with the IT department?"

Answer 17:

Extend existing upper floor functionality to this floor and allow accordingly.

Question 18:

"Chemical treatment for piping: Section 23 25 00 missing on the spec provided."

Answer 18:

Specification section 23 25 00 is not required. Mechanical Specifications - Section 23 05 20 Hydronic Specialties: Delete 1.2.3.

ATTACHMENTS

1. Submittal 21.000001.0 – Sprinkler System, F.D.C, Package [73 pages]

END OF ADDENDUM No. ME-01

Submittal
No. 21.000001.0

Harbridge + Cross Ltd.
350 Creditstone Rd.,
Suite 202
Concord, ON, L4K 3Z2
Canada

Title:	Sprinkler System, F.D.C., Extinguishers	Type:	Shop Drawings
Project No.:	200360	Status:	Returned
Project:	200360 - BQWCHC - New Facility – Trenton, ON	Priority:	Low Priority
Division:	21: Fire Suppression	Reference:	
Number:	21.000001.0	Subcontract:	
Revision:	0		
Required by Subcontractor On:		Required from Consultant On:	2020-Jun-15

History:

Action Taken: Conforms as Noted

From:	John Kapov Kasian Architecture Ontario Incorporated Suite 300 85 Hanna Avenue Toronto, Ontario, M6K 3S3 Canada (416) 583-3629	To:	Odette Cariaga Harbridge + Cross Ltd. 350 Creditstone Rd., Suite 202 Concord, ON, L4K 3Z2 Canada (416) 213-7165
Status:	Issued	Date:	2020-Jun-22
Carrier:		Waybill:	
CC:			
Comments:			

Reviewed as Noted

Attachment(s):

BQWCHC_Submittal_21000001.0_-_Sprinkler_System_F.D.C. Extinguishers_S&A_M&E_KASIAN_RN

Action Taken: Conforms as Noted

From:	John Kapov Kasian Architecture Ontario Incorporated Suite 300 85 Hanna Avenue	To:	Odette Cariaga Harbridge + Cross Ltd. 350 Creditstone Rd., Suite 202 Concord, ON, L4K 3Z2

Submittal
No. 21.000001.0

Harbridge + Cross Ltd.
350 Creditstone Rd.,
Suite 202
Concord, ON, L4K 3Z2
Canada

	Toronto, Ontario, M6K 3S3 Canada (416) 583-3629		Canada (416) 213-7165
Status:	Issued	Date:	2020-Jun-10
Carrier:		Waybill:	
CC:			
Comments:			

Reviewed as Noted

Attachment(s):

BQWCHC_Submittal_21.000001.0_-_Sprinkler_System_F.D.C._Extinguishers_Issued_S&A_KASIAN_RN

Action Taken:	Reviewed		
From:	Michael Armster Smith and Andersen Consulting Engineering 100 Sheppard Ave. East Suite 1100 Toronto, ON, M2N 6N5 Canada (416)218-7054	To:	John Kapov Kasian Architecture Ontario Incorporated Suite 300 85 Hanna Avenue Toronto, Ontario, M6K 3S3 Canada (416) 583-3629
Status:	Issued	Date:	2020-Jun-10
Carrier:		Waybill:	
CC:			
Comments:			

Electrical Contractor to coordinate all fire alarm interfaces for supervised valves and flow switches and power to associated sprinkler pumps.

Mike Armster

Attachment(s):

Submittal
No. 21.000001.0

Harbridge + Cross Ltd.
350 Creditstone Rd.,
Suite 202
Concord, ON, L4K 3Z2
Canada

Action Taken: Submitted for Review

From:	Matthew Henderson Smith and Andersen Consulting Engineering 500 - 4211 Yonge Street Toronto, ON, M2P 2A9 Canada (416)487-8151	To:	Michael Armster Smith and Andersen Consulting Engineering 100 Sheppard Ave. East Suite 1100 Toronto, ON, M2N 6N5 Canada (416)218-7054
Status:	Issued	Date:	2020-Jun-08
Carrier:		Waybill:	
CC:			
Comments:			

Attachment(s):

Submission#61 21 13 00-01-R0 Sprinkler sytem SD & PD for approval

---

Action Taken: Submitted for Review

From:	John Kapov Kasian Architecture Ontario Incorporated Suite 300 85 Hanna Avenue Toronto, Ontario, M6K 3S3 Canada (416) 583-3629	To:	Matthew Henderson Smith and Andersen Consulting Engineering 500 - 4211 Yonge Street Toronto, ON, M2P 2A9 Canada (416)487-8151
Status:	Issued	Date:	2020-Jun-02
Carrier:		Waybill:	
CC:	Brad Teasdale Harbridge + Cross Ltd. 350 Creditstone Rd., Suite 202 Concord, ON, L4K 3Z2 Canada (416) 213-7165		Contract Administration Toronto Smith and Andersen Consulting Engineering 100 Sheppard Ave. East Suite 1100 Toronto, ON, M2N 6N5 Canada (416)487-8151
	John Kapov Kasian Architecture Ontario Incorporated Suite 300 85 Hanna Avenue Toronto, Ontario, M6K 3S3 Canada (416) 583-3629		Luda Katanova Kasian Architecture Ontario Incorporated Suite 300 85 Hanna Avenue Toronto, Ontario, M6K 3S3 Canada (416) 583-3661

Submittal
No. 21.000001.0

Harbridge + Cross Ltd.
350 Creditstone Rd.,
Suite 202
Concord, ON, L4K 3Z2
Canada

Matthew Henderson
Smith and Andersen Consulting Engineering
500 - 4211 Yonge Street
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(416)218-7054

William Waters
Harbridge + Cross Ltd.
350 Creditstone Rd.,
Suite 202
Concord, ON, L4K 3Z2
Canada
(416) 213-7165

Comments:

Attachment(s):

Submission#61 21 13 00-01-R0 Sprinkler sytem SD & PD for approval

---

Action Taken: Submitted for Review

From:
Odette Cariaga
Harbridge + Cross Ltd.
350 Creditstone Rd.,
Suite 202
Concord, ON, L4K 3Z2
Canada
(416) 213-7165

To:
David Della Torre
Kasian Architecture Ontario Incorporated
Suite 300
85 Hanna Avenue
Toronto, Ontario, M6K 3S3
Canada
(416) 583-3660

Status: Issued

Date: 2020-Jun-01

Carrier:

Waybill:

CC:
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Contract Administration Toronto
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Luda Katanova
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Submittal
No. 21.000001.0

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Canada
(416) 213-7165

Comments:

Attachment(s):

Submission#61 21 13 00-01-R0 Sprinkler sytem SD & PD for approval

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Attachment(s):

Description

Smith + Andersen

Kasian Architecture Ontario Incorporated | 171 East Liberty Street Suite 130 Toronto ONTARIO M6K 3P6 Canada

Shop Drawing Transmittal

PROJECT	Belleville & Quinte West Belleville Ontario Belleville Quinte West Health Centre 18401-000	DATE SENT	6/3/2020
SUBJECT	Sump Pumps, Pits & Cover	SHOP DRAWING ID	22 13 29.00.1.R0
TYPE	Shop Drawing	TRANSMITTAL ID	00088
PURPOSE	**Reviewed with comments**	VIA	Hand
SPEC SECTION:	22 13 29.00		

FROM

NAME	COMPANY	EMAIL	PHONE
David Della Torre	Kasian Architecture Ontario Incorporated	David.DellaTorre@Kasian.com	(416)595-9880 x101

TO

NAME	COMPANY	EMAIL	PHONE
action@kasian.com		action@kasian.com	

This review is for the sole purpose of ascertaining conformance with the general design concept and for general arrangement. This shall not mean approval of the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor and such review shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site for information that pertains solely to fabrication processes, quantities or the techniques of construction and installation and for co-ordination with related work. This form is a record of transmittal to return the documents to the individual noted above.

REMARKS: **Response (Reviewed with Comments) from: Matthew Henderson (Smith and Andersen)**

Remarks:

S+A MECHANICAL REVIEW:

Item No.	Reference	Comment/s
1	Cover Plate	Per Article 2.2.3.1 of 22 13 29.13 Sump Covers must be complete with an inspection cover.
2	Sump Ladder	Per Article 2.2.3.6 of 22 13 29.13 sumps are required to have galvanized steel ladder rungs on 12 in centers for the full sump depth.
3	Sump Depth	Ensure sump depth is

		increased to accommodate the increased elevator pit depth without reducing pump runtime or dimensions shown on the Mechanical Standard Details.

S+A ELECTRICAL REVIEW:

Item No.	Reference	Comment/s
1	General	Reviewed

CONTENTS

QUANTITY: 1 DATED: 5/6/2020 NUMBER:

DESCRIPTION:
BQWCHC_Submittal_22.000001.0_-_Sump_Pumps_Pits.pdf

ACTION:
REMARKS:

DATE: 6/15/2020
ID: 00121

ACTION:
REMARKS:

HARBRIDGE + CROSS LIMITED
350 CREDITSTONE ROAD, SUITE# 202
CONCORD ON L4K 3Z2
TEL: 416-213-7165
FAX: 905-738-9649

KASIAN ARCHITECTURE ONTARIO INCORPORATED
85 Hanna Avenue, Suite 300
Toronto, ON M6K 3S3
T#(416) 583-3600

BQWCHC Project No. 200360

Attn: David Della Torre

Date: June 1, 2020

Project Name: BQWCHC

Job No. Z9-084

Submitted By: MITCHELL FIRE PROTECTION SYSTEM

RE: PRODUCT DATA & SHOP DRAWING SUBMISSION

SUBMITTAL No: **61 - ARCHITECTURAL/MECHANICAL**

NO. OF COPIES	DRAWINGS NO.	TITLE or DESCRIPTION
1 SET @		**DIVISION 21 - FIRE SUPPRESSION**
		SPECIFICATION SECTION: 21 11 19 - FIRE DEPARTMENT CONNECTIONS
		NAATIONAL FIRE EQUIPMENT 229 F.D.C.
		SPECIFICATION SECTION: 21 13 00 - SPRINKLER SYSTEMS
		SPRINKLER DRAWING LAYOUTS - GROUND, LEVEL 1 & LEVEL 2
		HYDRAULIC CLCULATIONS
		PIPE, VALVES, FITTINGS
		SPECIFICATION SECTION: 21 25 00 - PORTABLE FIRE EXTINGUISHER
		ABC MULTI PURPOSE DRY CHEMICAL EXTINGUISHERS
		RECESSED FIRE EXT. CABINETS

☑ For your review and APPROVAL

☐ Reviewed as submitted

☐ Revise as noted. Do not resubmit

☐ Revise and resubmit for final review

☐ For use in connection with your work/estimate

☐ For your information and file

HARBRIDGE + CROSS LIMITED

THIS SHOP DRAWING HAS BEEN REVIEWED AS TO GENERAL ARRANGEMENT ONLY. DESIGN, DIMENSIONS AND COMPLIANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS ARE THE RESPONSIBILITY OF THE SUB-CONTRACTOR

REVIEWED BY: OC DATE: June 1, 2020

REVIEWED AS SUBMITTED	REVISE AS NOTED Do Not Resubmit	REVISE AND RESUBMIT
/		

APPROVAL REQUIRED BY: June 15, 2020

REMARKS: CC: JOBSITE/FILE

REFER TO SMITH + ANDERSEN SHOP DRAWING REVIEW FORM FOR COMMENTS.

☐ Reviewed:
☐ Reviewed as noted:
☐ Revise and Resubmit:
☑ Not Reviewed:

kasian

By John.Kapov at 10:22 pm, Jun 15, 2020

Prepared by: ODETTE CARIAGA
*sent via email

Review is ~~for the sole purpose of ascertaining conformance to the~~ general design concept described in the Contract Documents. Review does not constitute approval of the detailed design inherent in the shop drawings, responsibility for which remains with the Contractor. The Contractor is responsible for errors and omissions in the shop drawings and for meeting the requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the project site, for information pertaining solely to fabrication processes, construction techniques and installation, and for coordination with the work of all trades.

COMMITMENT TO GENERAL REVIEWS BY ARCHITECT AND ENGINEERS

THIS FORM TO BE COMPLETED BY THE OWNER OR OWNER'S AUTHORIZED AGENT, AND SIGNED BY ALL CONSULTANTS RETAINED FOR GENERAL REVIEWS

Part A - Owner's Undertaking

Permit Application No.

Project Description:

Address of Project: CATHERINE STREET

Municipality: TRENTON

WHEREAS the Ontario Building Code requires that the project described above be designed and reviewed during construction by an architect, professional engineer or both that are licensed to practice in Ontario;

NOW THEREFORE the Owner, being the person who intends to construct or have the building constructed hereby warrants that:

1. The undersigned architect and/or professional engineers have been retained to provide general reviews of the construction of the building to determine whether the construction is in general conformity with the plans and other documents that form the basis for the issuance of a building permit, in accordance with the performance standards of the Ontario Association of Architects (OAA) and/or Professional Engineers Ontario (PEO);
2. All general review reports by the architect and/or professional engineers will be forwarded promptly to the Chief Building Official, and
3. Should any retained architect or professional engineer cease to provide general reviews for any reason during construction, the Chief Building Official will be notified in writing immediately, and another architect or engineer will be appointed so that general review continues without interruption during construction.

The undersigned hereby certifies that he/she has read and agrees to the above

Name of Owner: Date:

Address of Owner: Telephone:

Signature of Owner: Print Name: Fax:
(or officer of corporation)

Coordinator of the work of all consultants: Telephone:

Address: Fax:

Part B - Consultants

The undersigned architect and/or professional engineer(s) hereby certify that they have been retained to provide general reviews of the parts of construction of the building indicated, to determine whether the construction is in general conformity with the plans and other documents that form the basis for the issuance of a building permit, in accordance with the performance standards of the OAA and/or PEO.

SHADED PORTION TO BE COMPLETED BY CONSULTANTS

❑ **ARCHITECTURAL** ❑ **STRUCTURAL** ❑ **MECHANICAL** ❑ **ELECTRICAL** ❑ **SITE SERVICES** ☒ **OTHER (SPECIFY):** FIRE PROTECTION

Consultant Name: MBECO ENGINEERING LTD.
Signature:
Print Name: MICHAEL BASSILY, P.Eng.
Date: MAY 25, 2020

Telephone: (905)508-7036 Fax: 508-7611 Address: 22A ALESSIA CRT. RICHMOND HILL, ON. L4B 3Z5

❑ **ARCHITECTURAL** ❑ **STRUCTURAL** ❑ **MECHANICAL** ❑ **ELECTRICAL** ❑ **SITE SERVICES** ❑ **OTHER (SPECIFY):**

Consultant Name: Signature: Print Name: Date:

Telephone: Fax: Address:

❑ **ARCHITECTURAL** ❑ **STRUCTURAL** ❑ **MECHANICAL** ❑ **ELECTRICAL** ❑ **SITE SERVICES** ❑ **OTHER (SPECIFY):**

Consultant Name: Signature: Print Name: Date:

Telephone: Fax: Address:

❑ **ARCHITECTURAL** ❑ **STRUCTURAL** ❑ **MECHANICAL** ❑ **ELECTRICAL** ❑ **SITE SERVICES** ❑ **OTHER (SPECIFY):**

Consultant Name: Signature: Print Name: Date:

Telephone: Fax: Address:

Mitchell Fire Protection Systems

HYDRAULIC DESIGN SUMMARY

PROJECT NAME: **BELLEVILLE & QUINTE WEST COMMUNITY HEALTH CENTRE**

DESIGN AREA A-1

- SPRINKLER SYSTEM DESIGNED TO A MINIMUM DISCHARGE OF 0.10 USGPM/SF OVER 1500 SF PLUS 100 USGPM HOSE ALLLOWANCE & 75 USGPM (FUTURE).

15 SPRINKLERS FLOWING

DEMAND (AT STREET): 456 USGPM @ 58.8 PSI

AVAILABLE (STREET): 456 USGPM @ 69.7 PSI

LICENSED PROFESSIONAL ENGINEER
M. M. BASSILY
PROVINCE OF ONTARIO
MAY 25, 2020

WATER SUPPLY:

FLOW TEST CONDUCTED SEPT. 2018 WITH FIRE HYDRANTS AT CATHERINE STREET.
TEST CONDUCTED BY REGION:

- STATIC: 70.5 PSI
- FLOW: 3034 USGPM @ 43.7 PSI

DATE: 5/25/2020 C:\HASS DATA\QUINTE WEST A-1.SDF
JOB TITLE: QUINTE WEST - 0.10/1500

WATER SUPPLY DATA

SOURCE NODE TAG	STATIC PRESS. (PSI)	RESID. PRESS. @ (PSI)	FLOW @ (GPM)	AVAIL. PRESS. @ (PSI)	TOTAL DEMAND (GPM)	REQ'D PRESS. (PSI)
SOURCE	70.5	43.7	3034.0	69.7	456.1	58.8

AGGREGATE FLOW ANALYSIS:

TOTAL FLOW AT SOURCE	456.1 GPM
TOTAL HOSE STREAM ALLOWANCE AT SOURCE	100.0 GPM
OTHER HOSE STREAM ALLOWANCES	75.0 GPM
TOTAL DISCHARGE FROM ACTIVE SPRINKLERS	281.1 GPM

NODE ANALYSIS DATA

NODE TAG	ELEVATION (FT)	NODE TYPE	PRESSURE (PSI)	DISCHARGE (GPM)
S1	23.0	K= 5.60	8.7	16.5
S2	23.0	K= 5.60	8.7	16.5
S3	23.0	K= 5.60	9.0	16.8
S4	23.0	K= 5.60	10.0	17.7
S5	23.0	K= 5.60	11.2	18.8
S6	23.0	K= 5.60	11.3	18.8
S7	23.0	K= 5.60	12.6	19.9
S8	23.0	K= 5.60	11.5	19.0
S9	23.0	K= 5.60	10.8	18.4
S10	23.0	K= 5.60	11.5	19.0
S11	23.0	K= 5.60	13.0	20.2
S12	23.0	K= 5.60	12.1	19.5
S13	23.0	K= 5.60	12.4	19.7
S14	23.0	K= 5.60	12.8	20.1
S15	23.0	K= 5.60	13.1	20.3
J1	25.0	- - - -	8.6	- - -
J2	25.0	- - - -	8.7	- - -
J3	25.0	- - - -	9.1	- - -
J4	25.0	- - - -	10.1	- - -
J5	25.0	- - - -	12.0	- - -
J6	25.0	- - - -	12.2	- - -
J7	25.0	- - - -	13.1	- - -
J8	25.0	- - - -	11.1	- - -
J9	25.0	- - - -	11.3	- - -
J10	25.0	- - - -	11.8	- - -
J11	25.0	- - - -	13.4	- - -
J12	25.0	- - - -	12.1	- - -
J13	25.0	- - - -	12.4	- - -
J14	25.0	- - - -	12.9	- - -
J15	25.0	- - - -	13.2	- - -
A	25.0	HOSE STREAM	20.2	75.0
B	25.0	- - - -	20.8	- - -
C	25.0	- - - -	22.2	- - -
D	25.0	- - - -	24.1	- - -

DATE: 5/25/2020 C:\HASS DATA\QUINTE WEST A-1.SDF
JOB TITLE: QUINTE WEST - 0.10/1500

NODE ANALYSIS DATA

NODE TAG	ELEVATION (FT)	NODE TYPE	PRESSURE (PSI)	DISCHARGE (GPM)
E	25.0	- - - -	35.1	- - -
JA	25.0	- - - -	13.5	- - -
JB	25.0	- - - -	14.3	- - -
TOR	-3.0	- - - -	51.2	- - -
BOR	-10.0	- - - -	56.5	- - -
BFO	-10.0	- - - -	58.7	- - -
BFI	-10.0	- - - -	63.7	- - -
SPG	-10.0	- - - -	64.1	- - -
SOURCE	3.0	SOURCE	58.8	356.1

PIPE DATA

PIPE TAG / END NODES	ELEV. (FT)	NOZ. (K)	PT (PSI)	DISC. (GPM)	Q(GPM) VEL(FPS)	DIA(IN) HW(C) FL/FT	LENGTH (FT)		PRESS. SUM. (PSI)
Pipe: 1					-16.5	1.049 PL	4.00	PF	0.7
S1	23.0	5.6	8.7	16.5	6.1	120 FTG	2E	PE	-0.9
J1	25.0	0.0	8.6	0.0		0.091 TL	8.00	PV	
Pipe: 2					-16.5	1.049 PL	3.00	PF	0.9
S2	23.0	5.6	8.7	16.5	6.1	120 FTG	ET	PE	-0.9
J2	25.0	0.0	8.7	0.0		0.091 TL	10.00	PV	
Pipe: 3					-16.8	1.049 PL	3.00	PF	0.9
S3	23.0	5.6	9.0	16.8	6.2	120 FTG	ET	PE	-0.9
J3	25.0	0.0	9.1	0.0		0.094 TL	10.00	PV	
Pipe: 4					-17.7	1.049 PL	3.00	PF	1.0
S4	23.0	5.6	10.0	17.7	6.6	120 FTG	ET	PE	-0.9
J4	25.0	0.0	10.1	0.0		0.103 TL	10.00	PV	
Pipe: 5					-18.8	1.049 PL	5.00	PF	1.6
S5	23.0	5.6	11.2	18.8	7.0	120 FTG	2ET	PE	-0.9
J5	25.0	0.0	12.0	0.0		0.115 TL	14.00	PV	
Pipe: 6					-18.8	1.049 PL	9.00	PF	1.9
S6	23.0	5.6	11.3	18.8	7.0	120 FTG	ET	PE	-0.9
J6	25.0	0.0	12.2	0.0		0.116 TL	16.00	PV	
Pipe: 7					-19.9	1.049 PL	3.00	PF	1.3
S7	23.0	5.6	12.6	19.9	7.4	120 FTG	ET	PE	-0.9
J7	25.0	0.0	13.1	0.0		0.129 TL	10.00	PV	
Pipe: 8					-19.0	1.049 PL	2.00	PF	0.5
S8	23.0	5.6	11.5	19.0	7.0	120 FTG	E	PE	-0.9
J8	25.0	0.0	11.1	0.0		0.118 TL	4.00	PV	
Pipe: 9					-18.4	1.049 PL	4.50	PF	1.3
S9	23.0	5.6	10.8	18.4	6.8	120 FTG	ET	PE	-0.9
J9	25.0	0.0	11.3	0.0		0.112 TL	11.50	PV	
Pipe: 10					-19.0	1.049 PL	3.00	PF	1.2
S10	23.0	5.6	11.5	19.0	7.0	120 FTG	ET	PE	-0.9
J10	25.0	0.0	11.8	0.0		0.118 TL	10.00	PV	
Pipe: 11					-20.2	1.049 PL	3.00	PF	1.3
S11	23.0	5.6	13.0	20.2	7.5	120 FTG	ET	PE	-0.9
J11	25.0	0.0	13.4	0.0		0.132 TL	10.00	PV	
Pipe: 12					-19.5	1.049 PL	3.00	PF	0.9
S12	23.0	5.6	12.1	19.5	7.2	120 FTG	2E	PE	-0.9
J12	25.0	0.0	12.1	0.0		0.124 TL	7.00	PV	

PIPE TAG / END NODES	ELEV. (FT)	NOZ. (K)	PT (PSI)	DISC. (GPM)	Q(GPM) VEL(FPS)	DIA(IN) HW(C) FL/FT		LENGTH (FT)		PRESS. SUM. (PSI)
Pipe: 13					-19.7	1.049	PL	3.00	PF	0.9
S13	23.0	5.6	12.4	19.7	7.3	120	FTG	2E	PE	-0.9
J13	25.0	0.0	12.4	0.0		0.127	TL	7.00	PV	
Pipe: 14					-20.1	1.049	PL	3.00	PF	0.9
S14	23.0	5.6	12.8	20.1	7.4	120	FTG	2E	PE	-0.9
J14	25.0	0.0	12.9	0.0		0.131	TL	7.00	PV	
Pipe: 15					-20.3	1.049	PL	3.00	PF	0.9
S15	23.0	5.6	13.1	20.3	7.5	120	FTG	2E	PE	-0.9
J15	25.0	0.0	13.2	0.0		0.134	TL	7.00	PV	
Pipe: 17					-16.5	1.610	PL	11.00	PF	0.2
J1	25.0	0.0	8.6	0.0	2.6	120	FTG	E	PE	0.0
J2	25.0	0.0	8.7	0.0		0.011	TL	15.00	PV	
Pipe: 18					-33.0	1.610	PL	8.50	PF	0.3
J2	25.0	0.0	8.7	0.0	5.2	120	FTG	----	PE	0.0
J3	25.0	0.0	9.1	0.0		0.041	TL	8.50	PV	
Pipe: 19					-49.8	1.610	PL	12.00	PF	1.0
J3	25.0	0.0	9.1	0.0	7.9	120	FTG	----	PE	0.0
J4	25.0	0.0	10.1	0.0		0.087	TL	12.00	PV	
Pipe: 20					-67.5	1.610	PL	12.00	PF	1.8
J4	25.0	0.0	10.1	0.0	10.6	120	FTG	----	PE	0.0
J5	25.0	0.0	12.0	0.0		0.153	TL	12.00	PV	
Pipe: 21					-86.2	2.067	PL	4.00	PF	0.3
J5	25.0	0.0	12.0	0.0	8.2	120	FTG	----	PE	0.0
J6	25.0	0.0	12.2	0.0		0.071	TL	4.00	PV	
Pipe: 22					-105.0	2.067	PL	8.00	PF	0.8
J6	25.0	0.0	12.2	0.0	10.0	120	FTG	----	PE	0.0
J7	25.0	0.0	13.1	0.0		0.103	TL	8.00	PV	
Pipe: 23					-124.9	2.067	PL	40.42	PF	7.2
J7	25.0	0.0	13.1	0.0	11.9	120	FTG	T	PE	0.0
A	25.0	H.S.	20.2	75.0		0.142	TL	50.42	PV	
Pipe: 24					-199.9	3.068	PL	11.17	PF	0.6
A	25.0	H.S.	20.2	75.0	8.7	120	FTG	----	PE	0.0
B	25.0	0.0	20.8	0.0		0.049	TL	11.17	PV	
Pipe: 25					-19.0	1.610	PL	13.83	PF	0.2
J8	25.0	0.0	11.1	0.0	3.0	120	FTG	----	PE	0.0
J9	25.0	0.0	11.3	0.0		0.015	TL	13.83	PV	
Pipe: 26					-37.4	1.610	PL	10.00	PF	0.5
J9	25.0	0.0	11.3	0.0	5.9	120	FTG	----	PE	0.0
J10	25.0	0.0	11.8	0.0		0.051	TL	10.00	PV	

DATE: 5/25/2020 C:\HASS DATA\QUINTE WEST A-1.SDF
JOB TITLE: QUINTE WEST - 0.10/1500

PIPE TAG / END NODES	ELEV. (FT)	NOZ. (K)	PT (PSI)	DISC. (GPM)	Q(GPM) VEL(FPS)	DIA(IN) HW(C) FL/FT	LENGTH (FT)		PRESS. SUM. (PSI)
Pipe: 27					-56.4	1.610 PL	14.92	PF	1.6
J10	25.0	0.0	11.8	0.0	8.9	120 FTG	----	PE	0.0
J11	25.0	0.0	13.4	0.0		0.110 TL	14.92	PV	
Pipe: 28					-76.5	1.610 PL	30.00	PF	7.4
J11	25.0	0.0	13.4	0.0	12.1	120 FTG	T	PE	0.0
B	25.0	0.0	20.8	0.0		0.193 TL	38.00	PV	
Pipe: 29					-276.5	3.068 PL	16.00	PF	1.4
B	25.0	0.0	20.8	0.0	12.0	120 FTG	----	PE	0.0
C	25.0	0.0	22.2	0.0		0.090 TL	16.00	PV	
Pipe: 34					-19.5	1.049 PL	5.83	PF	1.3
J12	25.0	0.0	12.1	0.0	7.2	120 FTG	T	PE	0.0
JA	25.0	0.0	13.5	0.0		0.124 TL	10.83	PV	
Pipe: 35					-19.7	1.049 PL	3.17	PF	1.0
J13	25.0	0.0	12.4	0.0	7.3	120 FTG	T	PE	0.0
JA	25.0	0.0	13.5	0.0		0.127 TL	8.17	PV	
Pipe: 36					-39.2	1.610 PL	14.92	PF	0.8
JA	25.0	0.0	13.5	0.0	6.2	120 FTG	----	PE	0.0
JB	25.0	0.0	14.3	0.0		0.056 TL	14.92	PV	
Pipe: 37					-20.1	1.049 PL	5.83	PF	1.4
J14	25.0	0.0	12.9	0.0	7.4	120 FTG	T	PE	0.0
JB	25.0	0.0	14.3	0.0		0.131 TL	10.83	PV	
Pipe: 38					-20.3	1.049 PL	3.17	PF	1.1
J15	25.0	0.0	13.2	0.0	7.5	120 FTG	T	PE	0.0
JB	25.0	0.0	14.3	0.0		0.134 TL	8.17	PV	
Pipe: 39					-79.6	1.610 PL	30.00	PF	7.9
JB	25.0	0.0	14.3	0.0	12.5	120 FTG	T	PE	0.0
C	25.0	0.0	22.2	0.0		0.208 TL	38.00	PV	
Pipe: 40					-356.1	3.068 PL	5.92	PF	1.9
C	25.0	0.0	22.2	0.0	15.5	120 FTG	E	PE	0.0
D	25.0	0.0	24.1	0.0		0.144 TL	12.92	PV	
Pipe: 41					-356.1	3.068 PL	55.33	PF	11.0
D	25.0	0.0	24.1	0.0	15.5	120 FTG	3E	PE	0.0
E	25.0	0.0	35.1	0.0		0.144 TL	76.33	PV	
Pipe: 42					-356.1	4.026 PL	44.00	PF	4.0
E	25.0	0.0	35.1	0.0	9.0	120 FTG	6E	PE	12.1
TOR	-3.0	0.0	51.2	0.0		0.038 TL	104.00	PV	
Pipe: 43					-356.1	4.026 PL	7.00	PF	2.3
TOR	-3.0	0.0	51.2	0.0	9.0	120 FTG	TCB	PE	3.0
BOR	-10.0	0.0	56.5	0.0		0.038 TL	61.00	PV	

PIPE TAG / END NODES	ELEV. (FT)	NOZ. (K)	PT (PSI)	DISC. (GPM)	Q(GPM) VEL(FPS)	DIA(IN) HW(C) FL/FT	LENGTH (FT)	PRESS. SUM. (PSI)
Pipe: 44					-356.1	4.026 PL	6.00 PF	2.1
BOR	-10.0	0.0	56.5	0.0	9.0	120 FTG	ETA PE	0.0
BFO	-10.0	0.0	58.7	0.0		0.038 TL	56.00 PV	
Pipe: 45						FIXED PRESSURE LOSS DEVICE		
BFI	-10.0	0.0	63.7	0.0		5.0 psi, 356.1 gpm		
BFO	-10.0	0.0	58.7	0.0				
Pipe: 46					-356.1	4.026 PL	1.00 PF	0.4
BFI	-10.0	0.0	63.7	0.0	9.0	120 FTG	E PE	0.0
SPG	-10.0	0.0	64.1	0.0		0.038 TL	11.00 PV	
Pipe: 47					-356.1	7.981 PL	200.00 PF	0.3
SPG	-10.0	0.0	64.1	0.0	2.3	150 FTG	2ETG PE	-5.6
SOURCE	3.0	SRCE	58.8	(N/A)		0.001 TL	313.33 PV	

NOTES (HASS):

(1) Calculations were performed by the HASS 8.8 D computer program
in accordance with NFPA13 (2016)
under license no. 49071993 granted by
HRS Systems, Inc.
208 Southside Square
Petersburg, TN 37144
(931) 659-9760

(2) The system has been calculated to provide an average
imbalance at each node of 0.003 gpm and a maximum
imbalance at any node of 0.108 gpm.

