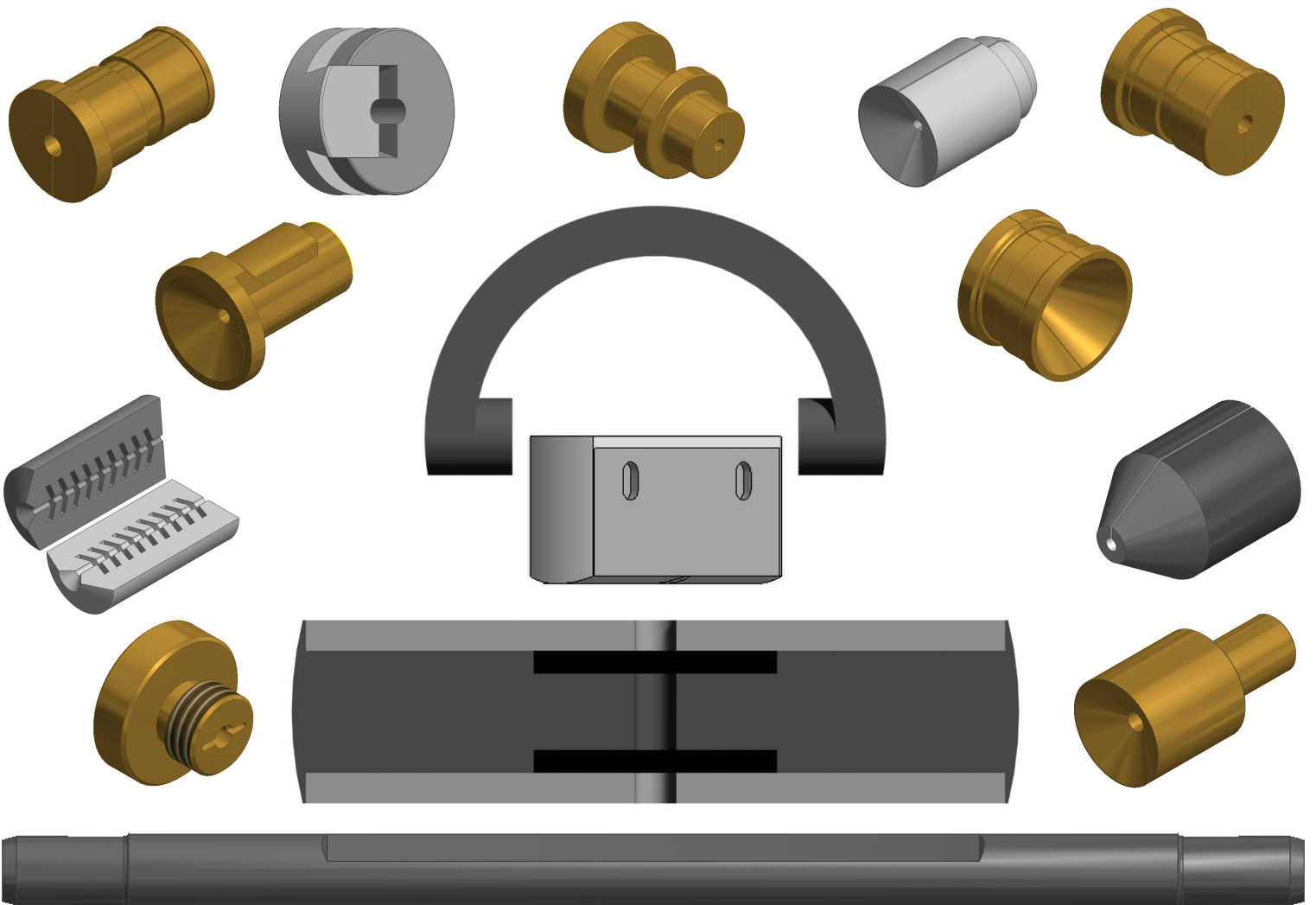




B & T Oilfield Products

Pressure Control Catalog





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Notes:

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ALASKA
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B & T Oilfield Products

Grease Head Equipment

Enviro Type

- OS9S Brass Upper Bushing
- Enviro Type Upper Gland
- 15K Brass Seat
- Bowen Mini Packoff Rubber
- Enviro Type Spacer
- OS9S Line Wiper
- Enviro Type Lower Gland

Bowen Type (Medium)

- Medium Bowen Type Upper Bushing
- Medium Bowen Type Line Wiper
- Medium Bowen Type Interlocking Seat

Bowen Type (Mini)

- Mini Bowen Type Upper Bushing
- Bowen Mini Packoff Rubber
- Mini Bowen Type Interlocking Seat

Bowen Type (Large)

- Large Bowen Type Upper Bushing
- Large Bowen Type Line Wiper
- Large Bowen Type Interlocking Seat

Bell Type

- OS9S Brass Upper Bushing
- OS9S Line Wiper
- OS9S Brass Lower Bushing
- OS9S Brass Holder

Type C

- Type C Upper Brass
- Type C Line Wiper
- Type C Lower Brass

Type CL

- Type CL Upper Brass
- Type CL Line Wiper
- Type CL Lower Brass

Type 410

- Type 410 Upper Brass
- Type 410 Lower Brass

Type MT

- Type MT Upper Brass
- Type MT Lower Brass

Flow Tubes

B & T Oilfield Products makes parts compatible with grease head injection units made by various manufacturers. B & T Oilfield Products is neither affiliated with nor a representative of National Oil Well Varco, NOV ASEP Elmar, Bowen, or Double E. Products are listed by their common OEM names only for ease of identifying component parts.

Enviro Type Grease Head

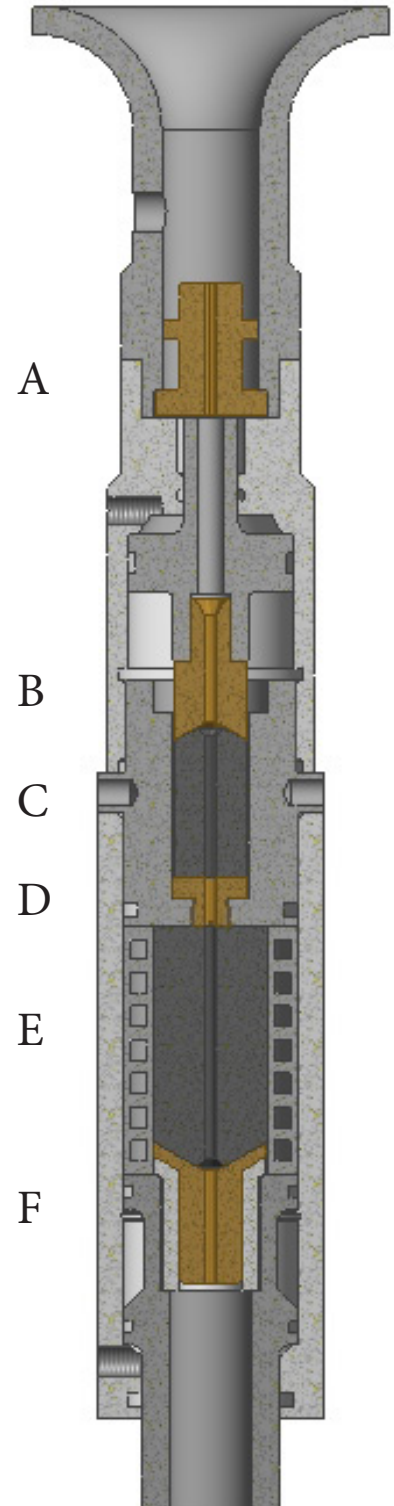
B & T manufactures the following components compatible with the Enviro type grease head:

- A) OS9S Brass Upper Bushing
- B) Enviro Type Upper Gland *
- C) Bowen Mini Packoff Rubber
- D) Enviro Type Spacer
- E) OS9S Line Wiper
- F) Enviro Type Lower Gland

The Bowen mini packoff rubber and OS9S line wiper are available in the full range of materials offered by B & T. Please consult the elastomer chart in the reference section to find the proper compound for your specific application. The standard compound suitable for most applications is 70 durometer NBR packoff rubber and a 50 durometer SBR/Natural line wiper rubber.

*Optional 15K configuration is also available. This will replace the Enviro Type Upper Gland with the 15K Brass Seat.

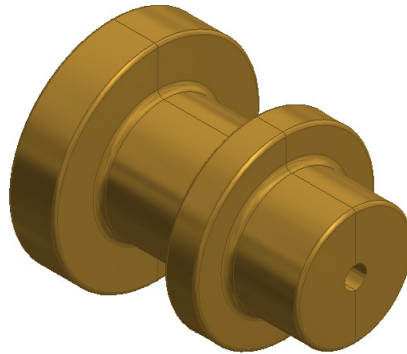
Brass parts of made of casted brass and brass materials.





B & T Oilfield Products

OS9S Brass Upper Bushing



Identifying Information

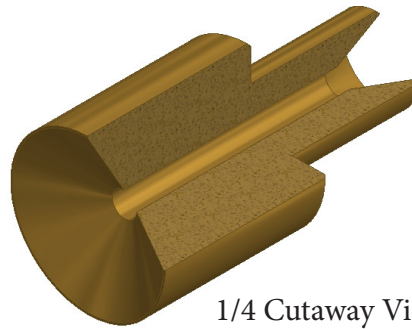
O.D. 2.000"
Length 2.460"

Part Number	Line Size	Material
OSUB-0002-15	3/16"	Casted Brass
OSUB-0003-15	7/32"	Casted Brass
OSUB-0004-15	1/4"	Casted Brass
OSUB-0005-15	9/32"	Casted Brass
OSUB-0006-15	5/16"	Casted Brass
OSUB-0008-15	3/8"	Casted Brass
OSUB-0009-15	7/16"	Casted Brass
OSUB-0010-15	15/32"	Casted Brass
OSUB-0011-15	1/2"	Casted Brass



B & T Oilfield Products

**Enviro Type
Upper Gland**



1/4 Cutaway View

Identifying Information

O.D. 1.370"
Length 2.585"

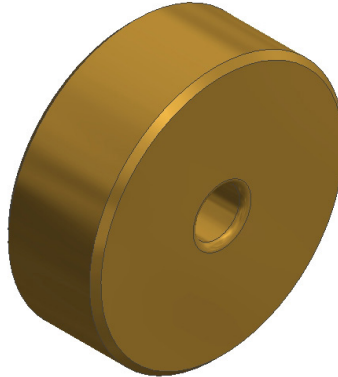
Part Number	Line Size	Material
EHUG-0002-05	3/16"	Brass
EHUG-0003-05	7/32"	Brass
EHUG-0004-05	1/4"	Brass
EHUG-0005-05	9/32"	Brass
EHUG-0006-05	5/16"	Brass
EHUG-0008-05	3/8"	Brass
EHUG-0009-05	7/16"	Brass
EHUG-0010-05	15/32"	Brass
EHUG-0011-05	1/2"	Brass



B & T Oilfield Products

15K Brass Seat

Replaces Enviro Type Upper Gland in the 15K configuration.



