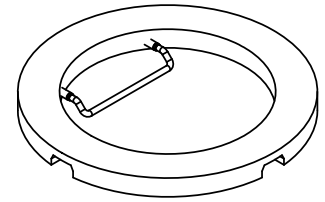
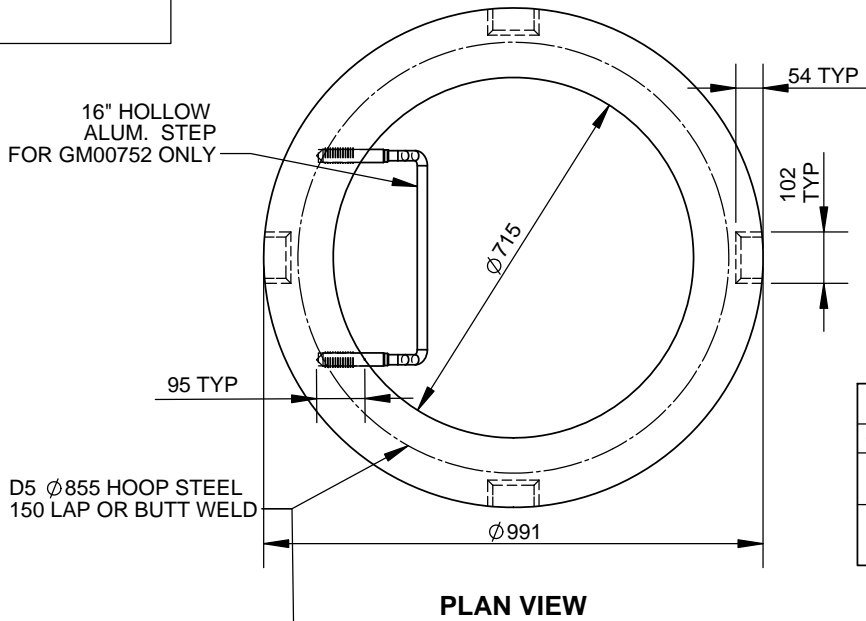


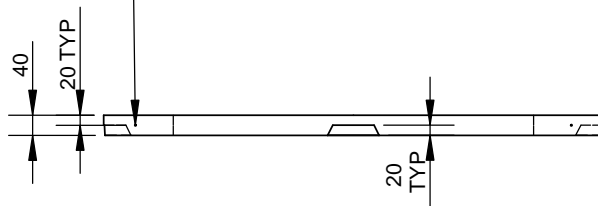
STENCIL
 CCP-OAKVILLE
 (HEIGHT)
 (DATE OF MFG)



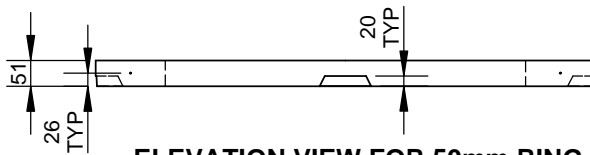
ISOMETRIC VIEW



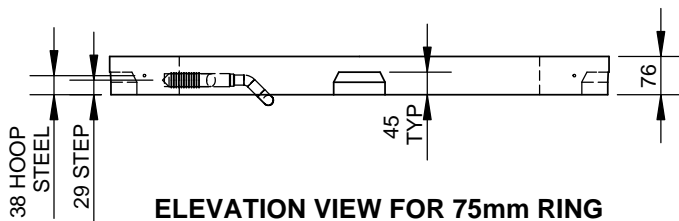
MATERIAL LIST			
QTY	TYPE	DESCRIPTION	REMARK
1	E	16" HOLLOW ALUMIN. STEP	FOR 75mm ONLY
1	E	HOOP STEEL RD. 855 X D5	