(3) Total pressure at each node is used in balancing the system.
Maximum water velocity is 15.5 ft/sec at pipe 40.

(4) Items listed in bold print on the cover sheet

are automatically transferred from the calculation report.

(5) Available pressure at source node SOURCE under full flow conditions is
69.57 psi with a flow of 494.07 gpm.

(6) PIPE FITTINGS TABLE

HASS Pipe Table Name: standard.pip

DATE: 5/25/2020 C:\HASS DATA\QUINTE WEST A-1.SDF
JOB TITLE: QUINTE WEST - 0.10/1500

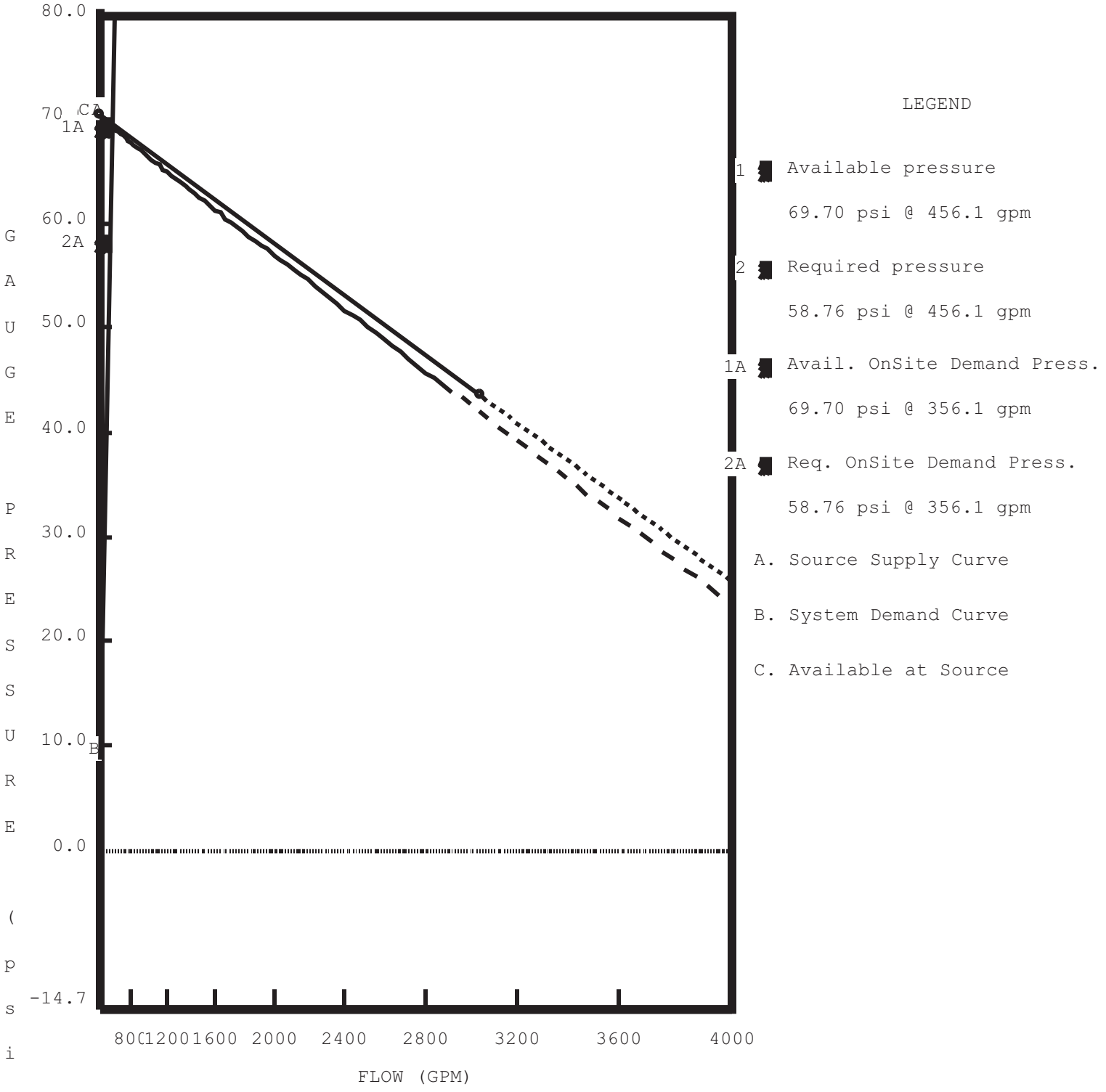
PAGE: A MATERIAL: S40 HWC: 120

Diameter (in)	Equivalent Fitting Lengths in Feet								
	E Ell	T Tee	L LngEll	C ChkVlv	B BfyVlv	G GatVlv	A AlmChk	D DPVlv	N NTee
	F F45Ell								
1.049	2.00 1.00	5.00	2.00	5.00	6.00	1.00	10.00	2.00	5.00
1.610	4.00 2.00	8.00	2.00	9.00	6.00	1.00	10.00	10.00	8.00
2.067	5.00 2.50	10.00	3.00	11.00	6.00	1.00	10.00	10.00	10.00
3.068	7.00 3.50	15.00	5.00	16.00	10.00	1.00	13.00	13.00	15.00
4.026	10.00 5.00	20.00	6.00	22.00	12.00	2.00	20.00	20.00	20.00
7.981	18.00 9.00	35.00	13.00	45.00	12.00	4.00	31.00	31.00	35.00

DATE: 5/25/2020 C:\HASS DATA\QUINTE WEST A-1.SDF
JOB TITLE: QUINTE WEST - 0.10/1500

WATER SUPPLY ANALYSIS

Static: 70.50 psi Resid: 43.70 psi Flow: 3034.0 gpm

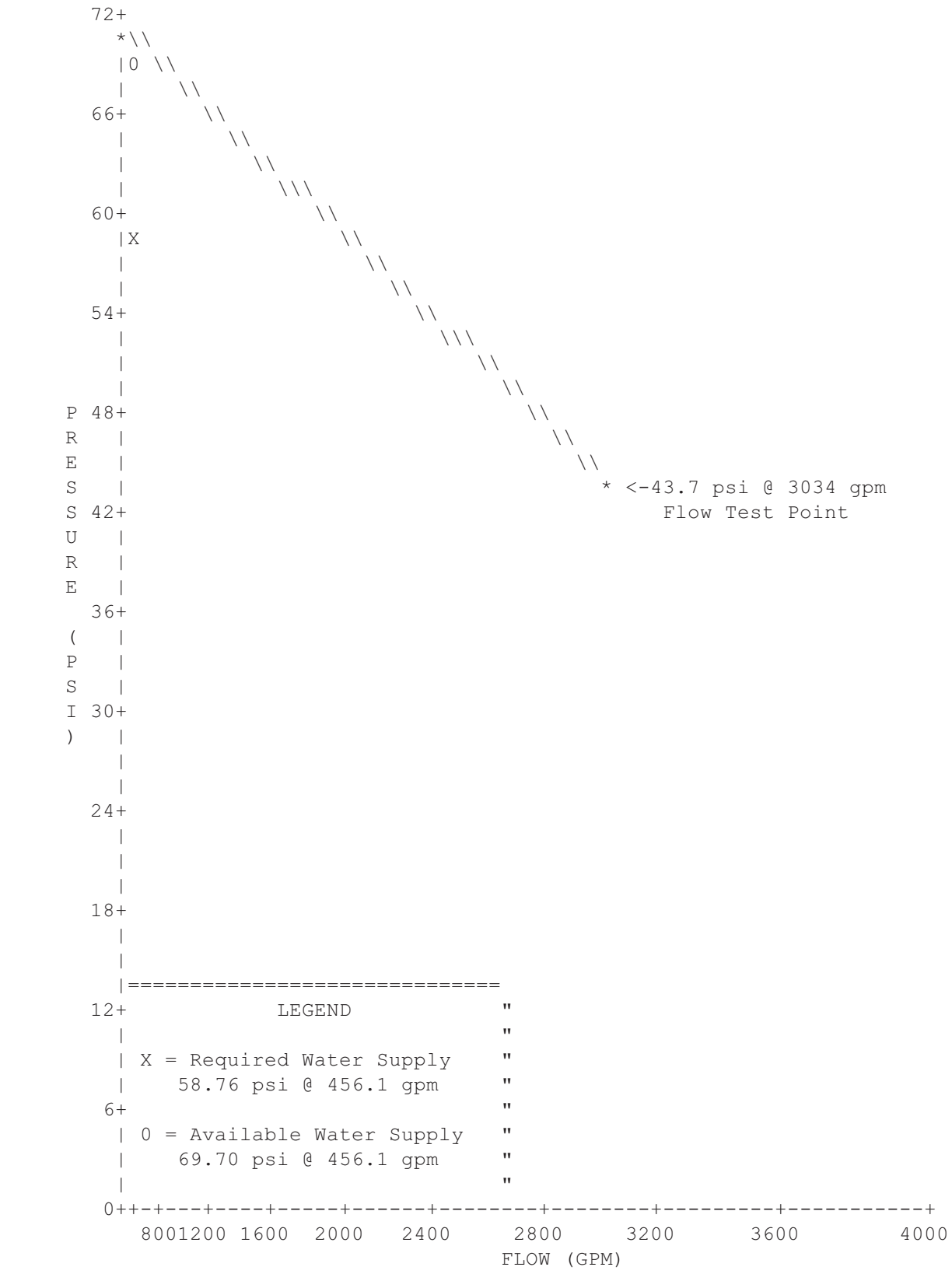


Note: (1) Dashed Lines indicate extrapolated values from Test Results

(2) On Site pressures are based on hose stream deduction at the source

DATE: 5/25/2020 C:\HASS DATA\QUINTE WEST A-1.SDF
JOB TITLE: QUINTE WEST - 0.10/1500

WATER SUPPLY CURVE



NOTES:

- ALL DIMENSIONS ARE CENTRE TO CENTRE
- PAINTING OF PIPE BY OTHERS.
- CUTTING AND PATCHING BY OTHERS.
- DESIGN AND INSTALLATION AS PER NFPA 13 (2013) & OBC (2012).
- ALL MATERIAL TO MEET N.F.P.A. 13 & OBC STANDARDS.
- ALL ELEC. WIRING & FIRE ALARM CONNECTION BY OTHERS.
- UNDERGROUND WATER MAIN IS BY OTERS.
- TO PREVENT FREEZING ALL AREAS WITH WET PIPE ARE TO MAINTAINED ABOVE 4 DEG.C.

PIPE AND FITTINGS:

- SPRINKLER PIPE: ALL PIPE TO BE BLACK S-40.
- SPRINKLER FITTINGS: GROOVED, SCREWED AND FLANGED.

SPRINKLER DESIGN:

LIGHT HAZARD:

- ALL AREAS EXCEPT AS NOTED BELOW TO BE DESIGNED AS PER NFPA 13 LIGHT HAZARD. HYDRAULIC DESIGN BASED ON A DISCHARGE OF 0.10 USGPM/SF OVER 1500 SF PLUS 100 USGPM FOR HOSE. AS WELL, A ALLOWANCE OF 75 USGPM (FIVE SPRINKLERS) HAS BEEN INCLUDED FOR FUTURE.

ORDINARY HAZARD GROUP ONE

- ELECTRICAL, MECHANICAL, GARBAGE AND COMMUNICATIONS ROOMS TO BE DESIGNED FOR A MINIMUM DISCHARGE OF 0.15 USGPM/SF.

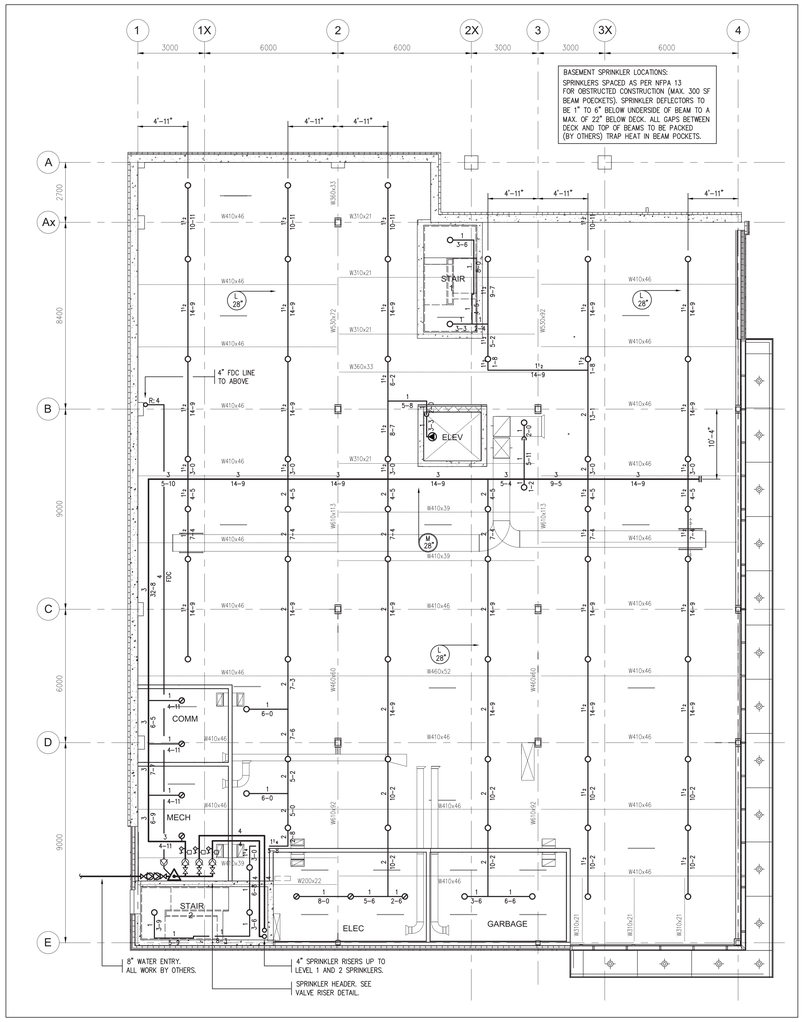
WATER SUPPLY:

FLOW TEST CONDUCTED SEPT. 2018 WITH FIRE HYDRANTS AT CATHERINE STREET. TEST CONDUCTED BY REGION:

- STATIC: 70.5 PSI
- FLOW: 3034 USGPM @ 43.7 PSI

LEGEND:

- 01 — HYDRAULIC NODE POINT
- 42" L — DISTANCE FROM CENTRE LINE OF PIPE TO UNDERSIDE OF FLOOR SLAB.
- DENOTES NEW CONCEALED PENDENT SPRINKLER (½", 155 DEG.F. QR, K5.6) WITH WHITE PLATE VIKING VK462 MIRAGE.
- DENOTES NEW BRASS UPRIGHT SPRINKLER (½", 155 DEG.F. QR, K5.6) WITH LISTED GUARD VIKING VK300.
- DENOTES NEW BRASS UPRIGHT SPRINKLER (½", 200 DEG.F. QR, K5.6) WITH LISTED GUARD VIKING VK300.
- DENOTES NEW BRASS SIDEWALL SPRINKLER (½", 200 DEG.F. QR, K5.6) VIKING VK305.

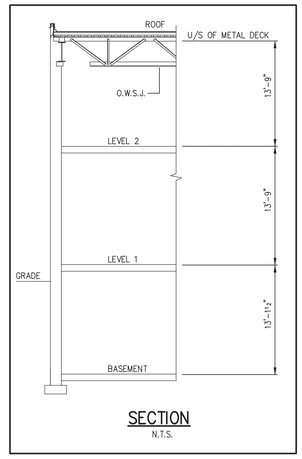


SPRINKLER PLAN – BASEMENT
SCALE: 1 : 100

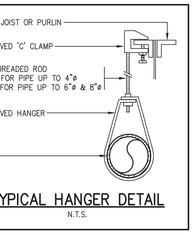
NOTE:

- ALL ARM-OVERS & DROPS ARE TO 1" S-40 BLACK PIPE.
- FLOOR DESIGN TO NFPA 13 LIGHT HAZARD EXCEPT DESIGN FOR ELEC., MECH., COMM. & GARBAGE ROOMS TO NFPA 13 ORDINARY HAZRD GROUP ONE.

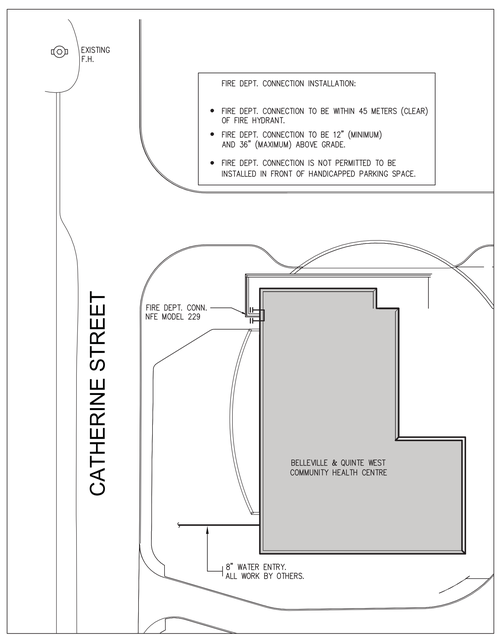
FLOOR SPRINKLER COUNT	
▣	0
○	61
⊘	7
◉	1



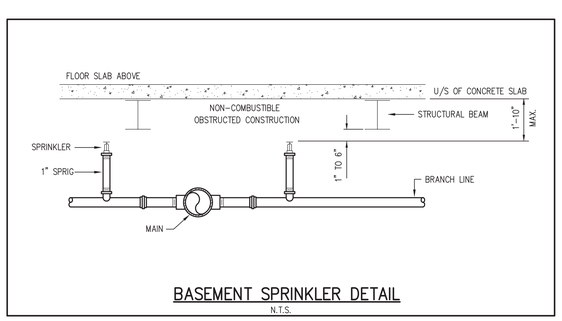
SECTION
N.T.S.



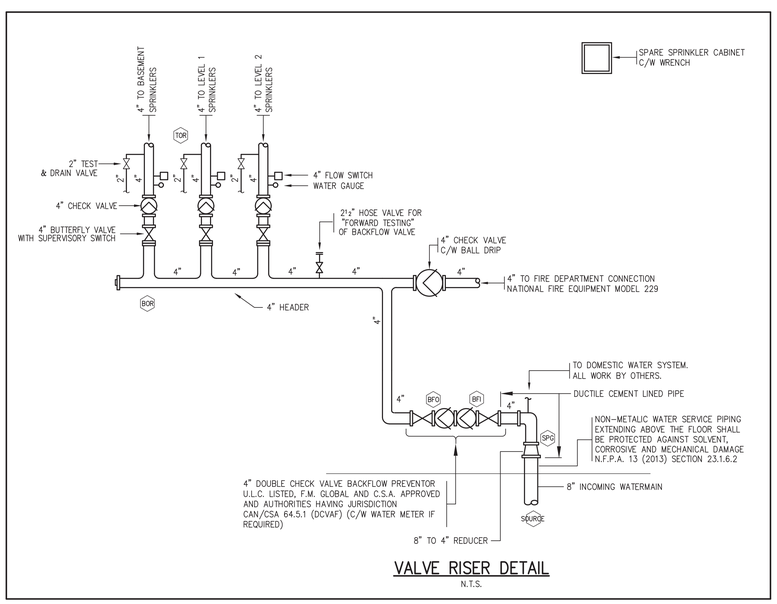
TYPICAL HANGER DETAIL
N.T.S.



SITE PLAN
SCALE: 1 : 200



BASEMENT SPRINKLER DETAIL
N.T.S.



VALVE RISER DETAIL
N.T.S.

No.	Date	Issued/Revision	By
			WSD
0	-- MAY 20	ISSUED FOR REVIEW	WSD

Mitchell Fire Protection Systems

Project :

BELLEVILLE & QUINTE WEST COMMUNITY HEALTH CENTRE

CATHERINE STREET
TRENTON, ON

Drawing Name :

SPRINKLER PLAN

Proj no. :	---	Date :	MAY 2020
Drawn by :	WSD	Property # :	----
Checked by :	PG	Scale:	AS NOTED

Drawing No :

SP-1

NOTES:

- ALL DIMENSIONS ARE CENTRE TO CENTRE
- PAINTING OF PIPE BY OTHERS.
- CUTTING AND PATCHING BY OTHERS.
- DESIGN AND INSTALLATION AS PER NFPA 13 (2013) & OBC (2012).
- ALL MATERIAL TO MEET N.F.P.A. 13 & OBC STANDARDS.
- ALL ELEC. WIRING & FIRE ALARM CONNECTION BY OTHERS.
- UNDERGROUND WATER MAIN IS BY OTERS.
- TO PREVENT FREEZING ALL AREAS WITH WET PIPE ARE TO MAINTAINED ABOVE 4 DEG.C.

PIPE AND FITTINGS:

- SPRINKLER PIPE: ALL PIPE TO BE BLACK S-40.
- SPRINKLER FITTINGS: GROOVED, SCREWED AND FLANGED.

SPRINKLER DESIGN:

LIGHT HAZARD:

- ALL AREAS EXCEPT AS NOTED BELOW TO BE DESIGNED AS PER NFPA 13 LIGHT HAZARD. HYDRAULIC DESIGN BASED ON A DISCHARGE OF 0.10 USGPM/SF OVER 1500 SF PLUS 100 USGPM FOR HOSE AS WELL, A ALLOWANCE OF 45 USGPM (FIVE SPRINKLERS) HAS BEEN INCLUDED FOR FUTURE.

ORDINARY HAZARD GROUP ONE

- ELECTRICAL, MECHANICAL, GARBAGE AND COMMUNICATIONS ROOMS TO BE DESIGNED FOR A MINIMUM DISCHARGE OF 0.15 USGPM/SF.

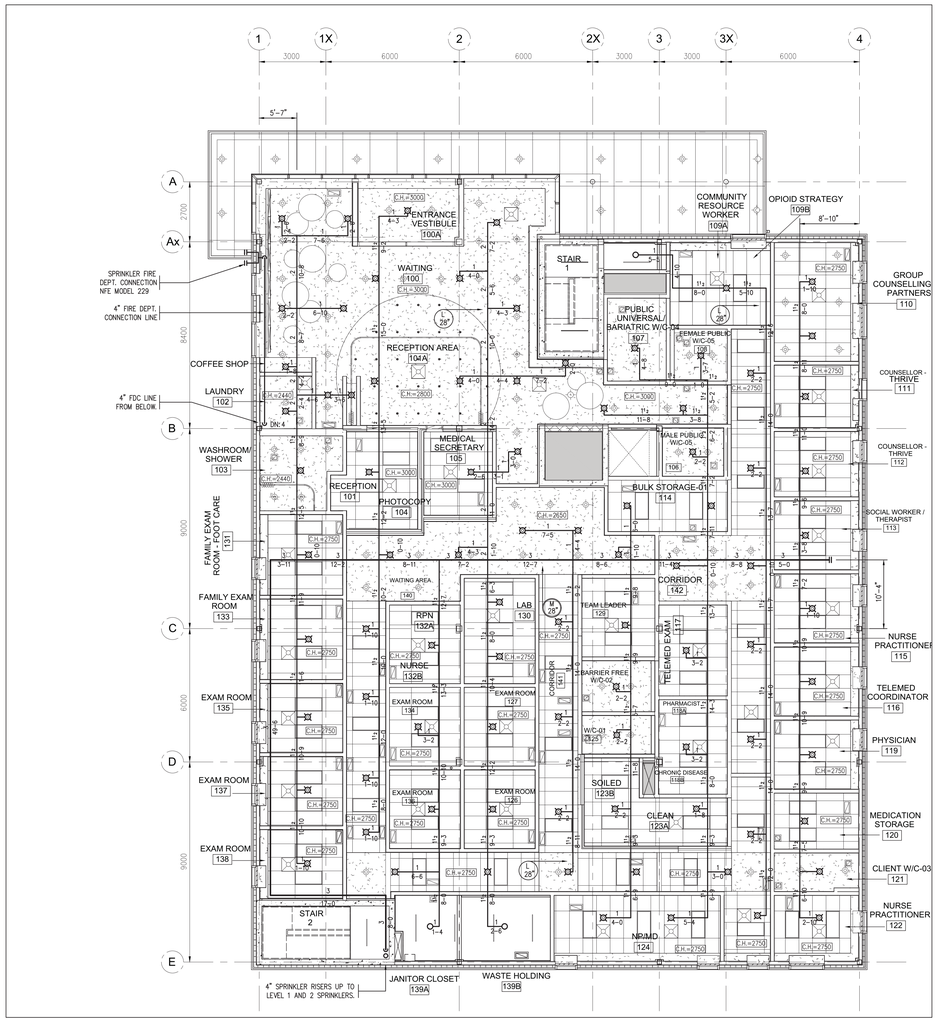
WATER SUPPLY:

FLOW TEST CONDUCTED SEPT. 2018 WITH FIRE HYDRANTS AT CATHERINE STREET. TEST CONDUCTED BY REGION:

- STATIC: 70.5 PSI
- FLOW: 3034 USGPM @ 43.7 PSI

LEGEND:

- (D1) HYDRAULIC NODE POINT
- 42" L — DISTANCE FROM CENTRE LINE OF PIPE TO UNDERSIDE OF FLOOR SLAB.
- DENOTES NEW CONCEALED PENDENT SPRINKLER (½", 155 DEG.F. QR, K5.6) WITH WHITE PLATE VIKING VK462 MIRAGE.
- DENOTES NEW BRASS UPRIGHT SPRINKLER (½", 155 DEG.F. QR, K5.6) WITH LISTED GUARD VIKING VK300.
- DENOTES NEW BRASS UPRIGHT SPRINKLER (½", 200 DEG.F. QR, K5.6) WITH LISTED GUARD VIKING VK300.
- DENOTES NEW BRASS SIDEWALL SPRINKLER (½", 200 DEG.F. QR, K5.6) VIKING VK305.



