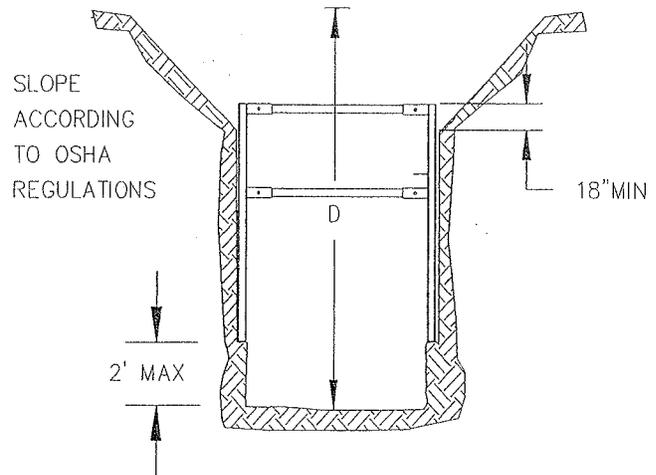
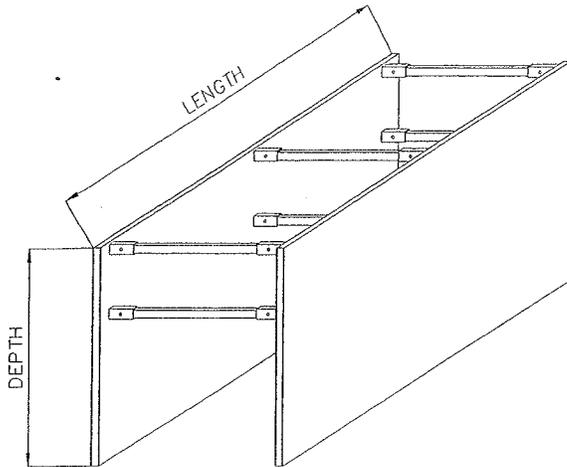


# MANUFACTURERS TABULATED DATA SHEET

MANUFACTURERS DATA			
MODEL NO. 61620			
SHIELD DEPTH	6	FT	
LENGTH	16	FT	
THICKNESS	0.5	IN	
SHIELD WEIGHT	5116	LBS	
STRUT-RND 5" SCH 80			

ALLOWABLE SOIL LOADING AND DEPTH	
ALLOWABLE LOADING	710 PSF
ALLOWABLE SOIL DEPTH (FT)	
Type A-25	28 FT
Type B-45	16 FT
TYPE C-60	12 FT
TYPE C-80	9 FT
ALLOWABLE STRUT LEN	16 FT



- Notes:
- 1) All excavations shall be in accordance with OSHA CFR 29, Part 1926, Subpart P. July 1997, and Cal Osha Safety orders title 8 sections 1504, 1539-1547.
  - 2) Soil shall be classified in accordance with OSHA Appendix A or by a registered civil engineer prior to installing this equipment.
  - 3) Shield may be held 2 ft above the bottom of the excavation.
  - 4) Surcharge load shall be determined by a competent person or engineer. The above depth ratings allow a 72 PSF surcharge load. Equipment and spoil piles spaced minimum 2 FT from the edge of the excavation will exert a 72 PSF surcharge load.
  - 5) Shield shall be assembled prior to placing it in excavation. Steel plates 1" thick may be placed at the end of the shield provided the shield is no more than 10 FT wide. For shields wider than 10 FT end panel systems shall be designed by a registered civil engineer.
  - 6) Shield is slightly tapered in the front to avoid side wall shaving

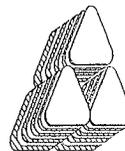
## The Saunders Co.

P.O. BOX 536  
 DUNDEE, OREGON. 97115  
 PH: (503) 538-0404  
 FAX: (503) 538-5039  
 TOLL FREE: (877) 964-6871  
 WEB PAGE: www.minusonellc.com  
 e-mail: sales@minusonellc.com



## SHIELD 6'X 16'X 0.5"

*J.M. TURNER ENGINEERING, INC.*  
**CONSULTING ENGINEERS**



1335 N. DUTTON AVE., SANTA ROSA, CA. 95401  
 (707) 528-4503 FAX (707) 528-4505

DATE	REVISED	JOB NO:
1/27/2005		8719-1

# MANUFACTURERS TABULATED DATA SHEET

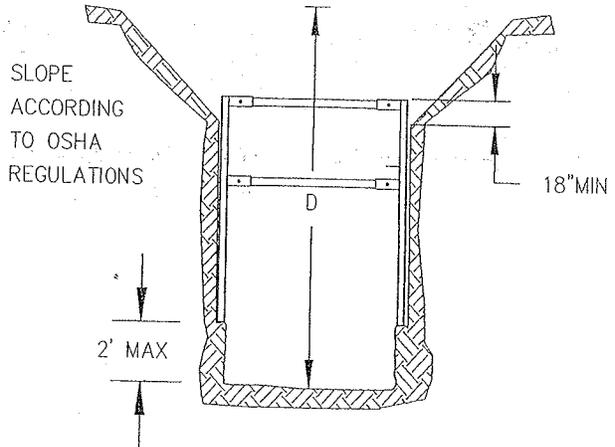
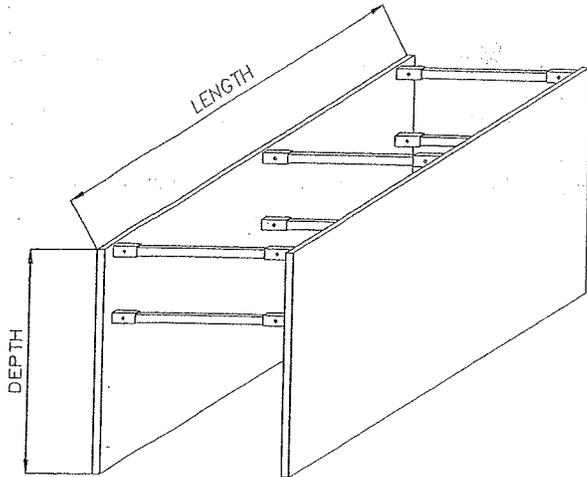
## MANUFACTURERS DATA