Identifying Information

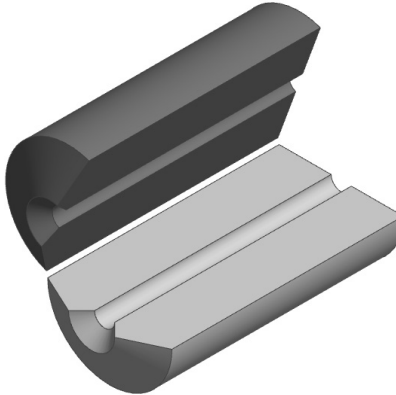
O.D. 1.369"
Length 0.500"

Part Number	Line Size	Material
15KBS-0002-05	3/16"	Brass
15KBS-0003-05	7/32"	Brass
15KBS-0004-05	1/4"	Brass
15KBS-0005-05	9/32"	Brass
15KBS-0006-05	5/16"	Brass
15KBS-0008-05	3/8"	Brass
15KBS-0009-05	7/16"	Brass
15KBS-0010-05	15/32"	Brass
15KBS-0011-05	1/2"	Brass



B & T Oilfield Products

Bowen Mini Packoff Rubber 119 Series



Identifying Information

O.D. 1.300"
Length 2.700"

Mold #-Line Size-Compound
0119-XXXX-XXXX

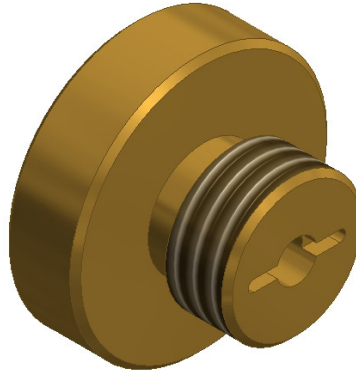
Line Size	Line Size Part No.	Compound	NBR 70 Duro	HNBR 65 Duro	HNBR 80 Duro	FKM 70 Duro	Epichlorohydrin 70 Duro
3/16"	0002		0807	8465	0848	0707	1307
7/32"	0003		0807	8465	0848	0707	1307
1/4"	0004		0807	8465	0848	0707	1307
9/32"	0005		0807	8465	0848	0707	1307
5/16"	0006		0807	8465	0848	0707	1307
.350"	0007		0807	8465	0848	0707	1307
3/8"	0008		0807	8465	0848	0707	1307
7/16"	0009		0807	8465	0848	0707	1307
15/32"	0010		0807	8465	0848	0707	1307
1/2"	0011		0807	8465	0848	0707	1307
17/32"	0012		0807	8465	0848	0707	1307

When ordering the Bowen mini packoff rubber use the prefix **0119** and please specify: line size and compound. Example: 3/16" NBR 70 Duro would be part number **0119-0002-0807**



B & T Oilfield Products

Enviro Type Spacer



Identifying Information

O.D. 1.380"
Length 0.885"

Part Number	Line Size	Material
EHSG-0002-05	3/16"	Brass
EHSG-0003-05	7/32"	Brass
EHSG-0004-05	1/4"	Brass
EHSG-0005-05	9/32"	Brass
EHSG-0006-05	5/16"	Brass
EHSG-0008-05	3/8"	Brass
EHSG-0009-05	7/16"	Brass
EHSG-0010-05	15/32"	Brass
EHSG-0011-05	1/2"	Brass



B & T Oilfield Products

OS9S Line Wiper 131 Series



Identifying Information

O.D. 2.000"
Length 4.800"

Mold #-Line Size-Compound
0131-XXXX-XXXX

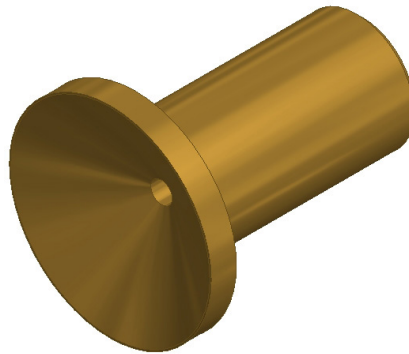
Line Size	Line Size Part No.	Compound	SBR/Natural 50 Duro	HNBR 65 Duro	HNBR 80 Duro	FKM 70 Duro	Epichlorohydrin 70 Duro
3/16"	0002		3105	8465	0848	0707	1307
7/32"	0003		3105	8465	0848	0707	1307
1/4"	0004		3105	8465	0848	0707	1307
9/32"	0005		3105	8465	0848	0707	1307
5/16"	0006		3105	8465	0848	0707	1307
3/8"	0008		3105	8465	0848	0707	1307
7/16"	0009		3105	8465	0848	0707	1307
15/32"	0010		3105	8465	0848	0707	1307
1/2"	0011		3105	8465	0848	0707	1307

When ordering the OS9S line wiper use the prefix **0131** and please specify: line size and compound. Example: 3/16" SBR/Natural 50 Duro would be part number **0131-0002-3105**



B & T Oilfield Products

**Enviro Type
Lower Gland**



Identifying Information

O.D. 2.050"
Length 2.562"

Part Number	Line Size	Material
EHLG-0002-05	3/16"	Brass
EHLG-0003-05	7/32"	Brass
EHLG-0004-05	1/4"	Brass
EHLG-0005-05	9/32"	Brass
EHLG-0006-05	5/16"	Brass
EHLG-0008-05	3/8"	Brass
EHLG-0009-05	7/16"	Brass
EHLG-0010-05	15/32"	Brass
EHLG-0011-05	1/2"	Brass

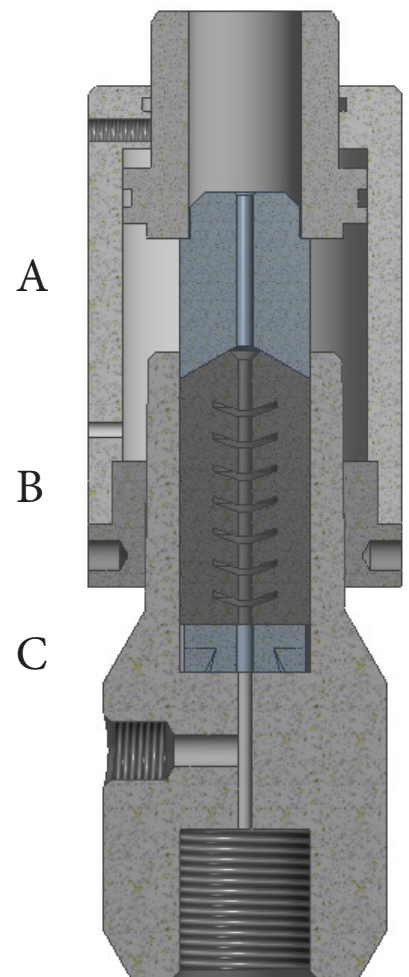
Medium Bowen Type Grease Head

B & T manufactures the following components compatible with the Bowen type grease head:

- A) Medium Bowen Type Upper Bushing
- B) Medium Bowen Type Line Wiper
- C) Medium Bowen Type Interlocking Seat

Line wipers are available in the full range of materials offered by B & T. Please consult the elastomer chart in the reference section to find the proper compound for your specific application. The standard compound suitable for most applications is NBR 60.

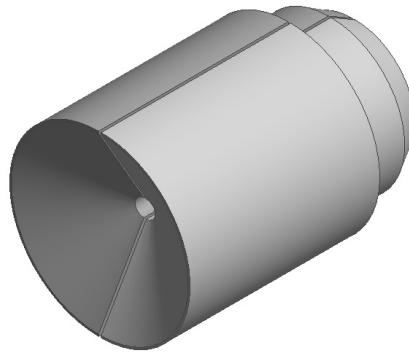
Upper and lower metals are made from casted steel.





B & T Oilfield Products

Medium Bowen Type Upper Bushing



Identifying Information

O.D. 2.100"
Length 3.000"

Part Number	Line Size	Material
BMUM-0002-10	3/16"	Casted Steel
BMUM-0003-10	7/32"	Casted Steel
BMUM-0004-10	1/4"	Casted Steel
BMUM-0005-10	9/32"	Casted Steel
BMUM-0006-10	5/16"	Casted Steel
BMUM-0008-10	3/8"	Casted Steel
BMUM-0009-10	7/16"	Casted Steel
BMUM-0010-10	15/32"	Casted Steel
BMUM-0011-10	1/2"	Casted Steel
BMUM-0013-10	9/16"	Casted Steel



B & T Oilfield Products

Medium Bowen Type Line Wiper 156 Series



Identifying Information

O.D. 2.100"
Length 4.400"

Mold #-Line Size-Compound
0156-XXXX-XXXX

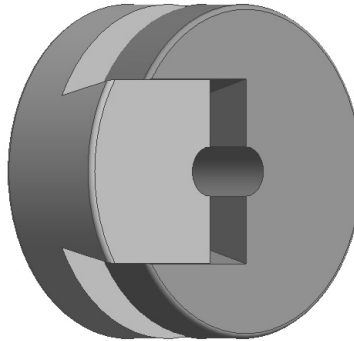
Line Size	Line Size Part No.	Compound	NBR 60 Duro	HNBR 65 Duro	HNBR 70 Duro	FKM 70 Duro	Epichlorohydrin 70 Duro
3/16"	0002		0806	8465	0847	0707	1307
7/32"	0003		0806	8465	0847	0707	1307
1/4"	0004		0806	8465	0847	0707	1307
9/32"	0005		0806	8465	0847	0707	1307
5/16"	0006		0806	8465	0847	0707	1307
3/8"	0008		0806	8465	0847	0707	1307
7/16"	0009		0806	8465	0847	0707	1307
15/32"	0010		0806	8465	0847	0707	1307
1/2"	0011		0806	8465	0847	0707	1307
9/16"	0013		0806	8465	0847	0707	1307

When ordering the medium Bowen type line wiper use the prefix **0156** and please specify: line size and compound. Example: 3/16" NBR 60 Duro would be part number **0156-0002-0806**



B & T Oilfield Products

Medium Bowen Type Interlocking Seat



Identifying Information

O.D. 2.060"
Height 0.750"

Part Number	Line Size	Material
BMLM-0002-10	3/16"	Casted Steel
BMLM-0003-10	7/32"	Casted Steel
BMLM-0004-10	1/4"	Casted Steel
BMLM-0005-10	9/32"	Casted Steel
BMLM-0006-10	5/16"	Casted Steel
BMLM-0008-10	3/8"	Casted Steel
BMLM-0009-10	7/16"	Casted Steel
BMLM-0010-10	15/32"	Casted Steel
BMLM-0011-10	1/2"	Casted Steel
BMLM-0013-10	9/16"	Casted Steel

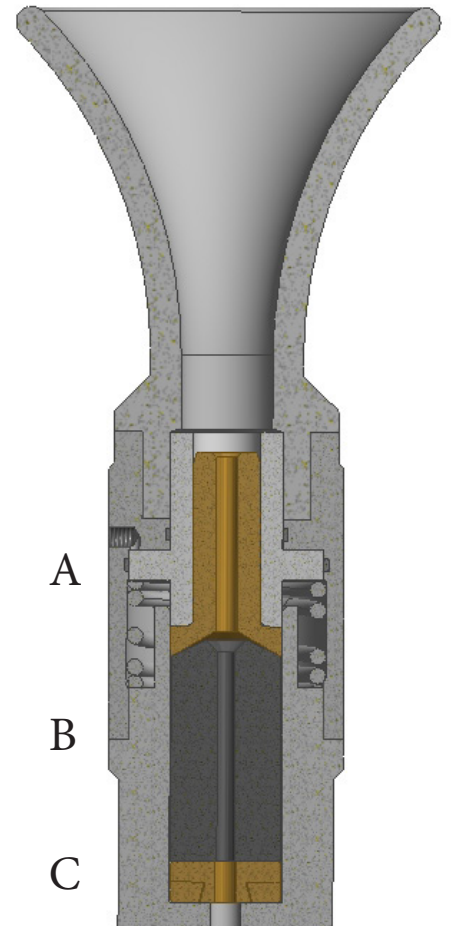
Mini Bowen Type Grease Head

B & T manufactures the following components compatible with the Bowen type grease head:

- A) Mini Bowen Type Upper Bushing
- B) Bowen Mini Packoff Rubber
- C) Mini Bowen Type Interlocking Seat

Line wipers are available in the full range of materials offered by B & T. Please consult the elastomer chart in the reference section to find the proper compound for your specific application. The standard compound suitable for most applications is NBR 70.

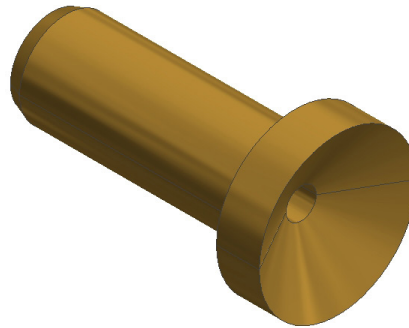
Upper and lower metals are made from brass.