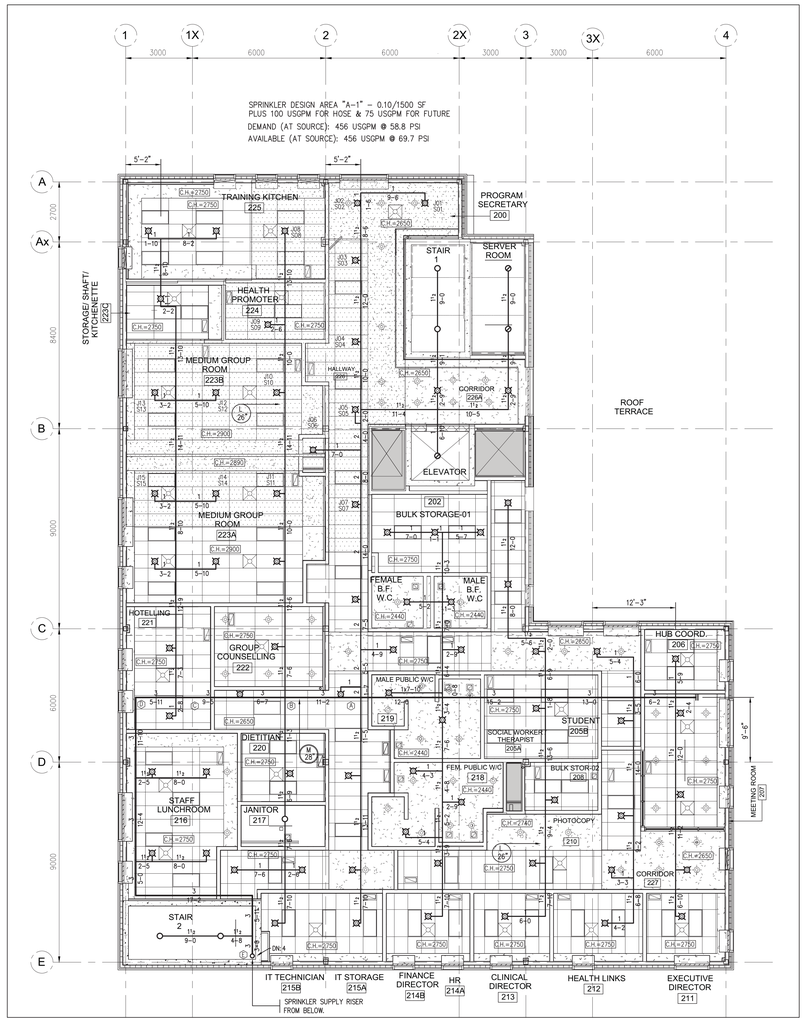
SPRINKLER PLAN – LEVEL 1

SCALE: 1 : 100

NOTE:

- ALL ARM-OVERS & DROPS ARE TO 1" S-40 BLACK PIPE.
- FLOOR DESIGN TO NFPA 13 LIGHT HAZARD.

FLOOR SPRINKLER COUNT	
▣	85
○	3
⊘	0
▶	0



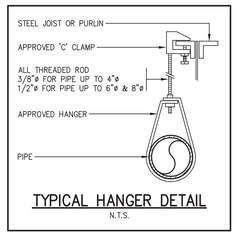
SPRINKLER PLAN – LEVEL 2

SCALE: 1 : 100

NOTE:

- ALL ARM-OVERS & DROPS ARE TO 1" S-40 BLACK PIPE.
- FLOOR DESIGN TO NFPA 13 LIGHT HAZARD.

FLOOR SPRINKLER COUNT	
▣	71
○	5
⊘	3
▶	0



TYPICAL HANGER DETAIL
N.T.S.

LICENSED PROFESSIONAL ENGINEER
OCT 25, 2020
M. M. BASSILY
PROVINCE OF ONTARIO

No.	Date	Issued/Revision	By
			WSD
0	-- MAY 20	ISSUED FOR REVIEW	WSD

Mitchell Fire Protection Systems

Project :

BELLEVILLE & QUINTE WEST COMMUNITY HEALTH CENTRE

CATHERINE STREET
TRENTON, ON

Drawing Name :

SPRINKLER PLAN

Proj no. : ---	Date : MAY 2020
Drawn by : WSD	Property # : ----
Checked by : PG	Scale: AS NOTED

Drawing No :

SP-2

Mitchell
Fire Protection Systems

Belleville and Quinte West Community Health Centre
Catherine Street, Trenton, Ontario.

Sprinkler System Shop Drawings

Double Check Valve Assembly

Viking Mirage VK: 462 Concealed Sprinkler

Viking VK 305 Q.R. Horizontal Sidewall Sprinkler

Viking VK 300 Q.R. Upright Sprinkler

Viking Sprinkler Head Guards

Sigma Grooved End Butterfly Valve

Firelock 717 Check Valves

AGF Model 2500 Test & Drains

Potter VSR Vane Type Flow Switch

National Fire Equipment Model 229 F.D.C.

Strike First ABC Multi-Purpose Dry Chemical Extinguisher

Model No. CE-950-3-FR 9x24x6 Recessed Fire Ext. Cabinet

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

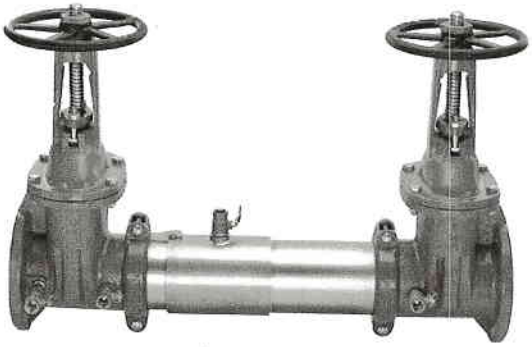
LEAD FREE*

Series 757, 757N

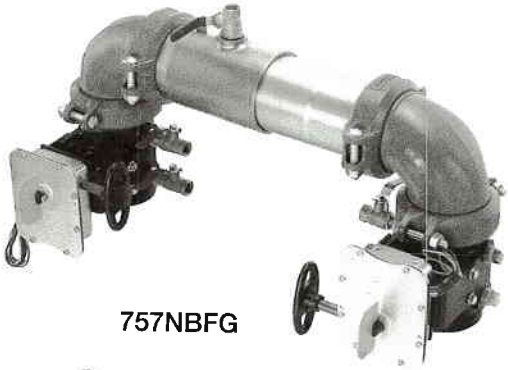
Double Check Valve Assemblies

Sizes: 2½" – 10"

Series 757, 757N Double Check Valve Assemblies are used to prevent backflow of non-health hazard pollutants that are objectionable but not toxic, from entering the potable water supply system. Series 757, 757N may be installed under continuous pressure service and may be subjected to backpressure and backsiphonage. Series 757, 757N consists of two independently operating check valves, two shutoff valves, and four test cocks.



757OSY



757NBFG

757OSY
(Vertical)

Features

- Extremely compact design
- 70% Lighter than traditional designs
- 304 (Schedule 40) Stainless steel housing & sleeve
- Groove fittings allow integral pipeline adjustment
- Patented tri-link check provides lowest pressure loss
- Unmatched ease of serviceability
- Available with grooved butterfly valve shutoffs
- Available for horizontal, vertical or N pattern installations
- Replaceable check disc rubber
- Sizes 2½", 3" and 4" available with quarter-turn ball valve shutoffs

Specifications

The Double Check Valve Assembly shall consist of two independent tri-link check modules within a single housing, sleeve access port, four test cocks and two drip tight shut-off valves. Tri-link checks shall be removable and serviceable, without the use of special tools. The housing shall be constructed of 304 Schedule 40 stainless steel pipe with groove end connections. Tri-link checks shall have reversible elastomer discs and in operation shall produce drip tight closure against reverse flow caused by backpressure or backsiphonage. Assembly shall be a Watts Series 757, 757N.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

***The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.**

WATTS®

Available Models

Suffix:

NRS –	non-rising stem resilient seated gate valves
OSY –	UL/FM outside stem and yoke, resilient seated gate valves
BFG –	UL/FM grooved gear operated butterfly valves with tamper switch
QT –	2½", 3" and 4" quarter-turn ball valves
**OSY FxG –	Flanged inlet gate connection and grooved outlet gate connection
**OSY GxF –	Grooved inlet gate connection and flanged outlet gate connection
**OSY GxG –	Grooved inlet gate connection and grooved outlet gate connection

Available with grooved NRS gate valves - consult factory**
Post indicator plate and operating nut available - consult factory**
**Consult factory for dimensions

Dimensions — Weight

Materials

Housing & Sleeve: 304 (Schedule 40) Stainless Steel
Elastomers: EPDM, Silicone and Buna-N
Tri-link Checks: Noryl®, Stainless Steel
Check Discs: Reversible Silicone or EPDM
Test Cocks: Lead Free* Bronze Body
Pins & Fasteners: 300 Series Stainless Steel
Springs: Stainless Steel

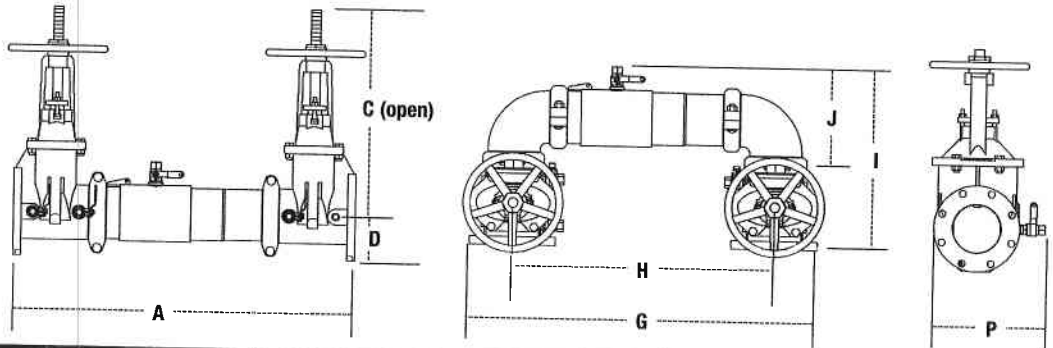
Pressure — Temperature

Temperature Range: 33°F – 140°F (0.5°C – 60°C)
Maximum Working Pressure: 175psi (12.1 bar)

Approvals

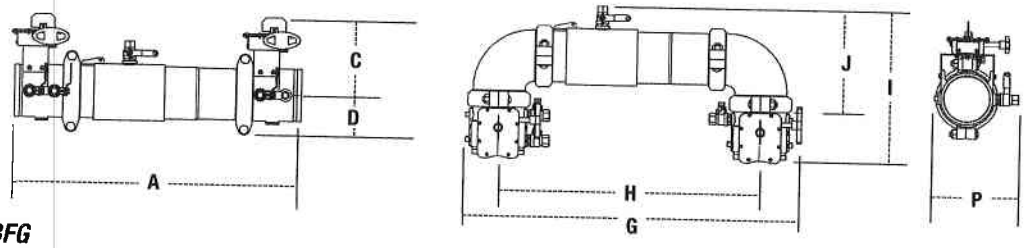
- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at The Unversity of Southern California (FCCCHR-USC)
- AWWA C510-97

1015 B64.5 (**BFG & OSY Only)



757, 757N

SIZE	DIMENSIONS																		WEIGHT					
	A		C (OSY)		C (NRS)		D		G		H		I		J		P		757NRS		757OSY		757N NRS	757N OSY
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.	lbs. kgs.	lbs. kgs.
2½	30¾	781	16⅜	416	9⅜	238	3½	89	29 1/16	738	21½	546	15½	393	8 13/16	223	9 3/16	234	115	52	125	57	123 56	133 60
3	31¾	806	18⅜	479	10¼	260	3 11/16	94	30¼	768	22¼	565	17⅜	435	9 3/16	233	10½	267	131	59	145	66	144 65	158 72
4	33¾	857	22¾	578	12 3/16	310	4	102	33	838	23½	597	18½	470	9 15/16	252	11 3/16	284	161	73	161	73	184 83	184 83
6	43½	1105	30⅛	765	16	406	5½	140	44¾	1137	33½	851	23 3/16	589	13 1/16	332	15	381	273	124	295	134	314 142	336 152
8	49¾	1264	37¾	959	19 15/16	506	6 11/16	170	54⅛	1375	40⅛	1019	27 1/16	697	15 11/16	399	17 3/16	437	438	199	480	218	513 233	555 252
10	57¾	1467	45¾	1162	23 13/16	605	8 3/16	208	66	1676	49½	1257	32½	826	17 5/16	440	20	508	721	327	781	354	891 404	951 431

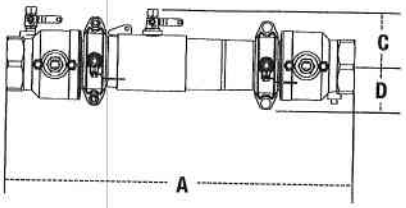


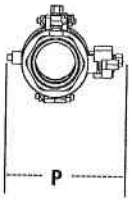
757BFG, 757NBFG

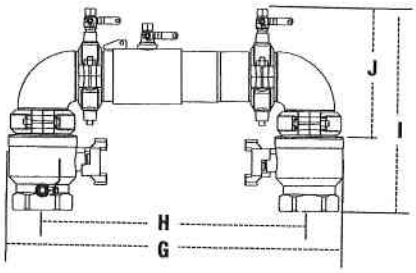
SIZE	DIMENSIONS														WEIGHT		
	A		C		D		G		H		I		J		P		757BFG	757N BFG
in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in. mm	lbs. kgs.
2½	27¾	705	8	203	3½	89	29⅞	759	21½	546	14 15/16	379	8 13/16	223	9	229	56 25	64 29
3	28¼	718	8 5/16	211	3 11/16	94	30 1/16	779	22¼	565	15 7/16	392	9 3/16	233	9½	241	54 24	67 30
4	29	737	8 15/16	227	3 11/16	94	31 15/16	811	23½	597	16¼	412	9 15/16	252	10	254	61 28	84 38
6	36½	927	10	254	5	127	43 3/16	1097	33¼	845	19 11/16	500	13 1/16	332	10½	267	117 53	157 71
8	42¾	1086	12¼	311	6½	165	51 1/16	1297	40⅛	1019	23 5/16	592	15 11/16	399	14 3/16	361	261 118	337 153

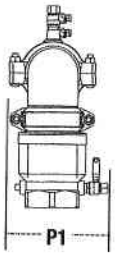
Noryl® is a registered trademark of SABIC Innovative Plastics Holding BV.

Dimensions — Weight continued









757QT

SIZE	DIMENSIONS																		WEIGHT	
	A		C		D		G		H		I		J		P		P1		QT		QTN	
in.	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*	*lbs.*	*kgs.*
2½	27¼	692	4⅞	124	6⅞	175	30¼	768	24½	622	16 1/16	407	11⅜	289	11 5/16	287	11 5/16	287	40	18	50	23
3	28¼	718	4⅞	124	6⅞	175	30¼	768	24½	622	16 9/16	420	11⅜	289	11 5/16	287	11 5/16	287	50	23	60	27
4	31½	800	4⅞	124	6⅞	175	30¼	768	24½	622	18 5/16	465	11⅜	289	11 5/16	287	11 5/16	287	70	32	80	36

Capacity

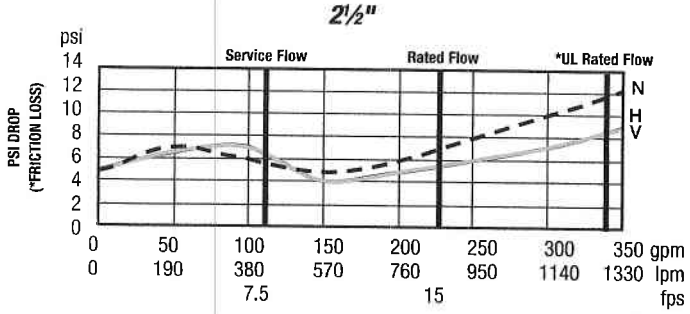
Series 757, 757N flow curves as tested by Underwriters Laboratory. Flow characteristics collected using butterfly shutoff valves

Horizontal Vertical N - Pattern

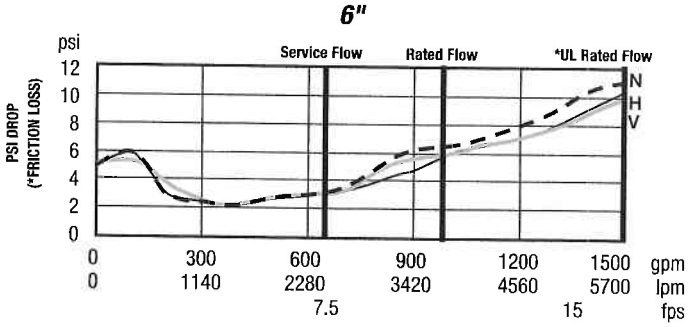
Flow capacity chart identifies valve performance based upon rated water velocity up to 25fps

- Service Flow is typically determined by a rated velocity of 7.5fps based upon schedule 40 pipe.
- Rated Flow identifies maximum continuous duty performance determined by AWWA.
- UL Flow Rate is 150% of Rated Flow and is not recommended for continuous duty.
- AWWA Manual M22 [Appendix C] recommends that the maximum water velocity in services be not more than 10fps.

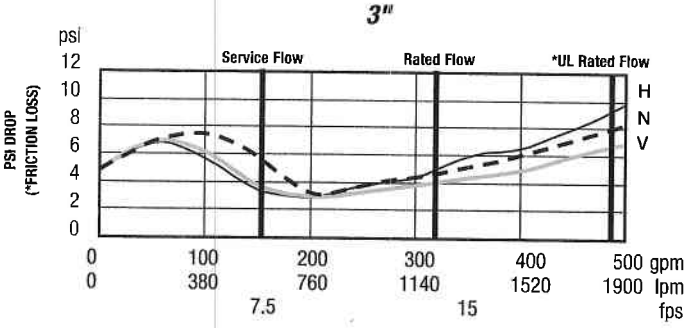
2½"



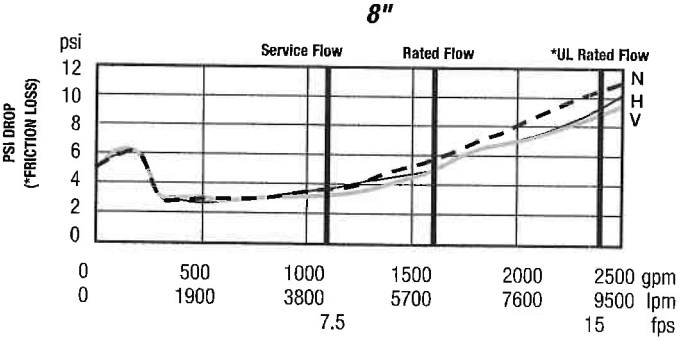
6"



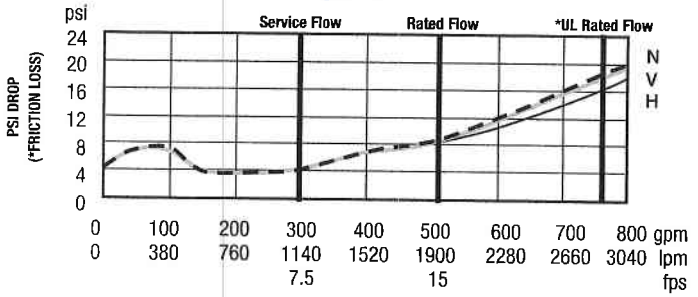
3"



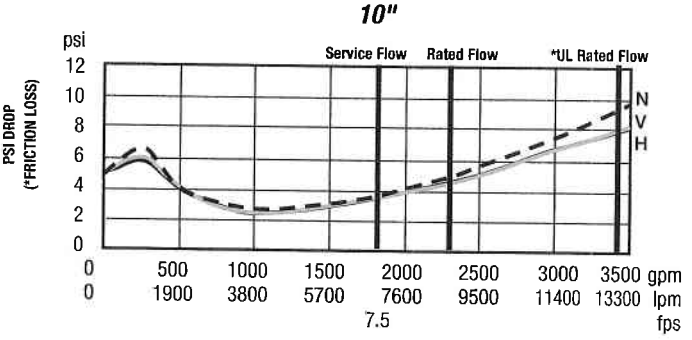
8"



4"



10"



NOTICE

Inquire with governing authorities for local installation requirements

USA: T: (978) 689-6066 • F: (978) 975-8350 • Watts.com
Canada: T: (888) 208-8927 • F: (888) 479-2887 • Watts.ca
Latin America: T: (52) 55-4122-0138 • Watts.com

VIKING®

TECHNICAL DATA

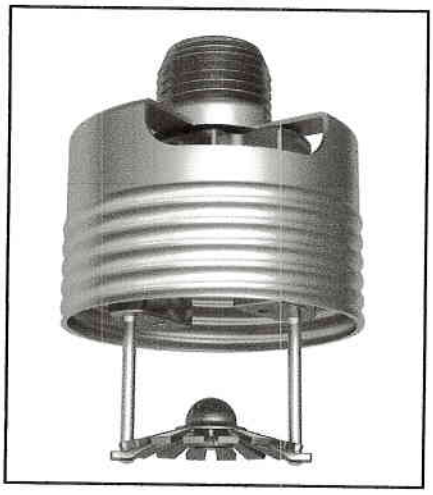
MIRAGE® STANDARD AND QR CONCEALED PENDENT SPRINKLER VK462 AND HP SPRINKLER VK463 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

1. DESCRIPTION

Viking Mirage® Standard and Quick Response Concealed Pendent Sprinkler VK462 and HP Sprinkler VK463 are thermosensitive glass-bulb spray sprinklers designed for installation on concealed pipe systems where the appearance of a smooth ceiling is desired.

The sprinkler is pre-assembled with a threaded adapter for installation with a low-profile cover assembly that provides up to ½" (12.7 mm) of vertical adjustment. The two-piece design allows installation and testing of the sprinkler prior to installation of the cover plate. The "push-on", "thread-off" design of the concealed cover plate assembly allows easy installation of the cover plate after the system has been tested and the ceiling finish has been applied. The cover assembly can be removed and reinstalled, allowing temporary removal of ceiling panels without taking the sprinkler system out of service or removing the sprinkler. The Electroless Nickel PTFE (ENT) coating has been investigated for installation in corrosive environments and is listed and approved as indicated in the Approval Charts. The ENT finish is only available for the sprinkler assembly, the cover plate is not plated.



WARNING: Cancer and Reproductive Harm- www.P65Warnings.ca.gov

2. LISTINGS AND APPROVALS

cULus Listed: Category VNIV

FM Approval: Class 2015

NYC Approved: MEA 89-92-E, Volume 32

VdS Approved: Certificate G4080021

LPCB Approved: Ref. No. 096e/12

CE Certified: Standard EN 12259-1, EC-certificate of conformity 0832-CPD-2032

China Approval: Approved according to China GB Standard

Refer to the Approval Charts and Design Criteria listing and approval requirements that must be followed.

3. TECHNICAL DATA

Specifications:

Available since 2006.

Minimum Operating Pressure: 7 psi (0.5 bar)*

Maximum Working Pressure: Sprinkler VK463 is rated for use with water working pressures ranging from the minimum 7 psi (0.5 bar) up to 250 psi (17.2 bar) for high-pressure systems. High-pressure (HP) sprinklers can be identified by locating "250" stamped on the deflector. Sprinkler VK462 is rated to a maximum 175 psi (12 bar) wwp.

Factory tested hydrostatically to 500 psi (34.5 bar)

Thread size: 1/2" (15 mm) NPT

Nominal K-Factor: 5.6 U.S. (80.6 metric**)

Glass-bulb fluid temperature rated to -65°F (-55°C)

Patents Pending

* cULus Listing, FM Approval, and NFPA 13 installs require a minimum of 7 psi (0.5 bar). The minimum operating pressure for LPCB and CE Approvals ONLY is 5 psi (0.35 bar).

**Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

Material Standards:

Sprinkler Body: Brass UNS-C84400

Deflector: Copper UNS-C19500 for Sprinkler; Phosphor Bronze UNS-C51000 for Sprinkler VK463

Deflector Pins: Stainless Steel Alloy

Bulb: Glass, nominal 3 mm diameter

Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400

Button: Brass UNS-C36000

Screws: 18-8 Stainless Steel

Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with Teflon Tape

Yoke: Phosphor Bronze UNS-C51000

Cover Adapter: Cold Rolled Steel UNS-G10080, Finish: Clear Chromate over Zinc Plating

Cover Assembly Materials:

Cover: Copper UNS-C11000 or Stainless Steel UNS-S30400

Base: Brass UNS-C26000 or UNS-C26800

Springs: Nickel Alloy

Solder: Eutectic

Ordering Information: The sprinkler and cover plate must be ordered separately. Refer to Tables 1 and 2.

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
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4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

5. OPERATION

During fire conditions, when the temperature around the sprinkler approaches its operating temperature, the cover plate detaches. Continued heating of the exposed sprinkler causes the heat-sensitive liquid in the glass bulb to expand and the bulb to shatter, releasing the yoke, pip-cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

Viking Sprinklers VK462 and VK463 are available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

TABLE 1: SPRINKLER ORDERING INFORMATION

Instructions: Using the sprinkler base part number,
(1) add the suffix for the desired Finish
(2) add the suffix for the desired Temperature Rating.
(3) Select a cover plate (See Table 2)

SIN	Sprinkler Base Part Number[8]	Size		1: Finishes		2: Temperature Ratings				
		NPT Inch	BSPT mm	Description	Suffix[1]	Sprinkler Temperature Classification	Nominal Rating	Bulb Color	Max. Ambient Ceiling Temperature[2]	Suffix
VK462	13503	1/2	--	Brass	A	Oridinary	155 °F (68 °C)	Red	100 °F (38 °C)	B
VK462	21356[7,9]	--	15	ENT [3,4]	JN	Intermediate	175 °F (79 °C)	Yellow	150 °F (65 °C)	D
VK463	13667	1/2	--			Intermediate	200 °F (93 °C)	Green	150 °F (65 °C)	E

Example:13503AE =
200 °F (93 °C) Temperature Rated Sprinkler with a standard Brass finish.

Accessories

Sprinkler Wrenches and tools (see Figure 1):

A. Heavy Duty Part Number: 14047W/B[5] (available since 2006)
B. Head Cabinet Wrench Part Number: 14031[6] (available since 2006)
C. Optional Concealed Cover Plate Installer Tool Part Number: 14412 (available since 2007)
D. Optional Large Concealed Cover Plate Installer Tool Part No. 14867 (available since 2007)

Sprinkler Cabinet:

Holds up to 6 sprinklers: Part number 01731A (available since 1971).

Footnotes

1. Where a dash (-) is shown in the Finish suffix designation, insert the desired Temperature Rating suffix. See example above.
2. Based on NFPA 13, NFPA 13R, and NFPA 13D. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.
3. UL Listed as corrosion resistant.
4. The corrosion resistant coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Chart. These tests cannot and do not represent all possible corrosive environments. Prior to installation, verify through the end-user that the coatings are compatible with or suitable for the proposed environment. For automatic sprinklers, the ENT coating is applied to all exposed exterior surfaces, including the waterway.
5. Requires a ½" ratchet (not available from Viking).
6. Also optional for removal of the protective cap. Ideal for sprinkler cabinets.
7. Not available with ENT finish. See approval charts for more information.
8. See approval charts for more information.
9. Approved according to China GB Standard.

VIKING®

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TABLE 2: COVER PLATE ORDERING INFORMATION

Instructions: Using the cover plate base part number,
(1) add the suffix for the desired Finish
(2) add the suffix for the required Cover Plate Nominal Rating.

