Integral Blade Stabilizers

(Alloy Steel)

Schoeller-Bleckmann Alloy Stabilizers are manufactured from AISI 4145 H Modified Steel, fully heat treated to 285-341 Brinell hardness and 40 ft. lbs. min. izod impact strength.

The blades are spiral milled in either left hand (L.H.) or right hand (R.H.) in three main configurations :

Wide open	150° to 210°
Open	over 210° to 270°
Tight	over 270° to 360°

The spiral blades are machined to provide maximum mud circulation.

Connection features are : Bore back box/Stress relief pin/Cold rolled thread roots/Phosphate coated connections/Heavy duty rubber thread protectors are standard

Blade diameters are ground to a maximum of $^{1}/_{32}$" under gauge on all hole sizes.

Hardfacing is applied on the leading edge as an additional protection.

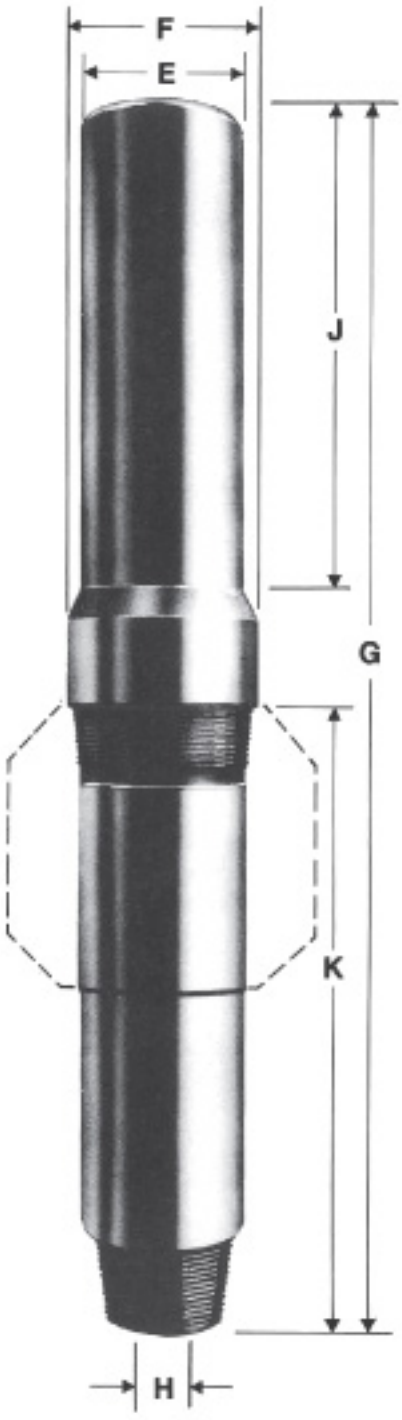
Information on Schoeller-Bleckmann Hardfacings can be found on the appropriate data sheet.

When ordering Schoeller-Bleckmann stabilizers, please specify :

1. Drill collar size and I.D.
2. Type of stabilizer (string or nearbit)
3. Type of hardfacing
4. Spiral type
5. Connection type and size

STANDARD SIZES FOR SB DARRON STABILIZERS							
Hole Size		5¼" / 6⅞"	7" / 9⅞"	10" / 13"	13½" / 17½"	18" / 22"	23" / 26"
Drill Collar Range		4⅛" / 5½"	5¾" / 7¾"	7" / 9½"	8" / 10"	8½" / 11"	8½" / 11"
Nominal Stabilizer Body OD		4¾"	6½"	8"	9½"	9½"	9½"
Std Stabilizer Overall Length	Nearbit	68"	72"	75"	85"	95"	101"
	String	72"	76"	80"	90"	100"	106"
No. of Pin Recuts Allowed to Meet DSI Specification		4	2	1	1	1	1
Extra Long Stab Overall Length	String	N/A	84"	100"	110"	120"	127"
No. of Pin Recuts Allowed to Meet DSI Specification		N/A	4	4	4	4	4
Std Stab Fishing Neck Length		28"	28"	28"	28"	28"	28"
Extra Long Stabilizer Fishing Neck Length		N/A	28"	36"	36"	36"	36"
Crown Length (Min)		14"	18"	18"	20"	22"	22"
Blade Width		2"	2½"	3"	3½"	4"	4"
Std Stabilizer Tong Space	Nearbit	22"	20"	20"	23"	23"	23"
	String	22"	20"	20"	23"	23"	23"
Extra Long Stab Tong Space (Min)	String	N/A	27"	32"	35"	35"	35"