ELEVATION VIEW FOR 40mm RING



ELEVATION VIEW FOR 50mm RING



ELEVATION VIEW FOR 75mm RING

PRODUCT VARIABLES				
PART ID	BUNDLE QTY	UNIT HEIGHT	MASS (kg)	STEP QTY
GM00401	1	40	34	0
GM00501	1	51	43	0
GM00751	1	76	64	0
GM00752	1	76	64	1
GMB00401	12	40	413	0
GMB00501	12	51	516	0
GMB00751	8	76	512	0
GMB00752	8	76	512	8

ENGINEER STAMP (IF REQUIRED)

ALL DIMENSIONS ARE IN mm
 DRAWINGS ARE NOT TO SCALE
 ALL VIEW AS POURED UNLESS SPECIFIED
 CDW TO ASTM A1064 Fy=485 MPa
 CDW Fy = 485 MPa
 SHIPPED IN BUNDLE

MIN. CONC STRENGTH 30 MPa
 TOLERANCES TO CSA A257
 DRY CAST MIX
 CEMENT TYPE HS_e
 *H=40 NOT ON OPSD LIST

CON CAST PIPE (CCP) STANDARD DRAWING
 STD. OPSD 704.010 NOV 2014 REV3 PART GM00XXX

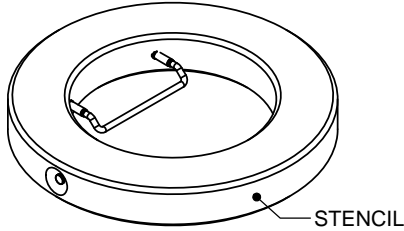
TITLE
MANHOLE GRADE RING
 HEIGHT = 40mm*, 50mm, 75mm
 75mm WITH STEP

REV.	DESCRIPTION	ENG.	DATE
3	CDW SPECIFICATION REFERENCED	MS	25APR2016
2	ADDED GM00401/GMB00401	SM	19/OCT/15
1	UPDATE MASS	KE	15/SEP/15

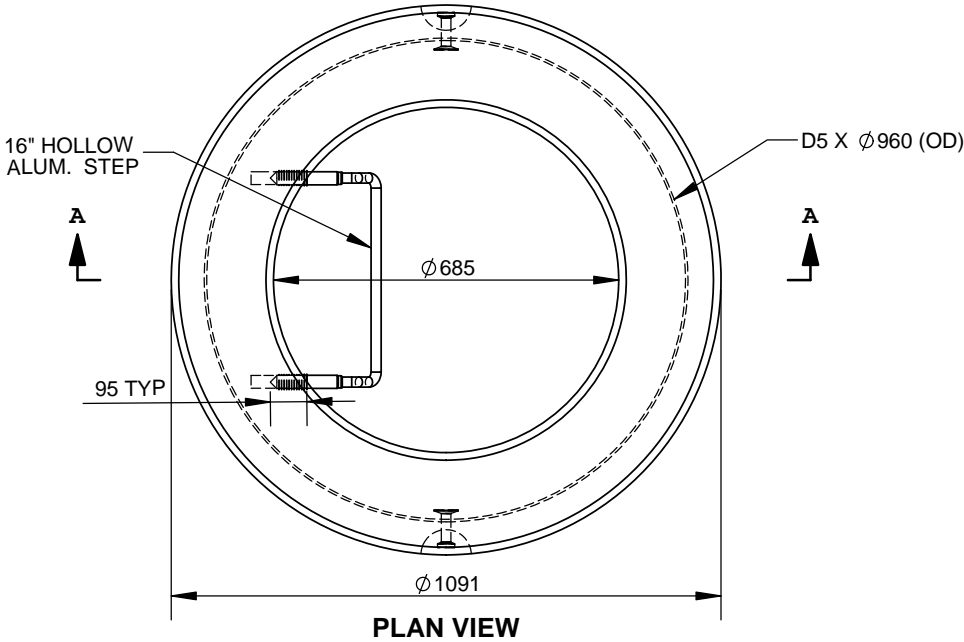
DRAWN BY	CHECKED BY	DATE	FILE	PAGE
SW	BA	29/FEB/12	MH RING	1 OF 1

STENCIL
 CCP-OAKVILLE
 CSA A257.4 /
 OPSD 704.010
 685 X 152
 TYPE HSe
 DATE OF MFG
 213 KG

MATERIAL LIST		
QTY	TYPE	DESCRIPTION
2	E	4TON x 3 1/2" SLA DBL HEAD
1	E	16" HOLLOW ALUM. STEP
1	E	D5 X Ø960 (RD) HOOP STL