Cover Plate Base Part Number[3]	Size Inch (mm)	Style	1: Finishes		Temperature Rating Matrix[1,2]			
			Description	Suffix[5]	Cover Plate Nominal Rating (Required)	Sprinkler Nominal Rating / Temperature Classification	Sprinkler Max. Ambient Ceiling Temperature[2]	Suffix
23190	2-3/4 (70)	Round	Polished Chrome	F	135 °F (57 °C) UL	155 °F (68 °C) / ORD	100 °F (38 °C)	A
23174	3-5/16 (84)	Round	Brushed Chrome	F-/B	139 °F (59 °C) FM			
23179	3-5/16 (84)	Square	Bright Brass	B	165 °F (74 °C)	175 °F (79 °C) / INT	150 °F (65 °C)	C
23193[4]	2-3/4 (70)	SST	Antique Brass	B-/A	165 °F (74 °C)	200 °F (93 °C) / INT	150 °F (65 °C)	C
23183[4]	3-5/16 (84)	SST	Brushed Brass	B-/B				
			Brushed Copper	E-/B				
			Painted White	M-/W				
			Painted Ivory	M-/I				
			Painted Black	M-/B				

Example: 23190MC/W =
165 °F (74 °C) Temperature Rated 2-3/4" (70 mm) Diameter Round Cover Plate with a Painted White finish.

Footnotes

1. The sprinkler temperature rating is stamped on the deflector.
2. Based on NFPA-13, NFPA 13R, and NFPA 13D. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.
3. Part number shown is the base part number. For complete part number, refer to current Viking price list schedule.
4. Stainless Steel versions are not available with any finishes or paint.
5. Where a dash (-) is shown in the Finish suffix designation, insert the desired Temperature Rating suffix. See example above.

All custom color painted cover plates will have an identifying label affixed to the inside of the cover that indicates the custom color and will have a representative sample (a paint dot) of the paint on the label.

Figure 1: Identification of Custom Paint for Concealed Covers

Figure 2: Square Cover Assembly

VIKING®

TECHNICAL DATA

MIRAGE® STANDARD AND QR CONCEALED PENDENT SPRINKLER VK462 AND HP SPRINKLER VK463 (K5.6)

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Approval Chart 1 (UL)

Mirage® Concealed Pendent Sprinklers VK462 and VK463

AW1 ← Sprinkler Temperature Rating / Cover Plate Temperature Rating / Cover Plate Finish KEY

Sprinkler Base Part No.[1]	SIN	Thread Size		Nominal K-factor		Maximum Water Working Pressure	Listings and Approvals[4] (Refer also to Design Criteria)					
		NPT Inch	BSPT mm	U.S.	metric[2]		cULus[5]	NYC	VdS[7]	LPCB	CE	China Approval
Standard Response Applications												
13503A	VK462	1/2"	--	5.6	80.6	175 psi (12 bar)	--	--	AY1, CZ1	AY1, BZ1	AY1, CZ1[8]	--
21356A[12]	VK462	--	15	5.6	80.6	175 psi (12 bar)	--	--	--	--	--	AY1, CZ1
Quick Response Applications												
13503A	VK462	1/2"	15	5.6	80.6	175 psi (12 bar)	AV1, BX1, AS2, BT2	AV1, BX1[6]	--	--	--	--
13503JN[11]	VK462	1/2"	15	5.6	80.6	175 psi (12 bar)	AV1, BX1, AS2, BT2	AV1, BX1[6]	--	--	--	--
21356A[12]	VK462	--	15	5.6	80.6	175 psi (12 bar)	AY1, CZ1	--	--	--	--	--
13667A	VK463	1/2"	15	5.6	80.6	250 psi (17.2 bar)[3]	AV1, BX1	AV1, BX1[6]	--	--	--	--
13667JN[11]	VK463	1/2"	15	5.6	80.6	250 psi (17.2 bar)[3]	AV1, BX1	AV1, BX1[6]	--	--	--	--

Approved Sprinkler Temperature Rating Codes	Approved Cover Plate Temperature Rating Codes	Approved Cover Plate Finish Codes
A = 155 °F (68 °C) B = 175 °F (79 °C) C = 200 °F (93 °C)	S - 135 °F (57 °C) cover 23193 or 23183 (large diameter) T - 165 °F (74 °C) cover 23193 or 23183 (large diameter) V - 135 °F (57 °C) cULus Listed cover 23190, 23174 (large diameter), or 23179 (square cover plate) X - 165 °F (74 °C) cover 23190, or 23174 (large diameter) Y - 135 °F (57 °C) cover 23190 *LPCB Approved as 139 °F (59 °C)* Z - 165 °F (74 °C) cover 23190	1 - Polished Chrome, Brushed Chrome, Bright Brass, Antique Brass, Brushed Brass, Brushed Copper, Painted White, Painted Ivory, or Painted Black 2 - Stainless Steel

Footnotes

1. Part number shown is the base part number. For complete part number, refer to current Viking price list schedule.
2. Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.
3. The Water Working Pressure rating is stamped on the deflector.
4. This chart shows the listings and approvals available at the time of printing. Other approvals may be in process. Check with the manufacturer for any additional approvals.
5. Listed by Underwriter's Laboratories for use in the U.S. and Canada.
6. Accepted for use, City of New York Department of Buildings, MEA Number 89-92-E, Vol. 32.
7. VdS Approved, standards VdS 2344:2005-12, VdS 2100-25:2008-01, and EN 12259-1:1999 + A1:2001 + A2:2004 + A3:2006, Certificate G4080021.
8. CE Certified, Standard EN 12259-1, EC-certificate of conformity 0832-CPD-2032.
9. The 135/139 °F cover has an orange label. The 165 °F (74 °C) cover has a white label.
10. Painted finish consists of Polyester Baked Enamel. Other paint colors are available on request with the same listings as the standard paint colors. Listings and approvals apply for any paint manufacturer. Contact Viking for additional information.
11. cULus Listed as corrosion resistant.
12. Approved according to China GB Standard.

NOTE: Custom colors are indicated on a label inside the cover assembly. Refer to Figure 1.

VIKING®

TECHNICAL DATA

MIRAGE® STANDARD AND QR CONCEALED PENDENT SPRINKLER VK462 AND HP SPRINKLER VK463 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1)

cULus Listing Requirements:

Mirage® Concealed Pendent Sprinklers VK462 and VK463 are cULus Listed as quick response for installation in accordance with the latest edition of NFPA 13 for standard coverage pendent spray sprinklers as indicated below.

- For hazard occupancies up to and including Ordinary Hazard, Group II.
- Protection areas and maximum spacing shall be in accordance with the tables provided in NFPA 13. Maximum spacing allowed is 15 ft. (4.6 m).
- Minimum spacing allowed is 6 ft. (1.8 m) unless baffles are installed in accordance with NFPA 13.
- Minimum distance from walls is 4 in. (102 mm).
- Maximum distance from walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler obstruction rules contained in NFPA 13 for standard coverage pendent spray sprinklers must be followed.

NOTE: Concealed sprinklers must be installed in neutral or negative pressure plenums only.

VdS Approval Requirements:

a) The sprinkler can be installed in a concrete ceiling (massive ceiling) or in a false ceiling made of light materials.

b) This sprinkler is deflector fixed type and can be only activated by heat. The housing is not tight.

c) Follow installation guidelines of current standards, CEA4001VdS and EN12845. These sprinklers can only be installed in LH and OH occupancies, except in OH4.

NOTES: Due to the design the sprinkler type 'Domed-CCP' shall not be installed in false ceilings in which the false ceiling space is protected by a water extinguishing system.

Due to the design the sprinkler type 'Domed-CCP' shall not be installed in false ceilings in which during a fire the pressure above the false ceiling may be assumed to be higher than the pressure below the false ceiling.

The criterion for the dropping of the cover relevant for this approval is heat.

Steps of installation:

1. Prepare the sprinkler key.
2. Remove the plastic cover.
3. Hold the sprinkler with the wrench and fasten it.
4. Replace the plastic cover and do not remove until the cover is installed.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

VIKING®

TECHNICAL DATA

MIRAGE® STANDARD AND QR CONCEALED PENDENT SPRINKLER VK462 AND HP SPRINKLER VK463 (K5.6)

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Approval Chart 2 (FM)

Mirage® Standard Response Concealed Pendent Sprinkler VK462

AW1 ← Sprinkler Temperature Rating / Cover Plate Temperature Rating / Cover Plate Finish — KEY

Sprinkler Base Part No.[1]	SIN	Thread Size		Nominal K-Factor		Maximum Water Working Pressure	FM Approvals[3] (Refer also to Design Criteria below.)
		NPT Inch	BSPT mm	U.S.	metric[2]		
13503A	VK462	1/2"	15	5.6	80.6	175 psi (12 bar)	AW1, BX1, AY2, BZ2
21356A[6]	VK462	--	15	5.6	80.6	175 psi (12 bar)	AU1, CV1

Approved Sprinkler Temperature Rating Codes	Approved Cover Plate Temperature Rating Codes	Approved Cover Plate Finish Codes
A - 155 °F (68 °C) B - 175 °F (79 °C) and 200 °F (93 °C) C - 200 °F (93 °C)	U - 139 °F (59 °C) cover 23190 V - 165 °F (74 °C) cover 23190 W - 139 °F (59 °C) cover 23190, 23174 (large diameter), or 23179 (square cover plate) X - 165 °F (74 °C) cover 23190, 23174 (large diameter), or 23179 (square cover plate) Y - 139 °F (59 °C) cover, 23183 or 23193 Z - 165 °F (74 °C) cover 23183 or 23193	1 - Polished Chrome, Brushed Chrome, Bright Brass, Antique Brass, Brushed Brass, Brushed Copper, Painted White, Painted Ivory, or Painted Black 2 - Stainless Steel

Footnotes

1. Part number shown is the base part number. For complete part number, refer to current Viking price list schedule.
2. Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.
3. This chart shows the FM Approvals available at the time of printing. Other approvals may be in process. Check with the manufacturer for any additional approvals.
4. The 139 °F (59 °C) cover has an orange label. The 165 °F (74 °C) cover has a white label.
5. Painted finish consists of Polyester Baked Enamel. Other paint colors are available on request with the same listings as the standard paint colors. Listings and approvals apply for any paint manufacturer. Contact Viking for additional information.
6. Approved according to China GB Standard.

NOTE: Custom colors are indicated on a label inside the cover assembly. Refer to Figure 1.

DESIGN CRITERIA - FM

(Also refer to Approval Chart 2 above.)

FM Approval Requirements:

Viking Concealed Pendent Sprinkler VK462 is FM Approved as a standard response **Non-Storage** concealed pendent sprinkler as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including Data Sheet 2-0). FM Global Loss Prevention Data Sheets contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

VIKING®

TECHNICAL DATA

MIRAGE® STANDARD AND QR CONCEALED PENDENT SPRINKLER VK462 AND HP SPRINKLER VK463 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
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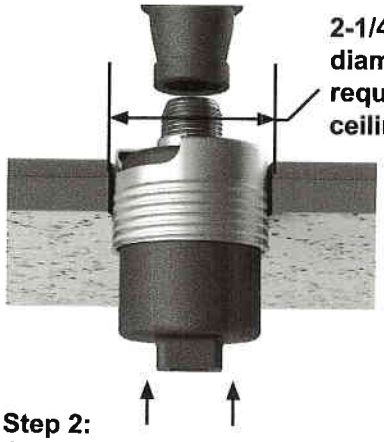
Sprinkler and Adapter Assembly
- Protective cap removed
- Use wrench 14047W/B**

Step 1:
Carefully slide the wrench sideways around the deflector and pins



Step 2:
Carefully press the wrench upward and turn slightly to ensure engagement with the sprinkler wrench flats.

NEVER install the sprinkler by applying the installation wrench across the frame arms. DO NOT overtighten. Use only the designated sprinkler wrenches, Viking Part Numbers 14047W/B or 14031**. A leak tight seal should be achieved by turning the sprinkler clockwise 1 to 1-1/2 turns beyond finger tight.**

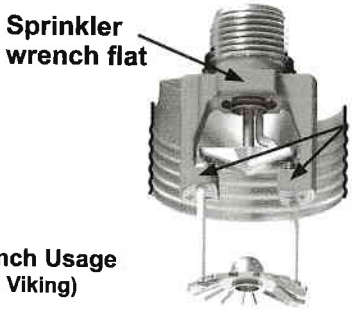
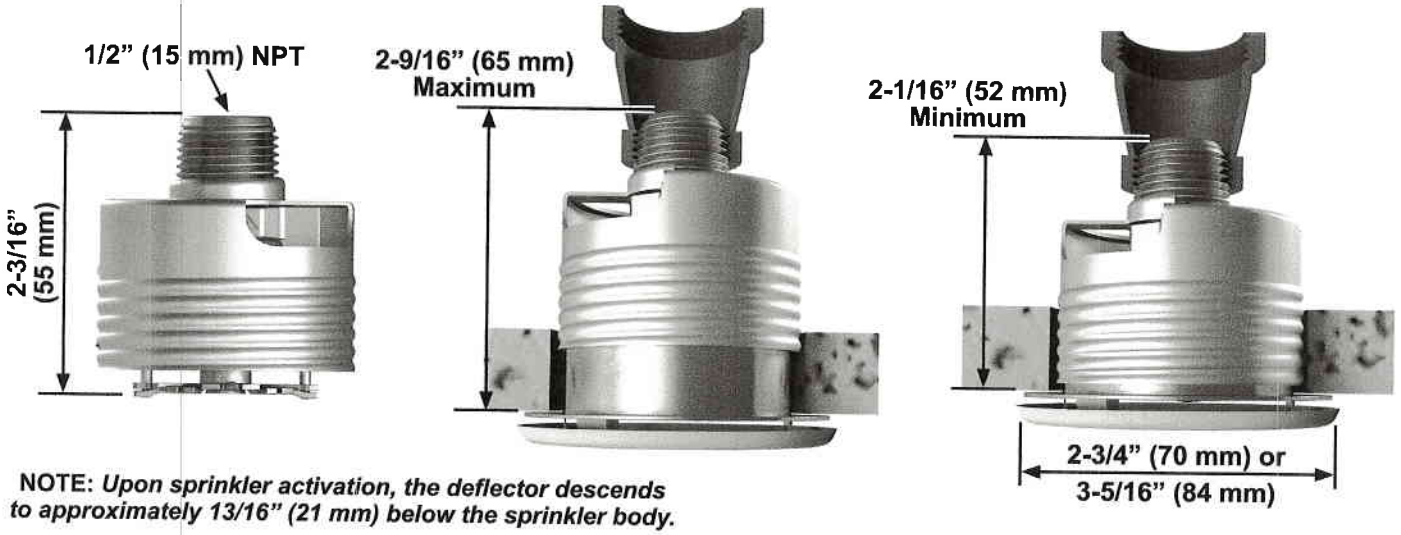


Figure 3: Sprinkler Installation and Proper Wrench Usage
** A 1/2" ratchet is required (Not available from Viking)



NOTE: *Upon sprinkler activation, the deflector descends to approximately 13/16" (21 mm) below the sprinkler body.*

Figure 4: Sprinkler Dimensions and Cover Installation

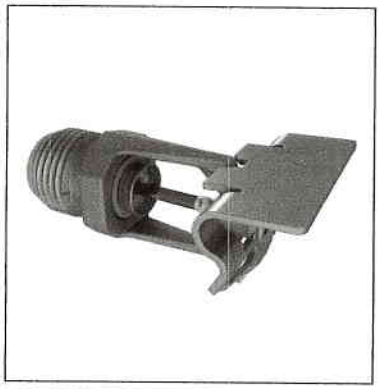
VIKING TECHNICAL DATA

MICROFAST® QUICK RESPONSE HORIZONTAL SIDEWALL SPRINKLER VK305 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

1. DESCRIPTION

The Viking Microfast® Quick Response Horizontal Sidewall Sprinkler VK305 is a small thermosensitive glass bulb spray sprinkler available with various finishes and temperature ratings to meet design requirements. The special Polyester and Electroless Nickel PTFE (ENT) coatings can be used in decorative applications where colors are desired. In addition, these coatings have been investigated for installation in corrosive atmospheres and are listed/approved as corrosion resistant as indicated in Approval Charts.



WARNING: Cancer and Reproductive Harm- www.P65Warnings.ca.gov

2. LISTINGS AND APPROVALS

cULus Listed: Category VNIV

FM Approved: Class 2020

CCCF Approved: Approved by the China Certification Center for Fire Products (CCCF)

Refer to Approval Charts and Design Criteria for listing and approval requirements that must be followed.

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)
Rated to 175 psi (12 bar) water working pressure
Factory tested hydrostatically to 500 psi (34.5 bar)
Nominal K-Factor: 5.6 U.S. (80.6 metric*)

* Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

Overall Length: 2-3/4" (68 mm)

Material Standards:

Frame Casting: Brass UNS-C84400 or QM Brass
Deflector: Copper UNS-C19500
Bulb: Glass, nominal 3 mm diameter
Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape
Screw: Brass UNS-C36000
Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400
For Polyester Coated Sprinklers: Belleville Spring-Exposed
For ENT Coated Sprinklers: Belleville Spring - Exposed, Screw and Pip cap - ENT plated.

Ordering Information: (Also refer to the current Viking price list.)

Order Viking Microfast® Quick Response Horizontal Sidewall Sprinkler VK305 by first adding the appropriate suffix for the sprinkler finish and then the appropriate suffix for the temperature rating to the sprinkler base part number.
Finish Suffix: Brass = A, Chrome = F, White Polyester = M-/W, Black Polyester = M-/B, and ENT = JN
Temperature Suffix: 135 °F / 57 °C = A, 155 °F / 68 °C = B, 175 °F / 79 °C = D, 200 °F / 93 °C = E, and 286 °F / 141 °C = G
For example, sprinkler 12997 with a Brass finish and a 155 °F / 68 °C temperature rating = Part No. 12997AB

Available Finishes And Temperature Ratings: Refer to Table 1.

Accessories: (Also refer to the Viking website.)

Sprinkler Wrenches:

A. Standard Wrench: Part No. 21475M/B (available since 2017).
B. Wrench for recessed and/or wax coated sprinklers: Part No. 13655W/B** (available since 2006)
**A ½" ratchet is required (not available from Viking).

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
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Sprinkler Cabinets:

A. Six-head capacity: Part No. 01724A (available since 1971)
B. Twelve-head capacity: Part No. 01725A (available since 1971)

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

5. OPERATION

During fire conditions, the heat-sensitive fusible link disengages, the pip cap and spring are released, and the waterway is opened. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

Viking Microfast® Quick Response Horizontal Sidewall Sprinkler VK305 is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

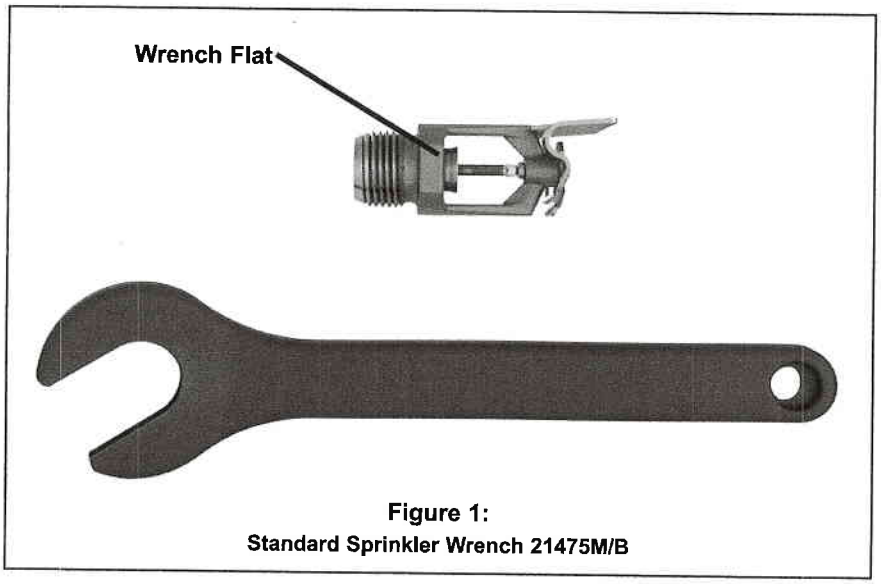

Figure 1:
Standard Sprinkler Wrench 21475M/B

VIKING	TECHNICAL DATA	MICROFAST® QUICK RESPONSE HORIZONTAL SIDEWALL SPRINKLER VK305 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
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TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES

Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating[1]	Maximum Ambient Ceiling Temperature[2]	Bulb Color
Ordinary	135 °F (57 °C)	100 °F (38 °C)	Orange
Ordinary	155 °F (68 °C)	100 °F (38 °C)	Red
Intermediate	175 °F (79 °C)	150 °F (65 °C)	Yellow
Intermediate	200 °F (93 °C)	150 °F (65 °C)	Green
High	286 °F (141 °C)	225 °F (107 °C)	Blue

Sprinkler Finishes: Brass, Chrome, White Polyester, Black Polyester, and ENT
Corrosion-Resistant Coatings[3]: White Polyester, Black Polyester, and ENT

Footnotes

[1] The sprinkler temperature rating is stamped on the deflector.

[2] Based on NFPA-13. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.

[3] The corrosion-resistant coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Charts. These tests cannot and do not represent all possible corrosive environments. Prior to installation, verify through the end-user that the coatings are compatible with or suitable for the proposed environment. For automatic sprinklers, the coatings indicated are applied to the exposed exterior surfaces only. For ENT coated sprinklers, the waterway is coated. Note that the spring is exposed on sprinklers with Polyester, and ENT coatings.

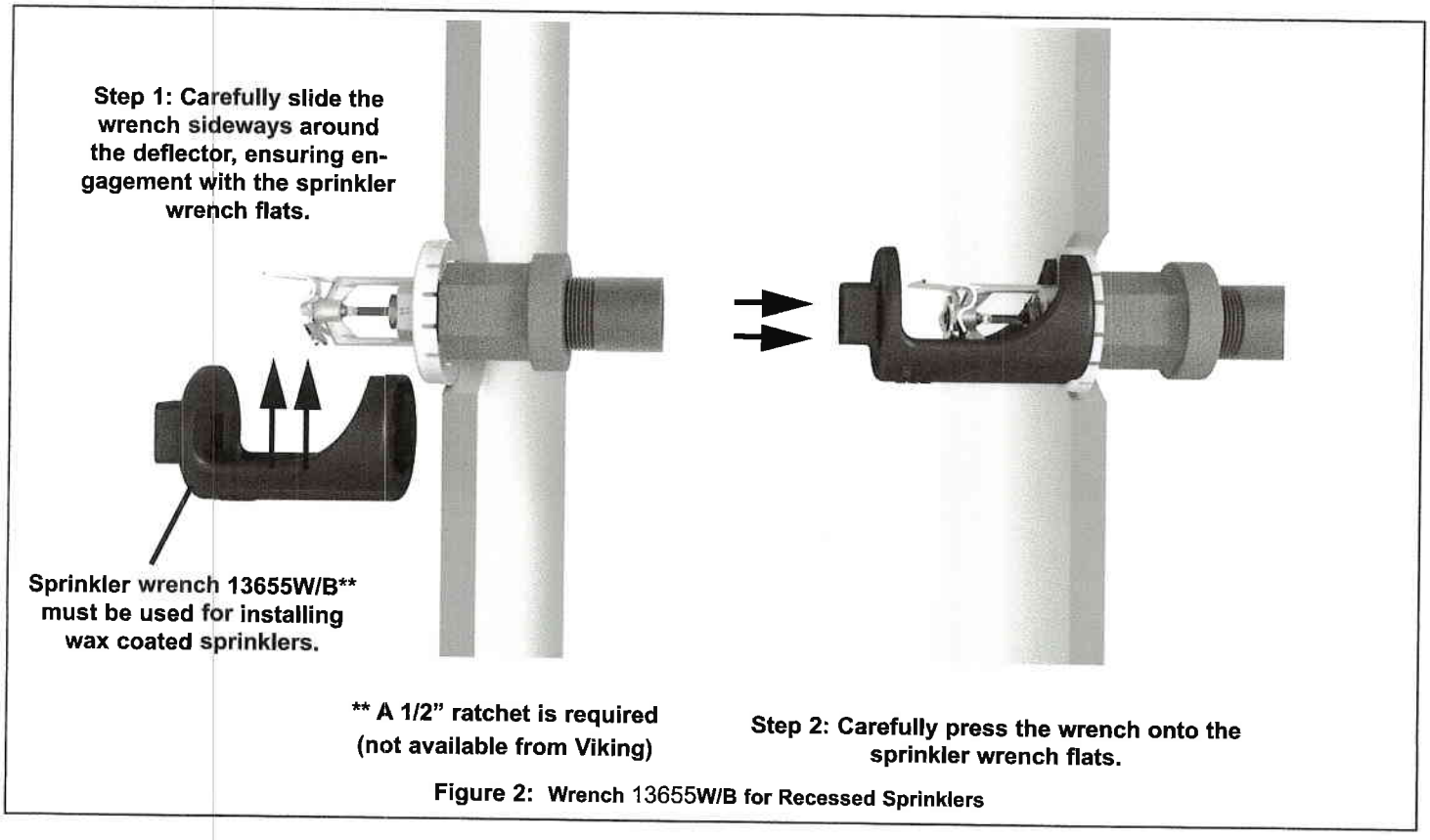

Figure 2: Wrench 13655W/B for Recessed Sprinklers

VIKING

TECHNICAL DATA

MICROFAST® QUICK RESPONSE HORIZONTAL SIDEWALL SPRINKLER VK305 (K5.6)

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Approval Chart 1 (UL)

Microfast® Quick Response Horizontal Sidewall Sprinkler VK305
For Light or Ordinary Hazard Occupancies
Maximum 175 PSI (12 Bar) WWP
Deflector must be located 4" to 12" (102 mm to 305 mm) below the ceiling.

KEY: A1X ← Temperature, Finish, Escutcheon (if applicable)

Base Part Number[1]	SIN	Sprinkler Style	Thread Size		Nominal K-Factor		Overall Length		Listings and Approvals[3] (Refer also to Design Criteria on page 43x.)			
			NPT	BSP	U.S.	metric[2]	Inches	mm	cULus[4]	LPCB	CE	
12997	VK305	HSW	1/2"	15 mm	5.6	80.6	2-11/16	68	A1W, B1X, C2W, D2Z	--	--	--
19782	VK305	HSW	1/2"	--	5.6	80.6	2-11/16	68	--	--	--	E3
NOTICE - Product Below - Limited Availability (Contact Local Viking Office)												
12121	VK305	HSW	1/2"	15 mm	5.6	80.6	1-11/16	68	A1W, B1X, C2W, D2Z	--	--	--

Approved Temperature Ratings

A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C)
B - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)
C - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C)
D - 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)
E - 155 °F (68 °C)

Approved Finishes

1 - Brass, Chrome, White Poly-ester[5,6], and Black Polyester[5,6]
2 - ENT[5]
3 - Chrome

Approved Escutcheons

W - Installed with standard surface-mounted escutcheons
X - Installed with standard surface-mounted escutcheons **or** recessed with the Viking Micromatic® Model E-1, E-2, or G-1 Recessed Escutcheon
Z - Installed with standard surface-mounted escutcheons or recessed with the Viking Micromatic Model E-1

Footnotes

[1] Base part number shown. For complete part number, refer to Viking's current price schedule.
[2] Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.
[3] This table shows the listings and approvals available at the time of printing. Other approvals may be in process.
[4] Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada.
[5] cULus Listed as corrosion-resistant.
[6] Other colors are available on request with the same Listings and Approvals as the standard colors.

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1.)

cULus Listing Requirements:

Quick Response Horizontal Sprinkler VK305 is cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for sidewall standard spray sprinklers.

- Designed for use in Light and Ordinary Hazard occupancies.
- Locate with the deflector 4" to 12" (102 mm to 305 mm) below the ceiling.
- Protection areas and maximum spacing shall be in accordance with the tables provided in NFPA 13.
- Minimum spacing allowed is 6 ft. (1.8 m).
- Align the top of the deflector parallel with the ceiling.
- Locate no less than 4" (102 mm) from end walls.
- Maximum distance from end walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler installation and obstruction rules contained in NFPA 13 for sidewall standard spray sprinklers must be followed.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Bulletin Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

VIKING

TECHNICAL DATA

MICROFAST® QUICK RESPONSE HORIZONTAL SIDEWALL SPRINKLER VK305 (K5.6)

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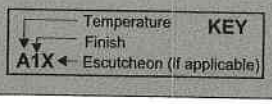
Approval Chart 2 (FM)

Quick Response Sidewall Sprinklers
Maximum 175 PSI WWP



Base Part Number[1]	SIN	Thread Size		Nominal K-Factor		Overall Length		FM Approvals[3,4] (Refer also to Design Criteria below.)
		NPT	BSP	U.S.	metric[2]	Inches	mm	
12997	VK305	1/2"	15 mm	5.6	80.6	2-11/16	68	A1Y, B1X
NOTICE - Product Below - Limited Availability (Contact Local Viking Office)								
12121	VK305	1/2"	15 mm	5.6	80.6	2-11/16	68	A1Y, B1X

Approved Temperature Ratings

A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C)
B - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)

Approved Finishes

1 - Brass

Approved Escutcheons

X - Installed with standard surface-mounted escutcheons **or** recessed with the Viking Micromatic® Model E-1, E-2, E-3, or G-1 Recessed Escutcheon
Y - Installed with standard surface-mounted escutcheons

Footnotes

[1] Base part number shown. For complete part number, refer to Viking's current price schedule.
[2] Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.
[3] This table shows the FM Approvals available at the time of printing. Other approvals may be in process.
[4] Viking vertical sidewall sprinklers may be installed pendent or upright.