Stabilizer Mandrels



One Piece Stabilizer Sleeve Mandrels

The Schoeller-Bleckmann Sleeve Type Stabilizer Mandrels available in either string or nearbit configurations are produced in a full range of sizes to overcome the logistics difficulties normally associated with stabilization equipment at the rig site.

Schoeller-Bleckmann Mandrels manufactured from a single piece of material for optimum integral strength are available in either AISI 4145 H Modified Steel or Non-Magnetic grades.

Engineered for easy make up using conventional plate type sleeve breakers and rig tongs, single piece Schoeller-Bleckmann Mandrels eliminate the need for any fluid seals.

Connections are manufactured and gauged to A.P.I. standards. Sufficient fishing neck, tong neck and mandrel upset lengths are provided to facilitate thread and shoulder repairs.

Used worldwide Schoeller-Bleckmann Mandrels have seen extensive service in B.H.A.'s for drilling both straight hole and directionally drilled wells.

MANDREL SPECIFICATIONS

SERIES	DRILL COLLAR DIA	UPSET DIA	OVERALL LENGTH	BORE		FISHING NECK LENGTH	SLEEVE END LENGTH
				STRING	N/BIT		
	E	F	G	H	H	J	K
41	4⅛" - 4¾"	5⅛"	62"	2"	1½"	24"	32"
47	4¾" - 5"	5¾"	62"	2¼"	1½"	24"	32"
62	6" - 7¼"	7½"	66"	$2^{13}/_{16}$"	2¼"	28"	32"
65		7¾"					
77	7¾" - 8¼"	9¼"	68"	$2^{13}/_{16}$"		28"	33"
85	8" - 9"	9¾"	68"	$2^{13}/_{16}$"		28"	33"
96	9" - 10"	11"	74"	3"		28"	39"

Standard Stabilizer Sleeves

Rig Replaceable

Schoeller-Bleckmann Stabilizer Sleeves have been designed as rig-replaceable units to help solve the problems of logistics when drilling in remote areas.

The sleeves are manufactured from solid bar for greater strength in rugged conditions and are engineered for easy make up.

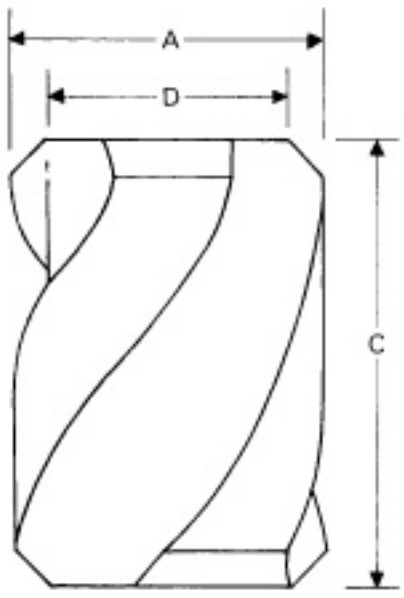
Hardfacing

Schoeller-Bleckmann offer a full range of hardfacings. A detailed spec.sheet is available.

When ordering Stabilizer Sleeves, please specify :

1. Hole size and series
2. Drill collar size
3. Type of hardfacing required

These sleeves are also produced in non-magnetic material.