B & T Oilfield Products

Mini Bowen Type Upper Bushing



Identifying Information

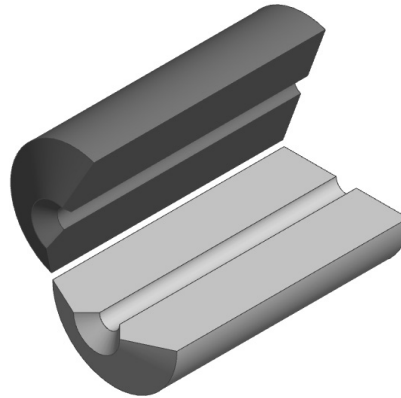
O.D. 1.375"
Length 2.500"

Part Number	Line Size	Material
MBUM-0002-05	3/16"	Brass
MBUM-0003-05	7/32"	Brass
MBUM-0004-05	1/4"	Brass
MBUM-0005-05	9/32"	Brass
MBUM-0006-05	5/16"	Brass
MBUM-0007-05	.350	Brass
MBUM-0008-05	3/8"	Brass
MBUM-0009-05	7/16"	Brass
MBUM-0010-05	15/32"	Brass
MBUM-0011-05	1/2"	Brass
MBUM-0012-05	17/32"	Brass



B & T Oilfield Products

Bowen Mini Packoff Rubber 119 Series



Identifying Information

O.D. 1.300"
Length 2.700"

Mold #-Line Size-Compound
0119-XXXX-XXXX

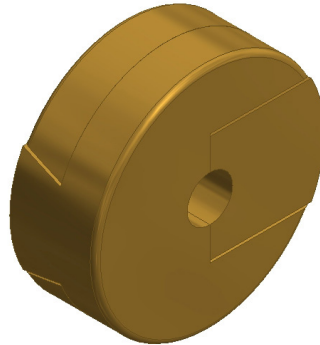
Line Size	Line Size Part No.	Compound	NBR 70 Duro	HNBR 65 Duro	HNBR 80 Duro	FKM 70 Duro	Epichlorohydrin 70 Duro
3/16"	0002		0807	8465	0848	0707	1307
7/32"	0003		0807	8465	0848	0707	1307
1/4"	0004		0807	8465	0848	0707	1307
9/32"	0005		0807	8465	0848	0707	1307
5/16"	0006		0807	8465	0848	0707	1307
.350"	0007		0807	8465	0848	0707	1307
3/8"	0008		0807	8465	0848	0707	1307
7/16"	0009		0807	8465	0848	0707	1307
15/32"	0010		0807	8465	0848	0707	1307
1/2"	0011		0807	8465	0848	0707	1307
17/32"	0012		0807	8465	0848	0707	1307

When ordering the Bowen mini packoff rubber use the prefix **0119** and please specify: line size and compound. Example: 3/16" NBR 70 Duro would be part number **0119-0002-0807**



B & T Oilfield Products

Mini Bowen Type Interlocking Seat



Identifying Information

O.D. 1.343"
 Height 0.500"

Part Number	Line Size	Material
MBLM-0002-05	3/16"	Brass
MBLM-0003-05	7/32"	Brass
MBLM-0004-05	1/4"	Brass
MBLM-0005-05	9/32"	Brass
MBLM-0006-05	5/16"	Brass
MBLM-0007-05	.350"	Brass
MBLM-0008-05	3/8"	Brass
MBLM-0009-05	7/16"	Brass
MBLM-0010-05	15/32"	Brass
MBLM-0011-05	1/2"	Brass
MBLM-0017-05	17/32"	Brass

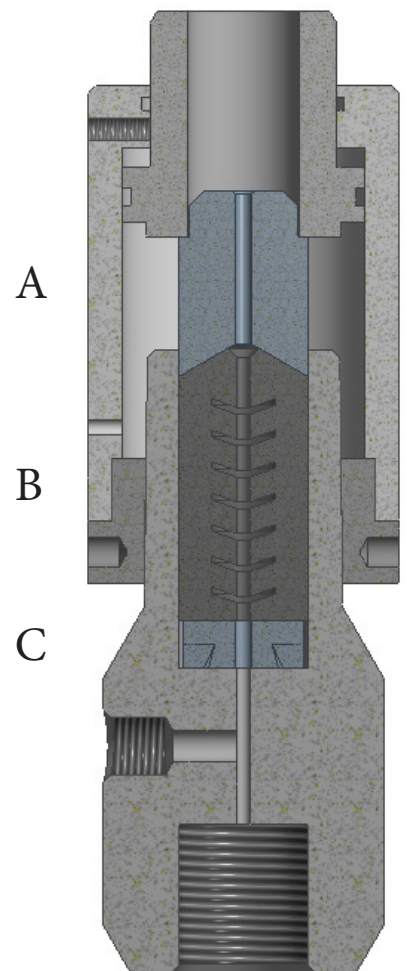
Large Bowen Type Grease Head

B & T manufactures the following components compatible with the Bowen type grease head:

- A) Large Bowen Type Upper Bushing
- B) Large Bowen Type Line Wiper
- C) Large Bowen Type Interlocking Seat

Line wipers are available in the full range of materials offered by B & T. Please consult the elastomer chart in the reference section to find the proper compound for your specific application. The standard compound suitable for most applications is NBR 60.

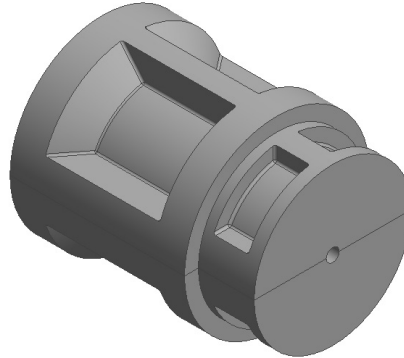
Upper and lower metals are made from casted steel.





B & T Oilfield Products

Large Bowen Type Upper Bushing



Identifying Information

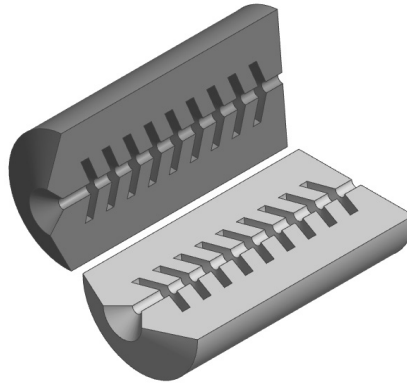
O.D. 3.300"
Length 2.645"

Part Number	Line Size	Material
BLUM-0002-10	3/16"	Casted Steel
BLUM-0003-10	7/32"	Casted Steel
BLUM-0004-10	1/4"	Casted Steel
BLUM-0006-10	5/16"	Casted Steel
BLUM-0008-10	3/8"	Casted Steel
BLUM-0018-10	.390"	Casted Steel
BLUM-0011-10	1/2"	Casted Steel
BLUM-0013-10	9/16"	Casted Steel



B & T Oilfield Products

Large Bowen Type Line Wiper 157 Series



Identifying Information

O.D. 2.700"
Length 5.500"

Mold #-Line Size-Compound
0157-XXXX-XXXX

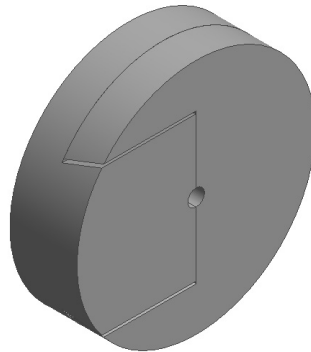
Line Size	Line Size Part No.	Compound	NBR 60 Duro	HNBR 65 Duro	HNBR 70 Duro	FKM 70 Duro	Epichlorohydrin 70 Duro
3/16"	0002		0806	8465	0847	0707	1307
7/32"	0003		0806	8465	0847	0707	1307
1/4"	0004		0806	8465	0847	0707	1307
5/16"	0006		0806	8465	0847	0707	1307
3/8"	0008		0806	8465	0847	0707	1307
.390"	0018		0806	8465	0847	0707	1307
1/2"	0011		0806	8465	0847	0707	1307
9/16"	0013		0806	8465	0847	0707	1307

When ordering the large Bowen type line wiper use the prefix **0157** and please specify: line size and compound. Example: 3/16" NBR 60 Duro would be part number **0157-0002-0806**



B & T Oilfield Products

Large Bowen Type Interlocking Seat



Identifying Information

O.D. 2.656"
 Height 0.750"

Part Number	Line Size	Material
BLLM-0002-10	3/16"	Casted Steel
BLLM-0003-10	7/32"	Casted Steel
BLLM-0004-10	1/4"	Casted Steel
BLLM-0006-10	5/16"	Casted Steel
BLLM-0008-10	3/8"	Casted Steel
BLLM-0018-10	.390"	Casted Steel
BLLM-0011-10	1/2"	Casted Steel
BLLM-0013-10	9/16"	Casted Steel

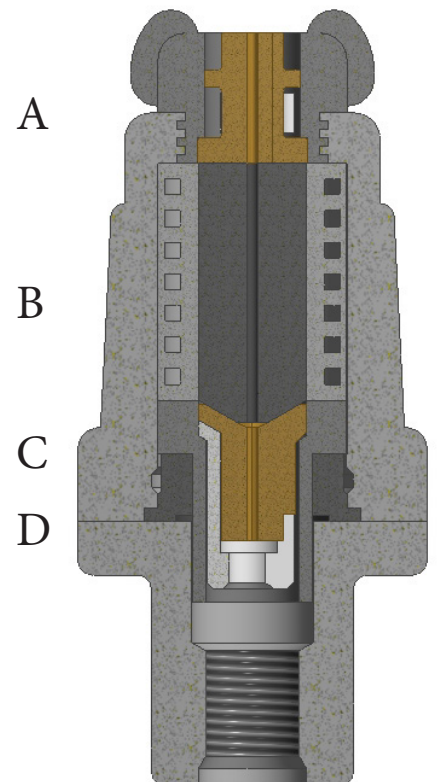
Bell Type Packoff

B & T manufactures the following components compatible with the Bell type packoff:

- A) OS9S Brass Upper Bushing
- B) OS9S Line Wiper
- C) OS9S Brass Lower Bushing
- D) OS9S Lower Bushing Cage

Line wipers are available in the full range of materials offered by B & T. Please consult the elastomer chart in the reference section to find the proper compound for your specific application. The standard compound suitable for most applications is SBR/Natural 50.

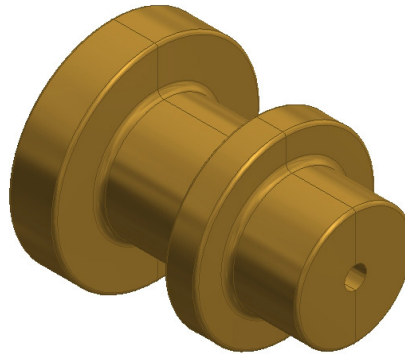
Upper and lower metals are made from casted brass.





B & T Oilfield Products

OS9S Brass Upper Bushing



Identifying Information

O.D. 2.000"
Length 2.460"

Part Number	Line Size	Material
OSUB-0002-15	3/16"	Casted Brass
OSUB-0003-15	7/32"	Casted Brass
OSUB-0004-15	1/4"	Casted Brass
OSUB-0005-15	9/32"	Casted Brass
OSUB-0006-15	5/16"	Casted Brass
OSUB-0008-15	3/8"	Casted Brass
OSUB-0009-15	7/16"	Casted Brass
OSUB-0010-15	15/32"	Casted Brass
OSUB-0011-15	1/2"	Casted Brass



B & T Oilfield Products

OS9S Line Wiper 131 Series



Identifying Information

O.D. 2.000"
Length 4.800"

Mold #-Line Size-Compound
0131-XXXX-XXXX

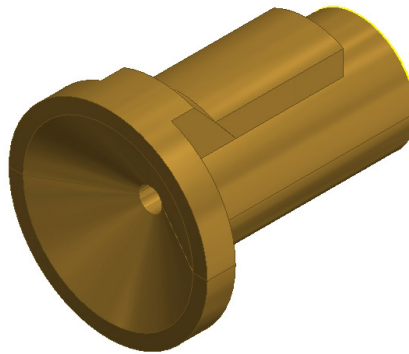
Line Size	Line Size Part No.	Compound	SBR/Natural 50 Duro	HNBR 65 Duro	HNBR 80 Duro	FKM 70 Duro	Epichlorohydrin 70 Duro
3/16"	0002		3105	8465	0848	0707	1307
7/32"	0003		3105	8465	0848	0707	1307
1/4"	0004		3105	8465	0848	0707	1307
9/32"	0005		3105	8465	0848	0707	1307
5/16"	0006		3105	8465	0848	0707	1307
3/8"	0008		3105	8465	0848	0707	1307
7/16"	0009		3105	8465	0848	0707	1307
15/32"	0010		3105	8465	0848	0707	1307
1/2"	0011		3105	8465	0848	0707	1307

When ordering the OS9S line wiper use the prefix **0131** and please specify: line size and compound. Example: 3/16" SBR/Natural 50 Duro would be part number **0131-0002-3105**



B & T Oilfield Products

OS9S Brass Lower Bushing



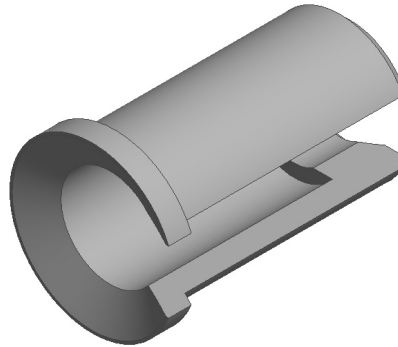
Identifying Information

O.D. 2.000"
Length 2.560"

Part Number	Line Size	Material
OSLB-0002-15	3/16"	Casted Brass
OSLB-0003-15	7/32"	Casted Brass
OSLB-0004-15	1/4"	Casted Brass
OSLB-0005-15	9/32"	Casted Brass
OSLB-0006-15	5/16"	Casted Brass
OSLB-0008-15	3/8"	Casted Brass
OSLB-0009-15	7/16"	Casted Brass
OSLB-0010-15	15/32"	Casted Brass
OSLB-0011-15	1/2"	Casted Brass

B/OP B & T Oilfield Products

OS9S Lower Bushing Cage



Identifying Information

O.D. 2.000”
Length 3.125”

