



Integral Body-Sealed Bearing – S.H.I. Series



Tool Features

Designed for the enlargement of pilot holes, directional drilling and large hole applications, the Schoeller-Bleckmann SHI series hole openers are manufactured from Chromium Molybdenum Solid Alloy Steel forgings, heat treated and conforming to the requirements of AISI 4145 H Modified.

- By design the fully integral construction of the body eliminates any requirement for welding on the body and cutter arms.
- The body and cutter arms are hardfaced for protection and cutters are available from our 3 standard designs, ST, MM and HD all of which are fully interchangeable.
- Non standard cutters can also be supplied to meet specific applications.
- The cutter assembly is a fully sealed unit incorporating ball and roller bearings providing optimum performance.
- Cutter assemblies can be easily changed out at the rig site using readily available hand tools.
- Circulation is achieved by either a 3 or 6 nozzle configuration on the body (3 in the cutter pockets and 3 in the wing areas). This is dependent on the hole opener body size.
- The body can be provided with a fully Integral Bullnose complete with reverse circulation facilities or with a rock bit connection with optional separate Bullnose.

When enquiring or ordering, please specify :

1. Hole size
2. Pilot size
3. Connection size and type
4. Cutter type
5. Circulation nozzle size and type
6. Pilot type (Rock Bit/Bullnose/Integral Bullnose)
7. If Bullnose type is selected please specify type required i.e. Plain, Side Hill or Spiral and any special circulation requirements

Note : Please state part no. from table below where possible.

STANDARD DETAILS	HOLE SIZE	PILOT SIZE	F / N LENGTH	FISHING NECK DIA	TONG NECK DIA	INSIDE DIA	TOP PIN CONN.
	8 1/2"	5 1/2"	30"	6 1/2"	4 1/2"	1"	4 1/2" IF
	12 1/2"	8 1/2"	30"	8"	6"	1"	6 1/2" REG
	16"	12 1/2"	35"	9 1/2"	8"	2 1/2"	7 1/2" REG
	17 1/2"	12 1/2"	38"	9 1/2"	8"	2 1/2"	7 1/2" REG

BOTTOM END OPTIONS	BIT BOX CONN.	PART NO.
	3 1/2" REG	I 08
	4 1/2" REG	I 12
	6 1/2" REG	I 16
	8 1/2" REG	I 17

INTEGRAL BULLNOSE – PART NOS		
PLAIN	SIDE HILL	SPIRAL
I 08 - A	I 08 - B	I 08 - C
I 12 - A	I 12 - B	I 12 - C
I 16 - A	I 16 - B	I 16 - C
I 17 - A	I 17 - B	I 17 - C

- Note :**
1. Standard circulation placement comprises of one central downward facing jet and three reverse circulation jets.
 2. A separate Bullnose for the three types shown can be supplied.
 3. Special requirements can be accommodated on request



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Cutter Features

Generally the cutter assembly consists of 4 machined parts : cutter, inner bearing race, spindle and locking key – roller and ball bearings and seals completing the assembly. All machined parts are fully surface hardened. A choice of cutter types are shown below.

ST



FOR SOFT TO MEDIUM FORMATIONS

- Open design tooth formation
- Tooth surfaces hardfaced

MM



FOR MEDIUM TO HARD FORMATIONS

- Closed design tooth formation
- Tooth surfaces hardfaced

HD



FOR EXTRA HARD FORMATIONS

- Button type design
(Spherical T.C.I.)

BODY PART NO.
I 08
I 12
I 16
I 17

HOLE SIZE	PILOT SIZE
8½"	5"
12¼"	8½"
16"	12¼"
17½"	12¼"

CUTTER TYPE PART NOS.		
ST	MM	HD
ST 82	MM 82	HD 82
ST 123	MM 123	HD 123
ST 162	MM 162	HD 162
ST 172	MM 172	HD 172

Non standard cutters can also be supplied to meet specific applications.



Single Stage Hole Openers



Sealed Bearing – SH Series



Tool Features

The Schoeller-Bleckmann Single Stage Hole Opener is a simple but rugged design. The body is machined from AISI 4145 fully heat treated alloy steel with arms welded onto the body providing location for the cutters. Arms and cutters are hardfaced for protection, the cutters are available in 3 different designs for varying conditions and rock formations (see Sheet 1a for more details). The cutter assembly is a fully sealed unit incorporating ball and roller bearings. Retaining the whole assembly is achieved by a locking pin. The design of the hole opener enables quick overhauls on the rig site. 3 or 6 replaceable nozzles are used giving optimum mud circulation around the cutters.

When enquiring or ordering, please specify :

1. Hole size
2. Pilot size
3. Connection types
4. Cutter type

BODY PART NO.	HOLE SIZE	PILOT SIZE	A	B	C	D	I.D	TOP PIN CONN.	BTM BOX CONN.	ASS. WT. (KG)
			LENGTH	FN LENGTH	FISHING DIA	TONG DIA				
S12	12¼"	8½"	70"	28"	8"	6"	1½"	6½" REG	4½" REG	410
S15	14¾"	9¾"	70"	28"	8"	7½"	1½"	6½" REG	6½" REG	460
S16	16"	12¼"	72"	28"	9½"	8"	2¼"	7½" REG	6½" REG	600
S17	17½"	12¼"	74"	28"	9½"	8"	2¼"	7½" REG	6½" REG	625
S24	24"	17½"	80"	30"	9½"	9½"	2¼"	7½" REG	7½" REG	985
S26	26"	17½"	82"	30"	9½"	9½"	3"	7½" REG	7½" REG	1010
S36	36"	26"	84"	30"	9½"	9½"	3"	7½" REG	7½" REG	1360



Single Stage Hole Openers



Sealed Bearing – SH Series

Cutter Features

Generally the cutter assembly consists of 4 machined parts : cutter, inner bearing race, spindle and locking key – roller and ball bearings and seals completing the assembly. All machined parts are fully surface hardened. A choice of cutter types are shown below.