SLEEVE SPECIFICATIONS					
HOLE SIZE	DRILL COLLAR DIA	SERIES	SLEEVE LENGTH	SLEEVE CYLINDER DIA	RCOMMENDED MAKE UP TORQUE Ft/Lbs
A			C	D	
6" - 6¼"	4⅛" - 4¾"	41	12"	5⅛"	2000 - 2500
6¼" - 7¾"	4¾" - 5"	47	14"	5¾"	2000 - 2500
8" - 9⅞"	6" - 6¾"	62	14"	7¼"	4500 - 5500
8¾" - 9⅞"	6¾" - 7¼"	65	14"		3500 - 4500
9⅞" - 15"	7¾" - 8¼"	77	14"	9¼"	7000 - 8000
16" - 17½"			18"	11"	
10¾" - 15"	8" - 9"	85	16"	10"	9000 - 10000
16" - 17½"			18"	11"	
13" - 15"	9" - 10"	96	18"	11"	10000 - 12000
17" - 17½"					
17½" - 26"			24"		

Machined dimensions may be modified to suit customers' requirements.

Barrel Stabilizer Sleeves

Available For Hole Sizes 8½" – 26"

The Schoeller-Bleckmann Barrel Sleeves system has been designed to overcome the logistics difficulties normally associated with transportation, storage and related costs of stabilizers at the rig site.

Developed from the original Schoeller-Bleckmann rig replaceable sleeve and fully interchangeable with standard steel and non-magnetic mandrels Barrel Sleeves may be used for both string and nearbit applications.

Manufactured from high grade Alloy Steel Barrel Sleeves are used extensively in directionally drilled wells where unconsolidated or badly faulted formations are being drilled.

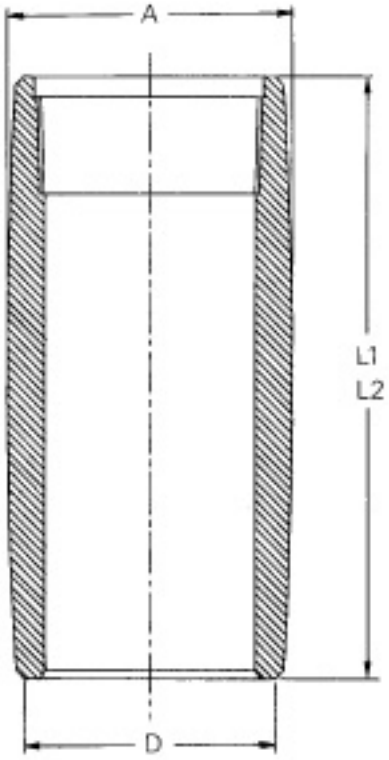
Field tests have shown that when used in conjunction with a mud motor and or steerable system the long radius and constant curvature of the sleeve blades improve directional control particularly during orientation and can reduce torque.

Barrel Sleeves are by design easily made power tight on the rig floor by using a conventional plate type sleeve breaker or tongs.

Features

1. Long radius constant curvature blade profile reduces hang up, hole wall damage and increases R.O.P.
2. Reduced fluctuation of W.O.B. caused by hang up.
3. Reduced drilling torque
4. Improved directional control when used in a steerable system

Stabilizer Sleeves may be hardfaced with any of Schoeller-Bleckmann dressing alternatives and the above illustrated blade configuration can be incorporated in Integral Blade Stabilizers, if required.

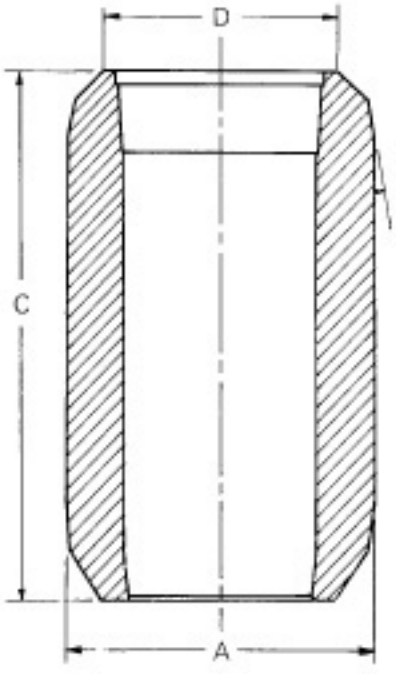


Barrel Sleeves are available in both open and tight spiral design.

