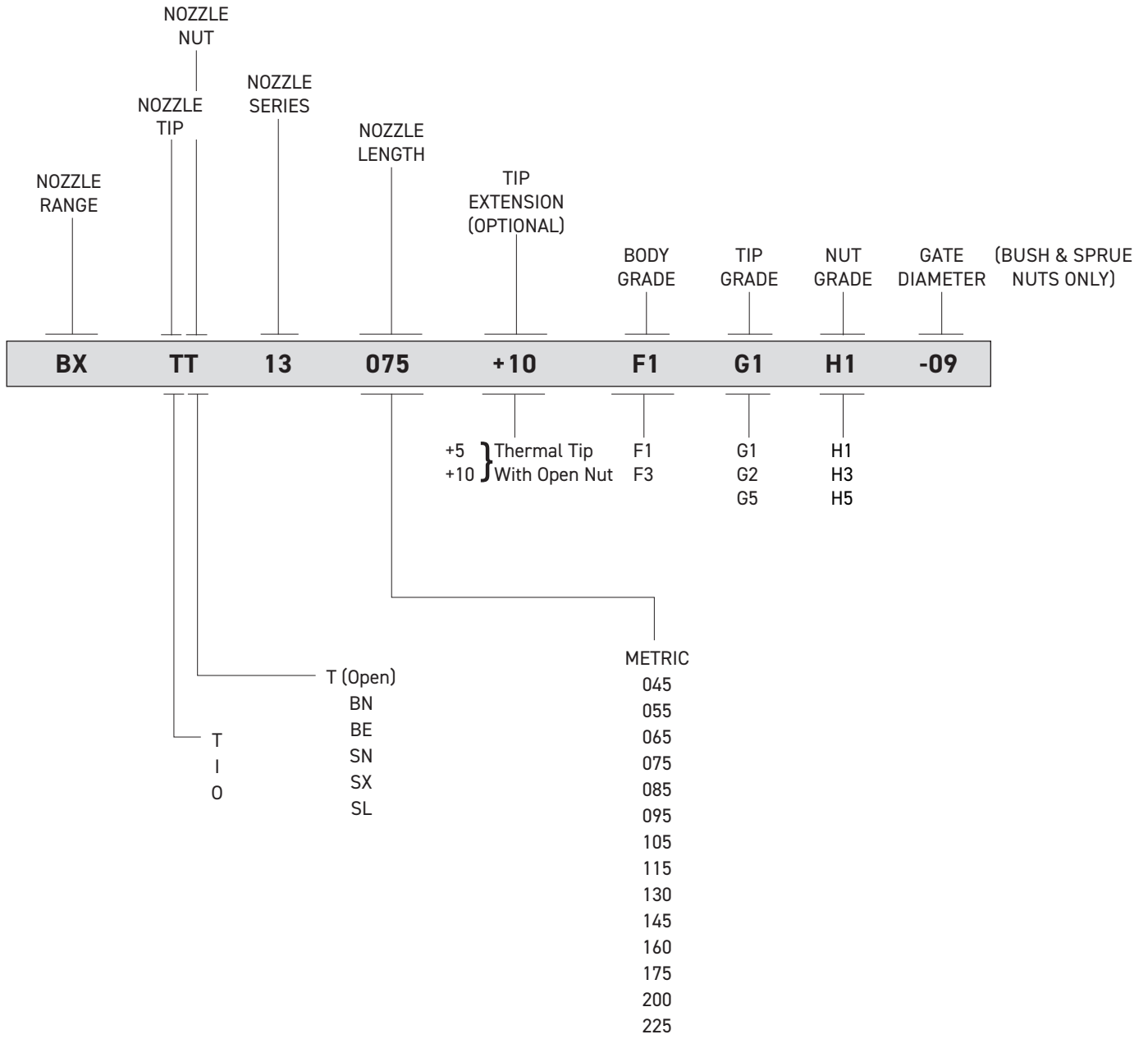


# **BX Thermal Gate Nozzle Assembly Technical Guide**

# **BX Thermal Gate 13 Series**

Nozzle Assembly Order Code for BX Thermal Gate 13 Series



\* See page 10, 14 & 17 in the system selection guide for an explanation on the grades

