

Pit Frame Installation Guide

01/21

Description

The pit frame accessory is a one-piece welded unit with no additional welding required. There are different type frames (2 for the standard duty scale, 1 for the heavy capacity unit, and 3 for the Lift Deck models) with many sizes for each type. This accessory is designed for in-floor or 'flush' applications. In general, a hole is cut in the concrete, the pit-frame accessory is installed in the hole, then concrete is poured around and under the frame. Once cured, the scale platform is set into the frame and installation can be completed.

Standard Duty Pit Frames:

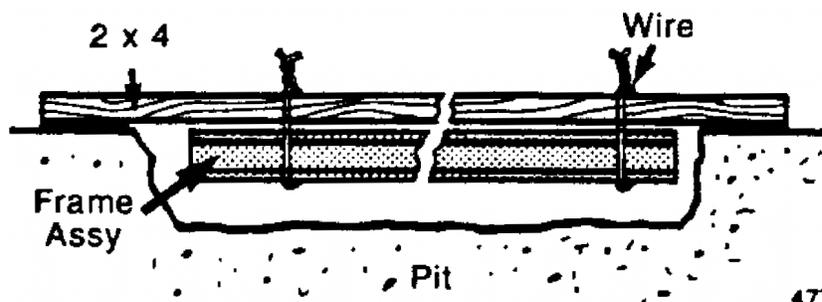
Standard duty frames are available in mild steel and stainless steel for seven (7) sizes. The concrete work and frame setting is usually done by a contractor, with a scale technician completing the project by setting and installing the scale.

1. Place the pit frame, standard or heavy duty, in the approximate position it will occupy on the floor.
2. Mark out the position of the hole to be made. The hole MUST be a minimum of 12" larger than the pit frame on all sides. Should pit drainage be required, slope the pit floor to an installed drain while maintaining a level area at each corner. Use the attached drawings for measurements.
3. The hole will have to be deep enough to accommodate the pit coping, plus the thickness of the pit floor. Use the attached drawings for measurements.

Setting the Pit Frame:

Once the properly sized and prepped hole has been cut in the concrete floor, use these steps to help set the frame properly.

- Set the frame in the hole supported at about the correct height.
- Set two 2 x 4's on edge (longer than the width of the hole) across the opening.
- Use soft wire and make 2 loops by twisting wire around each 2 x 4 and the frame.



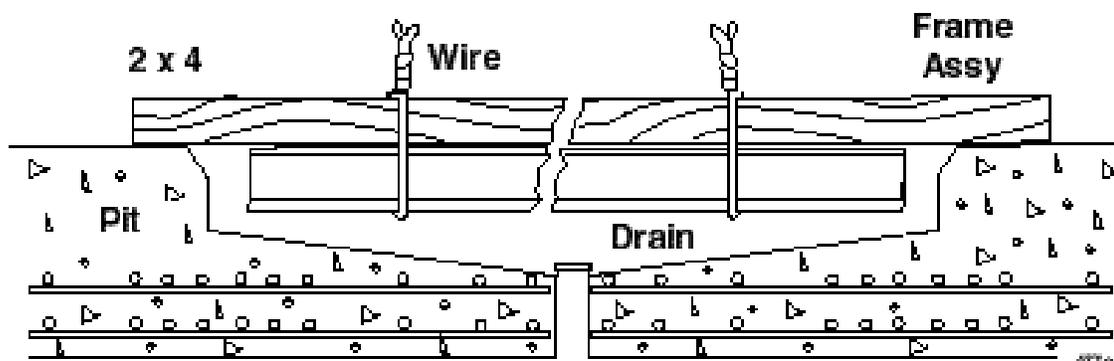
- With the frame supported by the wire and 2 x 4's, use a level to set the frame flush with the surrounding floor, level, and at the correct height by twisting or untwisting the wire.
- Use the included drawings for concrete specifications and amounts. Make sure the conduit for the scale cable is in place and secured into the frame opening.
- Pour the concrete around and under the frame ensuring a smooth and level finish.
- If a drain is included, use the drawings in this bulletin to put a slope in the pit floor to it.
- Cure to a minimum of 2000 psi before cutting wire (flush)
- Pull the cable through the conduit before placing the scale platform in the frame.
- Level the platform before installing the instrumentation.

Heavy Duty Frames:

Heavy duty pit frames are available in 4 sizes, mild steel only as standard product. The concrete work and frame setting are usually done by a contractor, with a scale technician completing the project by setting and installing the scale.