SLEEVE SPECIFICATIONS

HOLE SIZE	SERIES	DRILL COLLAR DIA	SLEEVE CYLINDER DIA	SLEEVE LENGTH		RECOMMENDED MAKE UP TORQUE FT/LB
A		B	D	L1	L2	
8" - 9⅞"	62	6" - 6¼"	7½"	14"	18"	4500 - 5500
8¾" - 9½"	65	6¾" - 7¼"	7¾"	14"	18"	3500 - 4500
9⅝" - 15"	77	7¾"-8¼"	9¼"	16"	21"	7000 – 8000
16" - 17½"			11	18"	23"	
10⅝" - 15"	85	8"-9"	10	16"	21"	9000 - 10000
16" - 17½"			11	18"	23"	
13" - 15"	96	9"-10"	11	16"	21"	10000 - 12000
16" - 17½"				18"	23"	
17¾" - 26"				24"	28"	

Heavy Duty Stabilizer Sleeves



Available For Hole Sizes 8½" – 26"

The Schoeller-Bleckmann Heavy Duty Sleeves system designed to overcome the logistics difficulties associated with hard formation drilling in remote areas is available in a full range of sizes as detailed below.

Developed from the original Schoeller-Bleckmann rig replaceable sleeve and fully interchangeable with standard steel and non-magnetic mandrels, Heavy Duty Sleeves may be used for both string and nearbit applications.

Manufactured from high grade Alloy Steel Heavy Duty Sleeves are used extensively in both straight hole and highly deviated directionally drilled wells.

Heavy Duty Sleeves are by design easily made power tight on the rig floor by using a conventionally plate type sleeve breaker or tongs.

Features

1. Blade length increased by 30% to increase wall contact for improved directional control while increasing wear resistance.
2. Secondary angles ground on the blades are designed to reduce trailing edge hang up when P.O.O.H., well bore damage and progressive leading edge degeneration due to intermittent impact loading.
3. Field tests have shown that when used in abrasive sandstone formations, Heavy Duty Sleeves dressed with Schoeller-Bleckmann HF2000 have improved rotating hour performance by 400%.

Stabilizer Sleeves may be hardfaced with any of Schoeller-Bleckmann dressing alternatives and the above illustrated blade configuration can be incorporated in Integral Blade Stabilizers if required.

Heavy Duty Sleeves are available in both open and tight spiral design.

SLEEVE SPECIFICATIONS

HOLE SIZE	DRILL COLLAR DIA	SERIES	SLEEVE LENGTH	SLEEVE CYLINDER DIA	RECOMMENDED MAKE UP TORQUE FT/LB
A	B		C	D	
8" - 9⅞"	6" - 6¾"	62	18"	7½"	4500 – 5500
8¾" - 9½"	6¾" - 7¼"	65	18"	7¾"	3500 – 4500
9⅝" - 15"	7¾" - 8¼"	77	21"	9¼"	7000 – 8000
16" - 17½"			23"	11	
10¾" - 15"	8" - 9"	85	21"	10	9000 – 10000
16" - 17½"			23"	11	
13" - 15"	9" - 10"	96	21"	11	10000 – 12000
16" - 17½"			23"		
17¾" - 26"			28"		

Welded Blade Stabilizers

(PH Series)

Schoeller-Bleckmann "PH Series" Weld Blade Stabilizers used in the B.H.A. for drilling soft to medium hard formation holes are available in two types as shown.

Stabilizer bodies are manufactured from AISI 4145 H Modified Steel with mechanical properties in accordance with A.P.I. Specification 7.

Mild steel blades are welded onto the body using strictly controlled pre-heating, post weld heat treatment and weld application techniques.

All areas affected by the process of welding are subject to full non-destructive examination to assure the mechanical integrity of the joint.

"PH Series" Weld Blade Stabilizers are only available in Straight Blade or Offset Straight Blade types, but can be supplied with 3 or 4 blade configuration.

Providing tools with extra bearing areas, "PH Series" tools reduce hole wall damage in soft formations and provide improved directional control where bit deviation forces exceed the formations ability to adequately support conventional blade widths.

Schoeller-Bleckmann HF 1000 or HF 2000 Hardfacings most are commonly applied to Weld Blade Stabilizers.

Information on Schoeller-Bleckmann Hardfacings can be found on the appropriate data sheet.