DESIGN CRITERIA - FM

(Also refer to Approval Chart 2 above.)

FM Approval Requirements:

Horizontal Sidewall Sprinkler VK305 is FM Approved as a quick response **Non-Storage** sidewall sprinkler as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including Data Sheet 2-0). FM Global Loss Prevention Data Sheets contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Bulletin Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

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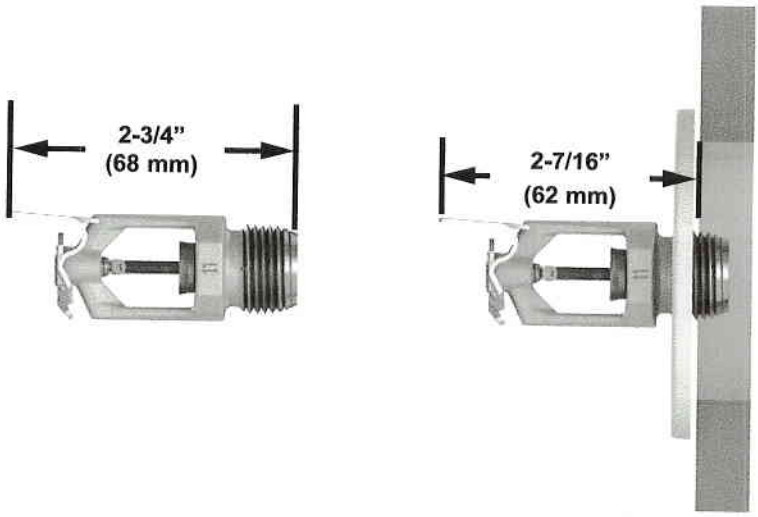
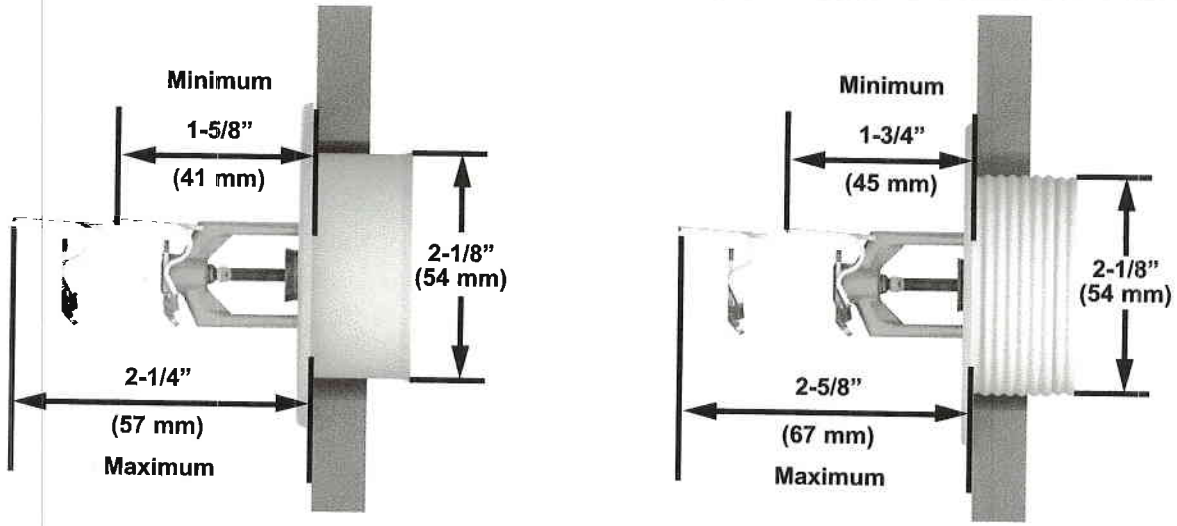


Wall Opening Size:
2-5/16" (58.7 mm) minimum
2-1/2" (63.5 mm) maximum

Installed with a Standard 1/8" Surface-Mounted Escutcheon

Figure 3: Sidewall Sprinkler Dimensions with a Standard Escutcheon



Wall Opening Size:
2-5/16" (58.7 mm) minimum
2-1/2" (63.5 mm) maximum

Installed with the Micromatic Model E-1 Recessed Escutcheon

Installed with the Threaded Model E-2 Recessed Escutcheon

Figure 4: Sidewall Sprinkler VK305 Dimensions with the Model E-1 and E-2 Recessed Escutcheons

VIKING®

TECHNICAL DATA

MICROFAST® QUICK RESPONSE UPRIGHT SPRINKLER VK300 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

1. DESCRIPTION

The Viking Microfast® Quick Response Upright Sprinkler VK300 is a small, thermosensitive, glass-bulb spray sprinkler available in several different finishes and temperature ratings to meet design requirements. The special Polyester and Electroless Nickel PTFE (ENT) coatings can be used in decorative applications where colors are desired. In addition, these coatings have been investigated for installation in corrosive atmospheres and are listed/approved as corrosion resistant as indicated in the Approval Charts.

WARNING: Cancer and Reproductive Harm- www.P65Warnings.ca.gov

2. LISTINGS AND APPROVALS

c(UL)us **cULus Listed:** Category VNIV

FM **FM Approved:** Classes 2002 and 2020

Refer to Approval Charts and Design Criteria for listing and approval requirements that must be followed.

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)*
Maximum Working Pressure: 175 psi (12 bar) wwp.
Factory tested hydrostatically to 500 psi (34.5 bar)
Testing: U.S.A. Patent No. 4,831,870
Thread size: 1/2" NPT, 15 mm BSP
Nominal K-Factor: 5.6 U.S. (80.6 metric**)
Glass-bulb fluid temperature rated to -65 °F (-55 °C)
Overall Length: 2-3/16" (56 mm)

*cULus Listing, FM Approval, and NFPA 13 installs require a minimum of 7 psi (0.5 bar). The minimum operating pressure for LPCB and CE Approvals ONLY is 5 psi (0.35 bar).

Material Standards:

Frame Casting: Brass UNS-C84400 or QM Brass
Deflector: Brass UNS-C23000 or Copper UNS-C19500
Bulb: Glass, nominal 3 mm diameter
Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape
Screw: Brass UNS-C36000
Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400
For Polyester Coated Sprinklers: Belleville Spring-Exposed
For ENT Coated Sprinklers: Belleville Spring-Exposed, Screw and Pipcap - ENT plated

Ordering Information: (Also refer to the current Viking price list.)

Order Viking Microfast® Quick Response Upright Sprinkler VK300 by first adding the appropriate suffix for the sprinkler finish and then the appropriate suffix for the temperature rating to the sprinkler base part number.
Finish Suffix: Brass = A, Chrome = F, White Polyester = M-/W, Black Polyester = M-/B, and ENT = JN
Temperature Suffix (°F/°C): 135°/57° = A, 155°/68° = B, 175°/79° = D, 200°/93° = E, and 286°/141° = G
For example, sprinkler VK300 with a 1/2" NPT thread, Brass finish and a 155 °F/68 °C temperature rating = Part No. 12978AB

Available Finishes And Temperature Ratings: Refer to Table 1.

Accessories: (Also refer to the Viking website.)

Sprinkler Wrench: Standard Wrench: Part No. 21475M/B (available since 2017)

Sprinkler Cabinets:

A. Six-head capacity: Part No. 01724A (available since 1971)
B. Twelve-head capacity: Part No. 01725A (available since 1971)

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

VIKING®

TECHNICAL DATA

MICROFAST® QUICK RESPONSE UPRIGHT SPRINKLER VK300 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
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5. OPERATION

During fire conditions, the heat-sensitive liquid in the glass bulb expands, causing the glass to shatter, releasing the pip cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

The Viking Microfast® Quick Response Upright Sprinkler VK300 is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES

Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating[1]	Maximum Ambient Ceiling Temperature[2]	Bulb Color
Ordinary	135 °F (57 °C)	100 °F (38 °C)	Orange
Ordinary	155 °F (68 °C)	100 °F (38 °C)	Red
Intermediate	175 °F (79 °C)	150 °F (65 °C)	Yellow
Intermediate	200 °F (93 °C)	150 °F (65 °C)	Green
High	286 °F (141 °C)	225 °F (107 °C)	Blue

Sprinkler Finishes: Brass, Chrome, White Polyester, Black Polyester, and ENT

Corrosion-Resistant Coatings[3]: White Polyester, Black Polyester, and Black PTFE. ENT in all temperature ratings except 135 °F (57 °C)

Footnotes

[1] The sprinkler temperature rating is stamped on the deflector.
[2] Based on NFPA-13. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.
[3] The corrosion-resistant coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Charts. These tests cannot and do not represent all possible corrosive environments. Prior to installation, verify through the end-user that the coatings are compatible with or suitable for the proposed environment. For automatic sprinklers, the coatings indicated are applied to the exposed exterior surfaces only. Note that the spring is exposed on sprinklers with Polyester, ENT, and PTFE coatings. For ENT coated automatic sprinklers, the waterway is coated.

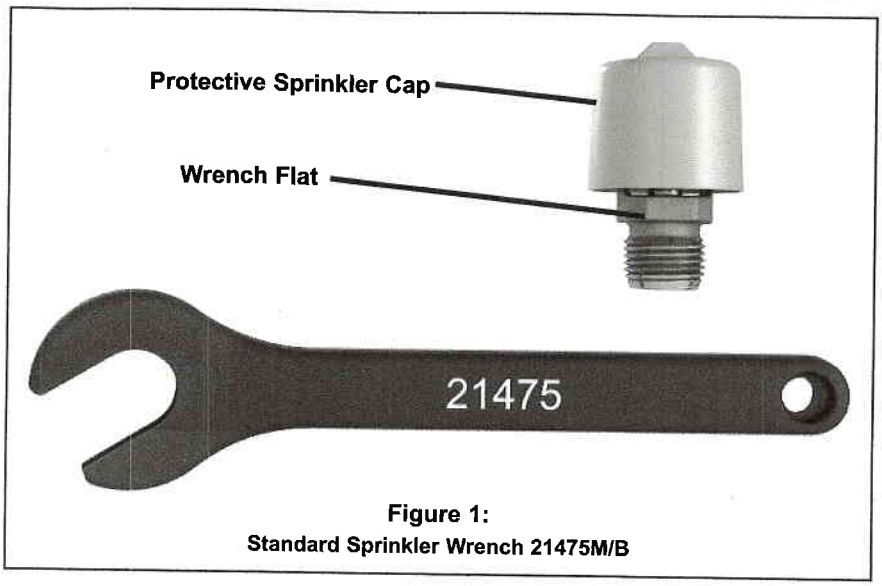

Figure 1:
Standard Sprinkler Wrench 21475M/B

VIKING® TECHNICAL DATA

MICROFAST® QUICK RESPONSE UPRIGHT SPRINKLER VK300 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
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Approval Chart 1 (UL)

Microfast® Quick Response Upright Sprinkler VK300
Maximum 175 PSI (12 bar) WWP

KEY: A1X ← Temperature, Finish, Escutcheon (if applicable)

Base Part Number[1]	SIN	Thread Size		Nominal K-Factor		Overall Length		Listings and Approvals[3]				
		NPT	BSP	U.S.	metric[2]	Inches	mm	cULus	VdS	LPCB	NYC[8]	CE
12978	VK300	1/2"	15 mm	5.6	80.6	2-3/16	56	A1, B2	--	--	See footnote 7.	--
NOTICE - Product Below - Limited Availability (Contact Local Viking Office)												
06661B	VK300	1/2"	15 mm	5.6	80.6	2-3/16	56	A1, B2	--	--	See footnote 7.	--

Approved Temperature Ratings

A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141°C)
B - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141°C)

Approved Finishes

1 - Brass, Chrome, White Polyester[5,6], and Black Polyester[5,6]
2 - ENT[6]

Footnotes

[1] Base part number is shown. For complete part number, refer to Viking's current price schedule.
[2] Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.
[3] This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals.
[4] Listed by Underwriters Laboratories Inc. for us in the U.S. and Canada
[5] Other colors are available on request with the same Listings and Approvals as the standard colors.
[6] cULus Listed as corrosion resistant.
[7] Meets New York City requirements, effective July 1, 2008
[8] Accepted for use, City of New York Board of Standards and Appeals, Calendar Number 219-76-SA and City of New York Department of Buildings, MEA 89-92-E, Vol. 16.

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1 above.)

cULus Listing Requirements:

The Viking Microfast® Quick Response Upright Sprinkler VK300 is cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for standard spray sprinklers.

- Designed for use in Light and Ordinary Hazard occupancies.
- The sprinkler installation rules contained in NFPA 13 for standard spray upright sprinklers must be followed.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

VIKING®

TECHNICAL DATA

MICROFAST® QUICK RESPONSE UPRIGHT SPRINKLER VK300 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

Approval Chart 2 (FM)

Microfast® Quick Response Upright Sprinkler VK300
Maximum 175 PSI (12 bar) WWP

KEY: A1X ← Temperature, Finish, Escutcheon (if applicable)

Base Part Number[1]	SIN	Thread Size		Nominal K-Factor		Overall Length		FM Approvals[3] (Refer also to Design Criteria below.)
		NPT	BSP	U.S.	metric[2]	Inches	mm	
12978	VK300	1/2"	15 mm	5.6	80.6	2-3/16	56	A1, B2
NOTICE - Product Below - Limited Availability (Contact Local Viking Office)								
06661B	VK300	1/2"	15 mm	5.6	80.6	2-3/16	56	A1, B2

Approved Temperature Ratings

A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141°C)
B - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141°C)

Approved Finishes

1 - Brass, Chrome, White Polyester[5], and Black Polyester[5]
2 - ENT[6]

Footnotes

[1] Base part number is shown. For complete part number, refer to Viking's current price schedule.

[2] Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

[3] This table shows the FM Approvals available at the time of printing. Check with the manufacturer for any additional approvals.

[5] Other colors are available on request with the same Approvals as the standard colors.

[6] FM approved as corrosion resistant.

DESIGN CRITERIA - FM

(Also refer to Approval Chart 2 above.)

FM Approval Requirements:

The Microfast® Quick Response Upright Sprinkler VK300 is FM Approved as a quick response **Non-Storage** upright sprinkler as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including Data Sheet 2-0). FM Global Loss Prevention Data Sheets contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

VIKING® TECHNICAL DATA — SPRINKLER GUARDS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

1. DESCRIPTION

The Viking Sprinkler Guard is a hard-wire cage designed to encase the sprinkler and protect it from mechanical damage. It is recommended for areas where the sprinkler is installed at a low elevation and/or near areas of high human or mechanical activity.

The Model D-1 Sprinkler Guard is for use with Viking standard and large orifice, standard and quick response upright and pendent frame style sprinklers.

The Dry Pendent Sprinkler Guard is for use with Viking standard, large orifice, ELO, standard and quick response dry upright, dry vertical sidewall, and dry pendent sprinklers.

2. LISTINGS AND APPROVALS

A. Model D-1 Sprinkler Guard:

cULus Listed: Category VFJV

FM Approved: Class 2091

⚠ **WARNING:** Cancer and Reproductive Harm- www.P65Warnings.ca.gov

cULus Listed and/or FM Approved for use with standard and large orifice, standard and quick response upright and pendent frame style sprinklers, including the following: VK001, VK003, VK100, VK102, VK108, VK110, VK122, VK124, VK130, VK132, VK200, VK202, VK204, VK206, VK300, VK301, VK302, VK303, VK350, VK352, VK377, and VK536.

B. Dry Sprinkler Guard: No Listings or Approvals

3. TECHNICAL DATA

Specifications:

A. Model D-1 Sprinkler Guard

Dimensions: 3-1/8" (79 mm) diameter, 3-1/8" (79 mm) high.

B. Dry Sprinkler Guard:

Dimensions: 2" (51 mm) diameter, 2-1/8" (54 mm) high.

Material Standards:

A. Model D-1 Sprinkler Guard:

Standard Model D-1 Sprinkler Guard:
Guard Wire: Bright Basic Steel UNS-G10100
Guard Finish: Clear Chromate over Zinc Plating
Screws: Two 6-32 (T15 Torx): Steel
Screw Finish: Zinc Plated
Stainless Steel Model D-1 Sprinkler Guard:
Guard: T302/T304 Electro-Polished Stainless Steel
Screws: Two 6-32 (T15 Torx): Stainless Steel UNS-S30400

B. Dry Sprinkler Guard:

Guard and Ring: Bright Basic Steel UNS-G10100
Finish: Clear Chromate over Zinc Plating

Ordering Information: (Also refer to the current Viking price list.)

A. Model D-1 Sprinkler Guard:

The Model D-1 Sprinkler Guard may be ordered separately or factory installed on Viking upright and pendent standard or large orifice, or ELO standard or quick response frame style sprinklers.

NOTICE

The Model D-1 Sprinkler Guard is NOT designed to be used on sidewall sprinklers, or sprinklers installed in recessed escutcheons.

To order the Model D-1 Sprinkler Guard separately (Figure 1 - Top):

1. Order Viking Part No. 10325
2. Order Viking Part No. 12198 (Stainless Steel)
3. Order Viking Part No. 20418 (ELO Sprinklers)

To order the Model D-1 Sprinkler Guard factory installed:

1. Refer to the Viking Price Book to select the appropriate base part number (plus appropriate suffixes for temperature and finish) for the sprinkler used.
2. To order the Model D-1 Sprinkler Guard factory installed on the sprinkler, add the suffix "G".

Model D-1 Sprinkler Guard
Order Sprinkler Guard Separately or Factory Installed
(See Ordering Instructions)

Model D-1 Sprinkler Guard on Upright and Pendent Frame-Style Sprinklers*

*The standard response sprinklers with 5 mm glass bulb shown above are representative only. The Model D-1 Guard may be used with standard and large orifice, upright or pendent standard response sprinklers with 5 mm glass bulbs; standard response fusible link sprinklers; and quick response sprinklers with 3 mm glass bulbs and QR fusible element sprinklers VK301 and VK303.

Figure 1

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
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B. To order the Viking Dry Sprinkler Guard (Figure 2 - Top): Order Viking Part No. 08954.

NOTICE

The Dry Sprinkler Guard is NOT listed or Approved.

Accessories: (Also refer to the Viking website.)

Sprinkler Wrenches:

For frame style sprinklers equipped with Model D-1 Sprinkler Guard, use Wrench Part No. 10896W/B (available since 2000) or 05000CW/B (no longer available). For ELO sprinklers use Wrench Part No. 20415M/B.

Model E-1 Water Shield for frame style upright sprinklers equipped with Model D-1 Sprinkler Guards: Part No. 10326 (see form F_012498).

Model F-1 Water Shield for frame style pendent sprinklers equipped with Model D-1 Sprinkler Guards (see form F_012498):

- For use on ½" NPT Sprinklers, order Part No. 10323
- For use on 3/4" NPT Sprinklers (standard and large orifice only, NOT ELO), order Part No. 10324

Dry Sprinkler Guard
(Order sprinkler guard separately from sprinklers.)

The standard response dry pendent sprinkler with 5 mm glass bulb shown above is representative only. The Dry Sprinkler Guard may be used with Viking standard or quick response dry upright, dry vertical sidewall, and dry pendent (including adjustable recessed) sprinklers.

Figure 2

4. INSTALLATION

A. Installing the Model D-1 Sprinkler Guard: Model D-1 Sprinkler Guards can be retrofitted onto sprinklers that have already been installed on the system. However, it is recommended to install the guard onto the sprinkler prior to installing the sprinkler on the system and prior to applying any pipe-joint compound or tape to the external threads of the sprinkler. Consider ordering the guard factory installed on the sprinkler used.

a. Loosen the screws in the brackets at the base of the sprinkler guard.
b. Spread and hold the two bracket halves (at the base of the sprinkler guard) apart just enough to place the guard over the deflector and wrench boss of the sprinkler.
c. With the sprinkler inside the sprinkler guard, position the guard so the two halves of the bracket grip the sprinkler just below the wrench boss, but above the threads.

NOTICE

Orient the sprinkler guard so the screw openings in the base of the guard are located at the ends of the sprinkler wrench boss (where the sprinkler frame arms contact the wrench boss). See Figure 1.

d. Thread both screws into the openings provided in the opposite bracket half and tighten to secure the base of the guard to the sprinkler.
e. Apply a small amount of pipe-joint compound or tape to the external threads only, taking care not to allow a build-up of compound in the sprinkler orifice.
f. Install the sprinkler on the piping using the special sprinkler wrench. DO NOT use the guard to start or thread the sprinkler into the fitting.

B. Installing the Dry Sprinkler Guard: Dry sprinklers must be installed on the system prior to installing the guard onto the dry sprinklers. Note: When installing the Dry Sprinkler Guard on recessed Dry Pendent or recessed Vertical Dry Sidewall Sprinklers, the Viking Recessed Escutcheon Cup must be removed and the sprinkler centered in a minimum 2-1/8" (54 mm) diameter hole prior to installation of the Dry Sprinkler Guard.

a. Remove the retaining ring from the Dry Sprinkler Guard.
b. Spread and hold the two "C" shaped halves of the bracket (at the base of the guard) apart just enough to place the guard over the deflector and wrench boss of the sprinkler.
c. With the sprinkler inside the guard, position the guard so the "C" shaped bracket halves of the guard grip the sprinkler in the slot provided just below the wrench boss.

NOTICE

Orient the sprinkler guard so two of the four guard wires align with the frame arms of the sprinkler. See Figure 2.

d. Push the retaining ring over the guard toward the base of the sprinkler until the ring snaps firmly into the depression provided on each of the four wire members of the guard.
e. For recessed dry pendent or recessed vertical dry sidewall sprinklers, re-install the Viking recessed escutcheon cup.

VIKING®

TECHNICAL DATA

SPRINKLER GUARDS

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
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Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

NOTICE

The Model D-1 Sprinkler Guard is NOT designed to be used on sidewall sprinklers, or sprinklers installed in recessed escutcheons.

The Model D-1 Sprinkler Guard is cULus Listed and/or FM Approved for use with standard and large orifice, standard and quick response upright and pendent frame style sprinklers, including the following: VK001, VK003, VK100, VK102, VK108, VK110, VK122, VK124, VK130, VK132, VK200, VK202, VK204, VK206, VK300, VK301, VK302, VK303, VK350, VK352, VK377, and VK536.

Model D-1 Sprinkler Guards can be retrofitted onto sprinklers that have already been installed on the system. However, it is recommended to install the guard onto the sprinkler prior to installing the sprinkler on the system and prior to applying any pipe-joint compound or tape to the external threads of the sprinkler. Consider ordering the guard factory installed on the sprinkler used.

⚠WARNING

Viking products are manufactured and tested to meet the rigid requirements of the approving agency. The sprinklers are designed to be installed in accordance with recognized installation standards. Deviation from the standards or any alteration to the sprinkler after it leaves the factory including, but not limited to: painting, plating, coating, or modification, may render the sprinkler inoperative and will nullify the approval and any guarantee made by The Viking Corporation.

NOTICE

Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to the appropriate sprinkler data page. Viking sprinklers are designed to be installed in accordance with the latest edition of Viking technical data, the latest standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards whenever applicable. The use of certain types of sprinklers may be limited due to occupancy and hazard. Refer to the Authority Having Jurisdiction prior to installation.

5. OPERATION

Refer to the sprinkler technical data page for the sprinkler model used. The Sprinkler Guard is a hard-wire cage designed to encase the sprinkler and protect it from mechanical damage.

6. INSPECTIONS, TESTS AND MAINTENANCE

Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

Viking sprinklers and sprinkler guards are available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE

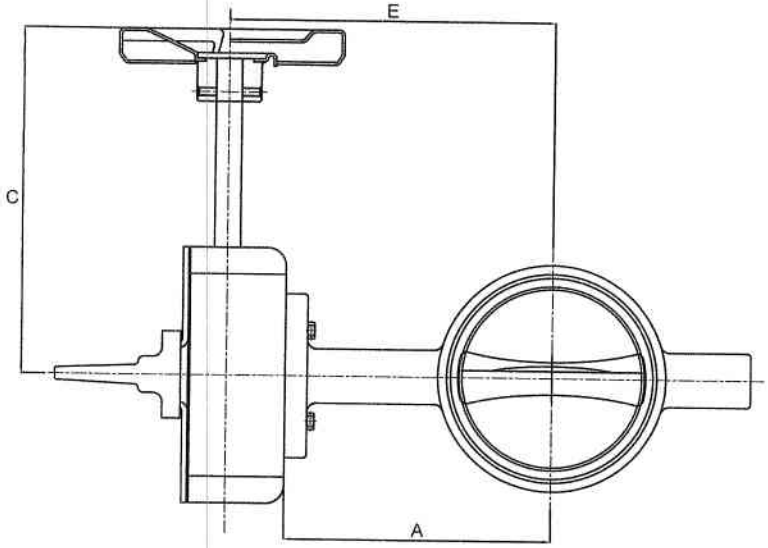
For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

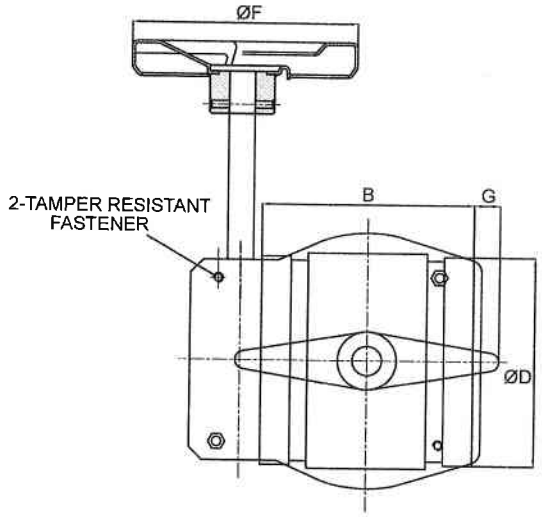
FIRE VALVES

- Size: 2 1/2 Through 8
- Working Pressure: 300 psi (21.5 Bars)
- Max. Test Pressure: 600 psi (43.0 Bars)
- Working Tempture: 250F (120°C)
- Factory Installed UL Approved Tampered Switch for Indoor and Outdoor Use
- Trademark: Global Safety Products, Inc.

DESCRIPTION

GROOVED END BUTTERFLY VALVE





COMPONENT	MATERIAL
Body	Ductile Iron, EPDM Encapsulated
Disc	Al-Bronze, Ni-Cr Plated
Stem	Stainless Steel, Hardened & Tempered
Housing	Ductile Iron (ASTM A-536)
Hand Wheel	Ductile Iron (ASTM A-536)

VALVE SIZE	ITEM CODE	A	B	C	D	E	F	G
2 1/2"	UFP025	4.13"	3.80"	6.61"	2.88"	5.39"	4.92"	
3"	UFP026	4.41"	3.80"	6.61"	3.50"	5.67"	4.92"	
4"	UFP027	5.71"	4.54"	6.61"	4.50"	6.97"	4.92"	
6"	UFP028	7.05"	5.21"	8.19"	6.63"	8.31"	8.86"	0.27"
8"	UFP029	8.03"	5.80"	8.19"	8.62"	9.29"	8.86"	0.95"

FireLock® Check Valves
Series 717 Check Valve
Series 717H High Pressure Check Valve

Victaulic

10.08

Series 717
(2½ – 3"/65 – 80 mm)

Series 717
(4 – 12"/100 – 300 mm)

Series 717H
High Pressure Check Valve
(2 – 3"/50 – 80 mm)

1.0 PRODUCT DESCRIPTION

Available Sizes

- 2 – 3"/DN50 – DN80 (Series 717H)
- 2 ½ – 12"/DN50 – DN300 (Series 717)

Pressure Class

- Up to 365 psi/2517 kPa/25 bar
- Working pressure dependent on size of pipe, valve size and approval requirements.

Application

- Designed for use in Fire Protection systems.
- Prevents back flow.
- Single-disc mechanism incorporates a spring-assisted feature for non-slamming operation.
- Can be installed either vertically (flow upwards only) or horizontally.
- Valve body cast with arrow indicator to assist with proper valve orientation.
- Optional upstream and downstream pressure taps included on select sizes. See Section 3.0.
- Provided with grooved ends.
- Rated for ambient temperature use in fire protection systems.

