GRADELOK®

Specified By Utility Experts Everywhere

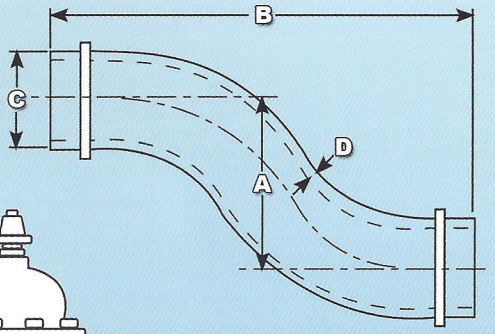
With a life expectancy of, say 100 years or so, why not make certain your fire hydrants are installed correctly the first time. How many times after installation is a hydrant still either too high or too low?

Specifying GRADELOK® gives you the advantages of a restrained joint and grade adjustment in a single fitting.

You will provide enhanced aesthetic appearance by having all fire hydrants set exactly to grade. By specifying GRADELOK® you'll save time and money by eliminating expensive extension kits and concrete thrust devices. Be sure to specify GRADELOK®, the system providing the very best hydrant installation available.

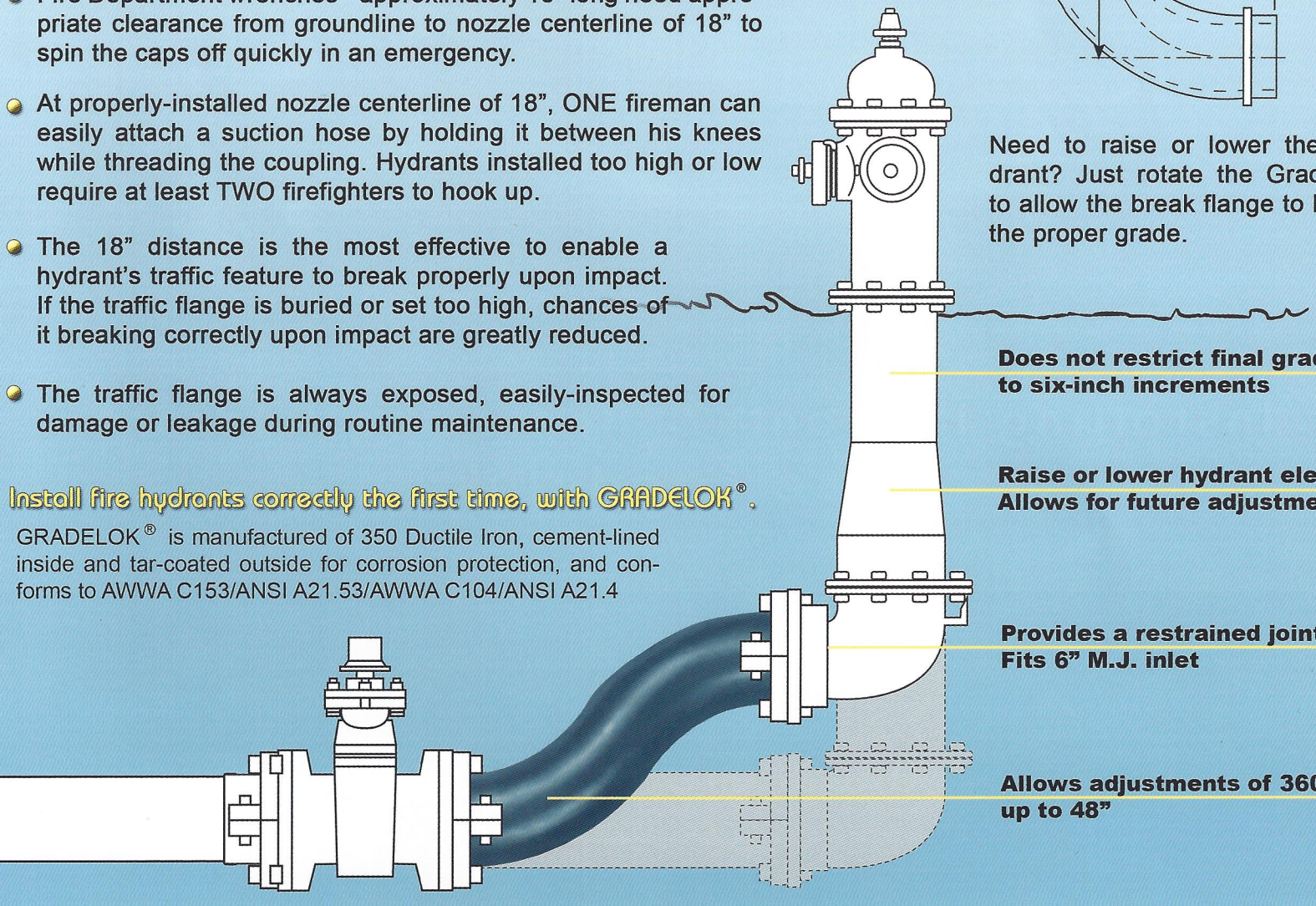
AVAILABLE SIZES

	6"x6"	6"x12"	6"x24"	6"x6"MJ	6"x12"MJ	6"x24"MJ
wt(lbs.)	72	100	140	76	106	140
A	6"	12"	24"	6"	12"	24"
B	18"	30"	41"	18"	30"	41"
C	6.90"	6.90"	6.90"	6.90"	6.90"	6.90"
D	.37"	.37"	.37"	.37"	.37"	.37"



- Fire Department wrenches - approximately 15" long need appropriate clearance from groundline to nozzle centerline of 18" to spin the caps off quickly in an emergency.
- At properly-installed nozzle centerline of 18", ONE fireman can easily attach a suction hose by holding it between his knees while threading the coupling. Hydrants installed too high or low require at least TWO firefighters to hook up.
- The 18" distance is the most effective to enable a hydrant's traffic feature to break properly upon impact. If the traffic flange is buried or set too high, chances of it breaking correctly upon impact are greatly reduced.
- The traffic flange is always exposed, easily-inspected for damage or leakage during routine maintenance.

Need to raise or lower the drant? Just rotate the Grad to allow the break flange to b the proper grade.