Caution: Heavy duty frames require substantially more concrete work and preparation than standard duty frames. Rebar and extra thick concrete are required to accept the pier loading that a 20K scale will have. Use only the proper drawing, 21897, included in this bulletin.

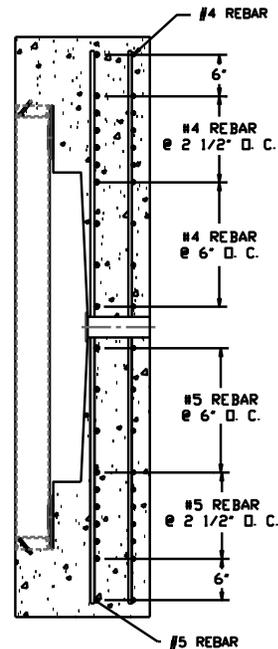
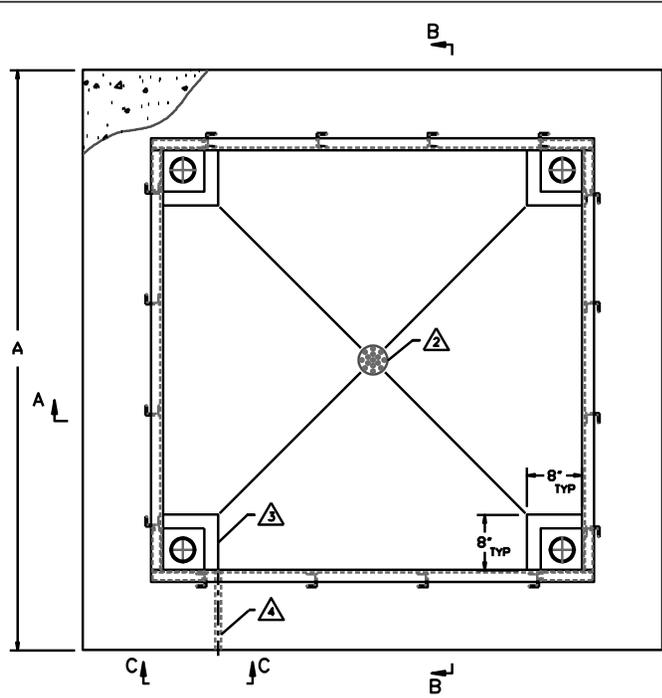
1. Setting the pit frame: Once the properly sized and prepped hole has been cut in the concrete floor, use these steps to help set the frame properly.
 - Set the frame in the hole supported at about the correct height.
 - Set two 2 x 4's on edge (longer than the width of the hole) across the opening.
 - Use soft wire and make 2 loops by twisting wire around each 2 x 4 and the frame.



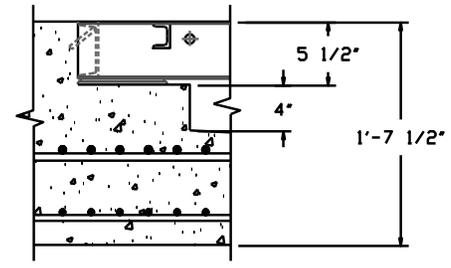
- With the frame supported by the wire and 2 x 4's, use a level to set the frame flush with the surrounding floor, level, and at the correct height by twisting or untwisting the wire.
- Use the included drawings for concrete specifications and amount. Make sure the conduit for the scale cable is in place and secured into the frame opening.
- Pour the concrete around and under the frame ensuring a smooth and level finish.
- If a drain is included, use the drawings in this bulletin to put a slope in the pit floor to it.
- Cure to a minimum of 2000 psi before cutting wire (flush).
- Pull the cable through the conduit before placing the scale platform in the frame.
- Level the platform before installing the instrumentation.

NOTE: The conduit must be installed through the hole provided. Align the pit frame and conduit with desired scale location.