Cutter Type ST – Soft to Medium Formations

- Open design tooth formation
- Tooth surfaces hardfaced



Cutter Type MM - Medium to Hard Formations

- Closed design tooth formation
- Tooth surfaces hardfaced



Cutter Type HD - Extra Hard Formations

- Button type design (Spherical T.C.I.)

BODY PART NO.	HOLE SIZE	PILOT SIZE	*CUTTER PART NO.
S12	12¼"	8½"	123
S15	14¾"	9½"	151
S16	16"	12¼"	162
S17	17½"	12¼"	172
S24	24"	17½"	243
S26	26"	17½"	263
S36	36"	26"	361

*Prefix cutter
Part number with
Relevant cutter.
Type: ST
MM
HD



Large Hole Range Hole Openers



Sealed Bearing – LHS Type



Tool Features

The Schoeller-Bleckmann Large Range of Hole Openers are designed specifically for big hole applications such as conductor holes and can open out from smaller than normal pilot holes in a single pass.

The opener is a simple but rugged design. The body is manufactured from AISI 4145 H Modified Alloy Steel, the saddles, ribs, plates etc which complete the body assembly are welded onto the body.

Saddles, ribs and other areas prone to wear are hardfaced for protection.

Excellent circulation is achieved by the strategic placement of nozzles between the cutters.

The cutter assembly is a fully sealed unit comprising of large ball and roller bearing elements that give optimum performance. The bearing race of the cutter is rotationally held by a cam lock.

Cutter assemblies are easily changed on the rig site usually readily available hand tools.

Cutter types available are :

- ST** Soft/Medium *tooth* type
- MM** Medium/Hard *tooth* type
- HD** Hard *Tungsten Carbide Insert* type

The bottom configuration can be manufactured to suit customer requirements i.e. bit box, bullnose etc.

When ordering or enquiring, please specify :

1. Hole size
2. Pilot size
3. Connection/bottom end configuration
4. Circulation nozzle opening size
5. Cutter type

Note : Please state part number from the table where possible.

HOLE SIZE	PILOT SIZE	FISHING NECK DIA.	FISHING LENGTH	I.D.	TOP PIN CONN.	BODY PART NO.	NO. OF CUTTERS
26"	15½"	9½"	42"	3"	7% REG	LHS 2600	3
28"	17½"	9½"	42"	3"	7% REG	LHS 2800	3
30"	19½"	9½"	42"	3"	7% REG	LHS 3000	3
36"	17½"	9½"	42"	3"	7% REG	LHS 3600	4
42"	23½"	9½"	42"	3"	7% REG	LHS 4200	4



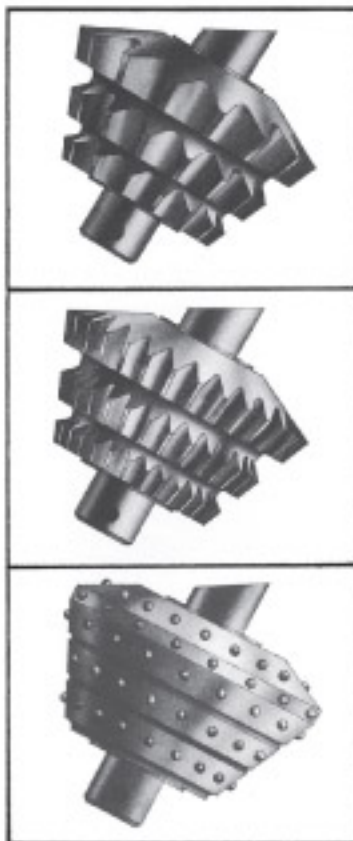
Large Hole Range Hole Openers



Sealed Bearing – LHS Series

Cutter Features

Generally the cutter assembly consists of 4 machined parts : cutter, inner bearing race, spindle and locking key – roller and ball bearings and seals completing the assembly. All machined parts are fully surface hardened. A choice of cutter types are shown below.



Cutter Type ST – Soft to Medium Formations

- Open design tooth formation
- Tooth surfaces hardfaced

Cutter Type MM - Medium to Hard Formations

- Closed design tooth formation
- Tooth surfaces hardfaced

Cutter Type HD - Extra Hard Formations

- Button type design (Spherical T.C.I.)

BODY PART NO.	HOLE SIZE	PILOT SIZE	CUTTER PART NO.		
			ST	MM	HD
LHS 2600	26"	15½"	SCYC260051	SCYC260050	SCYC260052
LHS 2800	28"	17½"	SCYC280051	SCYC280050	SCYC280052
LHS 3000	30"	19½"	SCYC300051	SCYC300050	SCYC300052
LHS 3600	36"	17½"	SCYC360051	SCYC360050	SCYC360052
LHS 4200	42"	23½"	SCYC420051	SCYC420050	SCYC420052