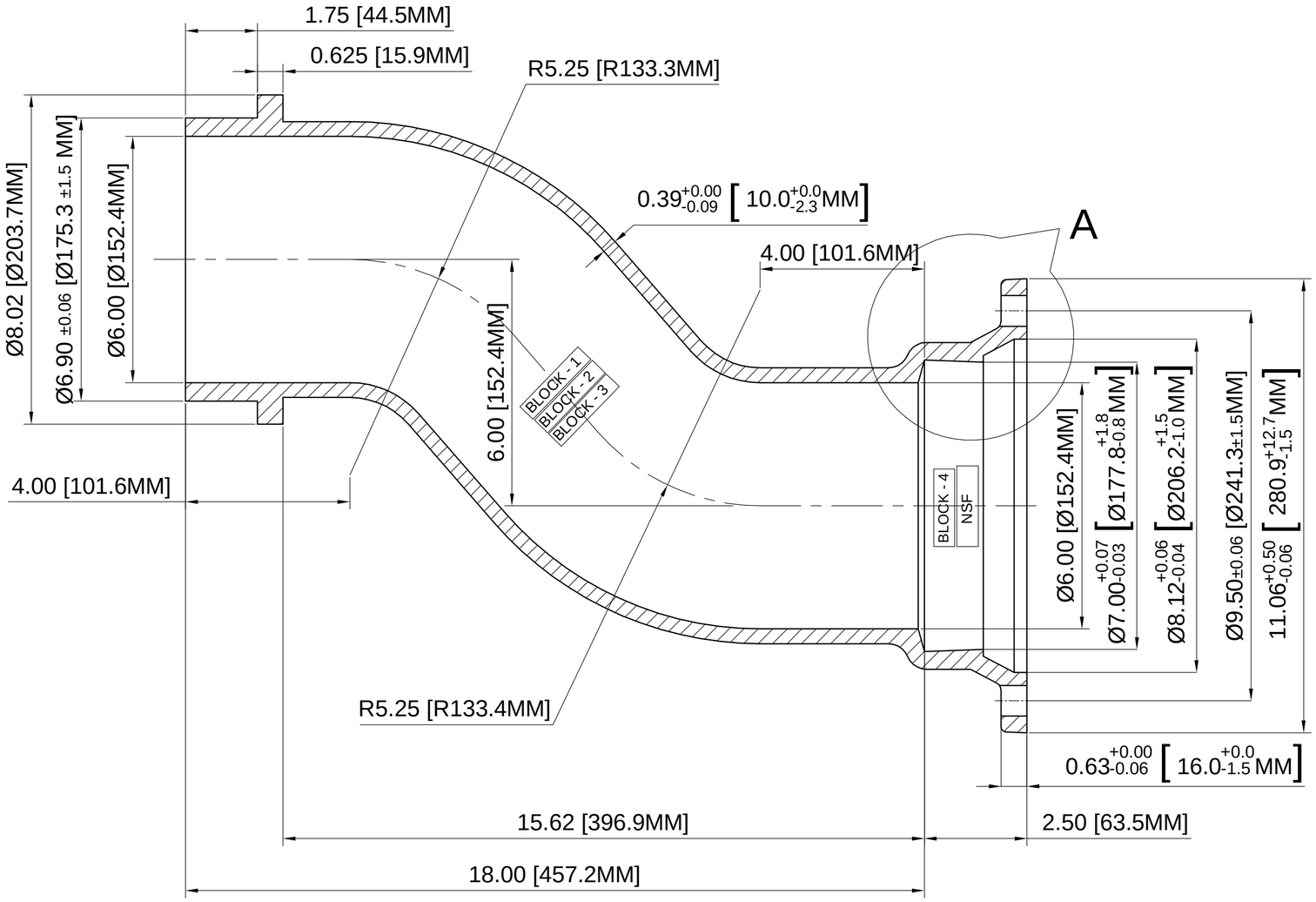
Install fire hydrants correctly the first time, with GRADELOK®.

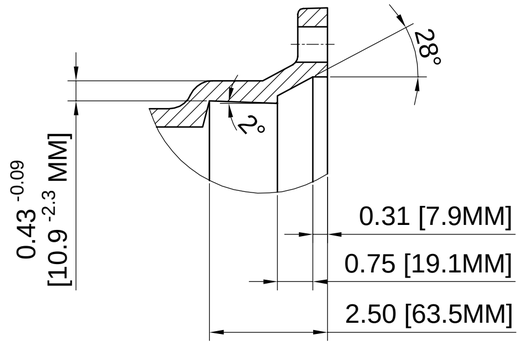
GRADELOK® is manufactured of 350 Ductile Iron, cement-lined inside and tar-coated outside for corrosion protection, and conforms to AWWA C153/ANSI A21.53/AWWA C104/ANSI A21.4

GL06MJ	REV:- 02	Pg 1 of 1

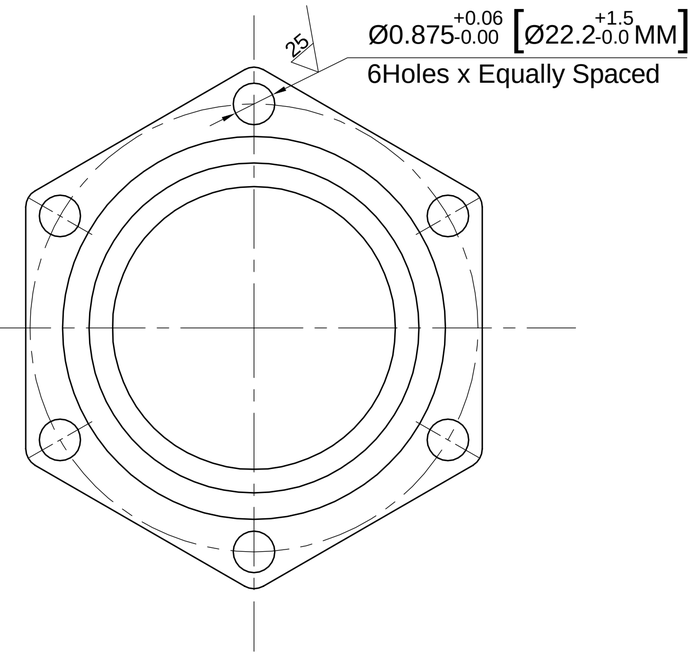
NOTES:-

1. All the dimensions are in inches. Metric units are in parenthesis.
2. Material :- DUCTILE IRON, ASTM-A536, GRADE- 70-50-5 OR 60-42-10
3. The drawing dimensions are as per ANSI/AWWA C153/A21.53
4. Pressure Rating:- 350psi.
5. The cast marks and heat numbers are as per Sigma's requirment which is written in a separate file
6. Cement-Mortar Lining thickness as per ANSI/AWWA C104/A21.4