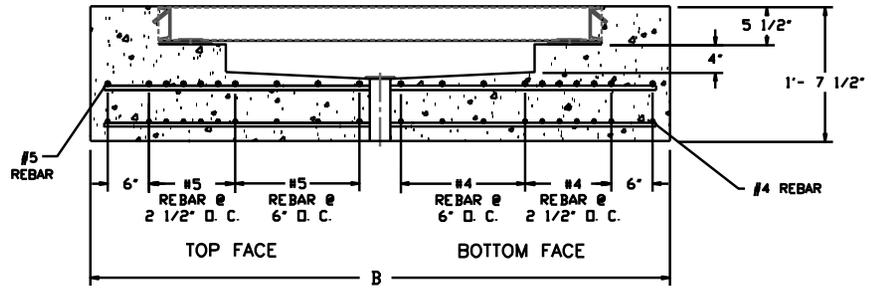
MODEL No.	PLATFORM SIZE	A	B
ACC-1744	4' x 4'	6'	6'
ACC-1755	5' x 5'	7'	7'
ACC-1757	5' x 7'	7'	9'
ACC-1768	6' x 8'	8'	10'



B-B VIEW



C-C VIEW

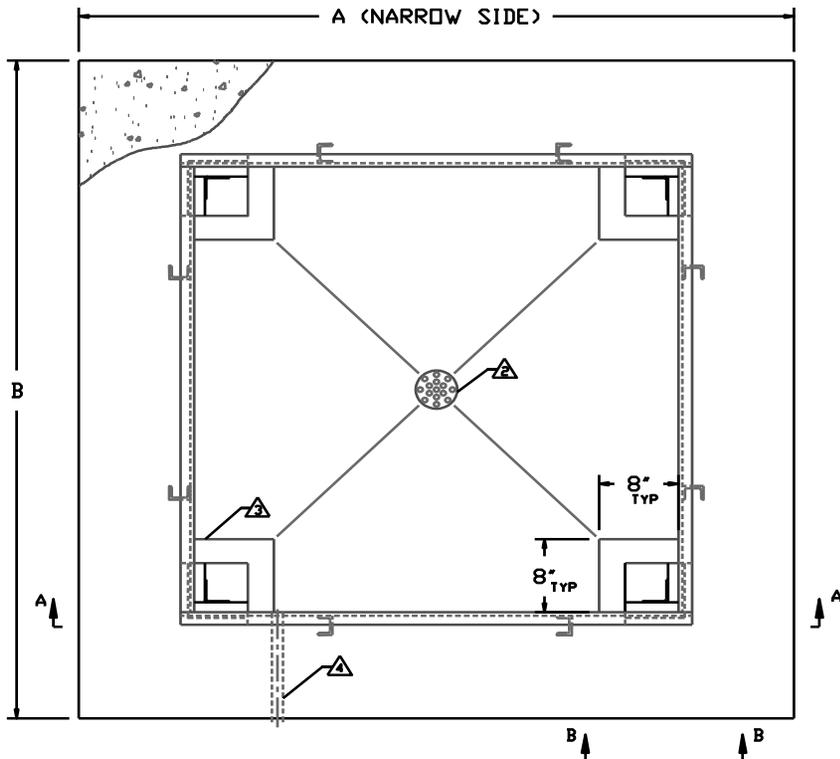
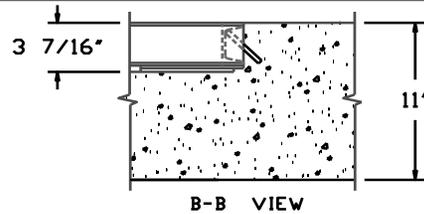


A-A VIEW

NOTE:

1. A PIT FRAME IS ONE-PIECE WELDED UNIT (NO FIELD WELDING REQUIRED).
2. THE PIT DIMENSIONS ARE DETERMINED BY THE PIT FRAME ACCESSORIES. A. AT LEAST 9" THICKNESS OF CONCRETE IS REQUIRED FOR PIT FLOOR IN NON-HOSTILE APPLICATIONS. B. AT LEAST 10" CONCRETE FLOOR WITH MINIMUM 1" BOTTOM SLOPE (AS SHOWN) IS REQUIRED IF DRAINAGE IS REQUIRED FOR HOSTILE APPLICATION. A 4" DIA. DRAIN IS RECOMMENDED.
3. A SOIL BEARING PRESSURE OF AT LEAST 1,500 lbs PER SQUARE FT. IS REQUIRED. THE CORNER PIER SHOULD BE DESIGNED TO SUPPORT AT LEAST TWO THIRDS OF THE TOTAL CAPACITY OF THE SCALE.
4. A 3/4" DIA. CONDUIT FOR SCALE INTERFACE CABLE IS RECOMMENDED. THE PIT FRAME IS ARRANGED WITH A 1 1/8" DIA. HOLE FOR CABLE EXIT. LOCATE CONDUIT TO MATCH HOLE LOCATION.
5. WITH THE FRAME LEVEL (±1/8") IN BOTH DIRECTIONS, AND SECURED, CONCRETE IS FILLED IN AROUND THE OUTSIDE OF PIT FRAME AND PIT FLOOR TO FORM SCALE PIT. IT IS RECOMMENDED THAT $f_c=4000$ psi AND 3" TO 4" SLUMP CONCRETE BE USED.
6. WHEN THE CONCRETE HAS REACHED A MINIMUM OF 2000 psi, PULL THE INTERFACE CABLE THROUGH THE CONDUIT TO THE INSTRUMENT LOCATION, AND LOWER THE PLATFORM ASSEMBLY INTO POSITION.
7. WITH THE SCALE IN THE PLACE, THE CLEARANCE AROUND THE EDGE OF THE PLATFORM AND PIT FRAME SHOULD BE 1/4" TO 3/8".