DEL NO. 81629

SHIELD DEPTH	8	FT
LENGTH	16	FT
THICKNESS	0.5	IN
SHIELD WEIGHT	6638.8	LBS
STRUT-RND 5" SCH 80		

## ALLOWABLE SOIL LOADING AND DEPTH

ALLOWABLE LOADING	749 PSF
ALLOWABLE SOIL DEPTH (FT)	
Type A-25	30 FT
Type B-45	17 FT
TYPE C-60	12 FT
TYPE C-80	9 FT
ALLOWABLE STRUT LENGTH	20 FT



**Notes:**

- 1) All excavations shall be in accordance with OSHA CFR 29, Part 1926, Subpart P. July 1977, and Cal Osha Safety orders title 8 sections 1504, 1539-1547.
- 2) Soil shall be classified in accordance with OSHA Appendix A or by a registered civil engineer prior to installing this equipment.
- 3) Shield may be held 2 ft above the bottom of the excavation.
- 4) Surcharge load shall be determined by a competent person or engineer. The above depth ratings allow a 72 PSF surcharge load. Equipment and spoil piles spaced minimum 2 FT from the edge of the excavation will exert a 72 PSF surcharge load.
- 5) Shield shall be assembled prior to placing it in excavation. Steel plates 1" thick may be placed at the end of the shield provided the shield is no more than 10 FT wide. For trench no wider than 3', may substitute 1" finform for 1" steel plate. For shields wider than 10 FT end panel systems shall be designed by a registered civil engineer.
- 6) Shield is slightly tapered in the front to avoid side wall shaving

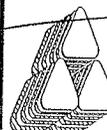
## SAUNDERS COMPANY

P.O. BOX 536  
 DUNDEE, OREGON. 97115  
 PH: (503) 538-0404  
 FAX: (503) 538-5039  
 TOLL FREE: (877) 964-6871  
 WEB PAGE: www.minusonellc.com  
 e-mail: sales@minusonellc.com



SHIELD 8' X 16' X 0.5"

*J.M. TURNER ENGINEERING, INC.*  
**CONSULTING ENGINEERS**



1335 N. DUTTON AVE., SANTA ROSA, CA. 95401  
 (707) 528-4503 FAX (707) 528-4505

DATE	REVISED	JOB NO:
1/27/05		8720-1

MODEL

620 XLDF

SERIAL NUMBER

115828

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
			SOIL TYPE TO BE EXCAVATED		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
6	20	900	36	20	15

**LIMITATIONS IN USE OF TABLE**

TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

EXCAVATION 2 FEET BELOW BOTTOM OF SHIELD IS PERMITTED WHEN NO LOSS OF SOIL FROM BEHIND OR BELOW THE BOTTOM OF SHIELD IS ENCOUNTERED.

CONSULT MANUFACTURER WHEN RESTRICTION OF NOTE 2 IS NOT MET.

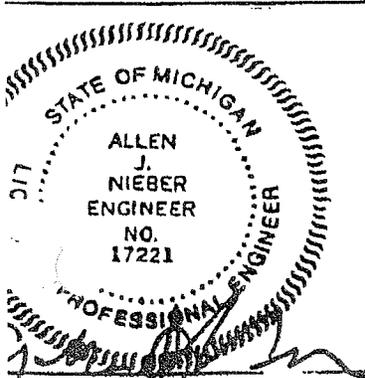
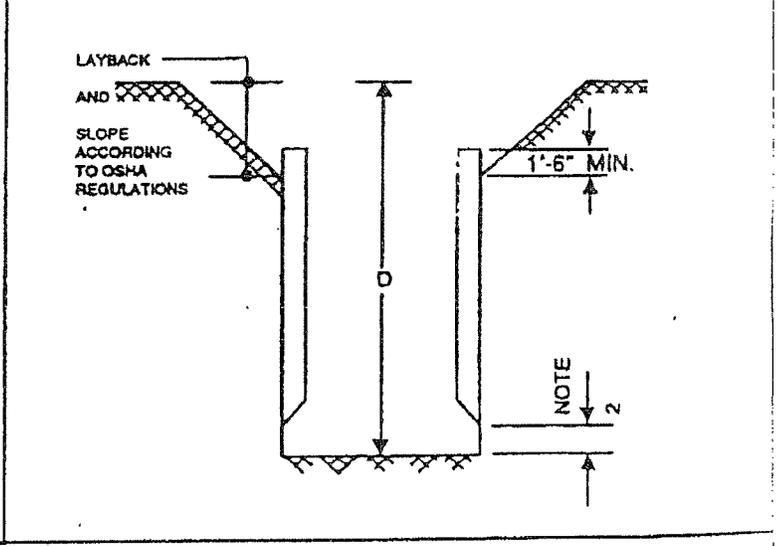
ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.

DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.

ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.

DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

DESCRIPTION	DESCRIPTION	DESCRIPTION
Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).	Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF. cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).	Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



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EFFICIENCY PRODUCTION, INC. ALL RIGHTS RESERVED

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENT NUMBERS:  
4,090,365-4,114,383-4,259,028  
ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

**USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS**

Any use of this product not specifically described on this certificate could cause cave-in, collapse, or structural failure resulting in death or serious injury.

**MODEL** 618 HDXLDF

**SERIAL NUMBER** 110312

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
			SOIL TYPE TO BE EXCAVATED		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
6	18	1,200	48	27	20

**LIMITATIONS IN USE OF TABLE**

1. TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
3. CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.
4. ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
5. DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
6. ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
7. DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

**DESCRIPTION**

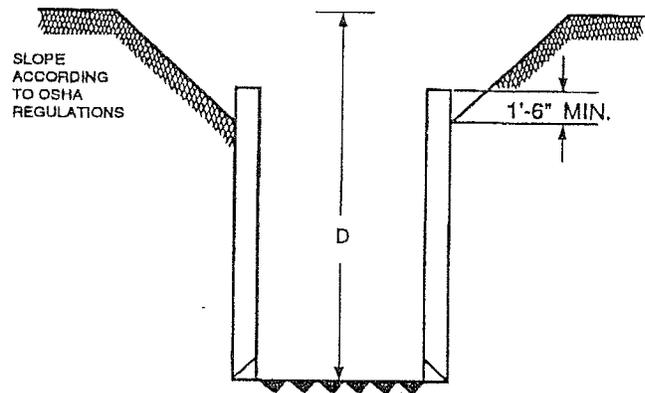
Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF. cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



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FEBRUARY 15, 1991

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4,090,365-4,114,383-4,259,028  
ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

**USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS**

Any use of this product not specifically described on this certification could cause cave-in,

PRODUCTION, INC.

PHONE (517) 676-8800

TRENCH SHIELDS

**MODEL** XLD-818

**SERIAL NUMBER** 132007

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS, 29 CFR, NO 209, PART 1926, SUBPART P

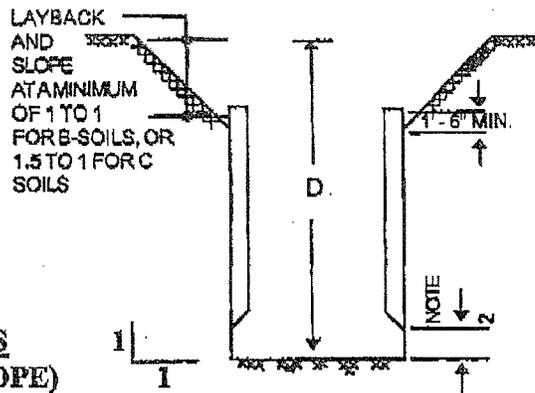
SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET)		
			D		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	SOIL TYPE TO BE EXCAVATED		
			TYPE B MEDIUM COHESIVE TO GRANULAR SOIL. 45 PSF PER FOOT OF DEPTH.	TYPE C-60 SOFT COHESIVE TO SUBMERGED SOIL. 60 PSF PER FOOT OF DEPTH.	TYPE C-80 SOFT COHESIVE TO SUBMERGED SOIL. 80 PSF PER FOOT OF DEPTH.
8	18	1380	31	23	17

**LIMITATIONS IN USE OF TABLE**

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- EXCAVATION 2 FEET BELOW BOTTOM OF SHIELD IS PERMITTED WHEN NO LOSS OF SOIL FROM BEHIND OR BELOW THE BOTTOM OF SHIELD IS ENCOUNTERED. SEE PARAGRAPH 1926.652 (a)(2)(i). THE COMPETENT PERSON SHALL MAKE THE DETERMINATION FOR COMPLIANCE. SUDDEN SHIFTING OF THE SHIELD VERTICALLY SHALL BE AVOIDED.
- CONSULT MANUFACTURER WHEN RESTRICTION ON NOTE 2 IS NOT MET.
- ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT AS LONG AS THE RATING OF THE BOTTOM SHIELD IS NOT EXCEEDED.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
- ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
- CONTRACTOR'S COMPETENT/QUALIFIED PERSON SHALL BE RESPONSIBLE FOR MONITORING SOIL CONDITIONS.

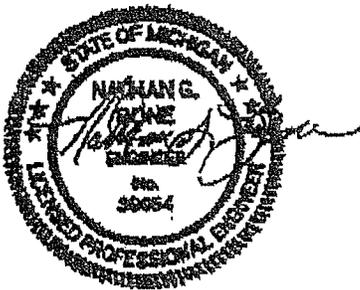
CONTINUED ON REVERSE SIDE

DESCRIPTION	DESCRIPTION	DESCRIPTION
Clay, with Unconfined Compressive Strength Greater than .5 TSF But Less than 1.5 TSF Cohesionless Gravel, Silt, Silt Loam or Sandy Loam.	Soft Cohesive Soil Unconfined Compressive Strength Less than .5 TSF Gravel, Sand and Loamy Sand; Submerged Soil or fractured Rock that is not Stable.	Soft Cohesive Soil Unconfined Compressive Strength Less than .5 TSF Gravel, Sand and Loamy Sand; Submerged Soil or fractured Rock that is not Stable.