2.0 CERTIFICATION/LISTINGS

c UL us LISTED FM VdS LPCB

NOTE

- Refer to Victaulic submittal publication 10.01 for details

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

2.0 CERTIFICATION/LISTINGS (Continued)

Approvals/Listings

Size	Approval/Listing Service Pressures			
	Series 717H			
	cULus	FM	LPCB	Vds
2"/50 mm	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa
2½"/65 mm	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa
76.1 mm	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa
3"/80 mm	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa

Size	Approval/Listing Service Pressures			
	Series 717			
	cULus	FM	LPCB	Vds
2½"/65 mm	250 psi/1725 kPa	n/a	365 psi/2517 kPa	n/a
76.1 mm	250 psi/1725 kPa	n/a	365 psi/2517 kPa	16bar/232 psi
3"/80 mm	250 psi/1725 kPa	n/a	365 psi/2517 kPa	16bar/232 psi
4"/100 mm	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa	16bar/232 psi
5"/125 mm	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa	n/a
139.7 mm	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa	16bar/232 psi
6"/150 mm	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa	16bar/232 psi
165.1 mm	365 psi/2517 kPa	365 psi/2517 kPa	365 psi/2517 kPa	n/a
8"/200 mm	365 psi/2517 kPa	365 psi/2517 kPa	348 psi/2400 kPa	16bar/232 psi
10"/250 mm	250 psi/1725 kPa	250 psi/1725 kPa	1725 kPa/250 psi	n/a
12"/300 mm	250 psi/1725 kPa	250 psi/1725 kPa	1725 kPa/250 psi	n/a

3.0 SPECIFICATIONS – MATERIAL

Body:

☐ Ductile Iron conforming to ASTM A-536, Grade 65-45-12.

Body Coating:

☐ Series 717H Body: Black Paint
☐ Series 717H Endface: Electroless Nickel conforming to ASTM B-733
☐ Series 717 (2 ½ – 3"/DN65 – DN80): PPS Coating
☐ Series 717 (4 – 12"/DN100 – DN300): Black Paint

Body Seat:

☐ Series 717H: Nitrile O-ring installed into an Electroless Nickel plating conforming to ASTM B-733
☐ Series 717 (2 ½" – 3"/DN65 – DN80): PPS Coated Ductile Iron
☐ Series 717 (4 – 12"/DN100 – DN300): Ductile Iron with Electroless Nickel plating conforming to ASTM B-733

Disc Seal or Coating: (specify choice[1])

☐ **Nitrile (Series 717H only)**
☐ **EPDM**
NOT COMPATIBLE FOR PETROLEUM SERVICES.

Discs:

☐ Series 717H: CF8M Cast Stainless Steel
☐ Series 717 (2 ½ – 3"/DN65 – DN80): Aluminum bronze with elastomer seal
☐ Series 717 (4 – 12"/DN100 – DN300): Elastomer encapsulated disc.

Shaft:

☐ Series 717H: Brass
☐ Series 717 (2 ½ – 3"/DN65 – DN80): Type 416 Stainless Steel
☐ Series 717 (4 – 12"/DN100 – DN300): Type 316 Stainless Steel

Spring:

☐ Type 302/304 Stainless Steel

Shaft Plug:

☐ Series 717H: Carbon Steel Zinc Plated
☐ Series 717: Carbon Steel Zinc Plated

Pipe Plug:

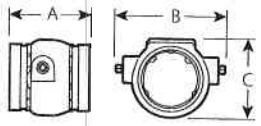
☐ Series 717H: Carbon Steel Zinc Plated
☐ Series 717: Carbon Steel Zinc Plated

Optional Pressure Taps:

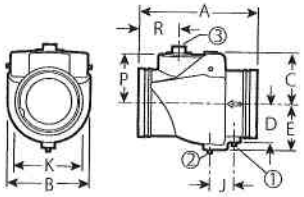
☐ Series 717H: Available on all sizes
☐ Series 717: Available on sizes 4 – 12"/DN100 – DN300

4.0 DIMENSIONS

Series 717

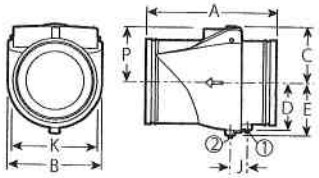


Typical 2 ½ – 3"/65 – 80 mm



① ½" NPT Upstream Drain
② ½" NPT Downstream Drain
③ 2" NPT (Drain Optional)

Typical 4 – 8"/100 – 200 mm



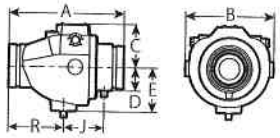
① ½" NPT Upstream Drain
② ½" NPT Downstream Drain

Typical 10 – 12"/250 – 300 mm

Size		Dimensions									Weight
Nominal inches mm	Actual Outside Diameter inches mm	E to E A inches mm	B inches mm	C inches mm	D inches mm	E inches mm	J inches mm	K inches mm	P inches mm	R inches mm	Approximate (Each) lb kg
2½ 65	2.875 73.0	3.88 99	4.26 108	3.57 91	–	–	–	–	–	–	3.6 1.6
76.1 mm	3.000 76.1	3.88 99	4.26 108	3.57 91	–	–	–	–	–	–	3.6 1.6
3 80	3.500 88.9	4.25 108	5.06 129	4.17 106	–	–	–	–	–	–	4.5 2.0
4 100	4.500 114.3	9.63 245	6.00 152	3.88 99	2.75 70	3.50 89	2.00 51	4.50 114	3.50 89	3.35 85	20.0 9.1
5 125	5.563 141.3	10.50 267	6.80 173	4.50 114	–	4.17 106	2.15 55	5.88 149	4.08 104	3.98 101	27.0 12.3
139.7 mm	5.500 139.7	10.50 267	6.80 173	4.50 114	–	4.17 106	2.15 55	5.88 149	4.08 104	3.98 101	27.0 12.3
6 150	6.625 168.3	11.50 292	8.00 203	5.00 127	–	4.50 114	2.38 61	6.67 169	4.73 120	3.89 99	38.0 17.2
165.1 mm	6.500 165.1	11.50 292	8.00 203	5.00 127	–	4.50 114	2.38 61	6.67 169	4.73 120	3.89 99	38.0 17.2
8 200	8.625 219.1	14.00 356	9.88 251	6.06 154	5.05 128	5.65 144	2.15 55	8.85 225	5.65 144	5.75 146	64.0 29.0
10 250	10.750 273.0	17.00 432	12.00 305	7.09 180	5.96 151	6.69 170	2.15 55	10.92 277	6.73 171	–	100.0 45.4
12 300	12.750 323.9	19.50 495	14.00 356	8.06 205	6.91 176	7.64 194	2.51 64	12.81 925	7.73 196	–	140.0 63.5

4.1 DIMENSIONS

Series 717H



Typical 2"/50 mm – 3"/80 mm

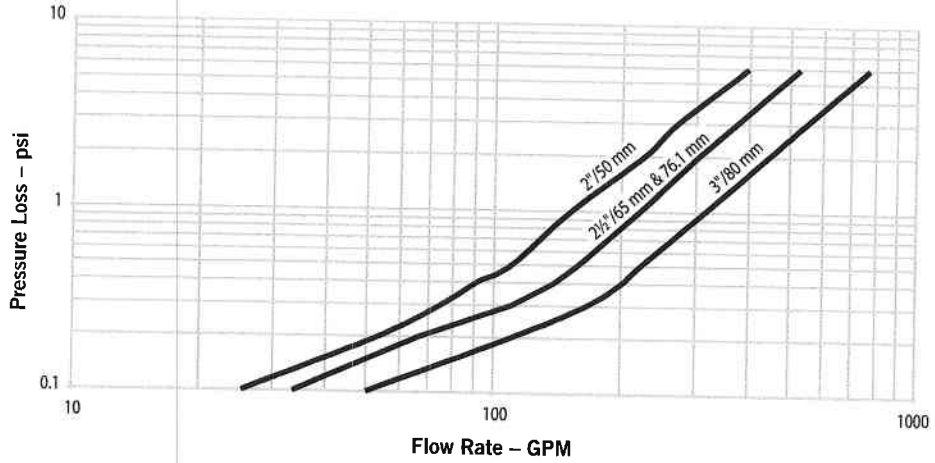
Size	Dimensions									Weight
Nominal inches mm	E to E A inches mm	B inches mm	C inches mm	D inches mm	E inches mm	J inches mm	K inches mm	P inches mm	R inches mm	Approximate (Each) lb kg
2 50	8.66 219.8	6.46 164.1	3.23 82.1	1.48 37.5	3.02 76.7	2.80 71.0	–	–	4.25 108.0	10.7 4.9
2½ 65	9.37 238.0	6.94 176.3	3.31 84.1	1.66 42.2	3.40 86.4	3.38 85.9	–	–	4.38 111.3	13.8 6.3
76.1 mm	9.37 238.0	6.94 176.3	3.31 84.1	1.66 42.2	3.40 86.4	3.38 85.9	–	–	4.38 111.3	13.8 6.3
3 80	9.62 244.3	7.44 189.0	3.53 89.7	1.91 48.5	3.65 92.7	3.38 85.9	–	–	4.63 117.6	20.0 9.1

5.0 PERFORMANCE

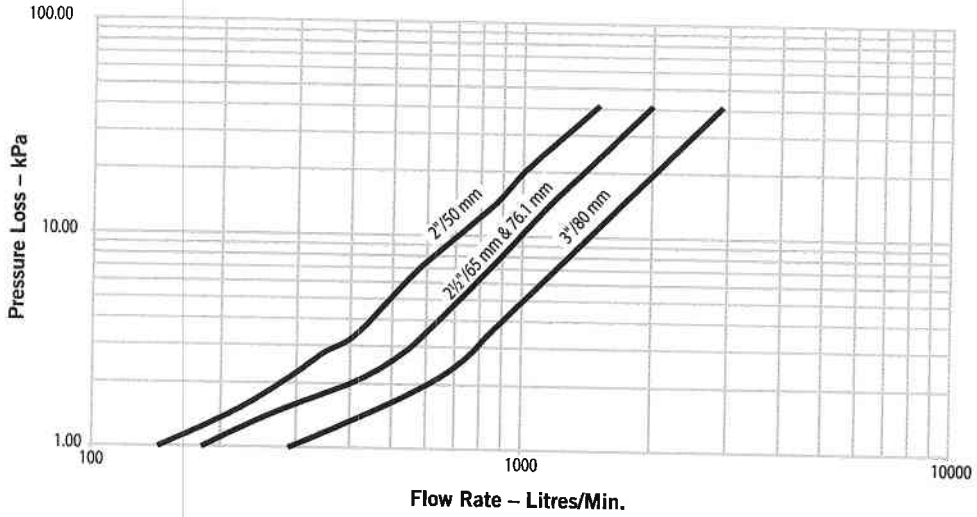
Flow Characteristics

The charts below express the flow of water at 60°F/16°C through valve.

S717H / 717HR



S717H / 717HR

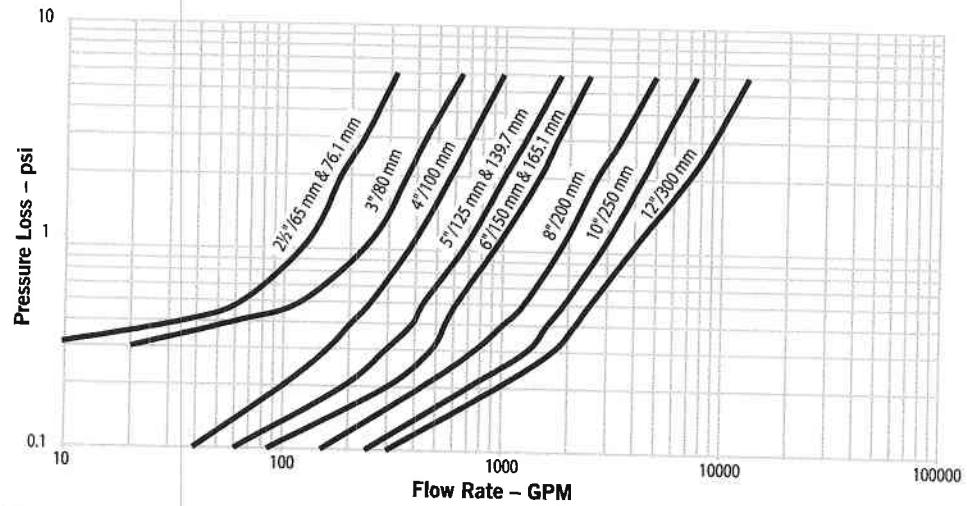


5.1 PERFORMANCE

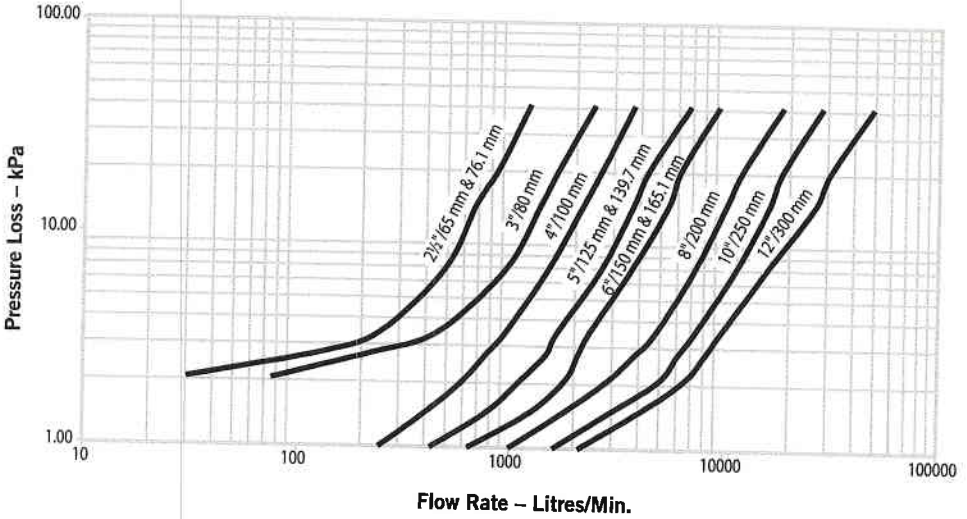
Flow Characteristics

The charts below express the flow of water at 60°F/16°C through valve.

S717 / 717R



S717 / 717R



6.0 NOTIFICATIONS

⚠ WARNING

- **Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.**

7.0 REFERENCE MATERIALS

05.01: Seal Selection Guide

10.01: Regulatory Approval Reference Guide

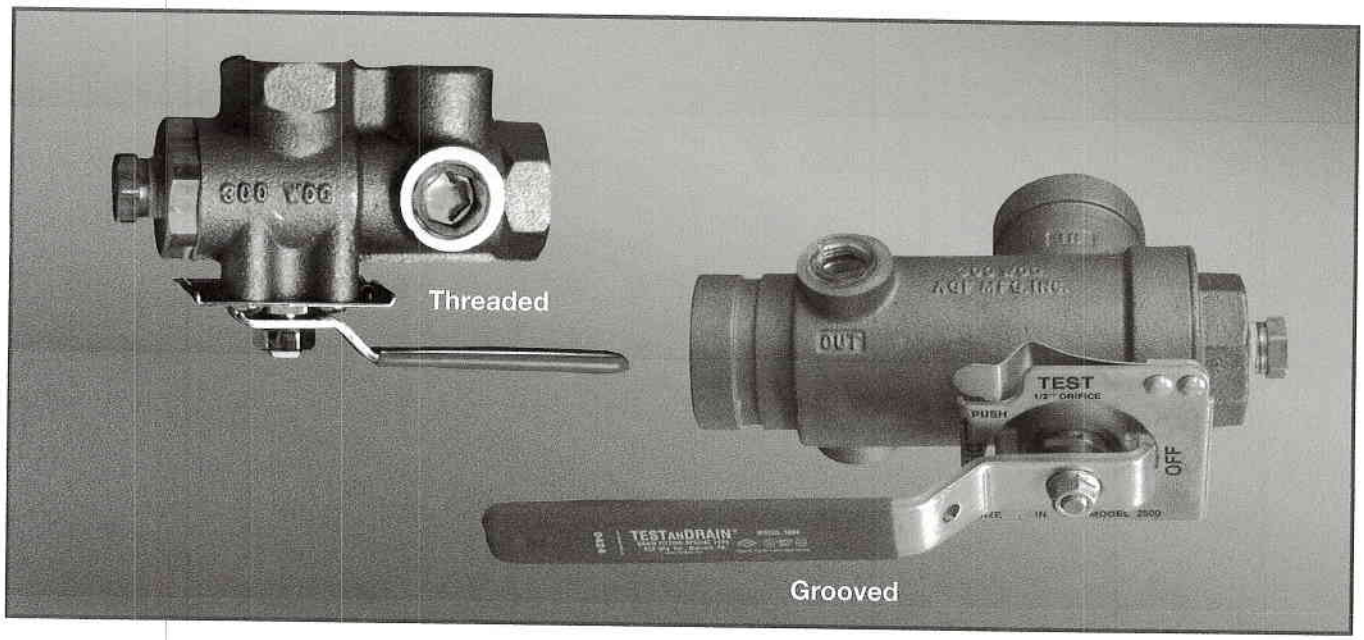
29.01: Terms and Conditions/Warranty

I-100: Field Installation Handbook

Model 2500
TESTANDRAIN®
Sectional Floor Control Test and Drain Valve

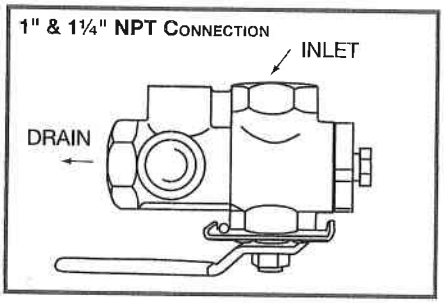
c UL us FM APPROVED

1" 1¼" 2"

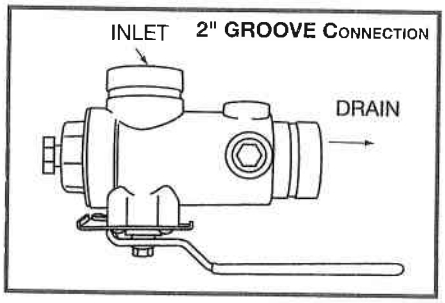


- The AGF Manufacturing Inc. **Model 2500 TESTANDRAIN®** provides both the test function and the express drain function for a wet fire sprinkler system.
- The 2" **Model 2500** features a groove x groove connection.
- The **Model 2500** complies with the requirements of NFPA-13, NFPA-13R, and NFPA-13D.
- The **Model 2500 TESTANDRAIN®** is a multi-direction, compact single handle ball valve which includes a tamper resistant test orifice and integral tamper resistant sight glasses, and is 300 PSI rated.
- The **Model 2500 TESTANDRAIN®** provides an alternate handle location from the **Model 1000** for difficult install situations
- Available in 1" And 1¼" NPT and 2" Groove, with all specifiable orifice sizes ⅜" (2.8K), 7/16" (4.2K), ½" (5.6K), 17/32" (8.0K), ⅝" (11.2K, ELO), ¾" (14.0K, ESFR), and K25 as required by NFPA 13, 2007 Edition (see reverse).
- The orifice size is noted on the indicator plate and the valve features a tapped and plugged port for system access.
- A locking kit is available and can be ordered with the valve to provide vandal resistance or prevent unintentional alarm activation.
- Repair kits including (1) adapter gasket, (1) ball, (2) valve seats, (1) stem packing, and (1) stem washer are available for all **TESTANDRAIN®** valves. Specify valve and orifice size when ordering.

MODEL 2500 - DRAIN TO LEFT



MODEL 2500 - DRAIN TO RIGHT

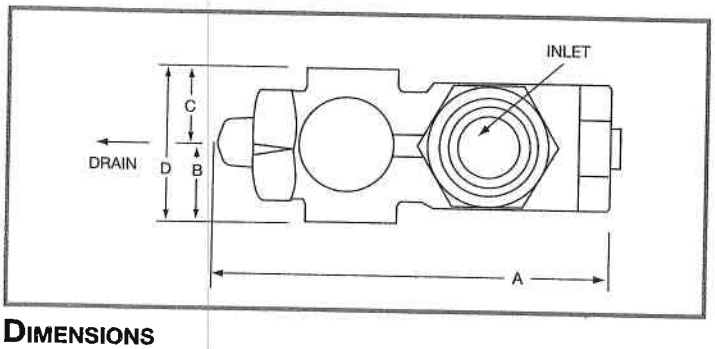


Reliability, Versatility, Code Compatibility

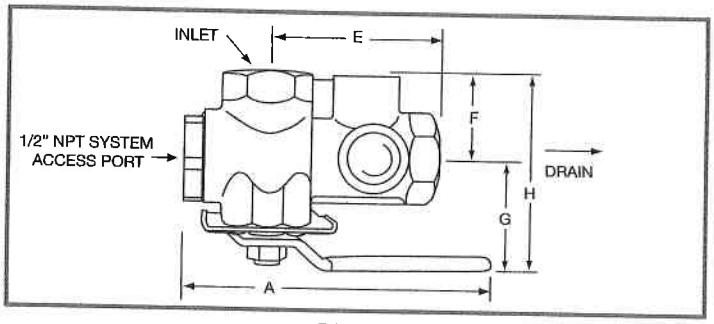
Model 2500 TEST AN DRAIN®

300 PSI Bronze Ball Valve

Model 2500 - Plan View



Model 2500 - Side View



Dimensions

Orifice Size Available: 3/8", 7/16", 1/2", 17/32", ELO (5/8"), ESFR (3/4")*, K25**

SIZE	A	B	C	D	E	F	G	H
1"	6 1/4" (159 mm)	1 1/4" (32 mm)	1 1/4" (32 mm)	2 1/2" (64 mm)	3 3/8" (86 mm)	1 13/16" (46 mm)	2 5/8" (67 mm)	4 3/16" (106 mm)
1 1/4"	7 9/16" (192 mm)	1 3/8" (35 mm)	1 3/8" (35 mm)	2 3/4" (70 mm)	3 3/8" (86 mm)	2 1/8" (159 mm)	3 1/16" (78 mm)	4 11/16" (119 mm)
2"†	10 1/4" (260 mm)	1 13/16" (460 mm)	1 13/16" (159 mm)	3 5/8" (92 mm)	5 5/8" (143 mm)	2 3/4" (70 mm)	3 3/4" (95 mm)	6 1/2" (165 mm)

* Available on 1 1/4" to 2" size units only
** Available on 2" size units only
† 2" M2500 is Groove x Groove only

Materials

Handle: Steel
Stem: Rod Brass
Ball: C.P. Brass
Body: Bronze
Valve Seat: Impregnated Teflon®
Indicator Plate: Steel
Handle Lock: Spring Steel

Approvals

UL and ULC Listed: EX4019
FM Approved
NYC-BSA No. 720-87-SM

MADE IN U.S.A.

The Model 2500 provides all of the following...

From the 2007 Edition of NFPA 13

Chapter 8.16.2.4.1*	Provisions shall be made to properly drain all parts of the system.
Chapter 8.16.2.4.2 & 8.16.2.4.3	Drain connections, interior sectional or floor control valve(s) – shall be provided with a drain connection having a minimum size as shown in Table 8.16.2.4.2.
Chapter 8.16.2.4.4	Drains shall discharge outside or to a drain capable of handling the flow of the drain.
Chapter A.8.17.4.2	(Wet Pipe System) test connection is permitted to terminate into a drain capable of accepting full flow... using an approved sight test connection containing a smooth bore corrosion-resistant orifice giving a flow equivalent to one sprinkler...
Chapter 8.17.4.2.2	The test connection valve shall be readily accessible.
Chapter 8.17.4.2.4	shall be permitted to be installed in any location... downstream of the waterflow alarm.
Chapter 8.17.4.3.1	(Dry Pipe System) a trip test connection not less than 1" in diameter, terminating in a smooth bore corrosion-resistant orifice, to provide a flow equivalent to one sprinkler...
Chapter 8.17.4.3.2	The trip test connection... with a shutoff valve and plug not less than 1", at least one of which shall be brass.

USA Patent # 4741361 and Other Patents Pending

AGF Manufacturing Inc.
100 Quaker Lane, Malvern, PA 19355
Phone: 610-240-4900
Fax: 610-240-4906
www.testandrain.com

Job Name: _____

Architect: _____

Engineer: _____

Contractor: _____

POTTER
The Symbol of Protection

VSR
VANE TYPE WATERFLOW ALARM SWITCH WITH RETARD

UL, CUL and CSFM Listed, FM Approved, LPCB Approved, For CE Marked (EN12259-5) / VdS Approved model use VSR-EU

Service Pressure: 450 PSI (31 BAR) - UL

Flow Sensitivity Range for Signal:
4-10 GPM (15-38 LPM) - UL

Maximum Surge: 18 FPS (5.5 m/s)

Contact Ratings: Two sets of SPDT (Form C)
10.0 Amps at 125/250VAC
2.0 Amps at 30VDC Resistive
10 mAmps min. at 24VDC

Conduit Entrances: Two knockouts provided for 1/2" conduit. Individual switch compartments suitable for dissimilar voltages.

Environmental Specifications:

- NEMA 4/IP54 Rated Enclosure suitable for indoor or outdoor use with factory installed gasket and die-cast housing when used with appropriate conduit fitting.
- Temperature Range: 40°F - 120°F, (4.5°C - 49°C) - UL
- Non-corrosive sleeve factory installed in saddle.

Service Use:

Automatic Sprinkler	NFPA-13
One or two family dwelling	NFPA-13D
Residential occupancy up to four stories	NFPA-13R
National Fire Alarm Code	NFPA-72

Specifications subject to change without notice.

Ordering Information			
Nominal Pipe Size		Model	Part Number
2"	DN50	VSR-2 Canadian	1144502
2 1/2"	DN65	VSR-2 1/2 Canadian	1144525
3"	DN80	VSR-3 Canadian	1144503
3 1/2"	-	VSR-3 1/2 Canadian	1144535
4"	DN100	VSR-4 Canadian	1144504
5"	-	VSR-5 Canadian	1144505
6"	DN150	VSR-6 Canadian	1144506
8"	DN200	VSR-8 Canadian	1144508

Optional: Cover Tamper Switch Kit, stock no. 0090148
Replaceable Components: Retard/Switch Assembly, stock no. 1029030

⚠ WARNING

- Installation must be performed by qualified personnel and in accordance with all national and local codes and ordinances.
- Shock hazard. Disconnect power source before servicing. Serious injury or death could result.
- Risk of explosion. Not for use in hazardous locations. Serious injury or death could result.

CAUTION

Waterflow switches that are monitoring wet pipe sprinkler systems shall not be used as the sole initiating device to discharge AFFF, deluge, or chemical suppression systems. Waterflow switches used for this application may result in unintended discharges caused by surges, trapped air, or short retard times.

General Information

The Model VSR is a vane type waterflow switch for use on wet sprinkler systems. It is UL Listed and FM Approved for use on steel pipe; schedules 10 through 40, sizes 2" thru 8" (50 mm thru 200 mm). LPC approved sizes are 2" thru 8" (50 mm thru 200 mm). See Ordering Information chart.

The VSR may also be used as a sectional waterflow detector on large systems. The VSR contains two single pole, double throw, snap action switches and an adjustable, instantly recycling pneumatic retard. The switches are actuated when a flow of 10 GPM (38 LPM) or more occurs downstream of the device. The flow condition must exist for a period of time necessary to overcome the selected retard period.

Enclosure

The VSR switches and retard device are enclosed in a general purpose, die-cast housing. The cover is held in place with two tamper resistant screws which require a special key for removal. A field installable cover tamper switch is available as an option which may be used to indicate unauthorized removal of the cover. See bulletin number 5401103 for installation instructions of this switch.

POTTER
The Symbol of Protection

VSR
VANE TYPE WATERFLOW ALARM SWITCH WITH RETARD

Installation (see Fig. 1)

These devices may be mounted on horizontal or vertical pipe. On horizontal pipe they shall be installed on the top side of the pipe where they will be accessible. The device should not be installed within 6" (15 cm) of a fitting which changes the direction of the waterflow or within 24" (60 cm) of a valve or drain.