REL	BY	DATE	REVISION	FAIRBANKS SCALES Meridian, Mississippi	
1	JSH	8/11/00	RELEASED	PIT INSTALLATION MODEL 6200 SERIES, 20K	
				DATE	REVISED
				8/11/00	
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				<small>N/A</small>	<small>sheet 1 of 1</small>
				<small>drawn by JSH</small>	<small>WAS_D143143</small>
				<small>checked by JSH</small>	<small>21897</small>
				<small>approved by JSH</small>	



A-A VIEW
INSTALLATION OF PIT FRAME
POURED CONCRETE BASED ON THE SIZE
1K-10K

MILD STEEL			PLATFORM SIZE		A	B	STAINLESS STEEL	
MS MODEL / PART NO.	OLD No.	DL D No.					SS MODEL / PART NO.	OLD No.
ACC-1728 / 63757	92849		3' x 3'	5'	5'		ACC-H1728 / 63758	92849-S
ACC-1729 / 63759	92850		4' x 4'	6'	6'		ACC-H1729 / 63760	92850-S
ACC-1730 / 63761	92851		4' x 5'	6'	7'		ACC-H1730 / 63762	92851-S
ACC-1732 / 63763	92852		4' x 6'	6'	8'		ACC-H1732 / 63764	92852-S
ACC-1734 / 63765	92853		5' x 5'	7'	7'		ACC-H1734 / 63766	92853-S
ACC-1736 / 63767	92854		5' x 7'	7'	9'		ACC-H1736 / 63768	92854-S
ACC-1741 / 64062	93108		6' x 8'	8'	10'		ACC-H1741 / 64063	93108-S