DETAIL -A



Rev	Date	Revision Record	Prepared by	Approved by
01	11-01-2010	Collar dimension changed & Wall thickness 0.39" changed to 0.36"	AT1	SR1
02	11-12-2010	Wall thickness 0.36" changed to 0.39"	AT1	SR1

RADIUS: ±.030 , MACHINED: . XX±.015

TOLERANCES UNLESS OTHERWISE SPECIFIED	
CAST:	
0"-1"	±0.04"
0-25mm	±1mm
1"-4"	±0.06"
25-100mm	±1.5mm
4"-16"	±0.09"
100-400mm	±2.3mm
18"-30"	±0.11"
457-762mm	±2.8mm
36"-60"	±0.13"
914-1524mm	±3.3mm

All Radii & Fillets to be 0.12" (3mm) unless otherwise specified
All Draft angles to be 2° unless otherwise specified on drawing

Product Group :- Ductile Iron Fittings

Coating/Lining:- Asphaltic Coating/Cement Lined

Type :- FITTING SIZE AND CAST MARK

Product Description- C153 - MJ x PE GRADE LOCK - 6 x 6 inch

Drawing Number :- GL06MJ | Rev :- 02

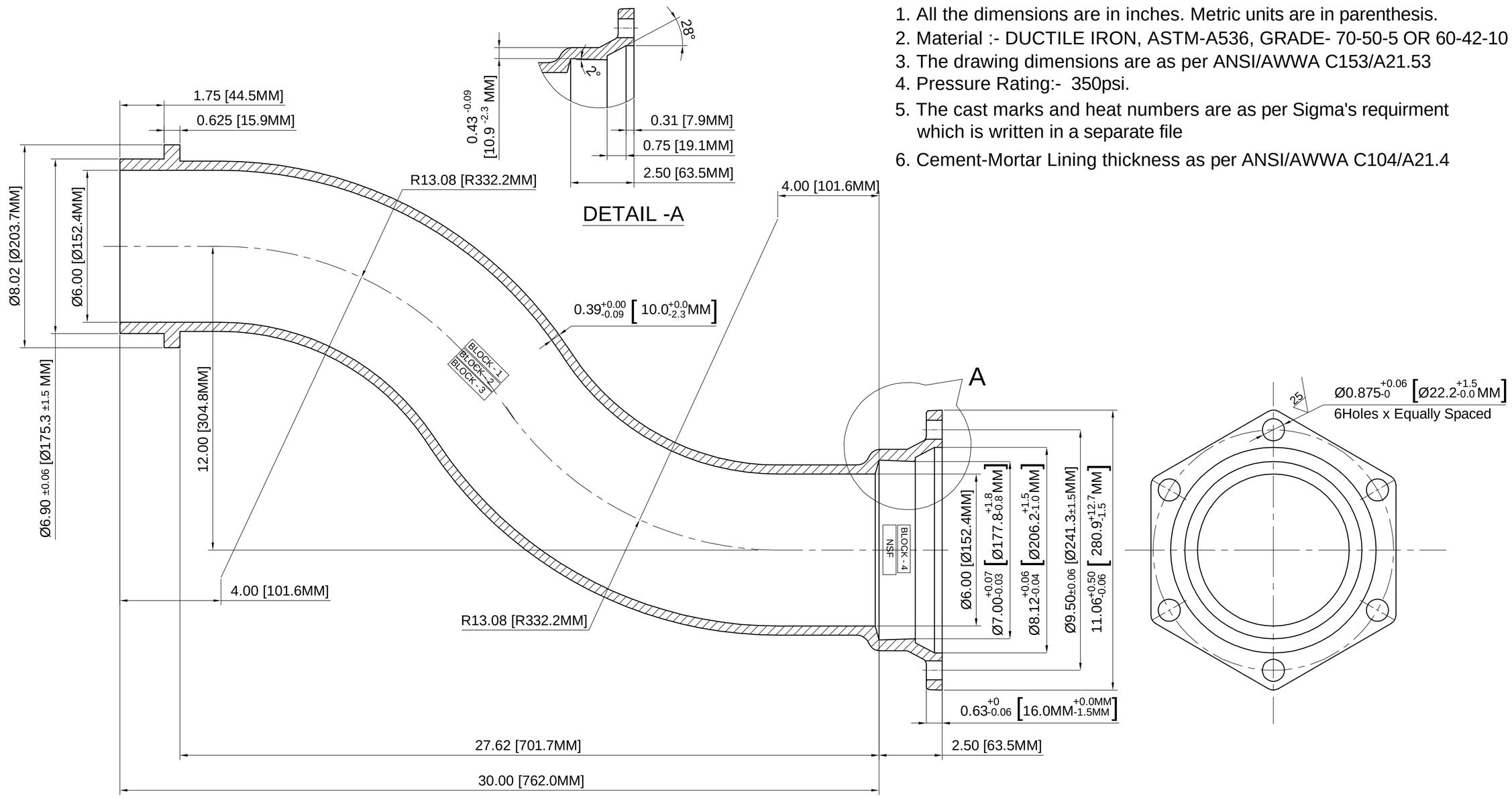
ASSURED FLOW SALES, INC
SARASOTA, FLORIDA

DATE : 10-14-2010	DRAWN BY : AT1
DRAWING FOR: SUBMITTAL	CHECKED BY : MSK
SCALE: NTS / SHEET NO: 1 OF 1	APPROVED BY : SR1

GL12MJ	REV:- 02	Pg 1 of 1

NOTES:-

1. All the dimensions are in inches. Metric units are in parenthesis.
2. Material :- DUCTILE IRON, ASTM-A536, GRADE- 70-50-5 OR 60-42-10
3. The drawing dimensions are as per ANSI/AWWA C153/A21.53
4. Pressure Rating:- 350psi.
5. The cast marks and heat numbers are as per Sigma's requirment which is written in a separate file
6. Cement-Mortar Lining thickness as per ANSI/AWWA C104/A21.4



Rev	Date	Revision Record	Prepared by	Approved by
01	11-01-2010	Overall length, Bend radius & Collar dimensions changed and wall thickness 0.39" changed to 0.36"	AT1	SR1
02	11-12-2010	Wall thickness 0.36" changed to 0.39"	AT1	SR1

RADIUS: ±.030 , MACHINED: . XX±.015

TOLERANCES UNLESS OTHERWISE SPECIFIED

CAST:

0"-1"	±0.04"
0-25mm	±1mm
1"-4"	±0.06"
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914-1524mm	±3.3mm

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All Draft angles to be 2° unless otherwise specified on drawing