Part Number	Material
OS9S Lower Bushing Cage	1018



B & T Oilfield Products

Type C

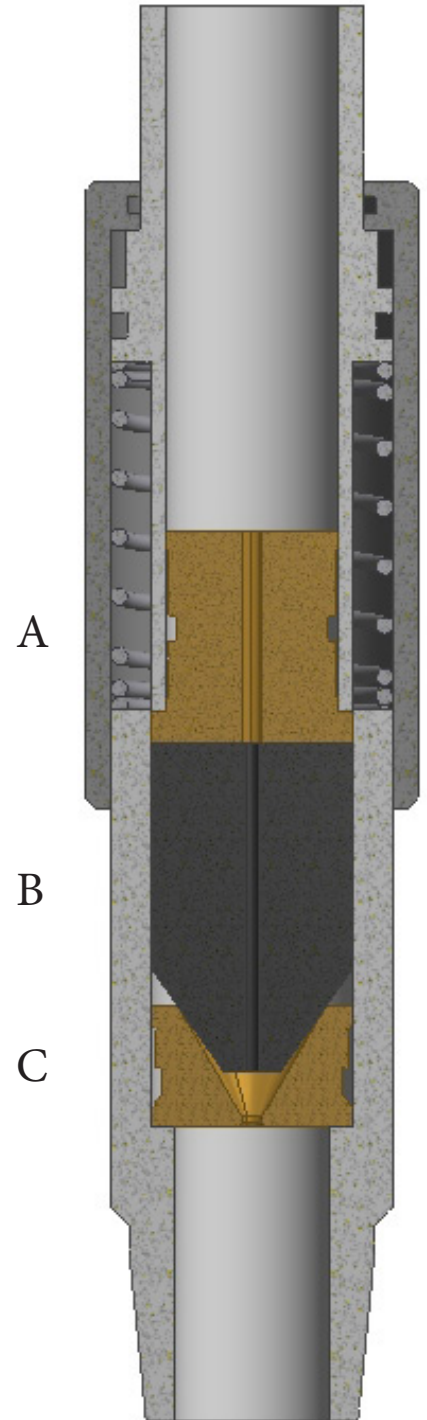
B & T manufactures the following components compatible with the Type C:

- A) Type C Upper Brass
- B) Type C Line Wiper
- C) Type C Lower Brass

B & T produces Type C components from high quality machined brass which gives them superior wear characteristics. Our brass components also cover a range of common line sizes giving the user maximum flexibility while lowering the amount of inventory that must be kept on hand.

The Type C line wiper is available in the full range of materials offered by B & T. Please consult the elastomer chart in the reference section to find the proper compound for your specific application. The standard compound suitable for most applications is SBR/Natural 50. If a slightly harder rubber is desired with the same chemical characteristics, we recommend the standard NBR 60 material.

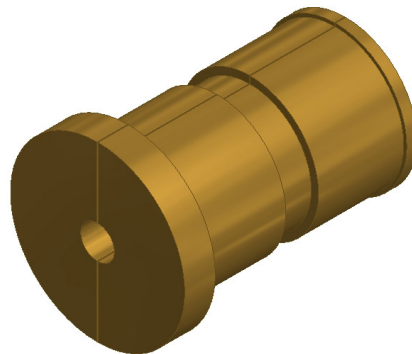
PLEASE NOTE: Many parts for the Type C, Type CL, MT, and 410 injection heads are shared between different styles, part numbers are listed for each style to avoid confusion. To check cross-compatibility, please see the “Double E Compatibility Chart” in the reference section.





B & T Oilfield Products

Type C Upper Brass



Identifying Information

O.D. 2.125"
Length 3.030"

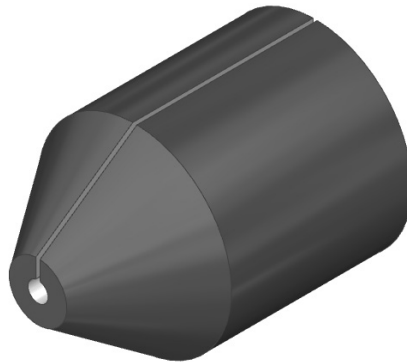
Part Number	Line Size	Material
CUB-0014-05	9/32"-3/8"*	Brass
CUB-0015-05	3/16"-1/4"*	Brass
CUB-0003-05	7/32"	Brass
CUB-0005-05	9/32"	Brass
CUB-0006-05	5/16"	Brass
CUB-0008-05	3/8"	Brass
CUB-0009-05	7/16"	Brass
CUB-0011-05	1/2"	Brass

*These line size ranges are what are specified by OEM equipment. We also make specific line sizes if your application requires it.



B & T Oilfield Products

Type C Line Wiper 346 Series



Identifying Information

O.D. 2.100"
Length 3.000"

Mold #-Line Size-Compound
0346-XXXX-XXXX

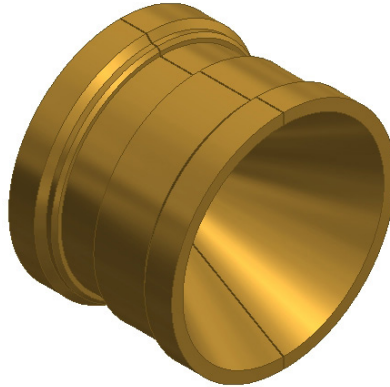
Line Size	Line Size Part No.	Compound	SBR/Natural 50 Duro	NBR 60 Duro	HNBR 65 Duro	HNBR 80 Duro	EKM 70 Duro	Aflas 80 Duro	Epichlorohydrin 70 Duro
3/16"	0002		3105	0806	8465	0848	0707	0408	1307
7/32"	0003		3105	0806	8465	0848	0707	0408	1307
1/4"	0004		3105	0806	8465	0848	0707	0408	1307
9/32"	0005		3105	0806	8465	0848	0707	0408	1307
5/16"	0006		3105	0806	8465	0848	0707	0408	1307
3/8"	0008		3105	0806	8465	0848	0707	0408	1307
7/16"	0009		3105	0806	8465	0848	0707	0408	1307
1/2"	0011		3105	0806	8465	0848	0707	0408	1307

When ordering the Type C line wiper use the prefix **0346** and please specify: line size and compound. Example: 3/16" SBR/Natural 50 Duro would be part number **0346-0002-3105**



B & T Oilfield Products

Type C Lower Brass



Identifying Information

O.D. 2.125"
Length 1.550"

Part Number	Line Size	Material
CLLB-0014-05	9/32"-3/8"*	Brass
CLLB-0015-05	3/16"-1/4"*	Brass
CLLB-0003-05	7/32"	Brass
CLLB-0005-05	9/32"	Brass
CLLB-0006-05	5/16"	Brass
CLLB-0008-05	3/8"	Brass
CLLB-0009-05	7/16"	Brass
CLLB-0011-05	1/2"	Brass

*These line size ranges are what are specified by OEM equipment. We also make specific line sizes if your application requires it.



B & T Oilfield Products

Type CL

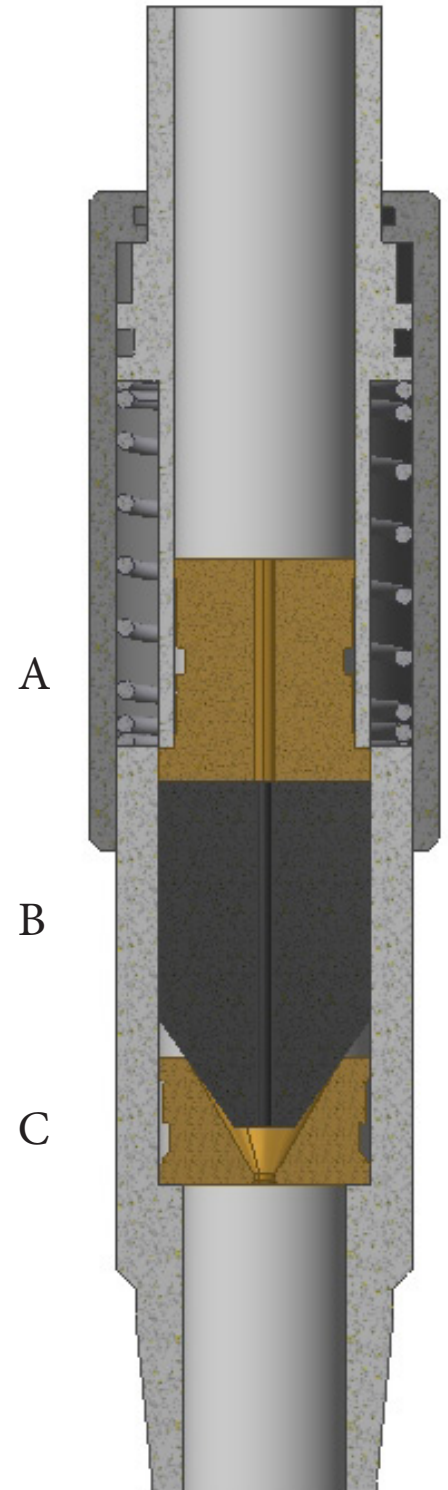
B & T manufactures the following components compatible with the Type CL:

- A) Type CL Upper Brass
- B) Type CL Line Wiper
- C) Type CL Lower Brass

B & T produces Type CL components from high quality machined brass which gives them superior wear characteristics. Our brass components also cover a range of common line sizes giving the user maximum flexibility while lowering the amount of inventory that must be kept on hand.

The Type CL line wiper is available in the full range of materials offered by B & T. Please consult the elastomer chart in the reference section to find the proper compound for your specific application. The standard compound suitable for most applications is SBR/Natural 50. If a slightly harder rubber is desired with the same chemical characteristics, we recommend the standard NBR 60 material.

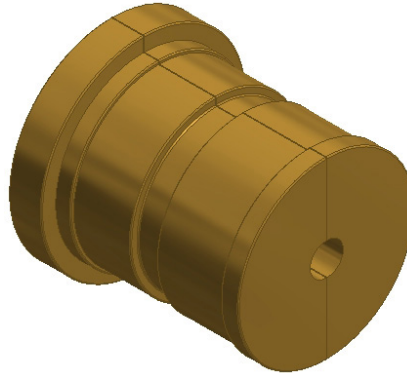
PLEASE NOTE: Many parts for the Type C, Type CL, MT, and 410 injection heads are shared between different styles, part numbers are listed for each style to avoid confusion. To check cross-compatibility, please see the “Double E Compatibility Chart” in the reference section.





B & T Oilfield Products

**Type CL
Upper Brass**



Identifying Information

O.D. 2.555"
Length 2.700"

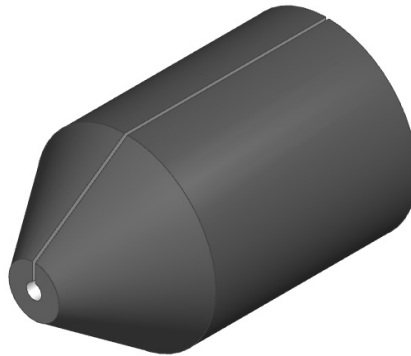
Part Number	Line Size	Material
CLUB-0014-05	9/32" - 3/8"*	Brass
CLUB-0015-05	3/16" - 1/4"*	Brass
CLUB-0003-05	7/32"	Brass
CLUB-0005-05	9/32"	Brass
CLUB-0006-05	5/16"	Brass
CLUB-0008-05	3/8"	Brass
CLUB-0009-05	7/16"	Brass
CLUB-0011-05	1/2"	Brass

*These line size ranges are what are specified by OEM equipment. We also make specific line sizes if your application requires it.



B & T Oilfield Products

Type CL Line Wiper 347 Series



Identifying Information

O.D. 2.600"
Length 4.200"

Mold #-Line Size-Compound
0347-XXXX-XXXX

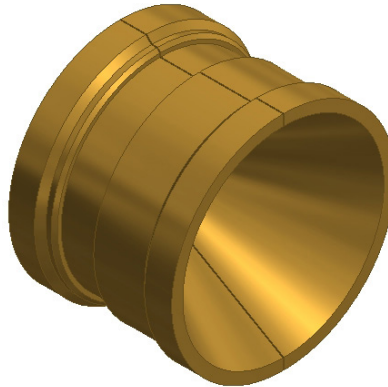
Line Size	Line Size Part No.	Compound	SBR/Natural 50 Duro	NBR 60 Duro	HNBR 65 Duro	HNBR 70 Duro	FKM 70 Duro	Epichlorohydrin 70 Duro
3/16"	0002		3105	0806	8465	0847	0707	1307
7/32"	0003		3105	0806	8465	0847	0707	1307
1/4"	0004		3105	0806	8465	0847	0707	1307
9/32"	0005		3105	0806	8465	0847	0707	1307
5/16"	0006		3105	0806	8465	0847	0707	1307
3/8"	0008		3105	0806	8465	0847	0707	1307
7/16"	0009		3105	0806	8465	0847	0707	1307
1/2"	0011		3105	0806	8465	0847	0707	1307

When ordering the Type CL line wiper use the prefix **0347** and please specify: line size and compound. Example: 3/16" SBR/Natural 50 Duro would be part number **0347-0002-3105**



B & T Oilfield Products

**Type CL
Lower Brass**



Identifying Information

O.D. 2.125"
Length 1.550"

Part Number	Line Size	Material
CLLB-0014-05	9/32" - 3/8"*	Brass
CLLB-0015-05	3/16" - 1/4"*	Brass
CLLB-0003-05	7/32"	Brass
CLLB-0005-05	9/32"	Brass
CLLB-0006-05	5/16"	Brass
CLLB-0008-05	3/8"	Brass
CLLB-0009-05	7/16"	Brass
CLLB-0011-05	1/2"	Brass

*These line size ranges are what are specified by OEM equipment. We also make specific line sizes if your application requires it.