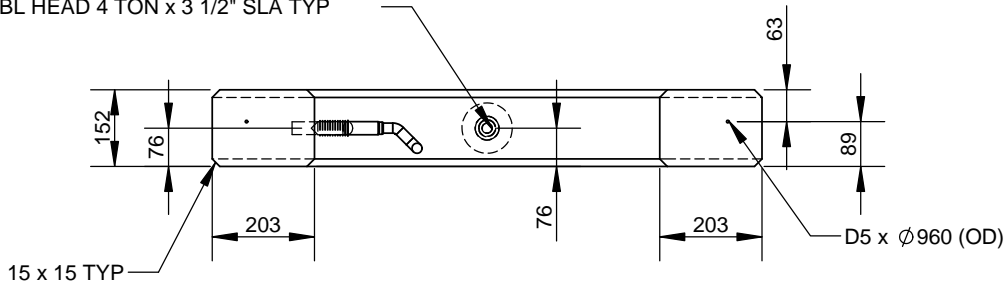


ISOMETRIC VIEW



PLAN VIEW

DBL HEAD 4 TON x 3 1/2" SLA TYP



SECTION A

ENGINEER STAMP (IF REQUIRED)

ALL DIMENSIONS ARE IN mm
 DRAWINGS ARE NOT TO SCALE
 ALL VIEW AS POURED UNLESS SPECIFIED
 CDW TO ASTM A1064 Fy = 485MPa (Deformed)

MIN. CONC STRENGTH 30 MPa
 TOLERANCES TO CSA A257.4
 DRY CAST
 CEMENT TYPE HSe
 MASS = 213 kg

CON CAST PIPE (CCP) STANDARD DRAWING

STD. OPSD 704.010 NOV 2014 REV3 PART GM01502

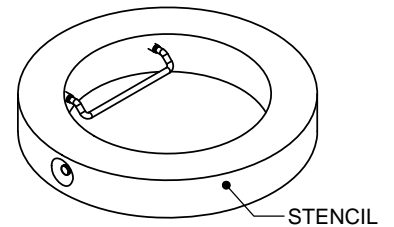
TITLE
**MANHOLE GRADE RING
 HEIGHT = 152mm
 WITH STEP**

1	CDW SPECIFICATION REFERENCED	MS	25APR2016
0	INITIAL RELEASE FOR 152 HEIGHT ONLY	SW	11/AUG/15
REV.	DESCRIPTION	ENG.	DATE

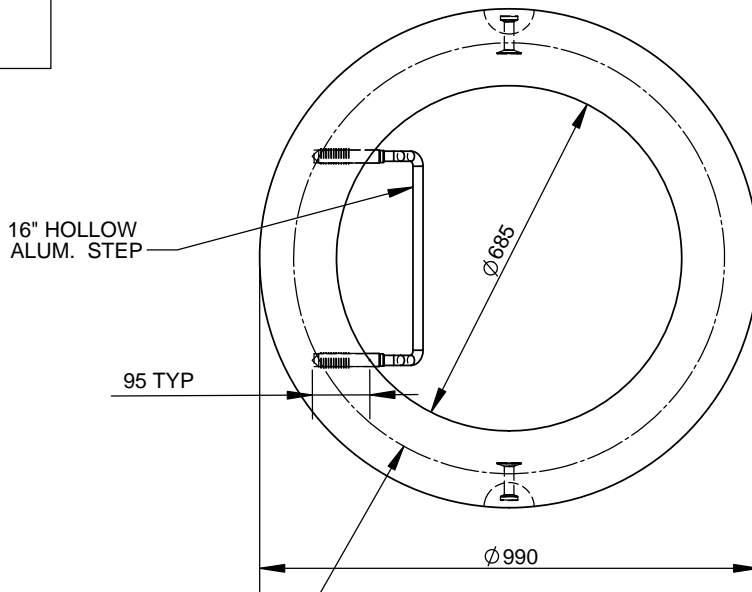
DRAWN BY KE	CHECKED BY SW	DATE 11/AUG/15	FILE MH RING 305	PAGE 1 OF 1
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STENCIL