Product Group :- Ductile Iron Fittings

Coating/Lining:- Asphaltic Coating/Cement Lined

Type :- FITTING SIZE AND CAST MARK

Product Description- C153 - MJ x PE GRADE LOCK - 6 x 12 inch

Drawing Number :- GL12MJ | Rev :- 02

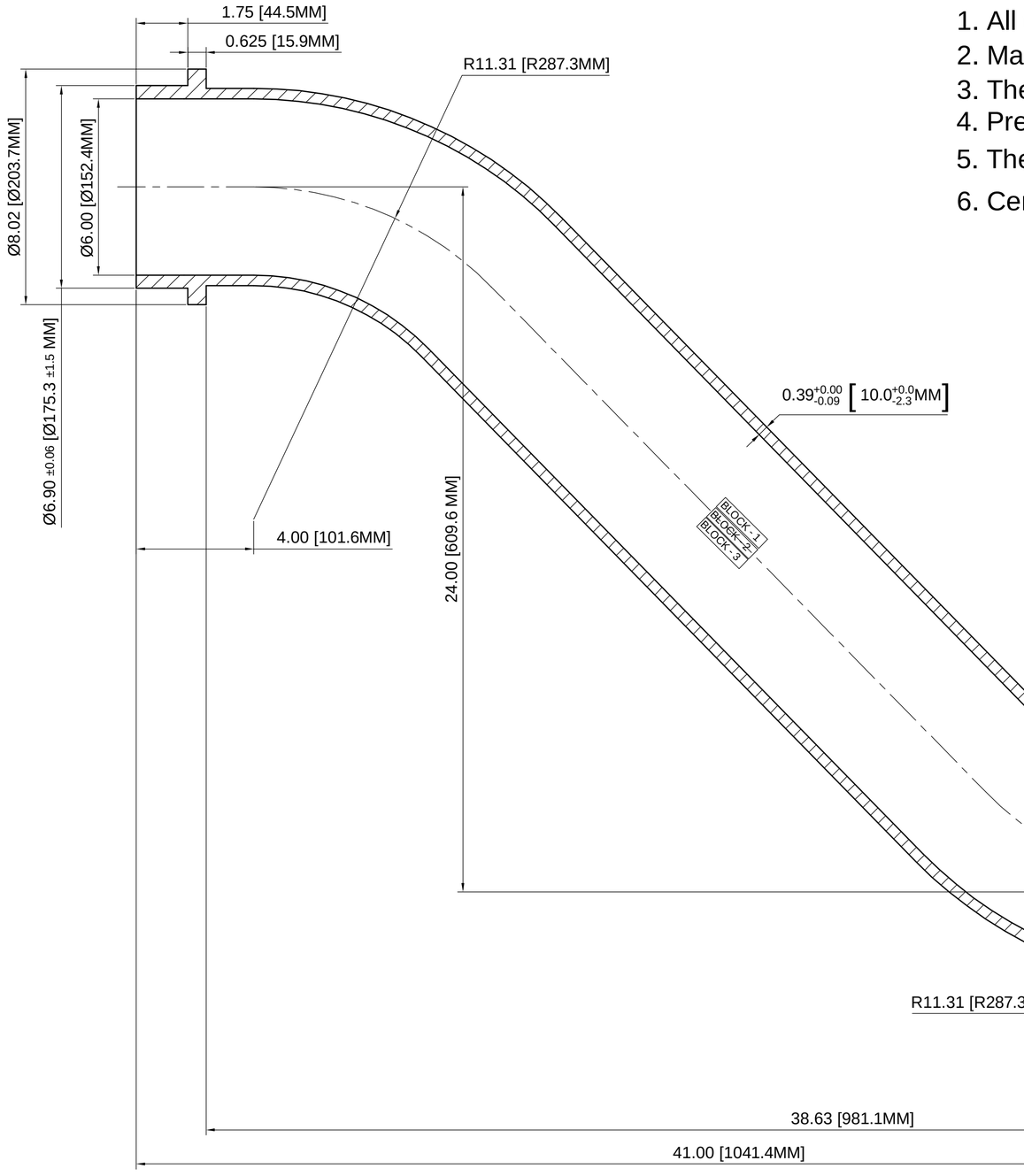
ASSURED FLOW SALES, INC
SARASOTA, FLORIDA

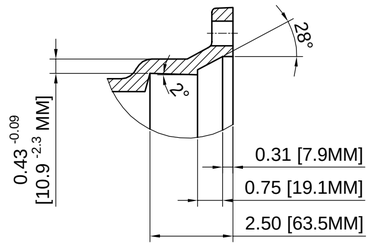
DATE : 09-08-2007	DRAWN BY : AT1
DRAWING FOR: SUBMITTAL	CHECKED BY : LWL
SCALE: NTS / SHEET NO: 1 OF 1	APPROVED BY : SR1

GL24MJ	REV:- 02	Pg 1 of 1

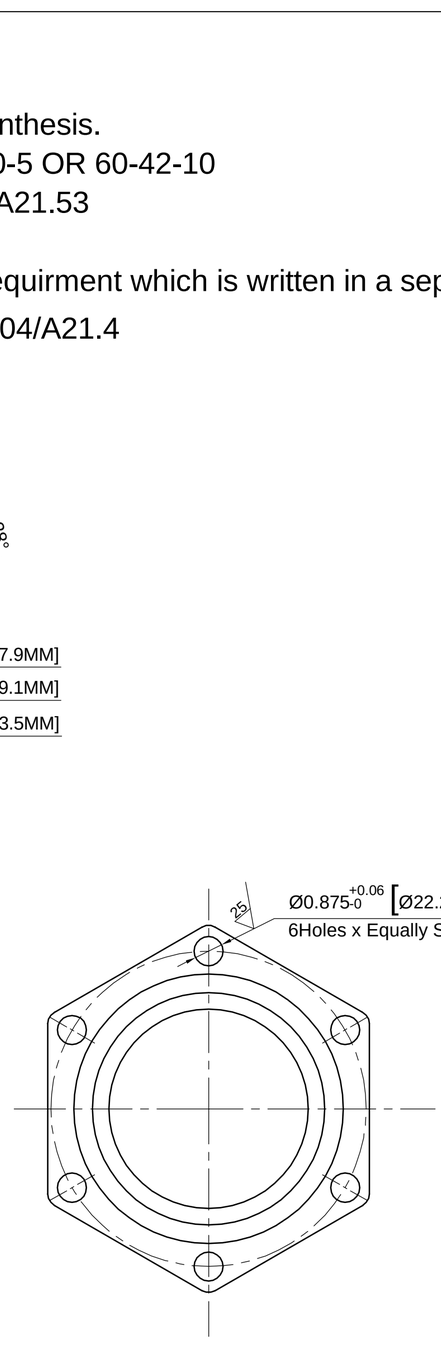
NOTES:-

1. All the dimensions are in inches. Metric units are in parenthesis.
2. Material :- DUCTILE IRON, ASTM-A536, GRADE- 70-50-5 OR 60-42-10
3. The drawing dimensions are as per ANSI/AWWA C153/A21.53
4. Pressure Rating:- 350psi.
5. The cast marks and heat numbers are as per Sigma's requirment which is written in a separate file
6. Cement-Mortar Lining thickness as per ANSI/AWWA C104/A21.4