B & T Oilfield Products

Type 410

B & T manufactures the following components compatible with the Type 410:

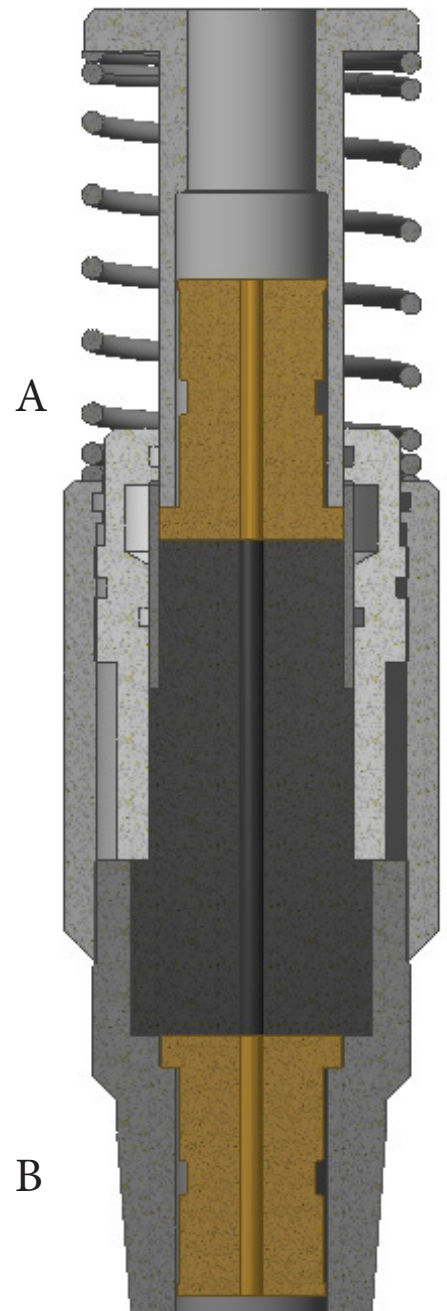
A) Type 410 Upper Brass

B) Type 410 Lower Brass

B & T produces Type 410 components from high quality machined brass which gives them superior wear characteristics. Our brass components also cover a range of common line sizes giving the user maximum flexibility while lowering the amount of inventory that must be kept on hand.

Type 410 rubber components are not made by B & T at this time.

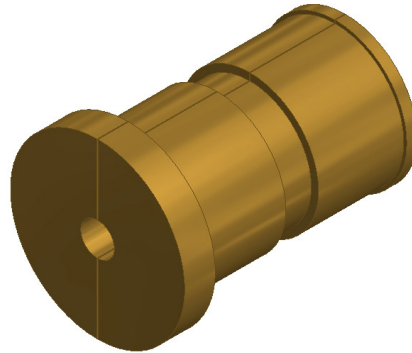
PLEASE NOTE: Many parts for the Type C, Type CL, MT, and 410 injection heads are shared between different styles, part numbers are listed for each style to avoid confusion. To check cross-compatibility, please see the “Double E Compatibility Chart” in the reference section.





B & T Oilfield Products

Type 410 Upper Brass



Identifying Information

O.D. 2.125"
Length 3.030"

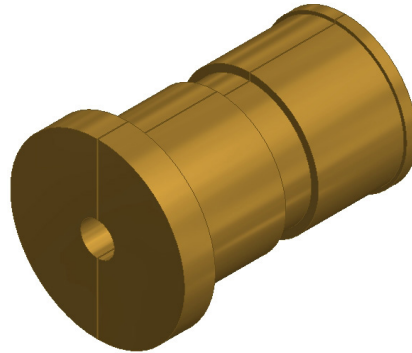
Part Number	Line Size	Material
CUB-0014-05	9/32" - 3/8"*	Brass
CUB-0015-05	3/16" - 1/4"*	Brass
CUB-0003-05	7/32"	Brass
CUB-0005-05	9/32"	Brass
CUB-0006-05	5/16"	Brass
CUB-0008-05	3/8"	Brass
CUB-0009-05	7/16"	Brass
CUB-0011-05	1/2"	Brass

*These line size ranges are what are specified by OEM equipment. We also make specific line sizes if your application requires it.



B & T Oilfield Products

Type 410 Lower Brass



Identifying Information

O.D. 2.125"
Length 3.030"

Part Number	Line Size	Material
CUB-0014-05	9/32"-3/8"*	Brass
CUB-0015-05	3/16"-1/4"*	Brass
CUB-0003-05	7/32"	Brass
CUB-0005-05	9/32"	Brass
CUB-0006-05	5/16"	Brass
CUB-0008-05	3/8"	Brass
CUB-0009-05	7/16"	Brass
CUB-0011-05	1/2"	Brass

*These line size ranges are what are specified by OEM equipment. We also make specific line sizes if your application requires it.

Type MT

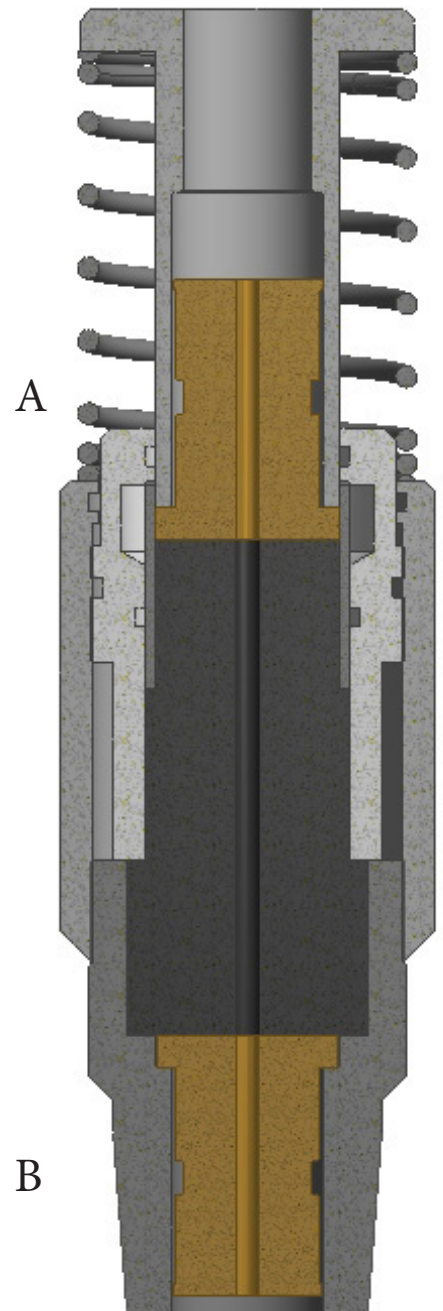
B & T manufactures the following components compatible with the Type MT:

- A) Type MT Upper Brass
- B) Type MT Lower Brass

B & T produces Type MT components from high quality machined brass which gives them superior wear characteristics. Our brass components also cover a range of common line sizes giving the user maximum flexibility while lowering the amount of inventory that must be kept on hand.

Type MT rubber components are not made by B & T at this time.

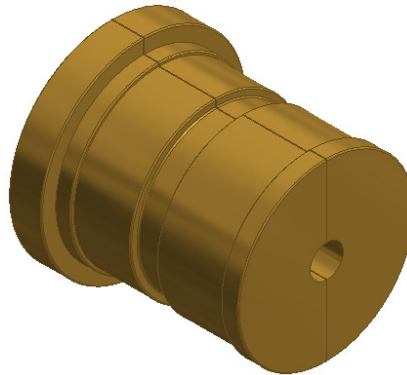
PLEASE NOTE: Many parts for the Type C, Type CL, MT, and 410 injection heads are shared between different styles, part numbers are listed for each style to avoid confusion. To check cross-compatibility, please see the “Double E Compatibility Chart” in the reference section.





B & T Oilfield Products

**Type MT
Upper Brass**



Identifying Information

O.D. 2.555"
Length 2.700"

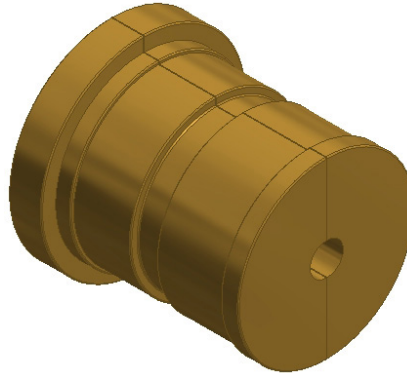
Part Number	Line Size	Material
CLUB-0014-05	9/32" - 3/8"*	Brass
CLUB-0015-05	3/16" - 1/4"*	Brass
CLUB-0003-05	7/32"	Brass
CLUB-0005-05	9/32"	Brass
CLUB-0006-05	5/16"	Brass
CLUB-0008-05	3/8"	Brass
CLUB-0009-05	7/16"	Brass
CLUB-0011-05	1/2"	Brass

*These line size ranges are what are specified by OEM equipment. We also make specific line sizes if your application requires it.



B & T Oilfield Products

**Type MT
Lower Brass**



Identifying Information

O.D. 2.555"
Length 2.700"

Part Number	Line Size	Material
CLUB-0014-05	9/32" - 3/8"*	Brass
CLUB-0015-05	3/16" - 1/4"*	Brass
CLUB-0003-05	7/32"	Brass
CLUB-0005-05	9/32"	Brass
CLUB-0006-05	5/16"	Brass
CLUB-0008-05	3/8"	Brass
CLUB-0009-05	7/16"	Brass
CLUB-0011-05	1/2"	Brass

*These line size ranges are what are specified by OEM equipment. We also make specific line sizes if your application requires it.



B & T Oilfield Products

Flow Tubes

B & T manufactures some of the highest quality flow tubes on the market. All tubes are precision drilled from 4140 raw stock and maintain tolerances of .002” in every line size. Every tube is measured with certified pin gages to ensure precision throughout the tube body, not just at the ends.

To ensure maximum life, each tube is further treated in a Kolene® nitrocarburization process that adds corrosion and wear resistance. As a final convenience, single sided wrench flats are milled and stamped with the line size so the customer will never have to measure or guess the size of a tube, even after repeated use.

As with all B & T parts, full traceability is available for every tube and documentation can be provided if required.

We currently manufacture the following line sizes but other sizes may be available upon request.

Line Size		
.186	.255	.294
.191	.258	.295
.196	.260	.296
.201	.261	.297
.202	.262	.298
.204	.263	.312
.205	.264	.315
.211	.284	.316
.216	.285	.318
.222	.286	.320
.224	.287	.321
.226	.288	.322
.228	.289	.323
.230	.290	.324
.231	.291	.325
.232	.292	.326
.236	.293	.328



Notes:

LOUISIANA
(337) 837-5359

TEXAS
(281) 756-8716

CANADA
(403) 340-0980

ALASKA
(907) 272-7817



Open Hole Packoff Equipment

HLWA

HLWA Packoff Rubber
HLWA PTFE

HLWB

HLWB Packoff Rubber
HLWB PTFE

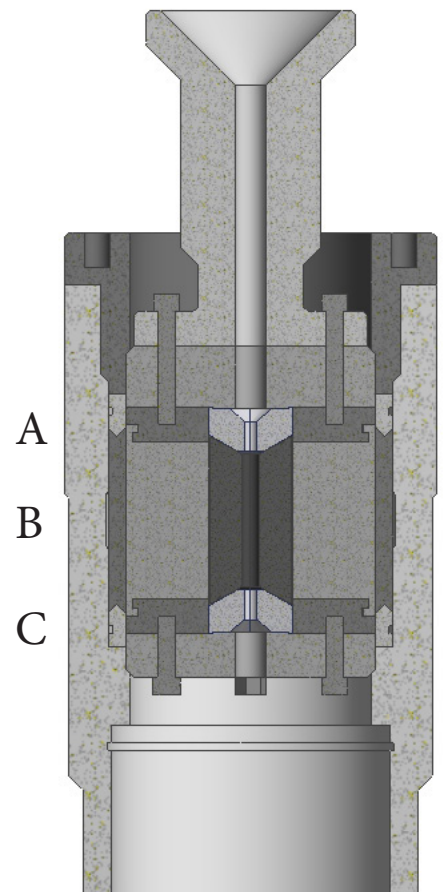
HLWA Open Hole Packoff

B & T manufactures the following components compatible with the HLWA open hole packoff:

- A) HLWA Upper/Lower PTFE
- B) HLWA Packoff Rubber
- C) HLWA Lower/Upper PTFE

Upper and lower PTFE are sold in numbered, matched sets to ensure true line size and seal. Please note, to order an entire PTFE redress, you will need (2) complete sets, one upper and one lower.