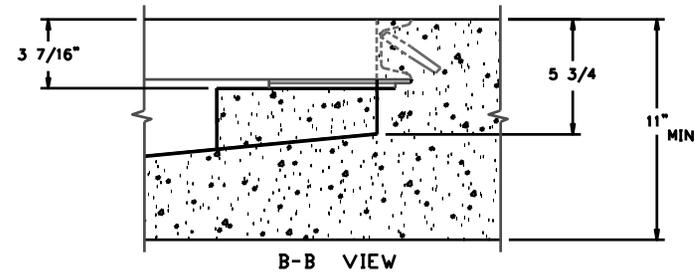
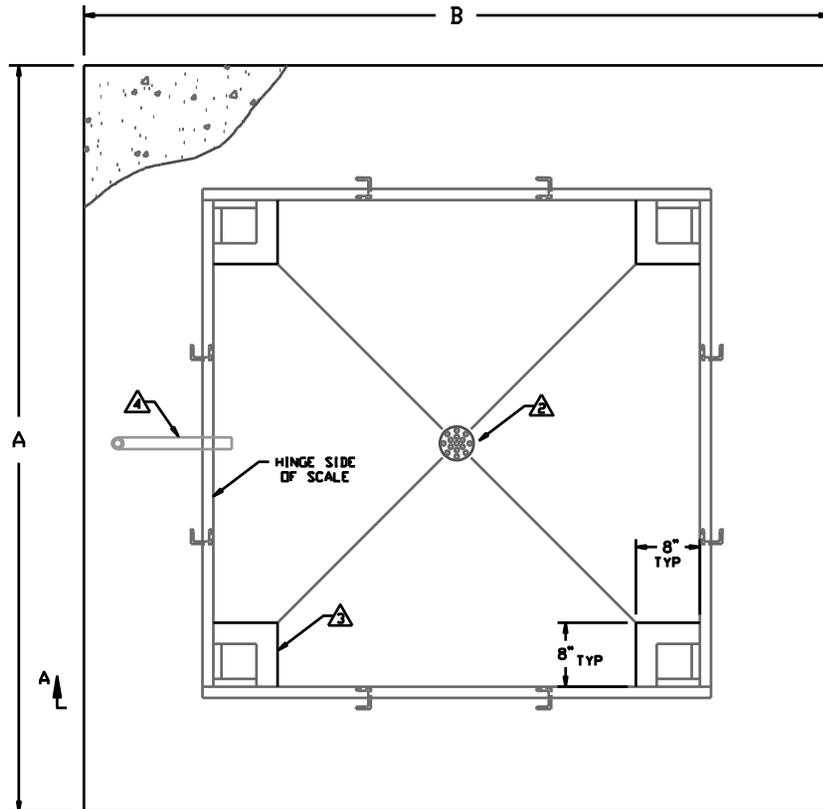
SOME OF THE SPECIAL PIT INSTALLATIONS								
MILD STEEL			PLATFORM SIZE		A	B	STAINLESS STEEL	
MS MODEL / PART NO.	OLD No.	DL D No.					SS MODEL / PART NO.	OLD No.
79214			2'-8" x 5'-1"	4'-8"	7'-1"		79864	
			2'-6" x 4'-2"	4'-6"	6'-2"		80042	
			2'-6" x 5'-0"	4'-6"	7'-0"			
81242			7' x 7'	9'	9'			
81961			4' x 4'-6"	6'	6'-6"			
82908			2'-6" x 2'-6"	4'-6"	4'-6"		23557	
			6' x 6'	8'	8'		83847	
84080			5' x 10'	7'	12'			
			3' x 5'	5'	7'		321760	
			4' x 7'	6'	9'		328600	

NOTE:

- A PIT FRAME IS ONE-PIECE WELDED UNIT (NO FIELD WELDING REQUIRED).
- THE PIT DIMENSIONS ARE DETERMINED BY THE PIT FRAME ACCESSORIES.
 - AT LEAST 6" THICKNESS OF CONCRETE IS REQUIRED FOR PIT FLOOR IN NON-HOSTILE APPLICATIONS.
 - AT LEAST 11" CONCRETE FLOOR WITH MINIMUM 3" BOTTOM SLOPE (AS SHOWN) IS REQUIRED IF DRAINAGE IS REQUIRED FOR HOSTILE APPLICATION. A 4" DIA. DRAIN IS RECOMMENDED.
- A SOIL BEARING PRESSURE OF AT LEAST 1,000 lbs PER SQUARE FT. IS REQUIRED. THE CORNER PIER SHOULD BE DESIGNED TO SUPPORT AT LEAST TWO THIRDS OF THE TOTAL CAPACITY OF THE SCALE.
- A 3/4" DIA. CONDUIT FOR SCALE INTERFACE CABLE IS RECOMMENDED. THE PIT FRAME IS ARRANGED WITH A 1 1/8" DIA. HOLE FOR CABLE EXIT. LOCATE CONDUIT TO MATCH HOLE LOCATION.
- WITH THE FRAME LEVEL (±1/8") IN BOTH DIRECTIONS, AND SECURED, CONCRETE IS FILLED IN AROUND THE OUTSIDE OF PIT FRAME AND PIT FLOOR TO FORM SCALE PIT. IT IS RECOMMENDED THAT $f_c=3500$ psi AND 3" TO 4" SLUMP CONCRETE BE USED.
- WHEN THE CONCRETE HAS REACHED A MINIMUM OF 2000 psi, PULL THE INTERFACE CABLE THROUGH THE CONDUIT TO THE INSTRUMENT LOCATION, AND LOWER THE PLATFORM ASSEMBLY INTO POSITION.
- WITH THE SCALE IN THE PLACE, THE CLEARANCE AROUND THE EDGE OF THE PLATFORM AND PIT COPING SHOULD BE 1/4" TO 3/8".