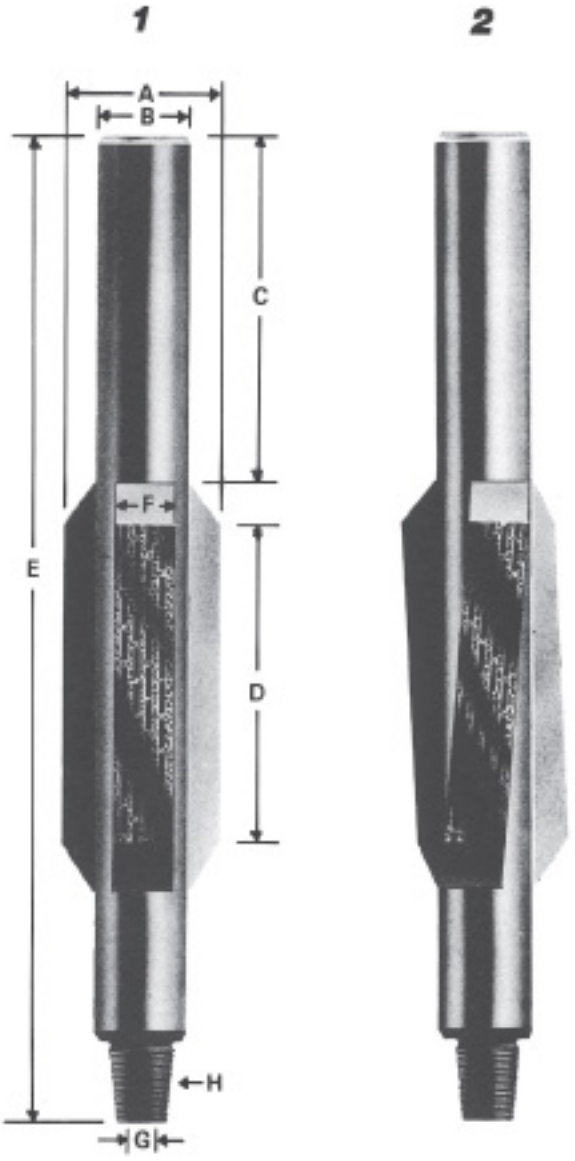
Thread connections are manufactured to A.P.I. Specification 7 and can be produced with Stress Relief Groove and Bore Back according to customer's specification.

Thread roots are cold rolled and can be kemplate coated to minimize galling upon request.

STANDARD DIMENSIONS						
A	6"	8½"	12¼"	17½"	26"	36"
B	4¾"	6½"	8"	9½"	9½"	9 ½"-11"
C	28"	28"	28"	28"	28"	28"
D	17"	21"	24"	26"	28"	30"
E	65"	73"	79"	82"	92"	104"
F	3"	3"	4"	4"	6"	6"
G	2¼"	$2^{13}/_{16}$"	$2^{13}/_{16}$"	3"	3"	3"
H	3½" IF	4½" IF	6⅝" REG	7⅝" REG	7⅝" REG	7⅝"-8⅝" REG

Other stabilizer sizes available on request.

1. **Straight Blade**
2. **Straight Blade Offset**



When ordering Schoeller-Bleckmann stabilizers, please specify :

1. Drill collar size and I.D.
2. Type of stabilizer (string or nearbit)
3. Type of Hardfacing
4. Blade type
5. Connection type and size

Welded Blade Stabilizers

(Standard)

Schoeller-Bleckmann "Standard" Weld Blade Stabilizers used in the B.H.A. for drilling soft to medium hard formation holes are available in three types as shown.

Stabilizer bodies are manufactured from AISI 4145 H Modified Steel with mechanical properties in accordance with A.P.I. Specification 7.

Mild steel blades are welded onto the body using strictly controlled pre-heating, post weld heat treatment and weld application techniques.

All areas affected by the process of welding are subject to full non-destructive examination to assure the mechanical integrity of the joint.

"Standard" Weld Blade Stabilizers are available in 3 or 4 blade configuration with the spiral type available with open or tight spiral.

Schoeller-Bleckmann HF 1000 or HF 2000 Hardfacings are most commonly applied to Weld Blade Stabilizers.