DETAIL -A



Rev	Date	Revision Record	Prepared by	Approved by
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02	11-12-2010	Wall thickness 0.36" changed to 0.39"	AT1	SR1

RADIUS: ±.030 , MACHINED: . XX±.015

TOLERANCES UNLESS OTHERWISE SPECIFIED

CAST:

0"-1"	±0.04"
0-25mm	±1mm
1"-4"	±0.06"
25-100mm	±1.5mm
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914-1524mm	±3.3mm

All Radii & Fillets to be 0.12" (3mm) unless otherwise specified
All Draft angles to be 2° unless otherwise specified on drawing

Product Group :-
Ductile Iron Fittings

Coating/Lining:-
Asphaltic Coating/Cement Lined

Type :-
FITTING SIZE AND CAST MARK

Product Description-
C153 - MJ x PE GRADE LOCK - 6 x 24 inch

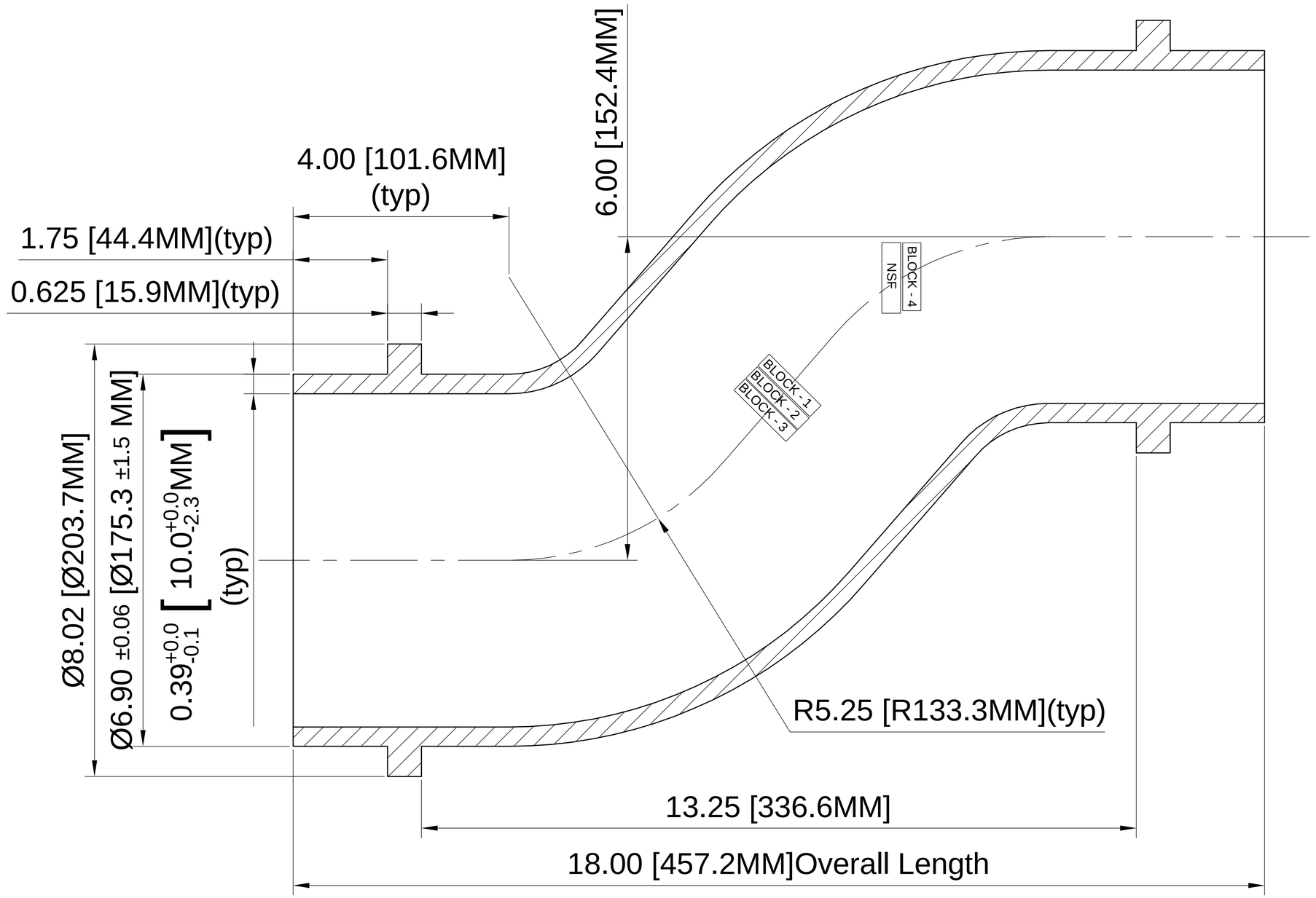
Drawing Number :- GL24MJ

Rev :- 02

ASSURED FLOW SALES, INC.
SARASOTA, FLORIDA

DATE : 03-14-2007		DRAWN BY : AT1
DRAWING FOR: SUBMITTAL		CHECKED BY : LWL
SCALE: NTS	SHEET NO: 1 OF 1	APPROVED BY : SR1

GL06SW	REV:- 03	Pg 1 of 1



NOTES:-

1. All the dimensions are in inches. Metric units are in parenthesis.
2. Material :- DUCTILE IRON, ASTM-A536, GRADE- 70-50-5 OR 60-42-10
3. The drawing dimensions are as per ANSI/AWWA C153/A21.53
4. Pressure Rating:- 350psi.
5. The cast marks and heat numbers are as per Sigma's requirment which is written in a separate file
6. Cement-Mortar Lining thickness as per ANSI/AWWA C104/A21.4