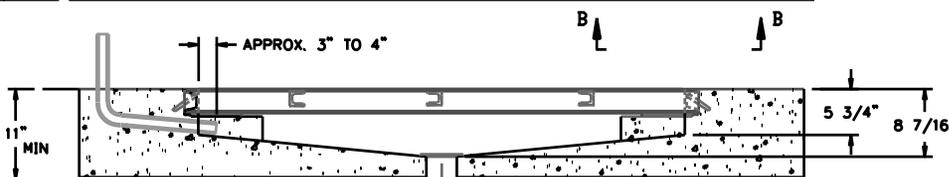
NO.	BY	DATE	REVISION	FAIRBANKS SCALES	
1	JSH	8/11/00	RELEASED	Meridian, Mississippi	
2	GAL	10/23/02	CHG'D SCALE FOOT LOCATORS	PIT INSTALLATION 1 - 10K, MS AND SS AEGIS BASIC & PROFILE	
				DATE	8/11/00
				BY	N/A
				PROJ. NO.	WAS_C142928/C142928-S
				REV. NO.	1 of 1
				PRICE	21896

STAINLESS STEEL	PLATFORM SIZE	A	B
SS MODEL / PART NO.			
63758	3' x 3'	5'	5'
63760	4' x 4'	6'	6'
63766	5' x 5'	7'	7'
63764	6' x 4'	8'	6'
321860	5' x 3'	7'	5'
328600	7' x 4'	9'	6'



NOTE:

- A PIT FRAME IS ONE-PIECE WELDED UNIT (NO FIELD WELDING REQUIRED).
- THE PIT DIMENSIONS ARE DETERMINED BY THE PIT FRAME ACCESSORIES.
 - AT LEAST 6" THICKNESS OF CONCRETE IS REQUIRED FOR PIT FLOOR IN NON-HOSTILE APPLICATIONS.
 - AT LEAST 11" CONCRETE FLOOR WITH MINIMUM 3" BOTTOM SLOPE (AS SHOWN) IS REQUIRED IF DRAINAGE IS REQUIRED FOR HOSTILE APPLICATION. A 4" DIA. DRAIN IS RECOMMENDED.
- A SOIL BEARING PRESSURE OF AT LEAST 1,000 lbs PER SQUARE FT. IS REQUIRED. THE CORNER PIER SHOULD BE DESIGNED TO SUPPORT AT LEAST TWO THIRDS OF THE TOTAL CAPACITY OF THE SCALE.
- A 1 1/4" DIA. CONDUIT FOR THE 4 LOAD CELL CABLES IS RECOMMENDED. LOCATE CONDUIT APPROX AS SHOWN WITH CONDUIT SLOPED FOR DRAINAGE.
- WITH THE FRAME LEVEL ($\pm 1/8"$) IN BOTH DIRECTIONS, AND SECURED, CONCRETE IS FILLED IN AROUND THE OUTSIDE OF PIT FRAME AND PIT FLOOR TO FORM SCALE PIT. IT IS RECOMMENDED THAT $f_c = 3500$ psi AND 3" TO 4" SLUMP CONCRETE BE USED.
- WHEN THE CONCRETE HAS REACHED A MINIMUM OF 2000 psi, PULL THE LOAD CELL CABLES THROUGH THE CONDUIT TO THE JUNCTION BOX LOCATION, AND LOWER THE PLATFORM ASSEMBLY INTO POSITION. ROUTE THE CABLES UNDER THE SCALE AS TO NOT INTERFERE WITH WEIGHING ON SCALE. SEAL THE ENDS OF THE CONDUIT TO KEEP WATER OUT.
- WITH THE SCALE IN THE PLACE, THE CLEARANCE AROUND THE EDGE OF THE PLATFORM AND PIT COPING SHOULD BE 1/4" TO 3/8".



**A-A VIEW
INSTALLATION OF PIT FRAME
POURED CONCRETE BASED ON THE SIZE
1K-10K**

NO.	BY	DATE	REVISION	FAIRBANKS SCALES	
1	JSH	4/26/02	RELEASED	Meridian, Mississippi	
				PIT INSTALLATION	
				1 - 10K, SS	
				LIFT DECK SCALES	
				DATE	REVISED
				4/26/02	
				SCALE	1 of 1
				DESIGNED BY	JSH
				CHECKED BY	JSH
				APPROVED BY	JSH
				23438	

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Unless otherwise specified, dimensions are in inches. Tolerances: Fractions: $\pm 1/16"$ Decimals: $\pm .005"$ Angles: 1° Hole diameters: $\pm 1/32"$



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