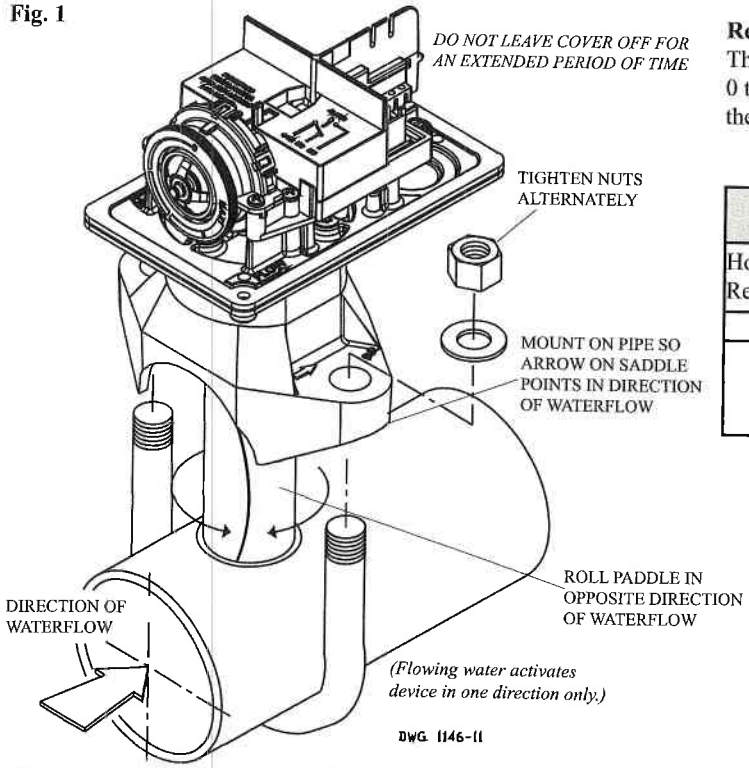
NOTE: Do not leave cover off for an extended period of time.

Drain the system and drill a hole in the pipe using a hole saw in a slow speed drill (see Fig. 1). Clean the inside pipe of all growth or other material for a distance equal to the pipe diameter on either side of the hole. Roll the vane so that it may be inserted into the hole; do not bend or crease it. Insert the vane so that the arrow on the saddle points in the direction of the waterflow. Take care not to damage the non-corrosive bushing in the saddle. The bushing should fit inside the hole in the pipe. Install the saddle strap and tighten nuts alternately to required torque (see the chart in Fig. 1). The vane must not rub the inside of the pipe or bind in any way.

⚠ CAUTION

Do not trim the paddle. Failure to follow these instructions may prevent the device from operating and will void the warranty.

Fig. 1

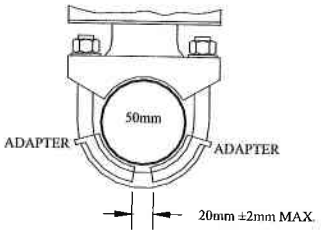


Retard Adjustment

The delay can be adjusted by rotating the retard adjustment knob from 0 to the max setting (60-90 seconds). The time delay should be set at the minimum required to prevent false alarms

CAUTION

Hole must be drilled perpendicular to the pipe and vertically centered. Refer to the Compatible Pipe/Installation Requirements chart for size.



DN50 ONLY

USE (2) 5180162 ADAPTERS AS SHOWN ABOVE

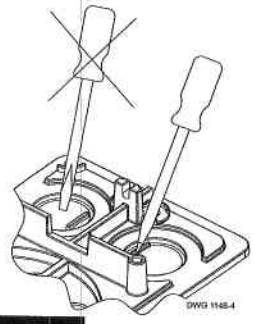
DWG# 1146-1F

Compatible Pipe/ Installation Requirements

Model	Nominal Pipe Size		Nominal Pipe O.D.		Pipe Wall Thickness								Hole Size		U-Bolt Nuts Torque	
					Schedule 10 (UL)		Schedule 40 (UL)		BS-1387 (LPC)		DN (VDS)					
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	ft-lb	n-m
VSR-2	2	DN50	2.375	60.3	0.109	2.77	0.154	3.91	0.142	3.6	0.091	2.3	1.25 + .125/-.062	33.0 ± 2.0	20	27
VSR-2 1/2	2.5	-	2.875	73.0	0.120	3.05	0.203	5.16	-	-	-	-				
VSR-2 1/2	-	DN65	3.000	76.1	-	-	-	-	0.142	3.6	0.102	2.6				
VSR-3	3	DN80	3.500	88.9	0.120	3.05	0.216	5.49	0.157	4.0	0.114	2.9	2.00 ± .125	50.8 ± 2.0		
VSR-3 1/2	3.5	-	4.000	101.6	0.120	3.05	0.226	5.74	-	-	-	-				
VSR-4	4	DN100	4.500	114.3	0.120	3.05	0.237	6.02	0.177	4.5	0.126	3.2				
VSR-5	5	-	5.563	141.3	0.134	3.40	0.258	6.55	-	-	-	-				
VSR-6	6	DN150	6.625	168.3	0.134	3.40	0.280	7.11	0.197	5.0	0.157	4.0				
VSR-8	8	DN200	8.625	219.1	0.148	3.76	0.322	8.18	0.248	6.3	0.177	4.5				

NOTE: For copper or plastic pipe use Model VSR-CF.

Fig. 2
To remove knockouts: Place screwdriver at inside edge of knockouts, not in the center.



NOTICE
Do not drill into the base as this creates metal shavings which can create electrical hazards and damage the device. Drilling voids the warranty.

Fig. 3
Break out thin section of cover when wiring both switches from one conduit entrance.

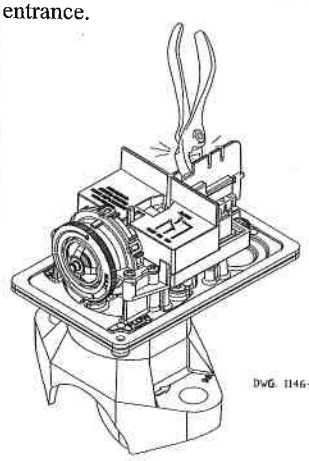
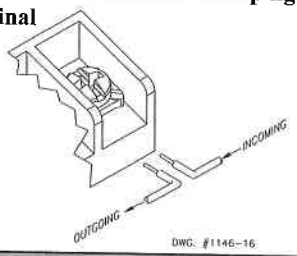


Fig. 4 Switch Terminal Connections Clamping Plate Terminal

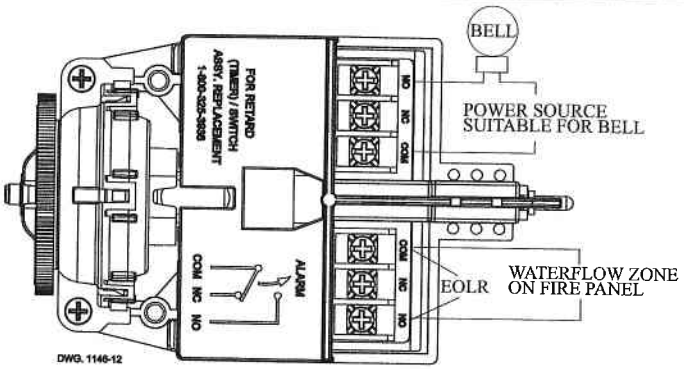


⚠ WARNING
An uninsulated section of a single conductor should not be looped around the terminal and serve as two separate connections. The wire must be severed, thereby providing supervision of the connection in the event that the wire become dislodged from under the terminal. Failure to sever the wire may render the device inoperable risking severe property damage and loss of life.

Do not strip wire beyond 3/8" of length or expose an uninsulated conductor beyond the edge of the terminal block. When using stranded wire, capture all strands under the clamping plate.

Fig. 5 Typical Electrical Connections

Notes:
1. The Model VSR has two switches, one can be used to operate a central station, proprietary or remote signaling unit, while the other contact is used to operate a local audible or visual annunciator.
2. A condition of LPC Approval of this product is that the electrical entry must be sealed to exclude moisture.
3. For supervised circuits, see "Switch Terminal Connections" drawing and warning note (Fig. 4).

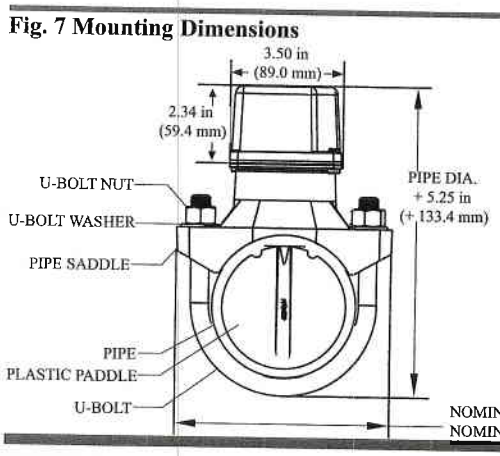


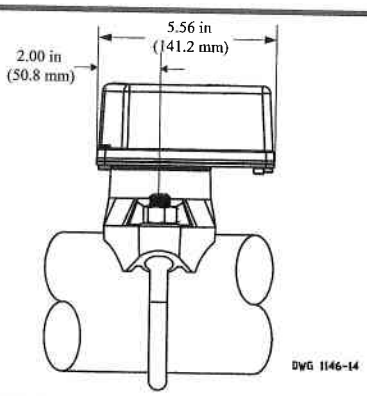
Testing
The frequency of inspection and testing for the Model VSR and its associated protective monitoring system shall be in accordance with applicable NFPA Codes and Standards and/or the authority having jurisdiction (manufacturer recommends quarterly or more frequently).

If provided, the inspector's test valve shall always be used for test purposes. If there are no provisions for testing the operation of the flow detection device on the system, application of the VSR is not recommended or advisable.
A minimum flow of 10 GPM (38 LPM) is required to activate this device.

NOTICE Advise the person responsible for testing of the fire protection system that this system must be tested in accordance with the testing instructions.

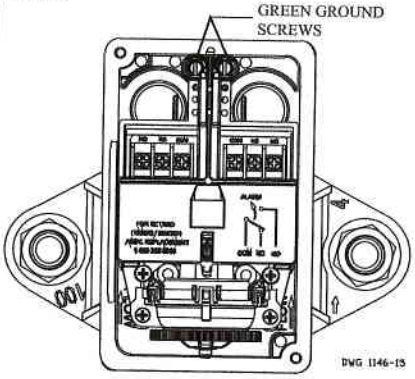
Fig. 7 Mounting Dimensions





NOMINAL PIPE DIA. +1.75 in (+44.5 MM) FOR DN 50 – DN 65 2–2.5 in
NOMINAL PIPE DIA. +2.125 in (+54.0 MM) FOR DN 80 – DN 200 3–8 in

Fig. 8



Maintenance

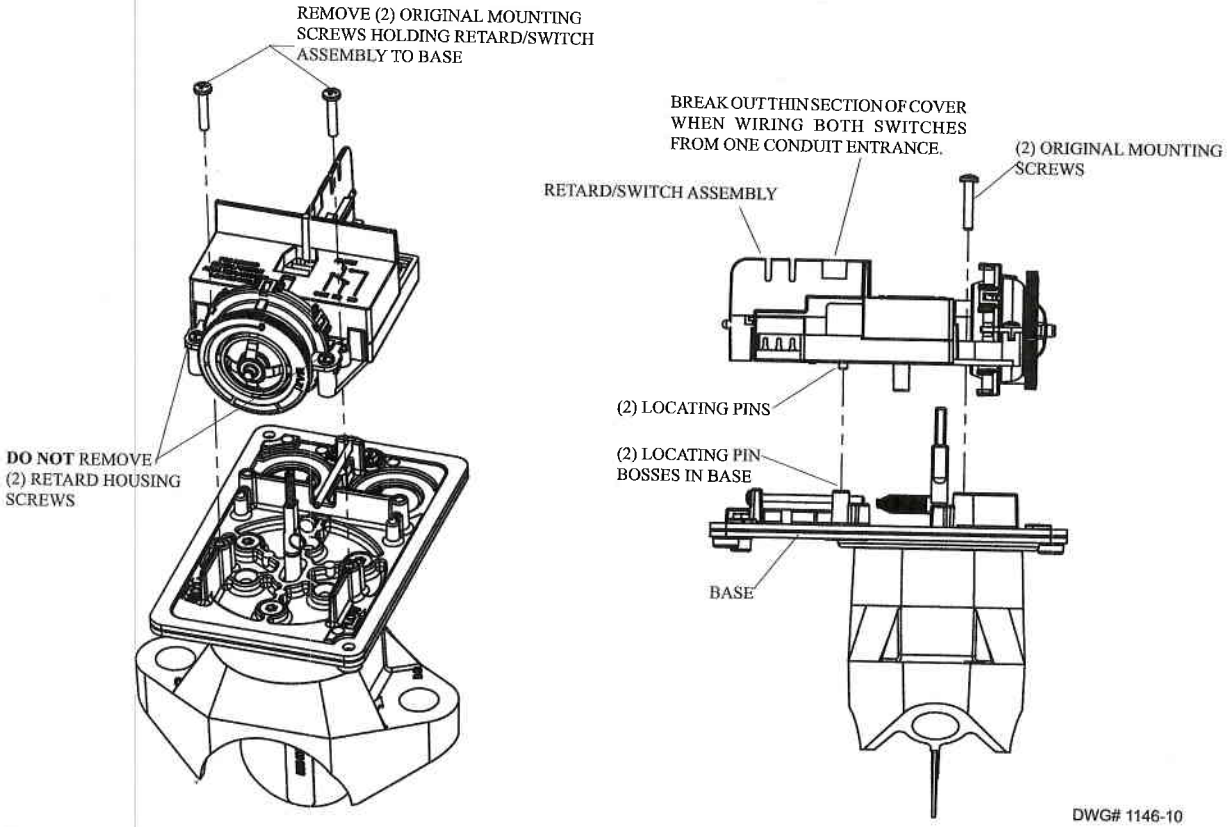
Inspect detectors monthly. If leaks are found, replace the detector. The VSR waterflow switch should provide years of trouble-free service. The retard and switch assembly are easily field replaceable. In the unlikely event that either component does not perform properly, please order replacement retard switch assembly stock #1029030 (see Fig. 6). There is no maintenance required, only periodic testing and inspection.

Retard/Switch Assembly Replacement (See Fig. 6)

NOTICE The Retard/Switch Assembly is field-replaceable without draining the system removing or removing the waterflow switch from the pipe

1. Make sure the fire alarm zone or circuit connected to the waterflow switch is bypassed or otherwise taken out of service.
2. Disconnect the power source for local bell (if applicable).
3. Identify and remove all wires from the waterflow switch.
4. Remove the (2) mounting screws holding retard/switch assembly to the base. **Do not** remove the (2) retard housing screws.
5. Remove the retard assembly by lifting it straight up over the tripstem.
6. Install the new retard assembly. Make sure the locating pins on the retard/switch assembly fit into the locating pin bosses on the base.
7. Re-install the (2) original mounting screws.
8. Reconnect all wires. Perform a flow test and place the system back in service.

Fig. 6



Removal of Waterflow Switch

- To prevent accidental water damage, all control valves should be shut tight and the system completely drained before waterflow detectors are removed or replaced.
- Turn off electrical power to the detector, then disconnect wiring.
- Loosen nuts and remove U-bolts.
- Gently lift the saddle far enough to get your fingers under it. With your fingers, roll the vane so it will fit through the hole while continuing to lift the waterflow detector saddle.
- Lift detector clear of pipe.

POTTER
The Symbol of Protection

VSR
ÉCOULEMENT À AILETTES
INTERRUPTEUR D'ALARME AVEC DÉCALAGE

Homologué UL, CUL et CSFM, approuvé FM, LPCB Approuvé, marqué pour CE (EN12259-5) / Approuvé VdS modèle VSR-EU

Pression d'utilisation : 450 PSI (31 BAR) - UL

Échelle de sensibilité au débit pour le Signal :
4-10 GPM (15-38 LPM) - UL

Surpression maximale : 18 pi/s (5,5 m/s)

Capacité des contacts : Deux ensembles d'interrupteurs unipolaires bidirectionnels (Form C)
10 A à 125/250 VCA
2 A à 30 VCC résistif
10 mA min. à 24 VCC

Entrées de conduit : Deux entrées à alvéoles défonçables par conduit de 1/2 po.
Compartiments à interrupteur séparés et adaptés pour les voltages hétérogènes.

Critères environnementaux :
- NEMA 4/AP54 Installation qualifiée adaptée pour l'intérieur ou l'extérieur avec le joint installé en usine et la structure moulée sous pression, si utilisé avec le raccord de conduit approprié.
- Fourchette de température : 40 °F - 120 °F (4,5 °C - 49 °C) - UL
- Gaine de protection non-corrosive installée en usine dans la sellette.

Utilisation de service :

Gicleur automatique	NFPA-13
Une ou deux habitations familiales	NFPA-13D
Immeuble d'habitation, jusqu'à quatre étages	NFPA-13R
National Fire Alarm Code	NFPA-72

Renseignements sur les commandes			
Calibre nominal du tuyau		Modèle	Numéro de pièce
2 po	DN50	VSR-2 avec/TSK	1144502
2 1/2 po	DN65	VSR-2 1/2 avec/TSK	1144525
3 po	DN80	VSR-3 avec/TSK	1144503
3 1/2 po	-	VSR-3 1/2 avec/TSK	1144535
4 po	DN100	VSR-4 avec/TSK	1144504
5 po	-	VSR-5avec/TSK	1144505
6 po	DN150	VSR-6 avec/TSK	1144506
8 po	DN200	VSR-8 avec/TSK	1144508

Protection du couvercle : Détecte tout retrait du couvercle
Contact d'interrupteur : Interrupteur unipolaire bidirectionnel (Form C)
Capacité des contacts : 3 A à 250 VCA
5 A à 125 VCA
1mA à 5 VCC min
Raccordements : 20 cm (8 po) fils conducteurs 22 (calibre américain)

Éléments remplaçables: Retard/Switch Assemblée, pas de stock. 1029030

⚠ AVERTISSEMENT

- L'installation doit être faite par du personnel qualifié et être conforme à tous les règlements et recommandations nationaux ou locaux.
- Risque d'électrocution. Déconnectez la source d'alimentation avant l'entretien. Risque de blessures sérieuses ou de mort
- Risque d'explosion. Non conçu pour une utilisation dans des endroits dangereux. Risque de blessures sérieuses ou de mort.

ATTENTION

Les interrupteurs de débit qui contrôlent les extincteurs automatiques à eau ne doivent pas être utilisés comme seul dispositif d'amorçage pour le déversement de mousse AFFF, de réseau d'extincteurs, ou de systèmes chimiques d'extinction d'incendie. Les interrupteurs de débit utilisés comme tels peuvent causer des déversements accidentels dûs à une surpression, à de l'air emprisonné ou à des temps de décalage courts.

Renseignements généraux

Le modèle VSR est un interrupteur de débit à ailettes pour utilisation sur des extincteurs automatiques. Il est homologué UL et approuvé FM pour utilisation sur un tuyau en acier; séries 10 à 40, calibres 2 po à 8 po (50 mm à 200 mm). Les calibres approuvés LPC sont de 2 po à 8 po (50 mm à 200 mm). Reportez-vous à la fiche des renseignements sur les commandes.

Le VSR peut aussi être utilisé en tant que détecteur de débit d'eau sectionné pour les gros systèmes.

Le VSR contient deux interrupteurs à pression unipolaires, à deux directions et un décalage pneumatique ajustable à recyclage instantané. Les interrupteurs sont actionnés lorsque le débit est de 10 GPM (38 LPM) en aval de l'appareil. Cette condition d'écoulement doit se produire pendant une période de temps plus longue que la période de décalage sélectionnée.

Enceinte

Les interrupteurs SVR et le dispositif de décalage sont encastrés pour un usage général, dans un corps moulé sous pression. Un interrupteur de protection du couvercle est inclus pour indiquer tout retrait non autorisé du couvercle

POTTER
The Symbol of Protection

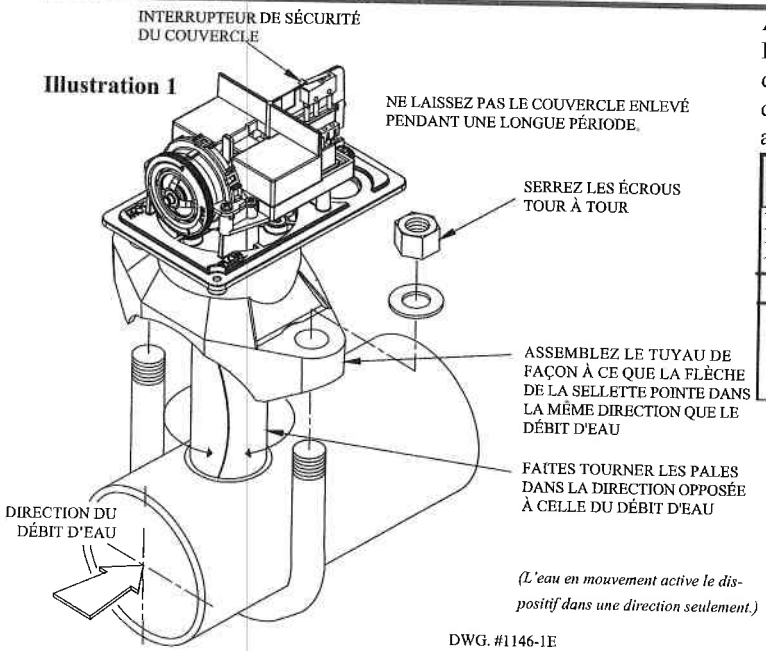
VSR
ÉCOULEMENT À AILETTES
INTERRUPTEUR D'ALARME AVEC DÉCALAGE

Installation Reportez-vous à l'illustration 1
Ces dispositifs peuvent être installés sur un tuyau horizontal ou vertical. Sur un tuyau horizontal, ils doivent être installés sur le dessus du tuyau, de manière à être accessibles. Le dispositif ne devrait pas être installé à moins de 6 po (15 cm) d'un raccord qui change la direction du débit d'eau ou à moins de 24 po (60 cm) d'un robinet ou d'un drain.
Note: Ne pas laisser couvercle pendant une longue période de temps.
Drainez le système et faites un trou dans le tuyau au moyen d'une scie cylindrique à basse vitesse. (reportez-vous à l'illustration 1)
Dégagez le tuyau intérieur de tout dépôt ou de toute autre substance, à une distance équivalente au diamètre du tuyau, de tous les côtés du trou.
Tournez la pale de manière à ce qu'elle puisse être insérée dans le trou; ne la pliez pas et ne la froissez pas. Insérez la pale de manière à ce que la flèche sur la sellette pointe dans la même direction que le débit d'eau. Attention de ne pas endommager la douille non-corrosive dans la selle. La douille devrait s'ajuster à l'intérieur du trou dans le tuyau. Installez la sangle de la sellette et serrez les écrous tour à tour, jusqu'au couple de serrage adéquat. (reportez-vous à l'illustration 1) La pale ne doit pas frotter sur l'intérieur du tuyau ou y être attachée de quelque façon que ce soit.
Spécifications sujettes à changement sans préavis.

⚠ ATTENTION

Ne pas tailler la palette. Ne pas suivre ces instructions pourrait empêcher le dispositif de fonctionner et annuler la garantie.

Illustration 1

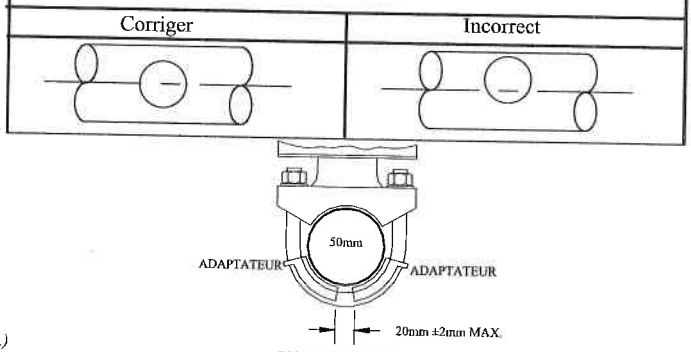


DWG. #1146-1E

Adjustement Du Decalage
Le délai peut être réglé en tournant la poignée d'ajustement du décalage de 0 au réglage maximal (60-90 secondes). Le temps du délai devrait être réglé au minimum, pour prévenir les fausses alarmes.

ATTENTION

Le trou doit être foré dans le centre de la pipe. Se référer à Directives d'installation.



DN50 SEULEMENT
UTILISEZ DEUX (2) 5180162 ADAPTATEURS, TEL QU'ILLUSTRÉ CI-DESSUS
DWG# 1146-1F

Modèle	Calibre nominal du tuyau		Diamètre extérieur nominal du tuyau		Épaisseur de la paroi du tuyau								Taille du trou		Écrou des boulons de serrage en forme de U	
					Barème 10 (UL)		Barème 40 (UL)		BS-1387 (LPC)		DN (VDS)					
	pouce	mm	pouce	mm	pouce	mm	pouce	mm	pouce	mm	pouce	mm	pouce	mm	pied-livre	n-m
VSR-2 avec/TSK	2	DN50	2,375	60,3	0,109	2,77	0,154	3,91	0,142	3,6	0,091	2,3	1,25 + 0,125/- 0,062	33,0 ± 2,0	20	27
VSR-2 1/2 avec/TSK	2 1/2		2,875	73,0	0,120	3,05	0,203	5,16								
VSR-2 1/2 avec/TSK		DN65	3,000	76,1					0,142	3,6	0,102	2,6				
VSR-3 avec/TSK	3	DN80	3,500	88,9	0,120	3,05	0,216	5,49	0,157	4,0	0,114	2,9	2,00 ± 0,125	50,8 ± 2,0		
VSR-3 1/2 avec/TSK	3 1/2		4,000	101,6	0,120	3,05	0,226	5,74								
VSR-4 avec/TSK	4	DN100	4,500	114,3	0,120	3,05	0,237	6,02	0,177	4,5	0,126	3,2				
VSR-5 avec/TSK	5		5,563	141,3	0,134	3,40	0,258	6,55								
VSR-6 avec/TSK	6	DN150	6,625	168,3	0,134	3,40	0,280	7,11	0,197	5,0	0,157	4,0				
VSR-8 avec/TSK	8	DN200	8,625	219,1	0,148	3,76	0,322	8,18	0,248	6,3	0,177	4,5				

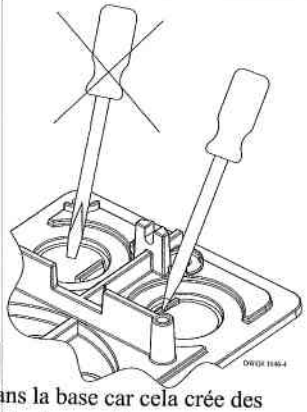
Tuyau compatible

Remarque : Pour un tuyau de cuivre ou de plastique, utilisez le modèle VSR-CF.

VSR
ÉCOULEMENT À AILETTES
INTERRUPTEUR D'ALARME AVEC DÉCALAGE

Ill. 2

Pour retirer les entrées à alvéoles défonçables : Placez un tournevis à l'intérieur des entrées défonçables, mais pas au centre.

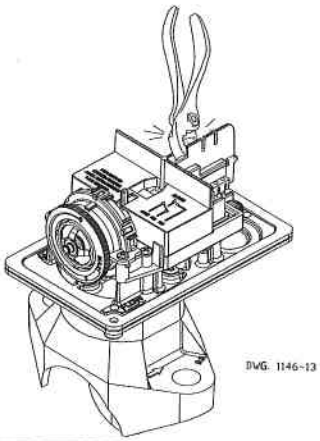


AVIS

Ne pas percer dans la base car cela crée des copeaux de métal qui pourraient endommager l'appareil.

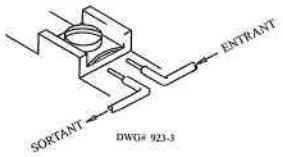
Ill. 3

Retirez le couvre-interrupteur dégagez une petite section du couvert lorsque vous connectez les deux interrupteurs d'une entrée de conduit.



Ill. 4

Connexions de la borne d'interrupteur
Borne de la plaquette de raccordement



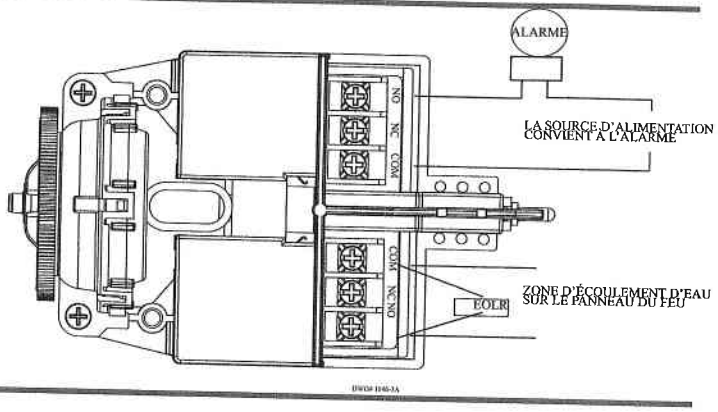
⚠ AVERTISSEMENT

Une partie non isolée d'un conducteur simple ne devrait pas être enroulée autour de la borne ni être utilisée comme deux connexions séparées. Le fil doit être sectionné, permettant ainsi de contrôler la connexion si le fil se déplace sous le terminal. Le non-respect de cette directive peut rendre le dispositif inefficace, ce qui pourrait causer des dommages matériels et la mort.