Rev	Date	Revision Record	Prepared by	Approved by
01	02-19-2009	Collar has introduced on another end	AT1	SR1
02	10-22-2009	Collar, Bend Radius and overall Length dimensions changed	AT1	SR1
03	11-12-2010	Wall thickness 0.36" changed to 0.39"	AT1	SR1

RADIUS: ±.030 , MACHINED: . XX±.015

TOLERANCES UNLESS OTHERWISE SPECIFIED

CAST:

0"-1"	±0.04"
0-25mm	±1mm
1"-4"	±0.06"
25-100mm	±1.5mm
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18"-30"	±0.11"
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36"-60"	±0.13"
914-1524mm	±3.3mm

All Radii & Fillets to be 0.12" (3mm) unless otherwise specified
All Draft angles to be 2° unless otherwise specified on drawing

Product Group :- Ductile Iron Fittings

Coating/Lining:- Asphaltic Coating/Cement Lined

Type :- FITTING SIZE AND CAST MARK

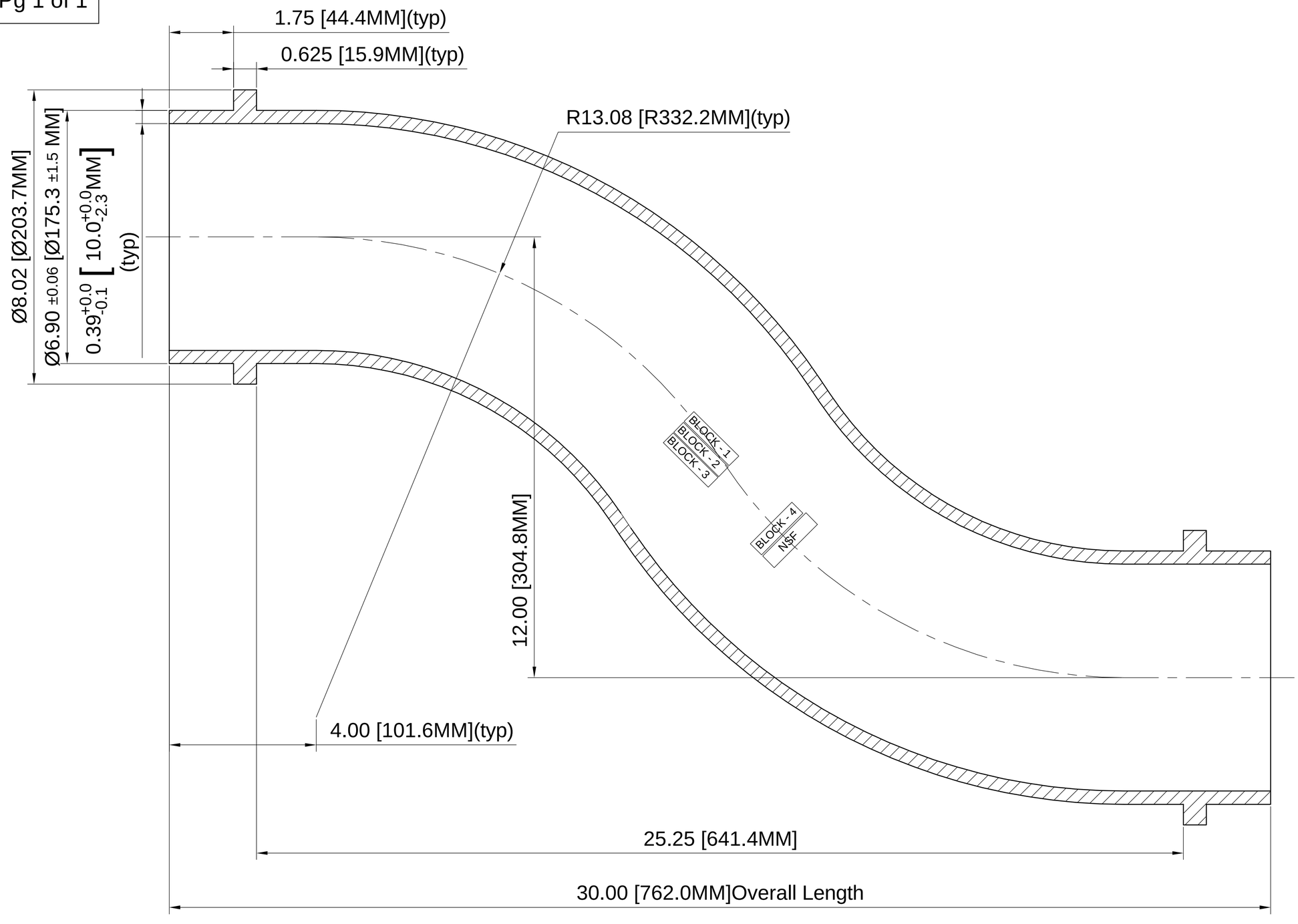
Product Description- C153 - PE x PE GRADE LOCK - 6 x 6 inch

Drawing Number :- GL06SW | Rev :- 03

ASSURED FLOW SALES, INC
SARASOTA, FLORIDA

DATE : 08-13-2008		DRAWN BY : AT1
DRAWING FOR: SUBMITTAL		CHECKED BY : LWL
SCALE: NTS	SHEET NO: 1 OF 1	APPROVED BY : SR1

GL12SW	REV:- 03	Pg 1 of 1



NOTES:-

1. All the dimensions are in inches. Metric units are in parenthesis.
2. Material :- DUCTILE IRON, ASTM-A536, GRADE- 70-50-5 OR 60-42-10
3. The drawing dimensions are as per ANSI/AWWA C153/A21.53
4. Pressure Rating:- 350psi.
5. The cast marks and heat numbers are as per Sigma's requirment which is written in a separate file
6. Cement-Mortar Lining thickness as per ANSI/AWWA C104/A21.4

Rev	Date	Revision Record	Prepared by	Approved by
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RADIUS: ±.030 , MACHINED: . XX±.015

TOLERANCES UNLESS OTHERWISE SPECIFIED

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0"-1"	±0.04"
0-25mm	±1mm
1"-4"	±0.06"
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914-1524mm	±3.3mm

All Radii & Fillets to be 0.12" (3mm) unless otherwise specified
All Draft angles to be 2° unless otherwise specified on drawing