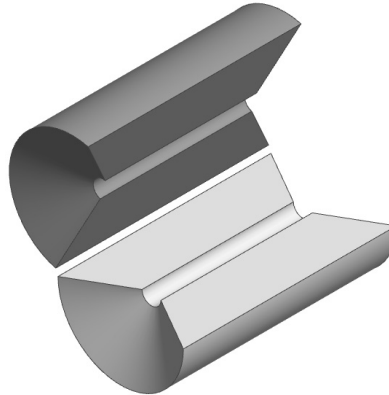
HLWA packoff rubbers are available in the full range of materials offered by B & T. Please consult the elastomer chart in the reference section to find the proper compound for your specific application. The standard compound suitable for most applications is NBR 80.





B & T Oilfield Products

HLWA Packoff Rubber 340 Series



Identifying Information

O.D. 3.300"
Length 5.600"

Mold #-Line Size-Compound
0340-XXXX-XXXX

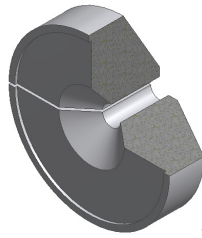
Line Size	Line Size Part No.	Compound	NBR 80 Duro	HNBR 65 Duro	HNBR 80 Duro	FKM 80 Duro	Epichlorohydrin 70 Duro
3/8"	0008		0808	8465	0848	0708	1307
1/2"	0011		0808	8465	0848	0708	1307
9/16"	0013		0808	8465	0848	0708	1307

When ordering the HLWA packoff rubber use the prefix **0340** and please specify: line size and compound. Example: 3/8" NBR 80 Duro would be part number **0340-0008-0808**



B & T Oilfield Products

HLWA PTFE



1/4 Cutaway View

Identifying Information

O.D. 3.375"
Length 1.480"

Part Number	Line Size	Compound
HLAT-0008-14	3/8"	PTFE
HLAT-0011-14	1/2"	PTFE
HLAT-0013-14	9/16"	PTFE

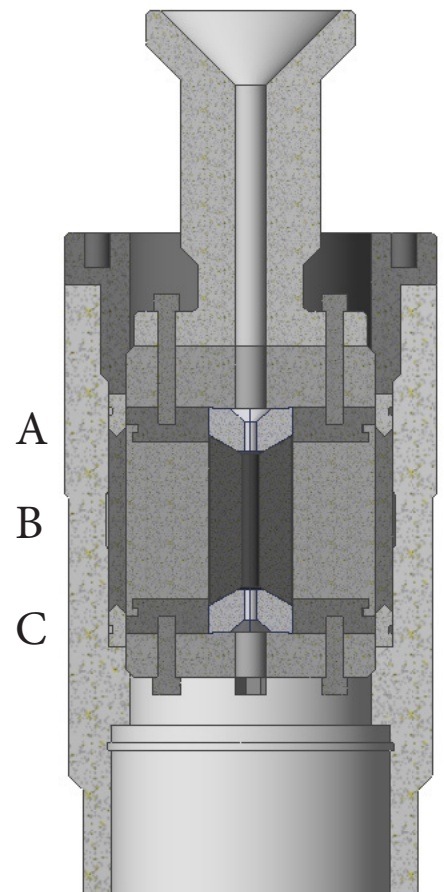
HLWB Open Hole Packoff

B & T manufactures the following components compatible with the HLWB open hole packoff:

- A) HLWB Upper/Lower PTFE
- B) HLWB Packoff Rubber
- C) HLWB Lower/Upper PTFE

Upper and lower PTFE are sold in numbered, matched sets to ensure true line size and seal. Please note, to order an entire PTFE redress, you will need (2) complete sets, one upper and one lower.

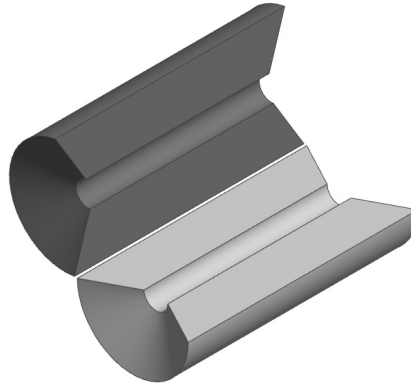
HLWB packoff rubbers are available in the full range of materials offered by B & T. Please consult the elastomer chart in the reference section to find the proper compound for your specific application. The standard compound suitable for most applications is NBR 80.





B & T Oilfield Products

**HLWB Packoff
Rubber
28 Series**



Identifying Information

O.D. 2.300"
Length 4.800"

Mold #-Line Size-Compound
0028-XXXX-XXXX

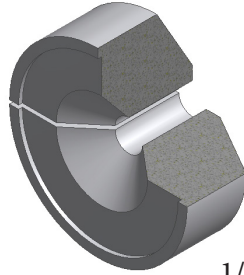
Line Size	Line Size Part No.	Compound	NBR 80 Duro	HNBR 65 Duro	HNBR 80 Duro	FKM 80 Duro	Epichlorohydrin 70 Duro
3/8"	0008		0808	8465	0848	0708	1307
1/2"	0011		0808	8465	0848	0708	1307
9/16"	0013		0808	8465	0848	0708	1307

When ordering the HLWB packoff rubber use the prefix **0028** and please specify: line size and compound. Example: 3/8" NBR 80 Duro would be part number **0028-0008-0808**



B & T Oilfield Products

HLWB PTFE



1/4 Cutaway View

Identifying Information

O.D. 2.430"
Length 1.290"

Part Number	Line Size	Compound
HLBT-0008-14	3/8"	PTFE
HLBT-0011-14	1/2"	PTFE
HLBT-0013-14	9/16"	PTFE

Notes:

LOUISIANA
(337) 837-5359

TEXAS
(281) 756-8716

CANADA
(403) 340-0980

ALASKA
(907) 272-7817



B & T Oilfield Products

Union Seals

Union Seals

Union Seals with Stainless Steel

Union Seals with Brass

High Pressure Union Seals



B & T Oilfield Products

Union Seals



- Figure 1002 1"
- Figure 1502 2"
- Figure 1002 3"
- Figure 1002 4"

Mold #-Type-Compound
XXXX-0100-XXXX

Size	Mold # Part No.	Type	O.D.	I.D.	Height	Compound	Aflas 90 Duro	HNBR 90 Duro	NBR 90 Duro	FKM 90 Duro	HM 95 Duro
1"	0115	0100	1.625"	1.235"	0.375"		0409	0849	0809	0709	795H
2"	0033	0100	2.700"	2.068"	0.500"		0409	0849	0809	0709	795H
3"	0108	0100	4.050"	3.210"	0.500"		0409	0849	0809	0709	795H
4"	0123	0100	5.100"	4.150"	0.500"		0409	0849	0809	0709	795H

When ordering the Figure 1002 or Figure 1502 union seal use the **Mold # Part Number that corresponds to the Size needed** and please specify: type and compound. Example: 1" Union Seal made of Aflas 90 Duro would be part number **0115-0100-0409**



B & T Oilfield Products

Union Seals with Brass Backup



Mold #-Type-Compound
XXXX-010B-XXXX

Size	Mold # Part No.	Type	O.D.	I.D.	Height	Compound	HNBR 90 Duro	NBR 90 Duro
2"	0354	010B	2.662"	2.102"	0.500"		0849	0809
3"	0355	010B	3.985"	3.035"	0.500"		0849	0809
4"	0356	010B	4.970"	4.150"	0.500"		0849	0809

When ordering the union seal with brass backup use the **Mold # Part Number that corresponds to the Size needed** and please specify: type and compound. Example: 2" Union Seal with Brass made of HNBR 90 Duro would be part number **0354-010B-0849**



B & T Oilfield Products

Union Seals with Stainless Steel Backup



Mold #-Type-Compound
XXXX-01SS-XXXX

Size	Mold # Part No.	Type	O.D.	I.D.	Height	Compound	FKM 90 Duro	Aflas 90 Duro
2"	0354	01SS	2.662"	2.102"	0.500"		0709	0409
3"	0355	01SS	3.985"	3.035"	0.500"		0709	0409
4"	0356	01SS	4.970"	4.150"	0.500"		0709	0409

When ordering the union seal with stainless steel backup use the **Mold # Part Number that corresponds to the Size needed** and please specify: type and compound. Example: 2" Union Seal with Stainless Steel made of FKM 90 Duro would be part number **0354-01SS-0709**



B & T Oilfield Products

High Pressure Union Seals



Figure 2202

Mold #-Type-Compound
0162-01SS-XXXX

Size	Mold # Part No.	Type	O.D.	I.D.	Height	Compound	FKM 90 Duro	HNBR 90 Duro	NBR 90 Duro
2"	0162	01SS	1.825"	1.410"	0.375"		0709	0849	0809

When ordering the high pressure union seal use the prefix **0162** and please specify: type and compound. Example: 2" High Pressure Union Seal made of FKM 90 Duro would be part number **0162-01SS-0709**

Notes:

LOUISIANA
(337) 837-5359

TEXAS
(281) 756-8716

CANADA
(403) 340-0980

ALASKA
(907) 272-7817



Blow Out Preventer Seals

Understanding Seal Styles

Outer Seals (No Lip)

Multi-Line Inner (Standard)

Outer Seals (With Lip)

Multi-Line Inner (Deep)

Standard Line-Size Inner Seals

Deep Line-Size Inner Seals

Understanding Seal Styles

In 1979, arctic conditions in Prudhoe Bay, Alaska, were creating sealing problems for the OEM. Bob Conley, owner of B & T, was contacted to see if he had any solutions. Using his experience and knowledge working with aircraft manufacturers, he was able to introduce a cold weather compound that has been successful in sealing BOPs for arctic service. Along with this compound, he also introduced the radius front on slickline BOP seals. Since that time, B & T has produced inner seals with a radius front.

Throughout the years, many styles of BOP seals have emerged. Although the large amount of terminology can become confusing, we have attempted to make finding the seal you need easy. Below you will find a short summary of the different seal styles and on each page are identifying dimensions to help quickly determine which style of seal you need.



Inner Seal (Standard Depth)

Rectangular inner seal used in Slickline, Electric Line, and Coil Tubing Service.



Inner Seal (Deep Depth)

Rectangular inner seal used in Slickline, Electric Line, and Coil Tubing Service but with a deeper depth from front to back and either has a slotted hole or a thru hole.



Outer Seal (No Lip)

For use in new or used equipment with Ram assemblies that are in good working condition.



Outer Seal (With Lip)

Originally introduced by TOT as their standard outer seal, it has become popular for use in pitted or worn Ram assemblies.