Ill. 5 Connexions électriques typiques

Remarques :

1. Le modèle VSR comporte deux interrupteurs, dont l'un peut être utilisé pour faire fonctionner une station centrale, comme signaleur à distance ou spécial, alors que l'autre est utilisé pour faire fonctionner un avertisseur visuel ou sonore local.
2. Une des conditions de l'approbation LPC de ce produit est que l'entrée du câble électrique doit être scellée de manière à éviter l'humidité.
3. Pour des directives sur les circuits, reportez-vous au dessin et à l'avertissement de la section « Connexions de la borne d'interrupteur » (illustration 2).

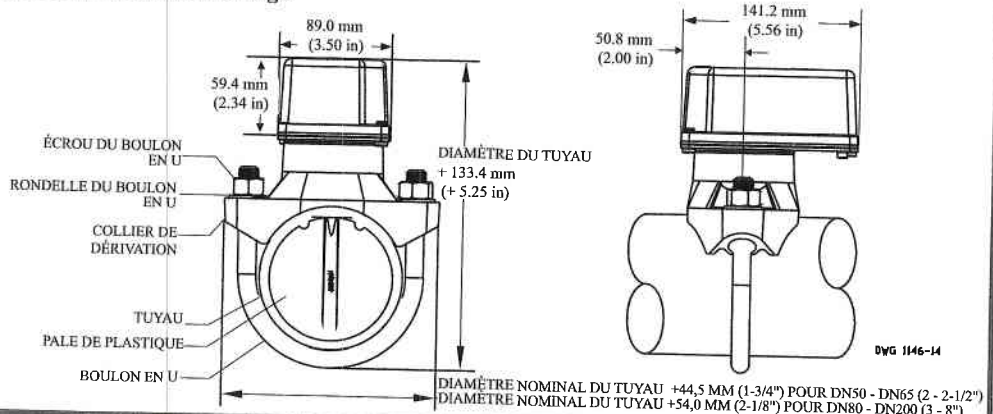


Essai

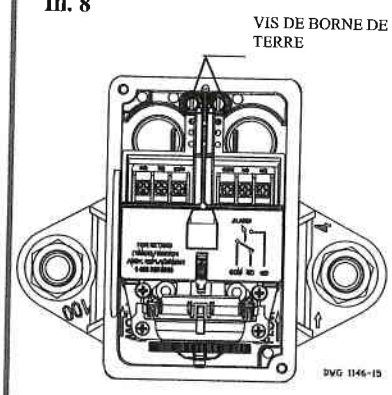
La fréquence d'inspection et d'essai du modèle VSR et des ses systèmes de contrôle associés devrait être conforme aux règlements et aux normes applicables de la NFPA et/ou aux lois en vigueur (le fabricant recommande de le faire à tous les trois mois, ou plus souvent). Utilisez le robinet d'essai, habituellement situé à l'extrémité de l'antenne, uniquement à des fins d'essai du système (si fourni). S'il n'y a pas de dispositions pour tester le fonctionnement du détecteur d'écoulement sur le système, l'installation du VSR n'est ni recommandée ni utile. Un débit minimal de 10 GPM (38 LPM) est requis pour activer ce dispositif.

AVIS Conseillez la personne chargée de l'essai du système de protection contre les incendies que ce système doit être examiné selon les instructions d'essai.

Ill. 7 Dimensions de montage



Ill. 8



Entretien

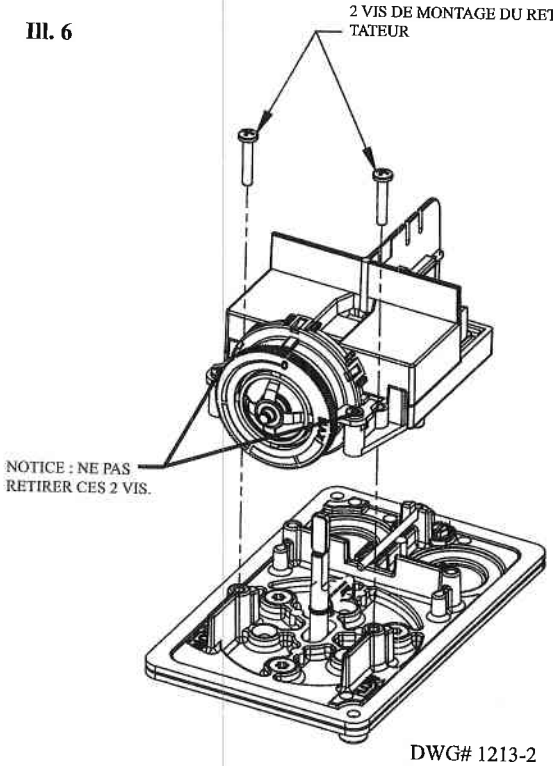
Vérifiez les détecteurs à tous les mois pour vous assurer qu'il n'y ait pas de fuites. Si vous trouvez une fuite, remplacez le détecteur. L'interrupteur de débit VSR devrait durer des années sans problèmes. L'assemblée de retard et de commutateur est facilement remplaçable sur place. Dans l'événement peu probable que l'un ou l'autre composant n'exécute pas correctement, commander svp les actions #1029030 de commutateur de retard de rechange. Il n'y a aucun entretien exigé, seulement essai et inspection périodiques.

Remplacement de l'assemblage retardateur/commutateur

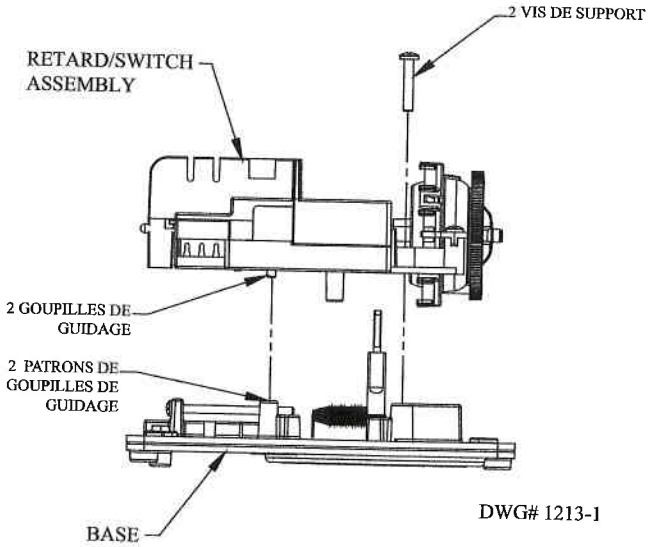
AVIS L'assemblage de retardateur/commutateur se remplace sur le terrain sans retirer le régulateur de circulation du tuyau.

1. S'assurer que la zone d'alarme d'incendie ou que le circuit branché au régulateur de circulation est contourné(e) ou retiré(e) du service de quelque autre façon.
2. Couper le courant de l'alarme locale (s'il y a lieu).
3. Identifier et retirer tous les fils du régulateur de circulation.
4. Retirer les deux vis de montage du retardateur.
5. Soulever l'assemblage du retardateur vers le haut sur la tige de déclenchement.
6. Installer le nouvel assemblage du retardateur. S'assurer que les goupilles de guidage du retardateur s'ajustent dans les trous de guidage sur le régulateur de circulation.
7. Fixer le retardateur à la base avec les deux vis déjà retirées.
8. Rebrancher tous les fils. Exécuter un test de débit et remettre le système en service.

Ill. 6



DWG# 1213-2



DWG# 1213-1

Retrait

- Pour prévenir les dégâts d'eau, tous les robinets de contrôle devraient être serrés et le système devrait être drainé en entier avant le retrait ou le remplacement des détecteurs de débit.
- Lorsque vous déconnectez le câblage, fermez toute alimentation électrique du détecteur
- Desserrez les écrous et retirez les boulons en forme de U
- Soulevez doucement la sellette, juste assez pour pouvoir glisser vos doigts en dessous. Avec vos doigts, tournez l'ailette de manière à ce qu'elle entre dans le trou, tout en continuant de lever la sellette du détecteur de débit
- Retirez le détecteur sur le tuyau en levant

National Fire Equipment Ltd.

MODEL 229

Model 229, Flush mounted Fire Department Connection

Complete 229 Flush Connection with Plate.

A104 Bushing 6" x 4"

A101NB Straight Body

A103 Plate

A90 Snoots

A81 Plugs

Application: Flush design when appearance is a factor. Double Inlet Fire Department connection with 500 GPM inlet capacity used to supplement water supply in standpipe or fire sprinkler systems. (REF. NFPA No. 14)

The body is complete with two drop clappers. The clappers ensure that if one of the servicing hoses bursts, the flow of water will not be interrupted. The clappers also allow for a single hose connection from the Fire Department pumper.

Comes complete with:

- Model A101NB Straight Body or A102NB Angel Body. The A102NB Angle body permits for top or bottom main pipe feed connection. Clappers must be changed for top or bottom connection.
- A103 Polished Rectangular Escutcheon Plate
- (2) A90 2½"(65mm) Brass Swivel Connections (Snoots)
- (2) A81 2½" (65mm) Brass Plugs
- Addition if required. Model A104 6" x 4" Bushing For 6" (152mm) pipe connections.
- **Option:** Available with Grooved end 4" (100mm)

Construction: Cast Brass Body, Brass Plate, Brass Swivel Adapters (Snoots) and Brass Plugs. All exposed services standard with polished finish.

Rated Pressure: 300 PSI /2068.50 kpa

Options: Plate and Plugs Only. Standard is Polished Brass. Optional Polished Chrome. Plate also available in Stainless Steel with Polished or Satin Finish with engraved lettering. Custom plates available. See section on special plates.

PLEASE SEE OUR DATA SHEETS ON FIRE DEPARTMENT CONNECTION BODIES (A101 AND A102) FOR DETAILED MEASUREMENTS

CE x 1191 LISTED 618R

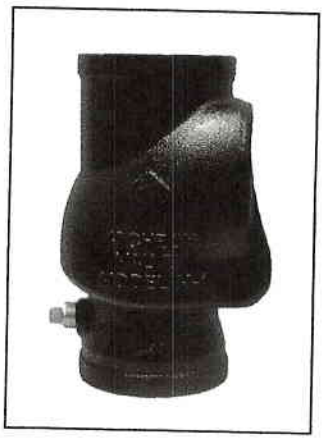
1-800-267-8508 • www.nationalfire.com
Moncton • Ottawa • Toronto • Windsor • Regina • Edmonton • Calgary • Vancouver

VIKING® TECHNICAL DATA — 4" CHECK VALVE MODEL M-2

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

1. DESCRIPTION

The Viking 4" Model M-2 Check Valve is a general purpose rubber-faced check valve approved for use in fire service systems. The Model M-2 Check Valve is manufactured with a ductile iron body, a stainless steel clapper assembly, brass seat, and an EPDM rubber.



Features

1. Ductile iron body for less weight and extra strength
2. Replaceable rubber seal
3. 1/2" NPT Drain Boss upstream of the seat
4. Lightweight, less than 12 lbs.
5. Spring loaded to prevent water hammer

2. LISTINGS AND APPROVALS

cULus Listed - Guide HMER
FM Approved - Single Check Valves
NYC Department of Buildings - MEA 89-92-E Vol. 40

3. TECHNICAL DATA

WARNING: Cancer and Reproductive Harm- www.P65Warnings.ca.gov

Specifications:

Rated to 250 psi (17.2 bar) water working pressure.
Factory tested hydrostatically to 500 psi (34.5 bar).
Standard Grooved Connections - ANSI/AWWA C606
Friction Loss: 15' (Expressed in equivalent length of Schedule 40 pipe based on Hazen & Williams formula: C = 120.)
Cv Factor: 414
Patent Pending

Material Standards:

Refer to Figure 1

Ordering Information:

4" Valve only
Part Number 22550

4. INSTALLATION

The Model M-2 Check Valve must be installed in an area not subject to freezing temperatures or physical damage. When corrosive atmospheres and/or contaminated water supplies are present, it is the owner's responsibility to verify compatibility with the Model M-2 Check Valve. Prior to installing the valve, thoroughly flush the water supply piping to verify that no foreign matter is present. NOTE: The Model M-2 Check Valve may be installed in the vertical position with direction of flow up, or in the horizontal position with the 1/2" drain boss down.

Hydrostatic Test:

The valve is factory tested at 500 psi (34.5 bar). Model M-2 Check Valves may be hydrostatically tested at 300 psi (20.7 bar) and/or 50 psi (3.4 bar) above the normal water working pressure for limited periods of time (two hours) for the purpose of acceptance by the Authority Having Jurisdiction. If air testing is required, do not exceed 80 psi (5.5 bar) air pressure.

5. OPERATION (Refer to Figure 1)

Water flowing through the Viking Model M-2 Check Valve lifts the rubber-gasketed clapper assembly (2) off the seat (3) and flows into the sprinkler piping. When flow through the valve stops, the clapper assembly (2) closes quickly. Rubber gasket (9) forms a tight seal against water seat (3), trapping pressurized water above the clapper and prevents reverse flow from the sprinkler piping.

6. INSPECTIONS, TESTS AND MAINTENANCE

⚠ WARNING

Any system maintenance or testing that involves placing a control valve or detection system out of service may eliminate the fire protection capabilities of that system. Prior to proceeding, notify all Authorities Having Jurisdiction. Consideration should be given to employment of a fire patrol in the affected area.

VIKING®

TECHNICAL DATA

4" CHECK VALVE MODEL M-2

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

NOTICE

The owner is responsible for maintaining the fire-protection system and devices in proper operating condition.

The Model M-2 Check Valve and trim must be kept free of foreign matter, freezing conditions, corrosive atmospheres, contaminated water supplies, and any condition that could impair its operation or damage the device.

It is imperative that the system be inspected and tested on a regular basis. The frequency of the inspections may vary due to contaminated water supplies, corrosive water supplies, and corrosive atmospheres. For minimum maintenance and inspection requirements, refer to NFPA 25. In addition, the Authority Having Jurisdiction may have additional maintenance, testing, and inspection requirements that must be followed.

6-A Five-Year Internal Inspection (Refer to Figure 1)

Internal inspection of check valves is recommended every five years unless inspections and tests indicate more frequent inspections are required.

1. Notify the Authority Having Jurisdiction, the system is being taken out of service.
2. Ensure the fire alarm system has been placed in a safe condition and the central station has been notified of the work to prevent a false alarm.
3. Close the water supply main control valve, placing the system out of service.
4. Open the main drain. If necessary, open the system test valve to vent and completely drain the system.
5. Remove check valve from system.
6. Inspect water seat (3). Wipe away all contaminants, dirt, and mineral deposits. Do not use solvents or abrasives.
7. Inspect clapper assembly (2) and rubber (9). Replace damaged or worn rubber parts as required.

NOTE: THE CLAPPER ASSEMBLY IS NOT REPLACEABLE. IF IT IS DETERMINED THAT THE CLAPPER IS DAMAGED, THE VALVE MUST BE REPLACED.

⚠ CAUTION

Never apply any lubricant to seats, gaskets, or any internal operating parts of the valve. Petroleum-based grease or oil will damage rubber components and may prevent proper operation.

6-B Maintenance (Refer to Figure 1)

1. Perform steps 1 through 6 of paragraph 6-A FIVE-YEAR INTERNAL INSPECTION.
2. To remove clapper rubber (9):
   a. Use the appropriate wrenches to loosen and remove button-head socket screw (7), hex nut (11), sealing washer (8), and rubber retainer (10).
   b. Remove the clapper rubber (9) for inspection. If the clapper rubber shows signs of wear, such as cracking, cuts, or excessively deep grooves where the rubber contacts the water seat, replace the rubber.
3. To re-install clapper rubber (9):
   a. Place the clapper rubber (9) over the center hub of the rubber retainer (10).
   b. Position the retainer (10) (with rubber in place) against the clapper (2) as shown in Figure 1.
   c. Replace and tighten the button-head socket screw (7), sealing washer (8), and hex nut (11). The sealing washer (8) must be located on the top side of the clapper assembly (2) as shown in Figure 1. DO NOT over-tighten.

7. AVAILABILITY

The Viking Check Valve is available through a network of domestic and international distributors. See The Viking Corporation website for closest distributor or contact The Viking Corporation.

8. GUARANTEES

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

VIKING®

TECHNICAL DATA

4" CHECK VALVE MODEL M-2

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

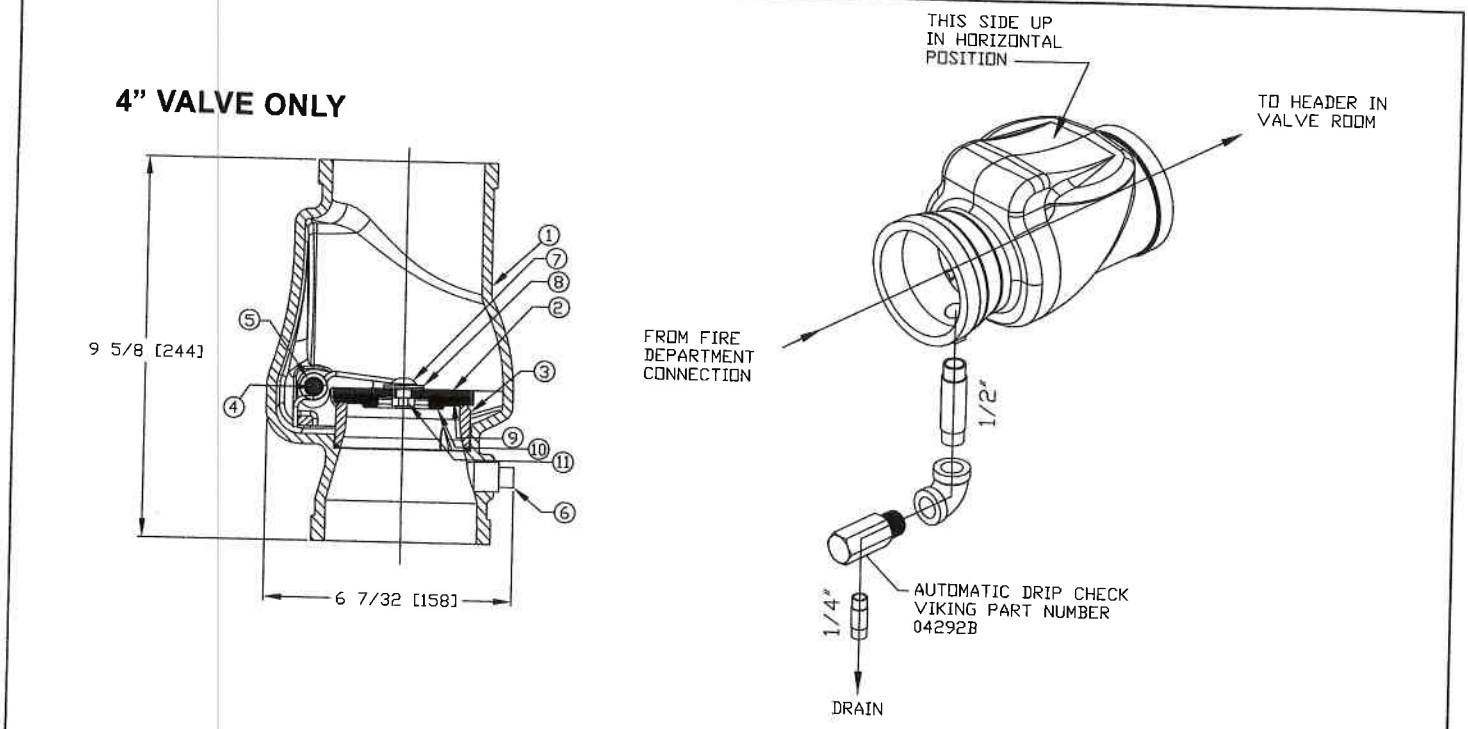


Figure 1

Item No.	Part No.	Description	Material	No. Req'd.
1	--	Body	Ductile Iron, 64-45-12	1
2	--	Clapper Assembly	Stainless Steel, UNS-S30400	1
3	--	Seat	Brass, UNS-C83600	1
4	--	Pin Hinge, Clapper	Stainless Steel, UNS-S30300	1
5	--	Spring	Stainless Steel, UNS-S30200	1
6	--	Plug, 1/2" Galvanized	Galvanized Steel	1
7	*	Screw, Socket Head, 3/8-24 x 1/2"	Stainless Steel, UNS-S30400	1
8	*	Sealing Washer, 3/8"	EPDM & Stainless Steel	1
9	*	Rubber	EPDM	1
10	*	Retainer	Stainless Steel, UNS-S30400	1
11	*	Jam Nut, 3/8"-24	Stainless Steel, UNS-S30400	1

Note: -- Indicates replacement part not available.
* Indicates part is available in Sub-Assembly only--see Sub-Assembly list.

SUB-ASSEMBLY LIST		
7 - 11	13508	Rubber Repair Kit

Replaces Form No. F_032405 Rev P65
(Revised images and format; replaced PN 12337 with 22550.)

National Fire Equipment Ltd.

MULTI-PURPOSE ABC DRY CHEMICAL

STRIKE FIRST ABC MULTI-PURPOSE DRY CHEMICAL FIRE EXTINGUISHERS ARE DESIGNED FOR:

- CLASS A — WOOD, PAPER, CLOTH
- CLASS B — FLAMMABLE LIQUIDS & GASES
- CLASS C — ELECTRICAL CONDUCTIVITY
- 6 YEAR WARRANTY

Features

- Steel cylinder complete with protective skirt
- Super durable polyester powder paint finish with superior corrosion resistance
- Waterproof stainless steel gauge
- Reinforced, full grip stainless steel handles
- Oversized stainless steel pull pin with retaining strap for easier and faster activation
- Colour and bar coded labels for accurate service
- Complies with NFPA 10 Standard
- Meets D.O.T. Requirements
- U.S.C.G. approved with bracket listed on label
- Temperature range: -65°F to 120°F (-54°C to 49°C)

UL LISTED
MEETS OR EXCEEDS: ANSI/UL 299 & 711

ULC LISTED HOMOLOGUÉ
MEETS OR EXCEEDS: CAN/ULC-S504 & S508

CAPACITY	2.5 lbs.	5 lbs.	5 lbs.	10 lbs.	20 lbs.	30 lbs.
Model No.	SF-ABC110ST	SF-ABC310	SF-ABC340	SF-ABC680	SF-ABC1020	SF-ABC30
UL/ULC Rating	1-A : 10-B : C	3-A : 10-B : C	3-A : 40-B : C	6-A : 80-B : C	10-A : 120-B : C	10-A : 120-B : C
U.S.C.G. Approval	Type B:C Size I	Type A Size II, Type B:C Size I	Type A Size II, Type B:C Size I	Type A Size II, Type B:C Size II	Type A Size II, Type B:C Size III	Type A Size II, Type B:C Size IV
Range	8-10 ft (2.5-3 m)	8-10 ft (2.5-3 m)	8-10 ft (2.5-3 m)	10-15 ft (3-4.5 m)	10-15 ft (3-4.5 m)	10-15 ft (3-4.5 m)
Discharge Time	9 sec	13 sec	13 sec	15 sec	28 sec	28 sec
PSI	150	195	195	235	235	195
Height	15 1/4" (39 cm)	15 1/4" (39 cm)	16 7/8" (43 cm)	21 1/4" (54 cm)	24" (61 cm)	30 3/4" (78 cm)
Width	3 3/4" (9.5 cm)	6 3/4" (17 cm)	6 3/4" (17 cm)	8" (20.3 cm)	9 1/2" (24 cm)	9 1/2" (24 cm)
Diameter	3 1/8" (8 cm)	4 1/4" (11 cm)	4 1/4" (11 cm)	5 1/8" (13 cm)	7 1/8" (18 cm)	7 1/8" (18 cm)
Weight	4 1/2 lb (2 kg)	10 1/2 lb (4.8 kg)	10 1/2 lb (4.8 kg)	19 1/4 lb (8.8 kg)	35 1/4 lb (16.1 kg)	50 1/3 lb (22.8 kg)
Chrome Option	YES	–	YES	–	–	–
Standard Bracket	Vehicle/Marine	Wall or Vehicle/Marine	Wall or Vehicle/Marine	Wall	Wall	Wall
Optional Brackets	Wall UP2-DB	UB-5DB UB-5MD HDVB-1	UB-5DB UB-5MD HDVB-1	UP-10MD HDVB-2	HDVB-3	HDVB-4 HD-CART

National Fire Equipment Ltd.
TORONTO: (905) 761-6355 Toll Free: (800) 267-8508
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VANCOUVER: (604) 420-1131 Toll Free: (800)-667-2138
BURNABY: (604)-299-4498
EDMONTON: (780) 455-3870 Toll Free: (888)-891-1008
CALGARY: (403) 236-5661
MONCTON: (506) 859-7277 Toll Free: (877) 816-3473
MISSISSAUGA: (905) 565-1385
www.nationalfire.com

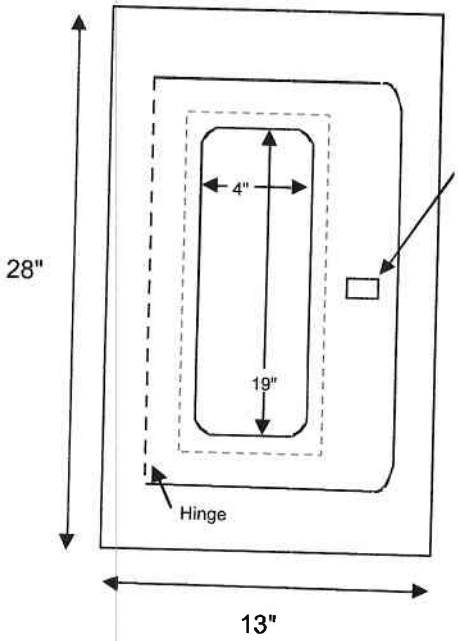
Model No. CE-950-3-FR
9" X 24" X 6"
RECESSED

FIRE EXTINGUISHER CABINET
FIRE RATED

STANDARD CONSTRUCTION FEATURES
- 1" Turnback on Front
- Full Glass Panel *(Glass Size 5" x 20")*
- Grey Baked Enamel Finish
- Accomodates 10lb Dry Chemical Fire Extinguisher

Options
- Break Glass Door & Lock
- Cylinder Lock
- 304 Stainless Steel Front (Satin Finish) & Tub

Rating:
Warnock Hersey International
Test Report WHI-495-1534
2 hour vertical fire rated assembly



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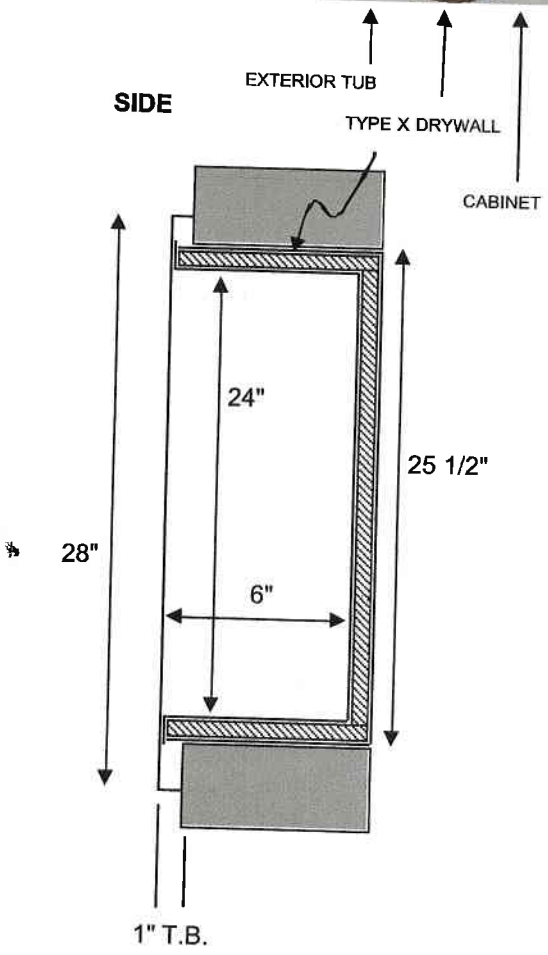

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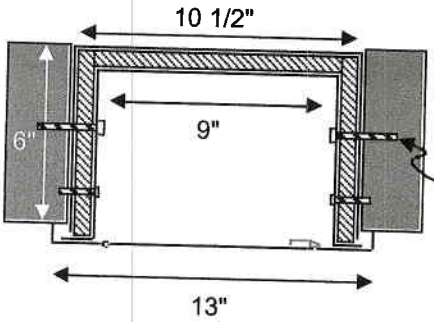

TOP

MADE IN CANADA

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