**B-SOILS**  
(1 TO 1 SLOPE)

**C-SOILS**  
(1.5 TO 1 SLOPE)



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MAY 11, 2006

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4,080,365-4,114,333-4,259,028  
ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS

Any use of this product not specifically described on this certificate could cause cave-in, collapse, or structural failure resulting in death or serious injury.

MODEL

**XLD-818**

SERIAL NUMBER

**132006**

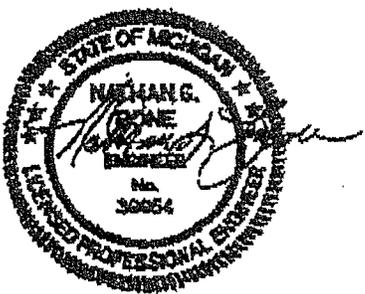
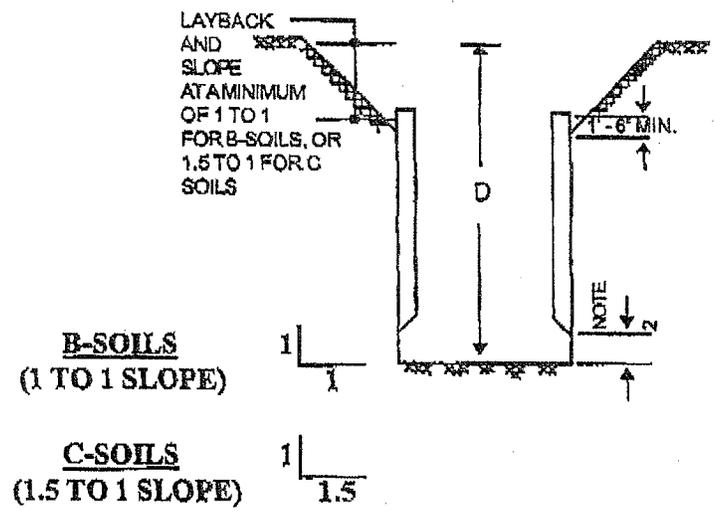
REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS, 29 CFR, NO 209, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET)		
			D		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	SOIL TYPE TO BE EXCAVATED		
			TYPE B MEDIUM COHESIVE TO GRANULAR SOIL. 45 PSF PER FOOT OF DEPTH.	TYPE C-60 SOFT COHESIVE TO SUBMERGED SOIL. 60 PSF PER FOOT OF DEPTH.	TYPE C-80 SOFT COHESIVE TO SUBMERGED SOIL. 80 PSF PER FOOT OF DEPTH.
8	18	1380	31	23	17

**LIMITATIONS IN USE OF TABLE**

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- EXCAVATION 2 FEET BELOW BOTTOM OF SHIELD IS PERMITTED WHEN NO LOSS OF SOIL FROM BEHIND OR BELOW THE BOTTOM OF SHIELD IS ENCOUNTERED. SEE PARAGRAPH 1926.652 (e)(2)(i). THE COMPETENT PERSON SHALL MAKE THE DETERMINATION FOR COMPLIANCE. SUDDEN SHIFTING OF THE SHIELD VERTICALLY SHALL BE AVOIDED.  
CONSULT MANUFACTURER WHEN RESTRICTION ON NOTE 2 IS NOT MET.
- ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT AS LONG AS THE RATING OF THE BOTTOM SHIELD IS NOT EXCEEDED.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
- ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
- CONTRACTOR'S COMPETENT/QUALIFIED PERSON SHALL BE RESPONSIBLE FOR MONITORING SOIL CONDITIONS.  
CONTINUED ON REVERSE SIDE

DESCRIPTION	DESCRIPTION	DESCRIPTION
Clay, with Unconfined Compressive Strength Greater than .5 TSF But Less than 1.5 TSF Cohesionless Gravel, Silt, Silt Loam or Sandy Loam.	Soft Cohesive Soil Unconfined Compressive Strength Less than .5 TSF Gravel, Sand and Loamy Sand; Submerged Soil or fractured Rock that is not Stable.	Soft Cohesive Soil Unconfined Compressive Strength Less than .5 TSF Gravel, Sand and Loamy Sand; Submerged Soil or fractured Rock that is not Stable.



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ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,663-1,062,664

USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS

Any use of this product not specifically described on this certificate could cause cave-in, collapse, or structural failure resulting in death or serious injury.

**MODEL** 418 XLDF

**SERIAL NUMBER** 110305

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-80, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
			SOIL TYPE TO BE EXCAVATED		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
4	18	780	31	17	13

**LIMITATIONS IN USE OF TABLE**

1. TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
3. CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.
4. ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
5. DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
6. ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
7. DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

**DESCRIPTION**

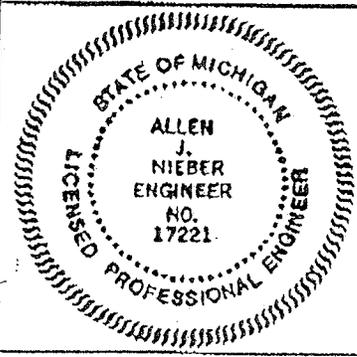
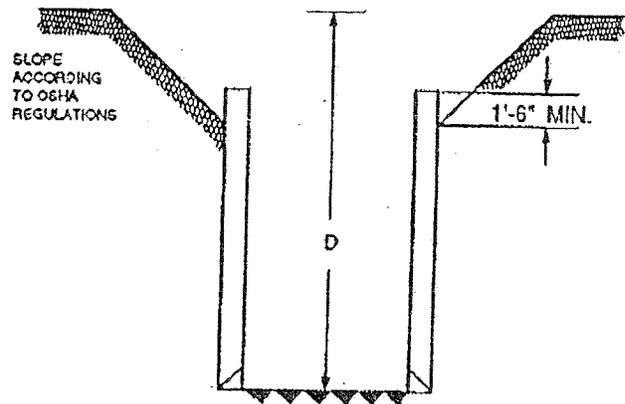
Clay, silt clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF, cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