CCP-GUELPH
152 W/ STEP
(DATE OF MFG)
TYPE HSe
151 kg

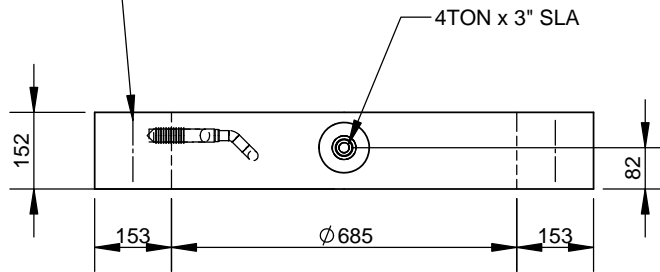


ISOMETRIC VIEW



PLAN VIEW

3 X 8 6 / 8 WWF
PLACE CENTRE OF WALL
LAP 150 MIN OR BUTT WELD
ALT D5 $\phi 820 \pm 15$



ELEVATION VIEW

MATERIAL LIST

QTY	TYPE	DESCRIPTION
2	E	4TON x 3" SLA
1	E	16" HOLLOW ALUM. STEP
1	E	3X8 6/8 WWF $\phi 820 \pm 15$ X 125

ENGINEER STAMP (IF REQUIRED)

ALL DIMENSIONS ARE IN mm
DRAWINGS ARE NOT TO SCALE
ALL VIEW AS POURED UNLESS SPECIFIED
WWF TO ASTM 1064
WWF $F_y = 485\text{MPa}$ (Deformed)

MIN. CONC STRENGTH 30 MPa
TOLERANCES TO CSA A257.4
WET CAST MIX
CEMENT TYPE HSe
MASS = 151kg

CON CAST PIPE (CCP) STANDARD DRAWING

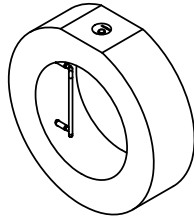
STD. OPSD 704.010 NOV 2014 REV3 PART GM01502-1

TITLE
**MANHOLE GRADE RING
HEIGHT = 152mm
WITH STEP**

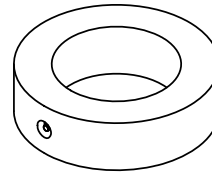
3	REVISED AS PER LATEST STANDARD	MS	25APR2016
2	OD ERROR CORRECTED	KE	9/APR/13
1	ALT. REINFORCEMENT FOR OCP	KE	1/AUG/12
REV.	DESCRIPTION	ENG.	DATE

DRAWN BY KE	CHECKED BY SW	DATE 8/AUG/12	FILE MH RING WC	PAGE 1 OF 1
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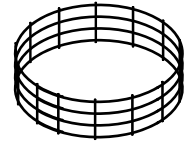
STENCIL	
CCP-GUELPH	685 X 305
(DATE OF MFG)	A257.4
TYPE HSe	430 kg



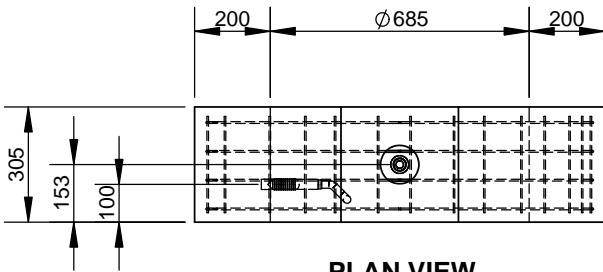
**ISOMETRIC VIEW
NEW HAMPTON FORM
(AS POUR)**