Information on Schoeller-Bleckmann Hardfacings can be found on the appropriate data sheet.

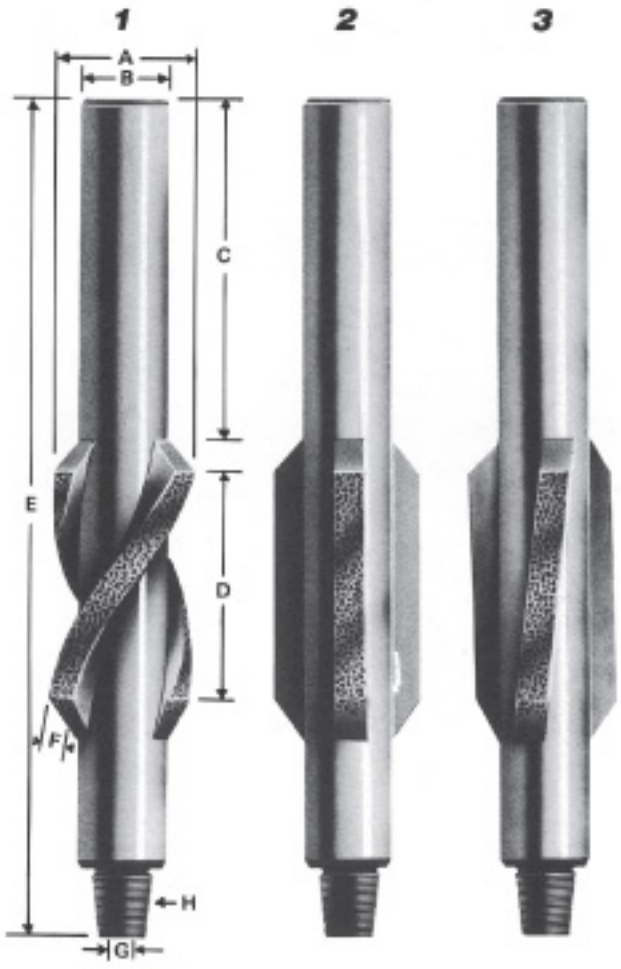
Thread connections are manufactured to A.P.I. Specification 7 and can be produced with Stress Relief Groove and Bore Back according to customer's specification.

Thread roots are cold rolled and can be kemplate coated to minimize galling upon request.

STANDARD DIMENSIONS						
A	6"	8½"	12¼"	17½"	26"	36"
B	4¾"	6½"	8"	9½"	9½"	9 ½"-11"
C	28"	28"	36"	36"	36"	36"
D	12"	14"	16"	18"	20"	20"
E	68"	77"	97"	108"	114"	124"
F	1½"	2"	2"	2½"	3"	3"
G	2¼"	$2^{13}/_{16}$"	$2^{13}/_{16}$"	3"	3"	3"
H	3½" IF	4½" IF	6⅝" REG	7⅝" REG	7⅝" REG	7⅝"-8⅝" REG

Other stabilizer sizes available on request.

1. **Spiral Blade**
2. **Straight Blade**
3. **Straight Blade Offset**

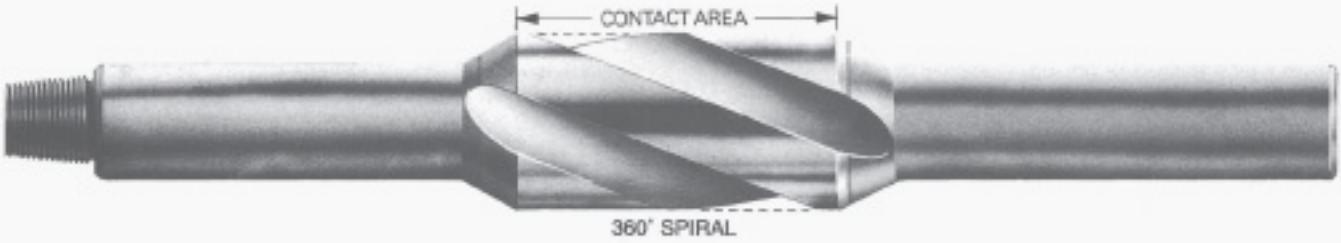


When ordering Schoeller-Bleckmann stabilizers, please specify :