Product Group :-
Ductile Iron Fittings

Coating/Lining:-
Asphaltic Coating/Cement Lined

Type :-
FITTING SIZE AND CAST MARK

Product Description-
C153 - PE x PE GRADE LOCK - 6 x 12 inch

Drawing Number :- GL12SW

Rev :- 03

ASSURED FLOW SALES, INC
SARASOTA, FLORIDA

DATE :	DRAWN BY :
07-29-2008	AT1
DRAWING FOR: SUBMITTAL	CHECKED BY : LWL
SCALE: NTS / SHEET NO: 1 OF 1	APPROVED BY : SR1

GL24SW	REV:- 03	Pg 1 of 1

NOTES:-

1. All the dimensions are in inches. Metric units are in parenthesis.
2. Material :- DUCTILE IRON, ASTM-A536, GRADE- 70-50-5 OR 60-42-10
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4. Pressure Rating:- 350psi.
5. The cast marks and heat numbers are as per Sigma's requirment which is written in a separate file
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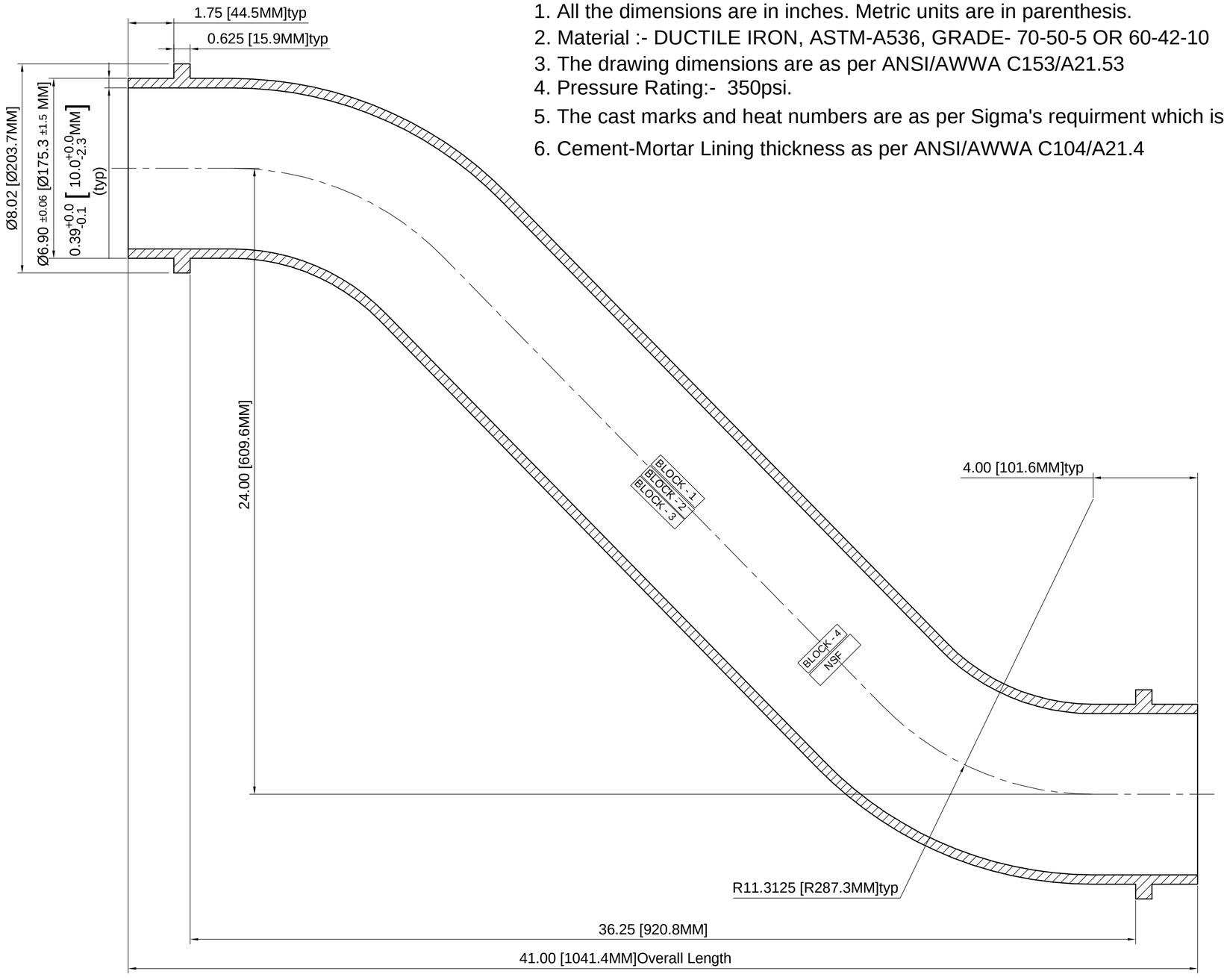

Rev	Date	Revision Record	Prepared by	Approved by
01	02-19-2009	Collar has introduced on other end	AT1	SR1
02	10-22-2009	Collar, Bend Radius and overall Length dimensions changed	AT1	SR1
03	11-12-2010	Wall thickness 0.36" changed to 0.39"	AT1	SR1

RADIUS: ±.030 , MACHINED: . XX±.015

TOLERANCES UNLESS OTHERWISE SPECIFIED

CAST:

0"-1"	±0.04"
0-25mm	±1mm
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All Draft angles to be 2° unless otherwise specified on drawing

Product Group :- Ductile Iron Fittings

Coating/Lining:- Asphaltic Coating/Cement Lined

Type :- FITTING SIZE AND CAST MARK

Product Description- C153 - PE x PE GRADE LOCK - 6 x 24 inch

Drawing Number :- GL24SW | Rev :- 03

ASSURED FLOW SALES, INC
SARASOTA, FLORIDA

DATE : 08-23-2008	DRAWN BY : AT1
DRAWING FOR: SUBMITTAL	CHECKED BY : LWL
SCALE: NTS / SHEET NO: 1 OF 1	APPROVED BY : SR1

Assured Flow Sales, INC.

Phone: 941/921-3435
Fax: 941/953-9695
P.O. Box 49633
Sarasota, FL 34230

SPECIFICATION FOR FIRE HYDRANT CONNECTOR PIPE

A.)THE CONNECTOR PIPE SHALL BE COMPACT DUCTILE IRON, AWWA C153, ANSI A21.53, 350 PSI AND POSITIONED BETWEEN THE FIRE HYDRANT AND GATE VALVE.

B.)THE CONNECTOR PIPE SHALL BE OF THE OFFSET DESIGN SO THAT THE FIRE HYDRANT CAN BE ADJUSTED TO ENSURE PLACEMENT AT PORPER GRADE. THE OFFSET SHALL BE ____INCHES.