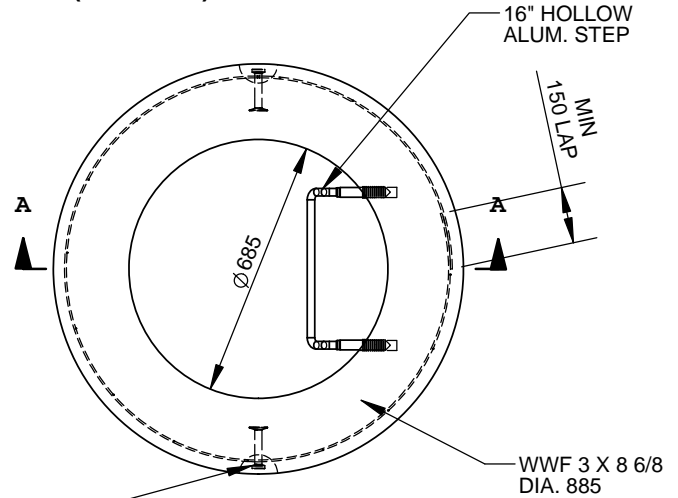
**ISOMETRIC VIEW
TRADITIONAL FORM
(AS POUR)**



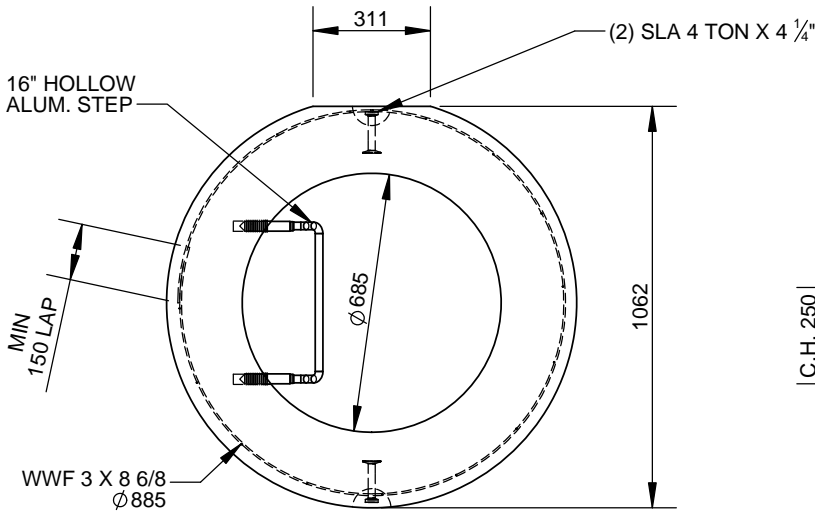
**ISOMETRIC VIEW
CAGE**



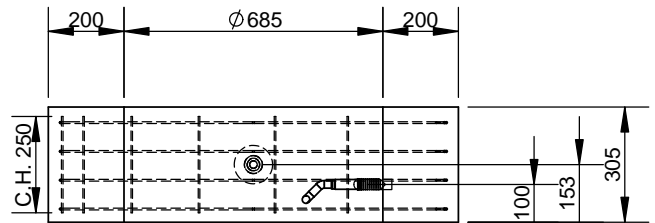
**PLAN VIEW
NEW HAMPTON FORM
(AS POUR)**



**PLAN VIEW
TRADITIONAL FORM
(AS POUR)**



**ELEVATION VIEW
NEW HAMPTON FORM
(AS POUR)**



**SECTION A
TRADITIONAL FORM
(AS POUR)**

MATERIAL LIST		
QTY	TYPE	DESCRIPTION
1	E	16" HOLLOW ALUMINUM STEP
2	E	4 TON X 4 1/4" SLA
1	E	3X8 6/8 WWF Ø885 ±15 X 250

ALL DIMENSIONS ARE IN mm
DRAWINGS ARE NOT TO SCALE
WWF SHEETS TO ASTM A1064
WWF Fy = 485MPa (Deformed) 450MPa (Smooth)