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FEBRUARY 15, 1991

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4,090,365-4,114,383-4,259,028  
ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,584

USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS

**MODEL** 818 XLDF

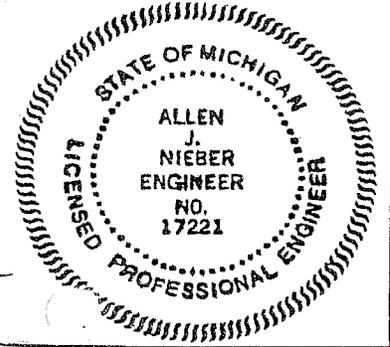
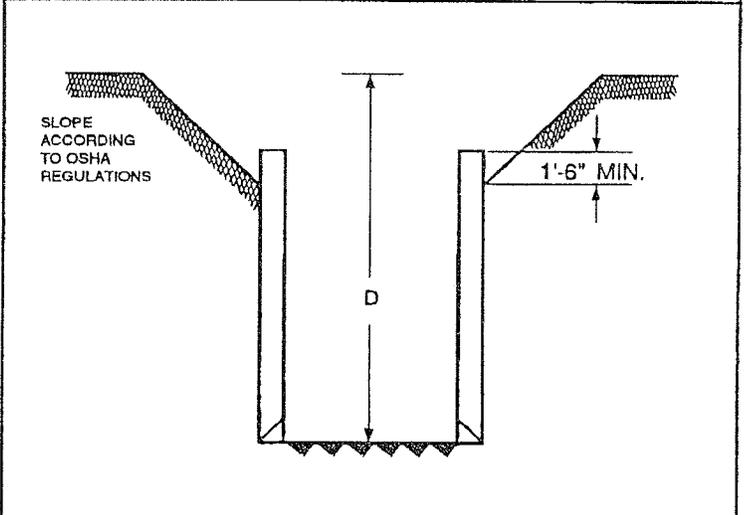
**SERIAL NUMBER** 110306

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
			SOIL TYPE TO BE EXCAVATED		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
8	18	900	36	20	15

- LIMITATIONS IN USE OF TABLE**
- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  - BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
  - CONSULT MANUFACTURER WHEN BOTTOM OF ELD IS NOT AT TRENCH BOTTOM.
  - ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
  - DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
  - ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
  - DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

DESCRIPTION	DESCRIPTION	DESCRIPTION
Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).	Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF. cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).	Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



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 McClurg & Associates, Inc. CONSULTING ENGINEERS  
 FEBRUARY 15, 1991

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 4,090,365-4,114,383-4,259,028  
 ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

**USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS**

Any use of this product not specifically described on this certification could cause cave-in, collapse, or structural failure resulting in death or serious injury.



**MODEL**

818 HDXLDF

**SERIAL NUMBER**

110310

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926. SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET)		
			D		
		SOIL TYPE TO BE EXCAVATED			
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
8	18	1,200	48	27	20

**LIMITATIONS IN USE OF TABLE**

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.  
CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.
- ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
- ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
- DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

**DESCRIPTION**

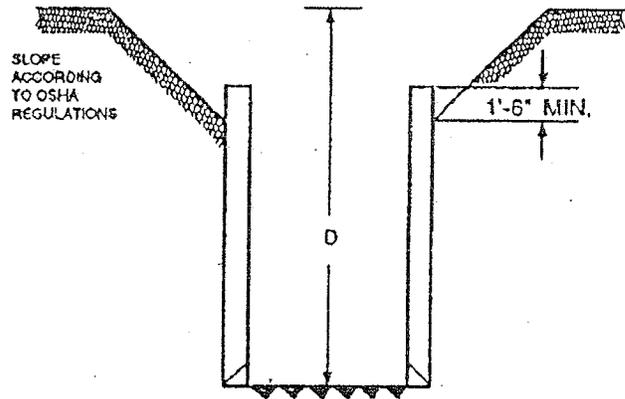
Clay, silty clay, sandy clay, clay loam. unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF, cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



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FEBRUARY 15, 1991

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4,090,365-4,114,383-4,259,028  
ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS

MODEL 818 HDXLDF

SERIAL NUMBER

110389

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET)		
			D		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	SOIL TYPE TO BE EXCAVATED		
			TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
8	18	1,200	48	27	20

**LIMITATIONS IN USE OF TABLE**

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
- CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.
- ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
- ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
- DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