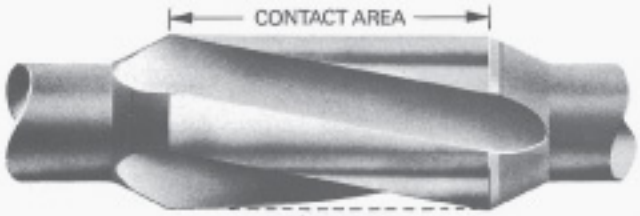
1. Drill collar size and I.D.
2. Type of stabilizer (string or nearbit)
3. Type of hardfacing
4. Blade type
5. Connection type and size

Stabilizer Configurations

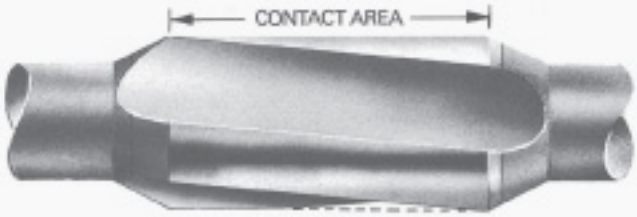
Schoeller-Bleckmann Stabilization can be supplied to any of the configurations shown below, or to customers' specific requirements.



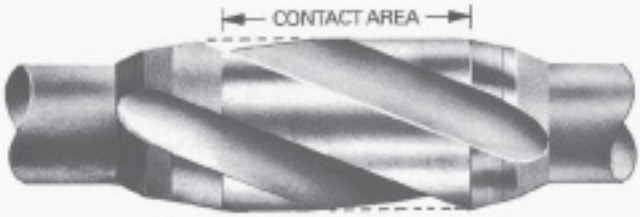
360° SPIRAL



270° SPIRAL

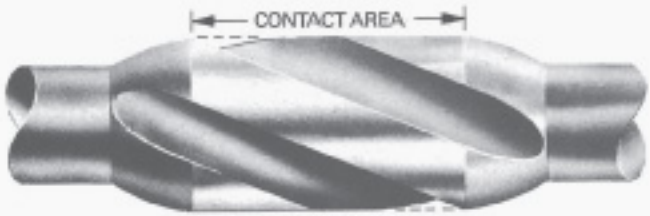


210° SPIRAL

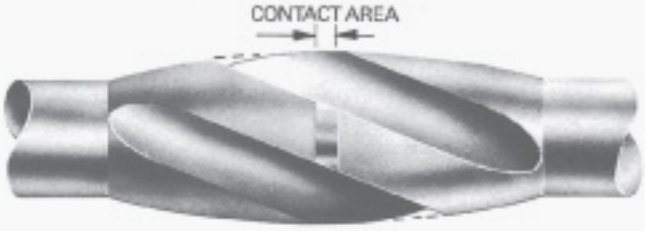


STANDARD WITH LEADING AND TRAILING ANGLES

STANDARD WITH LEADING ANGLE

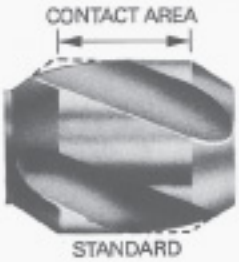


MELON SHAPE

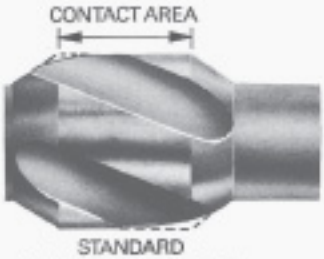


BARREL SHAPE

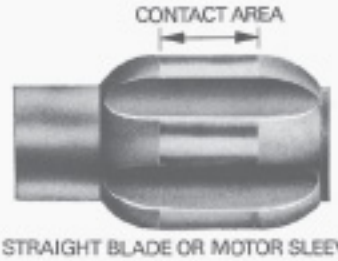
SLEEVES



STANDARD



STANDARD
WITH TORQUE SLEEVE



STRAIGHT BLADE OR MOTOR SLEEVE
MELON SHAPE