MIN. CONC STRENGTH 35 MPa
CLEAR COVER = 25 mm ± 5 mm
TOLERANCES TO CSA A257.4
APPROX. MASS 430 kg
STRIP CONC. STRENGTH 20 MPa
AIR ENTRAINMENT 5 % TO 8 %
CEMENT TYPE HSe

CON CAST PIPE (CCP) STANDARD DRAWING

STD. OPSD 704.010 NOV 2014 REV3 PART GM03002

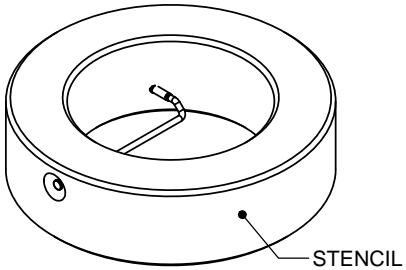
TITLE
**305 MANHOLE GRADE RING
Ø 685**

6	REVISED AS PER LATEST STANDARDS	MS	25APR2016
5	UPDATE SHEET FRMT / ADD GEOMETRY FOR NEW FORM	CW	05/APR/11
REV.	DESCRIPTION	ENG.	DATE

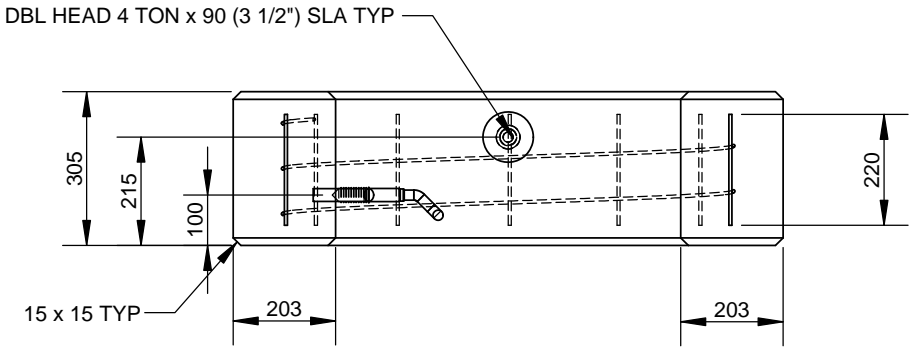
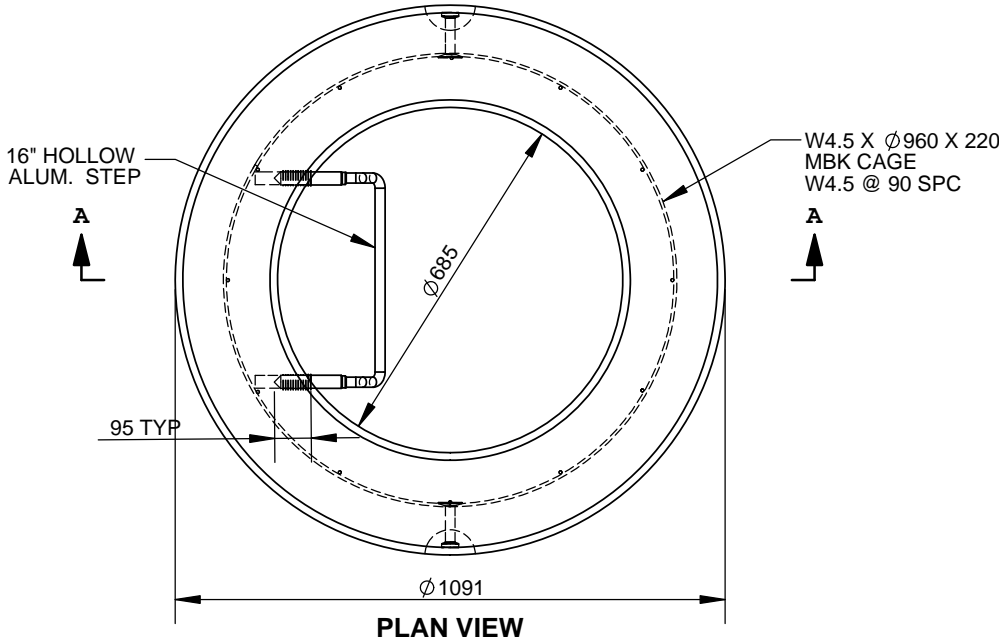
DRAWN BY CW	CHECKED BY SW	DATE 05/APR/11	FILE GM03002	PAGE 1 OF 1
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STENCIL
 CCP-OAKVILLE
 CSA A257.4 /
 OPSD 704.010
 685 X 305
 TYPE HSe
 DATE OF MFG
 425 KG