**DESCRIPTION**

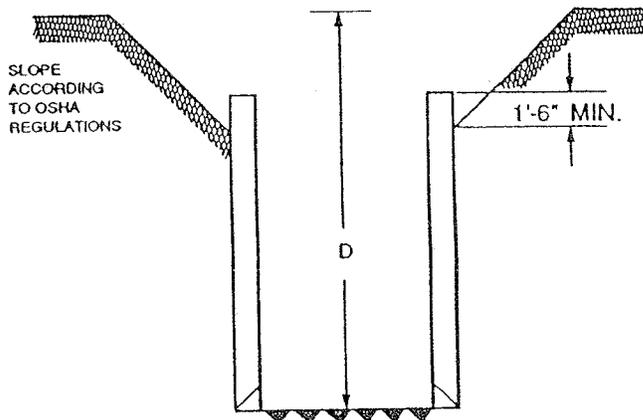
Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF. cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



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ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

**USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS**

MODEL 818 HDXLDLF

SERIAL NUMBER

110418

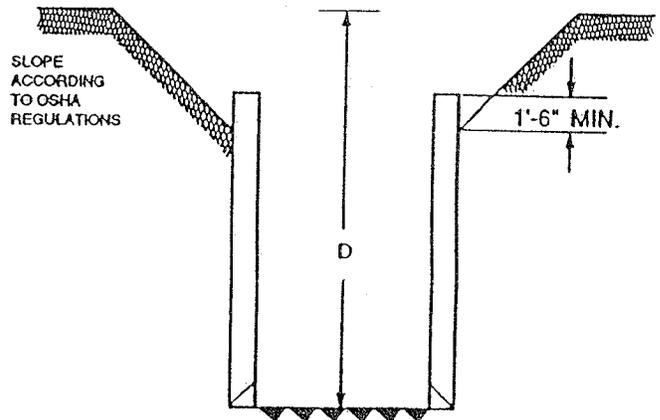
REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
			SOIL TYPE TO BE EXCAVATED		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
8	18	1,200	48	27	20

LIMITATIONS IN USE OF TABLE

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  - BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
  - CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.
- ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
  - ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
  - DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

DESCRIPTION	DESCRIPTION	DESCRIPTION
Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).	Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF. cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).	Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



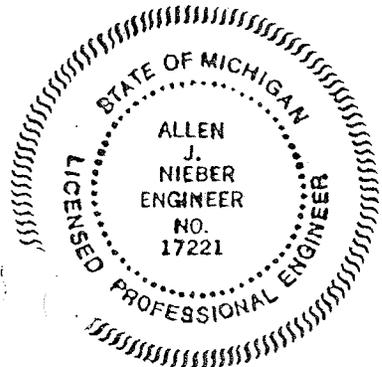
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ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS



Any use of this product not specifically described on this certification could cause cave-in,

MODEL

818 HDXLDF

SERIAL NUMBER

110419

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
			SOIL TYPE TO BE EXCAVATED		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
8	18	1,200	48	27	20

**LIMITATIONS IN USE OF TABLE**

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
- CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.  
  
ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
- ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
- DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

**DESCRIPTION**

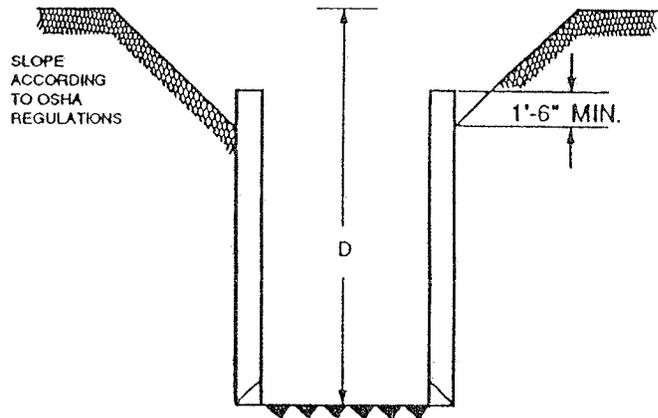
Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF. cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



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ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS



Any use of this product not specifically described on this certification could cause cave-in,

**MODEL** 618 HDXLDLF

**SERIAL NUMBER** 110420

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS, VOL. 54, NO. 209, 10-31-89, PART 1020, SUBPART F

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
HEIGHT (FEET)	LENGTH (FEET)		SOIL TYPE TO BE EXCAVATED		
		MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Silt, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
6	18	1,200	48	27	20

**LIMITATIONS IN USE OF TABLE**

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
- CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.  
ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
- ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
- DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

**DESCRIPTION**

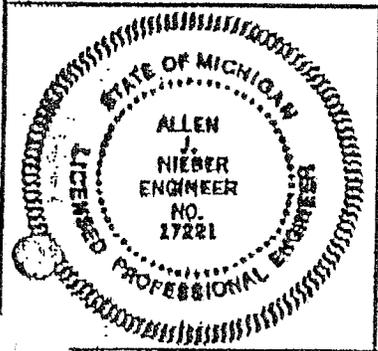
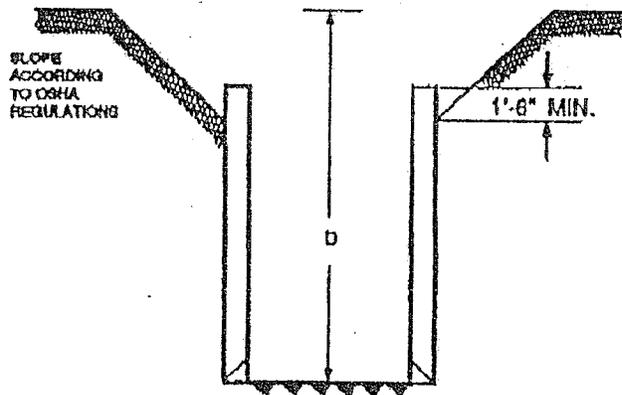
Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength greater than .5 TSP but less than 1.5 TSP, cohesionless gravel, silt, silt loam or sandy loam. (See Note 8 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength less than .5 TSP, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