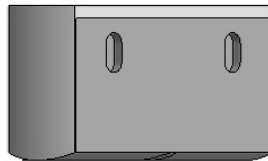


B & T Oilfield Products

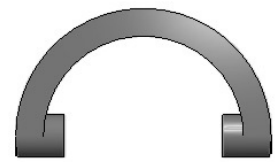
BOP Seals



Multi-Line Standard
Multi-Line Deep



Inner Seal Standard
Inner Seal Deep



Outer Seal No Lip
Outer Seal With Lip

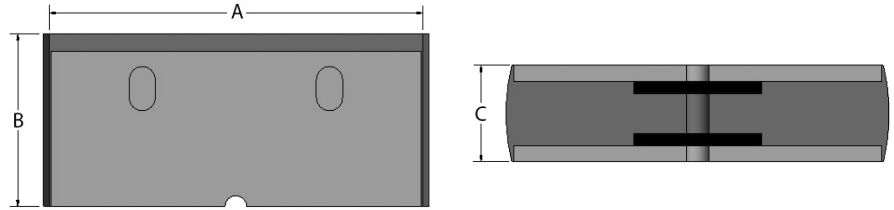
Features:

- Radius-Faced Inner Seal design for positive sealing in all conditions
- Materials selected for high temperature, chemical, or arctic environments
- Multi-strand 10,000psi slickline capacity
- Radiused E-line and tubing slots for maximum sealing ability
- Fits all common wireline BOP equipment



B & T Oilfield Products

Multi-Line Inner Seals (Standard)



Mold #-Line Size-Compound
XXXX-0017-XXXX

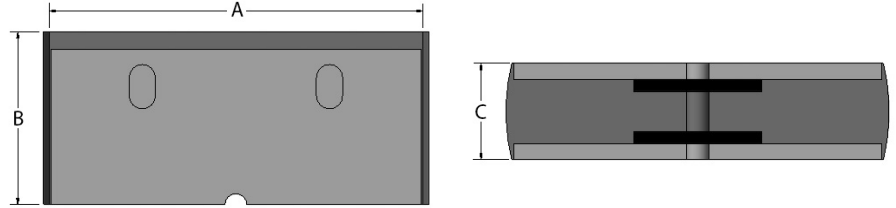
BOP Size	Mold # Part No.	Line Size	Line Size Part No.	Dim. A	Dim. B	Dim. C	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
2-1/2"	1154	0-5/16"	0017	2.980"	1.630"	1.000"		0808	0848	0708	1308
3"	1182	0-5/16"	0017	3.480"	1.845"	1.110"		0808	0848	0708	1308
4"	1149	0-5/16"	0017	4.980"	2.055"	1.370"		0808	0848	0708	1308
5"	1169	0-5/16"	0017	5.980"	2.730"	1.480"		0808	0848	0708	1308
7"	1119	0-5/16"	0017	7.000"	3.725"	1.610"		0808	0848	0708	1308

When ordering the multi-line standard inner seal use the **Mold # Part Number that corresponds to the BOP Size needed** and please specify: line size and compound. Example: 2-1/2" BOP 0-5/16" NBR 80 Duro would be part number **1154-0017-0808**



B & T Oilfield Products

4" Multi-Line Inner Seals (Deep) 1149D Series



Mold #-Line Size-Compound
1149D-0017-XXXX

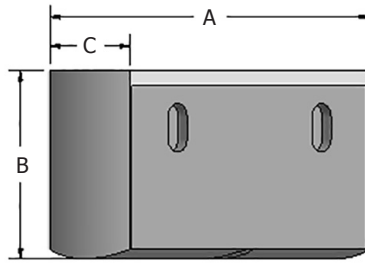
Line Size	Line Size Part No.	Dim. A	Dim. B	Dim. C	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
0-5/16"	0017	4.980"	2.370"	1.370"		0808	0848	0708	1308

When ordering the multi-line deep 4" BOP inner seal use the prefix **1149D** and please specify: line size and compound. Example: 0-5/16" NBR 80 Duro would be part number **1149D-0017-0808**



B & T Oilfield Products

**2-1/2" BOP
Inner Seals
(Standard)
1154 Series**



Identifying Information

Dimension A 2.980"
Dimension B 1.630"
Dimension C 1.000"

Mold #-Line Size-Compound
1154-XXXX-XXXX

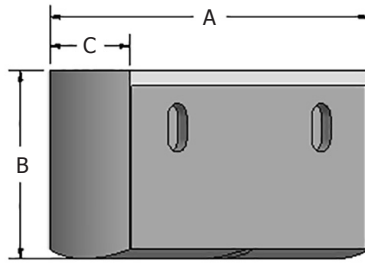
Line Size	Line Size Part No.	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
Blind	0000		0808	0848	0708	1308
3/16"	0002		0808	0848	0708	1308
7/32"	0003		0808	0848	0708	1308
1/4"	0004		0808	0848	0708	1308
9/32"	0005		0808	0848	0708	1308
5/16"	0006		0808	0848	0708	1308
3/8"	0008		0808	0848	0708	1308
.390"	0018		0808	0848	0708	1308
7/16"	0009		0808	0848	0708	1308
1/2"	0011		0808	0848	0708	1308

When ordering the standard 2-1/2" BOP inner seal use the prefix **1154** and please specify: line size and compound. Example: 3/16" NBR 80 Duro would be part number **1154-0002-0808**



B & T Oilfield Products

3" BOP Inner Seals (Standard) 1182 Series



Identifying Information

Dimension A	3.480"
Dimension B	1.845"
Dimension C	1.110"

Mold #-Line Size-Compound
1182-XXXX-XXXX

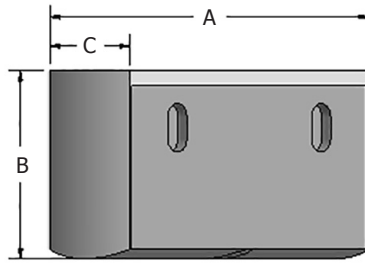
Line Size	Line Size Part No.	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
Blind	0000		0808	0848	0708	1308
3/16"	0002		0808	0848	0708	1308
7/32"	0003		0808	0848	0708	1308
1/4"	0004		0808	0848	0708	1308
9/32"	0005		0808	0848	0708	1308
5/16"	0006		0808	0848	0708	1308
3/8"	0008		0808	0848	0708	1308
.390"	0018		0808	0848	0708	1308
7/16"	0009		0808	0848	0708	1308
1/2"	0011		0808	0848	0708	1308

When ordering the standard 3" BOP inner seal use the prefix **1182** and please specify: line size and compound. Example: 3/16" NBR 80 Duro would be part number **1182-0002-0808**



B & T Oilfield Products

4" BOP Inner Seals (Standard) 1149 Series



Identifying Information

Dimension A	4.980"
Dimension B	2.055"
Dimension C	1.370"

Mold #-Line Size-Compound
1149-XXXX-XXXX

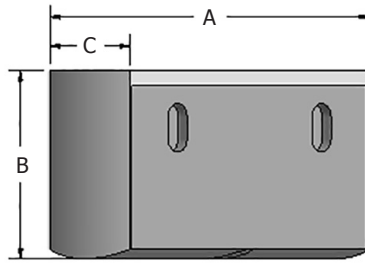
Line Size	Line Size Part No.	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
Blind	0000		0808	0848	0708	1308
3/16"	0002		0808	0848	0708	1308
7/32"	0003		0808	0848	0708	1308
1/4"	0004		0808	0848	0708	1308
9/32"	0005		0808	0848	0708	1308
5/16"	0006		0808	0848	0708	1308
3/8"	0008		0808	0848	0708	1308
.390"	0018		0808	0848	0708	1308
7/16"	0009		0808	0848	0708	1308
1/2"	0011		0808	0848	0708	1308

When ordering the standard 4" BOP inner seal use the prefix **1149** and please specify: line size and compound. Example: 3/16" NBR 80 Duro would be part number **1149-0002-0808**



B & T Oilfield Products

4" BOP Inner Seals (Deep) 1149D Series



Identifying Information

Dimension A	4.980"
Dimension B	2.370"
Dimension C	1.370"

Mold #-Line Size-Compound
1149D-XXXX-XXXX

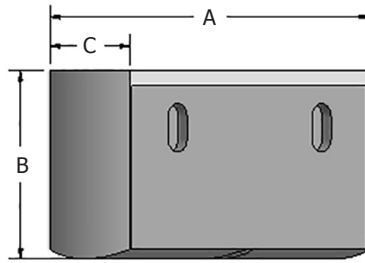
Line Size	Line Size Part No.	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
Blind	0000		0808	0848	0708	1308
3/16"	0002		0808	0848	0708	1308
7/32"	0003		0808	0848	0708	1308
1/4"	0004		0808	0848	0708	1308
9/32"	0005		0808	0848	0708	1308
5/16"	0006		0808	0848	0708	1308
3/8"	0008		0808	0848	0708	1308
.390"	0018		0808	0848	0708	1308
7/16"	0009		0808	0848	0708	1308
1/2"	0011		0808	0848	0708	1308

When ordering the deep 4" BOP inner seal use the prefix **1149D** and please specify: line size and compound. Example: 3/16" NBR 80 Duro would be part number **1149D-0002-0808**



B & T Oilfield Products

5" BOP Inner Seals (Standard) 1169 Series



Identifying Information

Dimension A 5.980"
Dimension B 2.730"
Dimension C 1.480"

Mold #-Line Size-Compound
1169-XXXX-XXXX

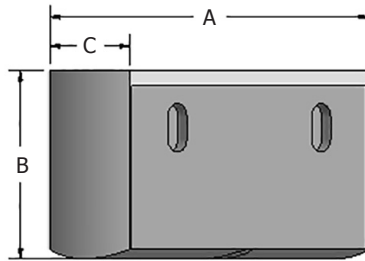
Line Size	Line Size Part No.	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
Blind	0000		0808	0848	0708	1308
3/16"	0002		0808	0848	0708	1308
7/32"	0003		0808	0848	0708	1308
1/4"	0004		0808	0848	0708	1308
9/32"	0005		0808	0848	0708	1308
5/16"	0006		0808	0848	0708	1308
3/8"	0008		0808	0848	0708	1308
.390"	0018		0808	0848	0708	1308
7/16"	0009		0808	0848	0708	1308
1/2"	0011		0808	0848	0708	1308

When ordering the standard 5" BOP inner seal use the prefix **1169** and please specify: line size and compound. Example: 3/16" NBR 80 Duro would be part number **1169-0002-0808**



B & T Oilfield Products

7" BOP Inner Seals (Standard) 1119 Series



Identifying Information

Dimension A	7.000"
Dimension B	3.725"
Dimension C	1.610"

Mold #-Line Size-Compound
1119-XXXX-XXXX

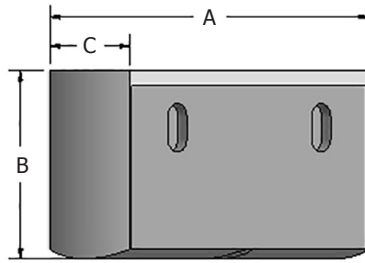
Line Size	Line Size Part No.	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
Blind	0000		0808	0848	0708	1308
3/16"	0002		0808	0848	0708	1308
7/32"	0003		0808	0848	0708	1308
1/4"	0004		0808	0848	0708	1308
9/32"	0005		0808	0848	0708	1308
5/16"	0006		0808	0848	0708	1308
3/8"	0008		0808	0848	0708	1308
.390"	0018		0808	0848	0708	1308
7/16"	0009		0808	0848	0708	1308
1/2"	0011		0808	0848	0708	1308

When ordering the standard 7" BOP inner seal use the prefix **1119** and please specify: line size and compound. Example: 3/16" NBR 80 Duro would be part number **1119-0002-0808**



B & T Oilfield Products

**7-5/8" BOP
Inner Seals
(Standard)
1117 Series**



Identifying Information

Dimension A 7.875"
Dimension B 3.040"
Dimension C 2.225"

Mold #-Line Size-Compound
1117-XXXX-XXXX

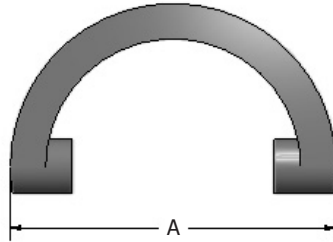
Line Size	Line Size Part No.	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
Blind	0000		0808	0848	0708	1308
3/16"	0002		0808	0848	0708	1308
7/32"	0003		0808	0848	0708	1308
1/4"	0004		0808	0848	0708	1308
9/32"	0005		0808	0848	0708	1308
5/16"	0006		0808	0848	0708	1308
3/8"	0008		0808	0848	0708	1308
.390"	0018		0808	0848	0708	1308
7/16"	0009		0808	0848	0708	1308
1/2"	0011		0808	0848	0708	1308

When ordering the standard 7-5/8" BOP inner seal use the prefix **1117** and please specify: line size and compound. Example: 3/16" NBR 80 Duro would be part number **1117-0002-0808**



B & T Oilfield Products

Outer Seal No Lip



Mold #-Line Size-Compound
XXXX-0000-XXXX

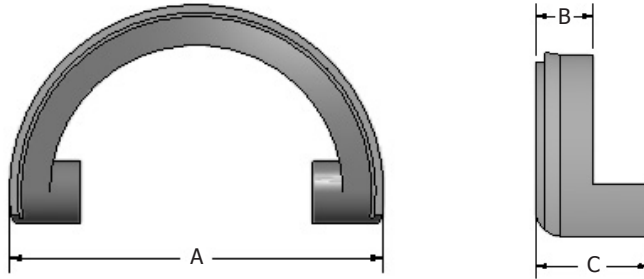
BOP Size	Mold # Part No.	Line Size	Line Size Part No.	Dim. A	Dim. B	Dim. C	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
2-1/2"	1152	N/A	0000	3.000"	.545"	1.180"		0808	0848	0708	1308
3"	1180	N/A	0000	3.500"	.750"	1.000"		0808	0848	0708	1308
4"	1147	N/A	0000	5.000"	.875"	1.375"/2.005"		0808	0848	0708	1308
5"	1170	N/A	0000	6.000"	.875"	1.450"		0808	0848	0708	1308
7"	1121	N/A	0000	7.000"	1.130"	2.040"		0808	0848	0708	1308
7-5/8"	1120	N/A	0000	7.425"	1.250"	2.700"		0808	0848	0708	1308