MATERIALS LIST		
QTY.	TYPE	DESCRIPTION
1	E	16" HOLLOW ALUM. STEP
2	E	4TON x 90 (3 1/2") SLA DBL HEAD
1	E	W4.5 @ 90 X Ø960 X 220 MBK CAGE



ISOMETRIC VIEW



SECTION A

ENGINEER STAMP (IF REQUIRED)

ALL DIMENSIONS ARE IN mm
 DRAWINGS ARE NOT TO SCALE
 ALL VIEW AS POURED UNLESS SPECIFIED
 CDW TO ASTM A1064 Fy = 485MPa (Deformed)

MIN. CONC STRENGTH 30 MPa
 TOLERANCES TO CSA A257.4
 DRY CAST
 CEMENT TYPE HSe
 MASS = 425 kg

CON CAST PIPE (CCP) STANDARD DRAWING

STD. OPSD 704.010	NOV 2014 REV3	PART GM03002K
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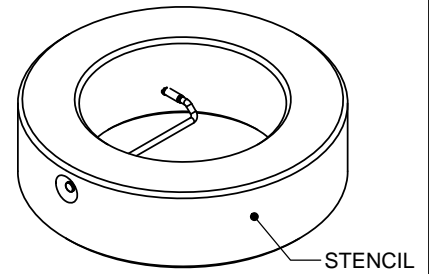
TITLE
**MANHOLE GRADE RING
 HEIGHT = 305mm
 WITH STEP**

1	CDW SPECIFICATION REFERENCE	MS	25APR2016
0	INITIAL RELEASE FOR 305 HEIGHT ONLY	KE	11/AUG/15
REV.	DESCRIPTION	ENG.	DATE

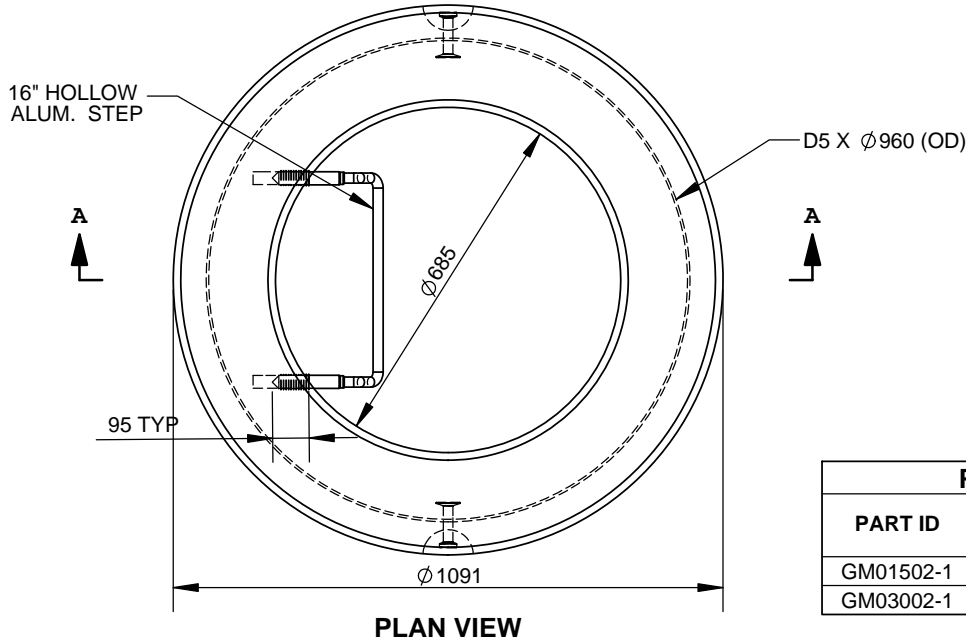
DRAWN BY KE	CHECKED BY SW	DATE 11/AUG/15	FILE MH RING 305	PAGE 1 OF 1
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STENCIL
CCP-OAKVILLE CSA A257.4 / OPSD 0704.010 685 X H TYPE HSe DATE OF MFG (MASS) KG