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ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,052,683-1,062,064

USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS

Any use of this product not specifically described on this certification could cause cave-in,

MODEL

618 HDXLDF

SERIAL NUMBER

110421

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
			SOIL TYPE TO BE EXCAVATED		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
6	18	1,200	48	27	20

**LIMITATIONS IN USE OF TABLE**

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
- CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.
- ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
- ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
- DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

**DESCRIPTION**

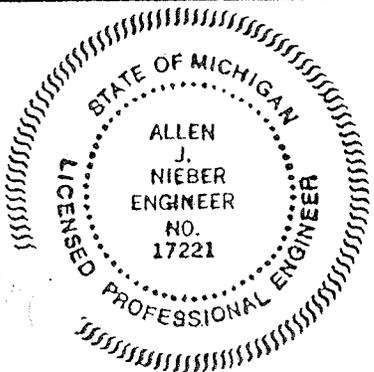
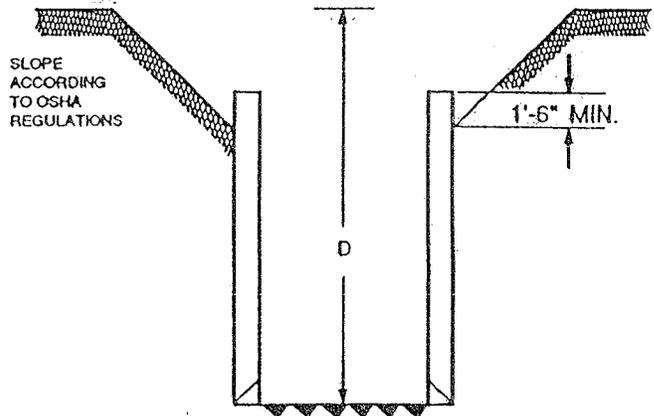
Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF. cohesionless gravel, silt, silt loam or sandy loam. (See Note 8 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



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4,090,365-4,114,383-4,259,028  
ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

**USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS**

Any use of this product not specifically described on this certification could cause cave-in, ...

MODEL

618 HDXLDF

SERIAL NUMBER

110422

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET)		
			D		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	SOIL TYPE TO BE EXCAVATED		
			TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
6	18	1,200	48	27	20

LIMITATIONS IN USE OF TABLE

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
- CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.  
ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
- ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
- DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

DESCRIPTION

Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).

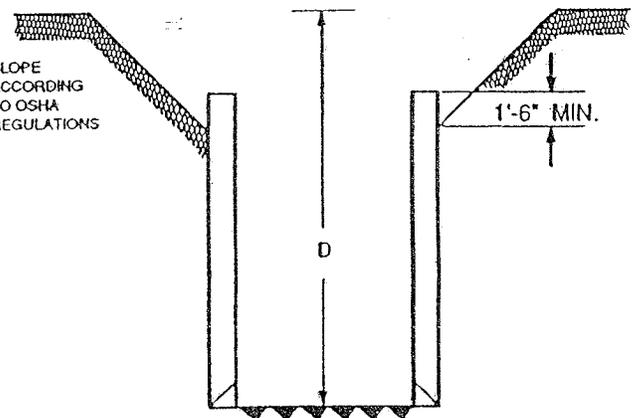
DESCRIPTION

Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF. cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).

DESCRIPTION

Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).

SLOPE ACCORDING TO OSHA REGULATIONS



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FEBRUARY 15, 1991

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ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS

Any use of this product not specifically described on this certification could cause cave-in, collapse, or structural failure resulting in death or serious injury.

**MODEL** 810 MHXLDF **SERIAL NUMBER** 110548

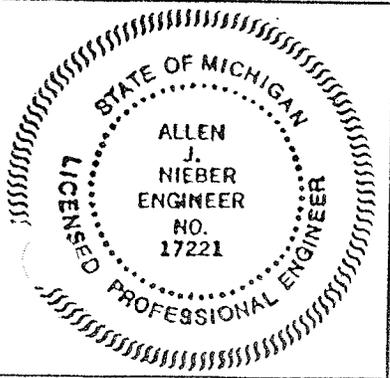
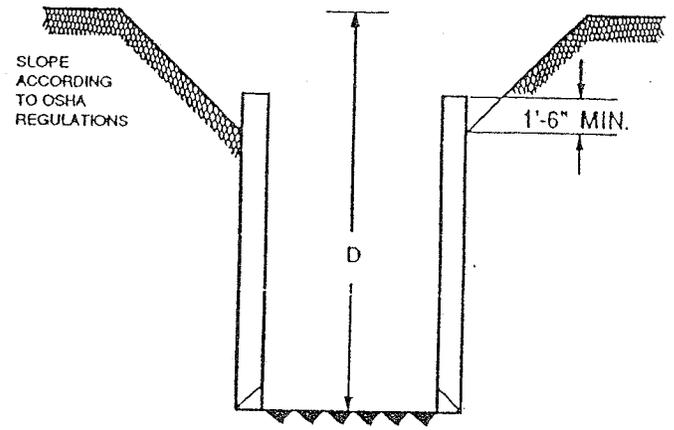
REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
			SOIL TYPE TO BE EXCAVATED		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
8	10	1,600	64	36	27