C.)THE CONNECTOR PIPE SHALL HAVE AN ANCHORING FEATURE AT BOTH ENDS SO THAT WHEN USED WITH SPLIT GLANDS. A RESTRAINED JOINT IS PROVIDED.

D.)THE CONNECTOR PIPE SHALL BE CEMENT LINED IN ACCORDANCE WITH AWWA C104, ANSI A21.4.

E.)THE CONNECTOR PIPE SHALL BE GRADELOK AS MANUFACTURED BY ASSURED FLOW SALES, INC.

Assured Flow Sales, Inc.

Phone: 800-388-0678
Fax: 941-929-9695
P.O. Box 49633
Sarasota, FL 34230-6633

Gradelok Features & Benefits

1. ALL COMPACT DUCTILE IRON CONSTRUCTION (350 PSI).

   A. **Strong** But **Lightweight** & Compact.
   B. Provides A Connection Of Similar Metals From Main To Hydrant For **Higher Corrosion Resistance.**

2. ANCHORING FEATURE PROVIDED ON BOTH ENDS.

   C. Provides A **Positive Restrained Joint.**
   D. **Fits All Hydrants** With A 6" Mechanical Joint Shoe.
   E. **Reduces** Overall Labor Costs.
   F. Eliminates Costly & Time Consuming Thrust Blocking & Mechanical Restraining Devices.

3. TAR COATED OUTSIDE & CEMENT LINED INSIDE.

   A. Provides Corrosion Protection.

4. OFFSET DESIGN WITH 6", 12" & 24" CENTER TO CENTER

   A. **Allows** Up To A 48" **Adjustment** Anywhere In 360 Degrees.
   B. **Reduces** Hydrant **Inventory**. STOCK ONE BURY DEPTH!!!!
   C. **RAISE** Or **LOWER** Hydrant Elevation.
   D. Also Provides Horizontal Adjustment.
   E. Does Not Restrict Final Grade To 6" Increments.
   F. **Eliminates** The Need For Most **Extensions Kits**.
   G. Final Grade Setting On The Bury Line. Thus Maintaining The Required 18" Clearance Between The Groundline & Centerline Of The Nozzels.

WHY THE GRADELOK IS BENEFICIAL TO A MUNICIPAL WATER SYSTEM

1. WHY IS IT IMPORTANT TO MAINTAIN AN 18" CLEARANCE BETWEEN THE GROUNDLINE AND THE CENTERLINE OF THE NOZZELS?

   A. The Fire Department Wrenches Are Approximately **15**" and This Enables **Them To Spin The Caps Off Quickly** In Emergencies.

   B. With The Centerline Of The Pumper Nozzle At **18**" Above Grade, **ONE** Fireman Can Easily Attach The Suction Hose By Holding The Hose Between His Knees And Threading The Coupling By Hand. If The Nozzle Is Too High Or Too Low It Would Require **Two** Men.

   C. The **18**" distance Is The **Most Effective** To Enable The Traffic Feature To **Break Property** Upon Impact.

   C. The **Traffic Flange** Is Always **Exposed** And Can Be **Easily Checked** For **Damage** And **Leakage** During Routine Maintenance.

   E. If The **Traffic Flange** Is **Buried** Under The **Soil** The **Bolts** Can **Corrode** And Go Undetected Until the Time Of An Emergency.

   F. If The **Traffic Flange** Is **Buried** Under **Concrete Or Asphalt** The Chances Of It **Breaking Correctly** Are **Greatly Reduced.**

   G. If The **Traffic Flange** Is Set **Too High** It Is Very **Expensive To Correct** The Problem And **Very Unlikely** That The **Hydrant Will Break Correctly** Upon Traffic Impact.

   H. **AESTHETICS**, Fire Hydrants Should Last Well Over 75 Years And They Are One Of The Few Parts Of A System That The Public Will See, So Why Not **Install Them Correctly The First Time.**

WHY THE GRADELOK IS BENEFICIAL TO A MUNICIPAL WATER SYSTEM

2. WHY TRY TO **ELMINATE** THE USE OF FIRE HYDRANT **EXTENSION KITS?**

A. The Use Of Extension Kits Is Not Generally Planned And Therefore An **Expensive Oversight.**

B. A Very Large Percentage Of Extension Kits Are **Installed Incorrectly.** The Barrel Flanges And Stem Coupling That Come With The Hydrant Are Of The Traffic Model Design. **The Barrel Flanges And Stem Coupling That Come With The Extension Kit Are Not Of The Traffic Model Design.** Unfortunately The Instructions Rarely Make It To The Jobsite And When The Extension Is Installed The Traffic Model Flanges And Coupling Are Left At The Old Groundline And **The New Extension Flanges And Coupling Are Installed At The New Groundline. When This Occurs It Is Very Unlikely That The Hydrant Will Break Correctly.**

C. There Are So many Different Styles Of Hydrants, Each Requiring A Different Model Extension Kit It Is Often **Difficult** And **Time Consuming To Locate The Correct Extension Kit.**

D. With Extension Kits You Are Always **Limited To 6" Increments.**

E. Each Time An Extension Kit Is Added To A Hydrant You Will Get More Play In The Stem Which Can Cause Water Hammer. Also, Each Time An Extension Is Added To A Hydrant You Add Another Location For A **Possible Leak**.

3. WHY TRY TO **ELIMINATE** THE USE OF TIE RODS AND **THRUST BLOCKS?**

A. It Is A **Costly** And **Time Consuming** Operation.

B. **Tie Rods** Are Nothing More Than A **Temporary Measure** In Corrosive Soils.

C. Where Hydrants Utilize Drain Holes **Concrete** Can **Plug** The **Drain Ports.**

D. If Repairs To The Hydrant Become Necessary The Concrete Is Expensive And Time Consuming To Remove.

Assured Flow Sales, INC.

Phone: 941-955-3435
Fax: 941-953-9695
P.O. Box 49633
Sarasota, FL 34230

Certificate of Compliance

This is to certify that Gradelok® is produced in accordance with and meets all applicable terms and provisions of specification ANSI/AWWA C111/A21.11 and ANSI/AWWA C153/A21.53, as per UL/FM Investigation.

All Gradelok® Fittings supplied by Assured Flow Sales, Inc. are coated with NSF 61 approved paint and are classified for use with potable water.

The manufacturing location is approved as an applicator for NSF 61 paint, as they follow the procedures laid by NSF 61.

Benjamin R. James
President
Assured Flow Sales, Inc.

REV: 02/01/2018