When ordering the no lip outer seal use the **Mold # Part Number** that corresponds to the **BOP Size needed** and please specify: line size and compound. Example: 2-1/2" BOP NBR 80 Duro would be part number **1152-0000-0808**



B & T Oilfield Products

Outer Seal With Lip



Mold #-Line Size-Compound
XXXXL-0000-XXXX

BOP Size	Mold # Part No.	Line Size	Line Size Part No.	Dim. A	Dim. B	Dim. C	Compound	NBR 80 Duro	HSN 80 Duro	FKM 80 Duro	Epichlorohydrin 80 Duro
2-1/2"	1152L	N/A	0000	3.000"	.545"	1.180"		0808	0848	0708	1308
3"	1180L	N/A	0000	3.500"	.750"	1.000"		0808	0848	0708	1308
4"	1147L	N/A	0000	5.000"	.875"	1.375"/2.005"		0808	0848	0708	1308

When ordering the outer seal with lip use the **Mold # Part Number that corresponds to the BOP Size needed** and please specify: line size and compound. Example: 2-1/2" BOP NBR 80 Duro would be part number **1152L-0000-0808**



B & T Oilfield Products

Reference

Elastomer Chart

Legal Disclaimer

Cross Compatibilty Chart

General Terms and Conditions



B & T Oilfield Products

Elastomer Chart for Pressure Control

Compound	Hardness	Temperature	Crude H2S	CO2	Inhibitors		Zinc Bromide	KCL CACL	Comments
					Water Base	Oil Base			
A80 *TFE/P	80A	-20 to +400 °F	Yes	No	Yes	Yes	Yes	Yes	Amine, Steam O'Rings
Epichlorohydrin 70 Duro	70A	-40 to +300 °F	No	Yes					
Epichlorohydrin 80 Duro	80A	-40 to +300 °F	No	Yes					
FKM 70 Duro	70A	-20 to +450 °F	Yes	No	No	No	Yes	Yes	No Amine Inhibitors
FKM 75 Duro	75A	-20 to +450 °F	Yes	No	No	No	Yes	Yes	No Amine Inhibitors
FKM 80 Duro	80A	-20 to +450 °F	Yes	No	No	No	Yes	Yes	No Amine Inhibitors
FKM 90 Duro	90A	-20 to +450 °F	Yes	No	No	No	Yes	Yes	No Amine Inhibitors
HNBR 65 Duro	65A	-30 to +325 °F	Yes	Yes					
HNBR 70 Duro	70A	-30 to +325 °F	Yes	Yes					
HNBR 80 Duro	80A	-30 to +325 °F	Yes	Yes					
HNBR 85 Duro	85A	-30 to +325 °F	Yes	Yes					
HNBR 90 Duro	90A	-30 to +325 °F	Yes	Yes					
N60 NBR	60A	-20 to +275 °F	No	Yes	No	Low Conc	Below 150 °F	Yes	General Purpose Rings and O'Rings
N70 NBR	70A	-20 to +275 °F	No	Yes	No	Low Conc	Below 150 °F	Yes	General Purpose Rings and O'Rings
N80 NBR	80A	-20 to +275 °F	No	Yes	No	Low Conc	Below 150 °F	Yes	General Purpose Rings and O'Rings
N90 NBR	90A	-20 to +275 °F	No	Yes	No	Low Conc	Below 150 °F	Yes	General Purpose Rings and O'Rings
SBR 50 Duro	50A	-30 to +225 °F	No	No					

*CR=Neoprene TFE/P=Aflas

This table is intended as a guide to seal suitability for specific applications. Contact B & T directly for full operating parameters.

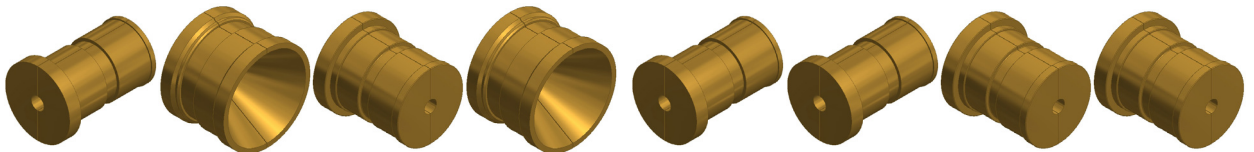
Statements and recommendations in this publication are based on our experience and knowledge of typical applications as well as stated or written OEM or manufacturer specifications for these products, and shall not constitute a guarantee or warranty of performance nor a modification or alteration of our standard product warranty which shall be applicable to such products.



B & T Oilfield Products

Cross Compatibility Chart

This cross compatibility chart assists with finding parts that are used in multiple Oil Saver style injection heads. Parts that are used in more than one type of Oil Saver OEM model are indicated with multiple marks in the corresponding columns. For example, the “Type C Upper” is used in the Type C Upper, the 410 Upper, and the 410 Lower.



	Type C Upper	Type C Lower	Type CL Upper	Type CL Lower	Type 410 Upper	Type 410 Lower	Type MT Upper	Type MT Lower
Type C Upper	X				X	X		
Type C Lower		X		X				
Type CL Upper			X				X	X
Type CL Lower		X		X				
Type 410 Upper	X				X	X		
Type 410 Lower	X				X	X		
Type MT Upper			X				X	X
Type MT Lower			X				X	X



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B & T Oilfield Products

General Terms and Conditions

The equipment, materials, and services (herein referred to as the “Products”) which are set forth in this publication will be sold by B & T OILFIELD PRODUCTS, hereinafter called “B & T”, only upon the following terms and conditions of sale:

I. APPLICABILITY:

- (a) None of the Standard Terms and Conditions of Sale herein set forth may be added to, modified, superseded, or otherwise altered, except by a written instrument signed by an officer of B & T and delivered by B & T to Customer. Each shipment received by Customer from B & T shall be deemed to be only upon the terms and conditions herein set forth, except as they may be added to, modified, superseded, or otherwise altered as provided below, notwithstanding any terms and conditions that may be contained in any purchase order or other form of Customer and notwithstanding Customer’s act of accepting or paying for the Products or similar act of Customer.
- (b) Any typographical error herein is subject to correction by B & T.
- (c) The submission of a quotation by B & T in response to Customer’s request for a quotation does not constitute an expression of acceptance of any term or condition which may have been set forth in Customer’s request. Notwithstanding any prior quotations, correspondence, conversations, purchase orders, or similar instruments relative to the Products, the terms and conditions of sale set forth herein are the only terms and conditions applicable to the sale of Products, and the acceptance of a quotation issued by B & T is expressly limited to the terms of such quotation. The transmittal of a purchase order pursuant to such purchase order agrees with such quotation with respect to the description of the Products to be furnished by B & T as shown on the face thereof, the quantity thereof and the purchase price to be charged therefore. Any additional or different terms or conditions of sale set forth in the purchase order or other communication from Customer are objected to by B & T and shall not be effective or binding unless assented to in writing by an officer of B & T.
- (d) Where B & T does not issue either quotation, or a sales confirmation and ships Products pursuant to Customer’s purchase order, or any other form of acknowledgement of the sale, such sale shall be subject to B & T’s Standard Terms and Conditions of Sale as set forth in this document, and condensed version on the back of B & T’s invoice, and Customer shall be deemed to have agreed thereto unless Products are returned to B & T within ten days of date of invoice, upon which the Customer is subject to the restocking charge of 20 percent maximum of the value of the Product(s).

II. SERVICES:

- (a) Services rendered by B & T are only technical or advisory in nature.
- (b) B & T does not promise or guarantee results of its services. B & T reserves the right to terminate its services if in its opinion such action is advisable because of conditions pertaining to the service ordered. Customer shall pay B & T its prevailing charges for services performed, regardless of results.
- (c) B & T shall not be liable to Customer for damage to or loss of property, whether real or personal, belonging to Customer, arising in any way out of or in connection with B & T’s performance of services rendered.

III. WARRANTY:

- (a) B & T makes no warranty, expressed or implied, as to merchantability, fitness, or otherwise, as to merchandise sold, or rented. Any B & T manufactured merchandise will be replaced by B & T upon satisfactory proof of defect received by B & T within one year of delivery of such merchandise to customer; however, B & T’s liability in connection therewith shall be limited solely to such replacement, notwithstanding any specification or description in its catalogue, literature or brochures, of materials used in the manufacture of its products, B & T reserves the right to substitute other materials without notice.



General Terms and Conditions (Continued)

IV. INDEMNITY:

(a) In the event that B & T manufactures or modifies Products in accordance with plans or specifications furnished by Customer, then Customer shall indemnify and hold B & T harmless from and against all claims and causes of action for damages and expenses of every kind and character asserted against B & T, its agents, servants, and employees, by any firm, person, corporation or other legal entity on account of injury to or death of any person or persons whomsoever, or for damage due or destruction of any personal or real property, or on account of infringement of any patent, design, copyright, or trade name or mark arising out of, directly or indirectly, or in any manner connected with such Products or use of such Products, including all claims and causes of action resulting, either in whole or in part, from B & T's alleged breach or breach of implied or expressed warranty (except as specifically provided herein).

(b) In case of the Products named in its catalogue, literature, or brochures, B & T does not state or implies for its benefit the Products so named, and furthermore does not have any benefit of the alleged misrepresentation or misleading intentionally its customers as to whose Product the contents of the catalogue, literature, and brochures B & T is offering. To the contrary, B & T acknowledges the original manufacturers of the said products and fully respects the quality with which they were made.

V. PRICES and TERMS OF PAYMENT

(a) Unless otherwise specified in this publication or on a B & T Quotation, sales confirmation, or invoice the prices which are set forth on any such quotation, sales confirmation, or invoice issued by B & T are prices Ex Works, F.O.B. or F.A.S. B& T's location, Broussard, Louisiana, USA.

(b) Prices set forth in any quotation or sales confirmation do not include sales, use, excise, or other taxes or import duties, documentation charges, freight, transfer fees, or similar costs or charges, unless specifically indicated thereon.

(c) Unless otherwise agreed in writing, terms of payment are net cash thirty (30) days following the date of the invoice, which, to the extent possible, will be the date of delivery.

(d) Any amount unpaid at the end of thirty (30) days from the date of invoice shall bear interest at the maximum rate allowed under applicable law, plus reasonable attorney's fees and court costs if collected by an attorney or through court proceedings.

VI. TRANSPORTATION:

(a) In the absence of specific routing instructions from Customer, B & T shall have the right to select the date of shipment, type of carrier, and the routing of shipment on behalf of and for the account of Customer.

(b) Unless otherwise previously agreed in writing, all Products are shipped at B & T's option, either Ex Works, F.O.B., or F.A.S. B& T's location in Broussard and acceptance of Products by Customer occurs upon delivery to carrier.

(c) Customer shall give written notice to B & T of any claim for shortage, error in shipment, or error in charges within thirty (30) days after receipt of Products or such claim shall be deemed waived.

(d) Customer agrees that B & T shall not be liable for damage to or destruction of Customer's Products occurring while such Products are in the possession of B & T except where such damage or destruction arises from the sole gross negligence of B & T.

(e) If the Products are sold for export from Broussard, then title to those Products and risk of their loss or damage notwithstanding the preceding transportation terms shall pass to the Customer.



General Terms and Conditions (Continued)

VII. DELIVERY DATES

- (a) Quoted deliveries are approximate estimates determined at the time of quotation and are subject to revision at the time of order placement due to prior sale. Products in B & T's catalogue are not necessarily available for immediate delivery.
- (b) B & T shall not be held responsible for any delivery or failure to make delivery of all or any part of the Products or nonperformance of services, ordered or requested by Customer as a result of governmental action, strikes, lack of or inability to obtain raw materials, due to act of God or other cause not subject to B & T's control which prevents or hinders the manufacture or delivery of Products or the performance of the services.

VIII. OTHER TERMS AND CONDITIONS

- (a) All orders accepted are subject to final review at B & T's principal office. Once accepted, orders cannot be cancelled by Customer without written approval from B & T. Acceptance of Customer's cancellation will be predicted upon Customer's payment of a cancellation charge to be determined by B & T.
- (b) Prices quoted include standard packaging only. Any special handling or packaging will be subject to additional charges.
- (c) B & T deserves the right to modify the design of any Products without obligation or previous notifications, and B & T is not obligated to so modify Products previously or subsequently sold.
- (d) Any contract arising hereunder shall be construed in accordance with the laws of the United States, and the rights and duties of the Customer and B & T hereunder shall be determined by the laws of the United States in the Courts of Louisiana.
- (e) Should any clause, sentence or part of the Standard Terms and Conditions of Sale be held invalid, such holding shall in no way affect the validity of the remainder, which shall remain in full effect. Failure to enforce any or all of the Standard terms and Conditions of Sale in a particular instance or instances shall not constitute a waiver or preclude subsequent enforcement thereof.



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