**LIMITATIONS IN USE OF TABLE**

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.  
CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.
- ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
- ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
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DESCRIPTION	DESCRIPTION	DESCRIPTION
Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).	Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF. cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).	Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



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ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

**USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS**

MODEL

810 MHXLDF

SERIAL NUMBER

110549

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
			SOIL TYPE TO BE EXCAVATED		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
8	10	1,600	64	36	27

**LIMITATIONS IN USE OF TABLE**

1. TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
3. CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.
4. ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
5. DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
6. ANY MODIFICATIONS OR ALTERATIONS NOT ALLOWED UNLESS APPROVED IN WRITING BY EFFICIENCY PRODUCTION, INC.
7. DEPTH CERTIFICATION IS BASED ON SHORT TERM EXPOSURE WITH EXCAVATION OPEN A PERIOD OF TIME EQUAL TO 24 HOURS OR LESS. CONSULT THE MANUFACTURER SHOULD LONG TERM EXPOSURE BE REQUIRED.

**DESCRIPTION**

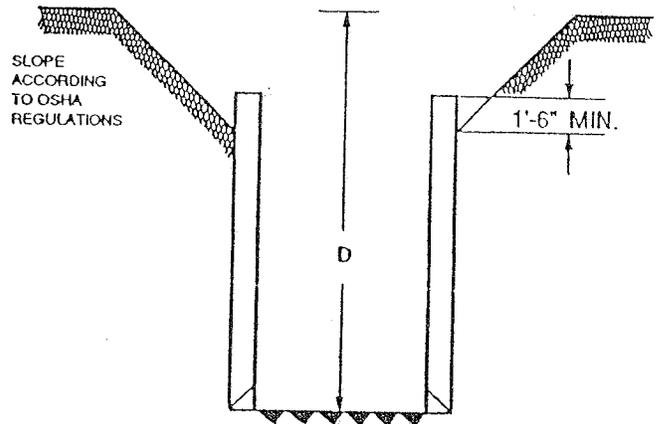
Clay, silty clay, sandy clay, clay loam, unconfined compressive strength of 1.5 tons per square foot or greater. (See note 8 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength greater than .5 TSF but less than 1.5 TSF. cohesionless gravel, silt, silt loam or sandy loam. (See Note 9 on reverse side).

**DESCRIPTION**

Clay with unconfined compressive strength less than .5 TSF, submerged sand, clay or fractured rock that is not stable. (See Note 10 on reverse side).



**CERTIFIED BY:**

McCLURG & ASSOCIATES, INC. CONSULTING ENGINEERS  
FEBRUARY 15, 1991

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MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENT NUMBERS:  
4,090,365-4,114,383-4,259,028  
ONE OR MORE OF THE FOLLOWING CANADIAN PATENT NUMBERS: 1,062,683-1,062,684

USE THIS PRODUCT ONLY IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS



**MODEL** 6x5.3 XLSE

**SERIAL NUMBER** 110550

REFERENCE TO OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION RULES AND REGULATIONS. VOL. 54, NO. 209, 10-31-89, PART 1926, SUBPART P

SHIELD SIZE		PSF RATING	MAXIMUM ALLOWABLE DEPTH OF CUT (FEET) D		
			SOIL TYPE TO BE EXCAVATED		
HEIGHT (FEET)	LENGTH (FEET)	MAXIMUM LATERAL EARTH PRESSURE CAPACITY AT TRENCH BOTTOM IN POUNDS PER SQUARE FOOT	TYPE A Stiff, cohesive soil. 25 PSF per foot of depth.	TYPE B Medium cohesive to granular soil. 45 PSF per foot of depth.	TYPE C Soft cohesive to submerged soil. 60 PSF per foot of depth.
6	5.3	1,600	64	36	27

**LIMITATIONS IN USE OF TABLE**

- TRENCH SHIELD TO BE ASSEMBLED AND INSTALLED AS SHOWN AND IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- BANK ABOVE TOP OF SHIELD TO BE LAID BACK ACCORDING TO OSHA REGULATIONS.
- CONSULT MANUFACTURER WHEN BOTTOM OF SHIELD IS NOT AT TRENCH BOTTOM.
- ADDITIONAL SHIELDS MAY BE STACKED WITH NO PENALTY IN DEPTH OF CUT.
- DEPTHS OF CUTS SHOWN ARE BASED ON EXAMPLES OF VARIOUS SOIL CONDITIONS. VERIFY ACTUAL SOIL PRESSURES PRIOR TO EACH USE.
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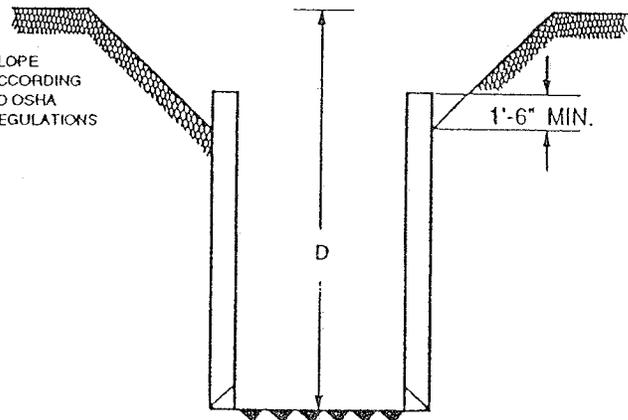
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SLOPE ACCORDING TO OSHA REGULATIONS



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