QTY.	TYPE	DESCRIPTION
X	E	D5 X Ø960 (OD) HOOP STEEL (FOR 305)
1	E	16" HOLLOW ALUM. STEP
2	E	4TON x 3 1/2" SLA

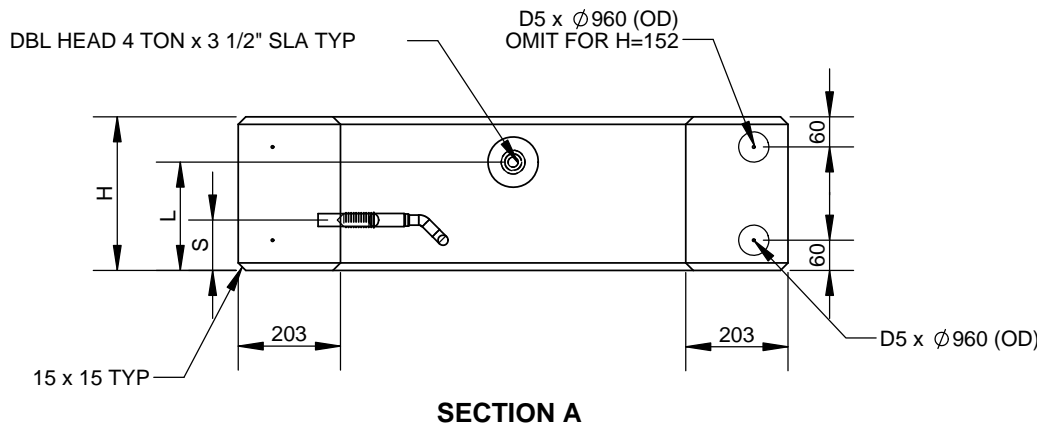


ISOMETRIC VIEW



PLAN VIEW

PART ID	VARIABLE DIMENSIONS				MASS (kg)
	H	S	L	X	
GM01502-1	152	76	89	1	213
GM03002-1	305	100	215	2	425



SECTION A

ENGINEER STAMP (IF REQUIRED)

ALL DIMENSIONS ARE IN mm
DRAWINGS ARE NOT TO SCALE
ALL VIEW AS POURED UNLESS SPECIFIED
CDW TO ASTM A1064 Fy = 485MPa (Deformed)

MIN. CONC STRENGTH 30 MPa
TOLERANCES TO CSA A257.4
DRY CAST
CEMENT TYPE HSe

CON CAST PIPE (CCP) STANDARD DRAWING

STD. OPSD 704.010	NOV 2014 REV3	PART GM0XXX2
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TITLE
**MANHOLE GRADE RING
HEIGHT = 152, 305mm
WITH STEP**

3	CDW SPECIFICATION REFERENCED	MS	25APR2016
2	REMOVE GM01252-1	SM	29JUN2015
1	INITIAL RELEASE	MS	15JUNE2015
REV.	DESCRIPTION	ENG.	DATE

DRAWN BY SM	CHECKED BY SW	DATE 29JUN2015	FILE MH RING 305	PAGE 1 OF 1
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