Body, Tip & Nut Grade Availability

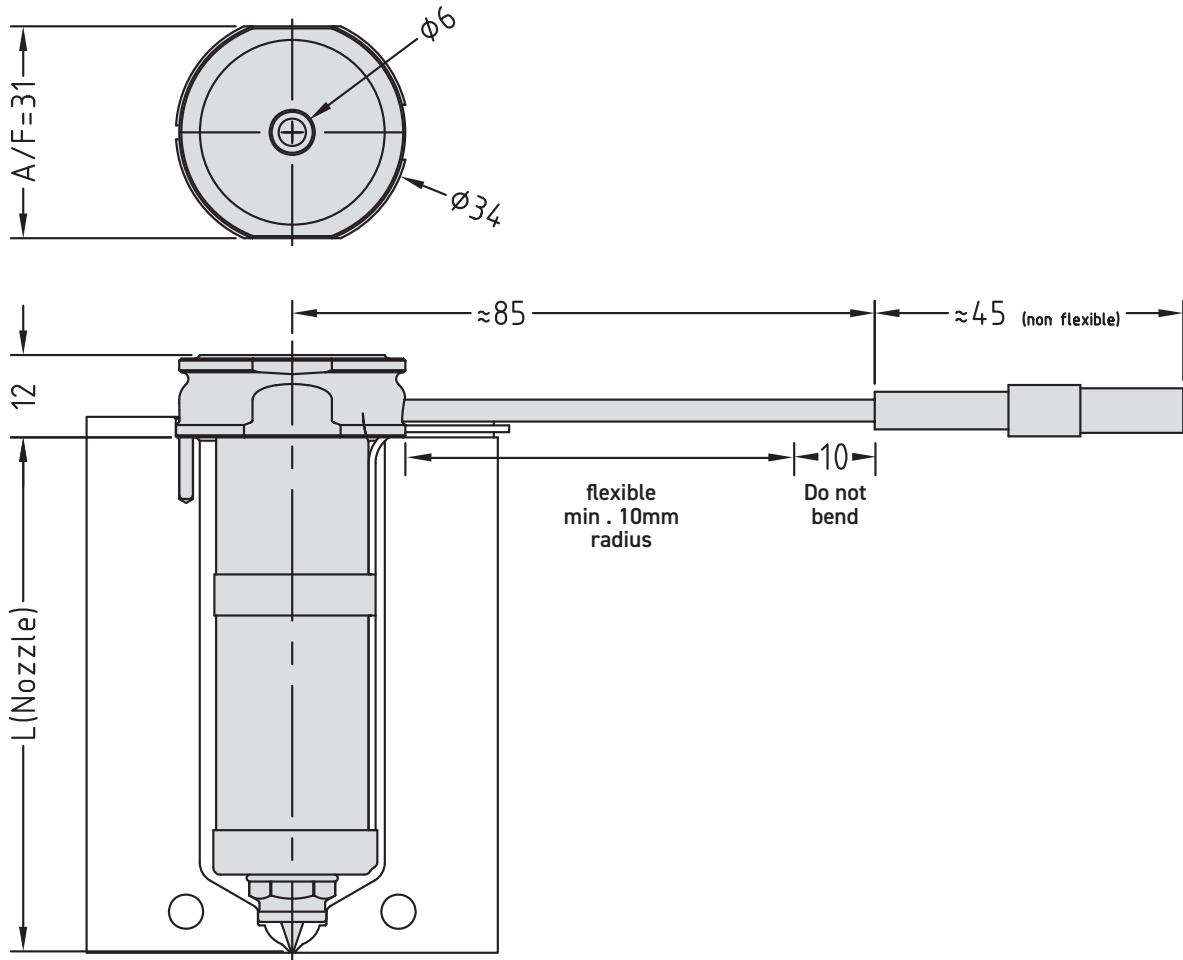
Nozzle Code	Grade					
	F1G1H1	F1G2H1	F1G5H1	F3G1H3	F3G2H3	F3G5H3
BXTT	✓	✓	✓	✓	✓	✓
BXIT	✓	✓	✓	✓	✓	✓
BXOT	✓	✗	✓	✓	✗	✓

To order a nozzle assembly:

Provide the Nozzle Code + Grade

(Order example: BXTT13075F1G1H1)

Nozzle Dimensions





Body, Tip & Nut Grade Availability

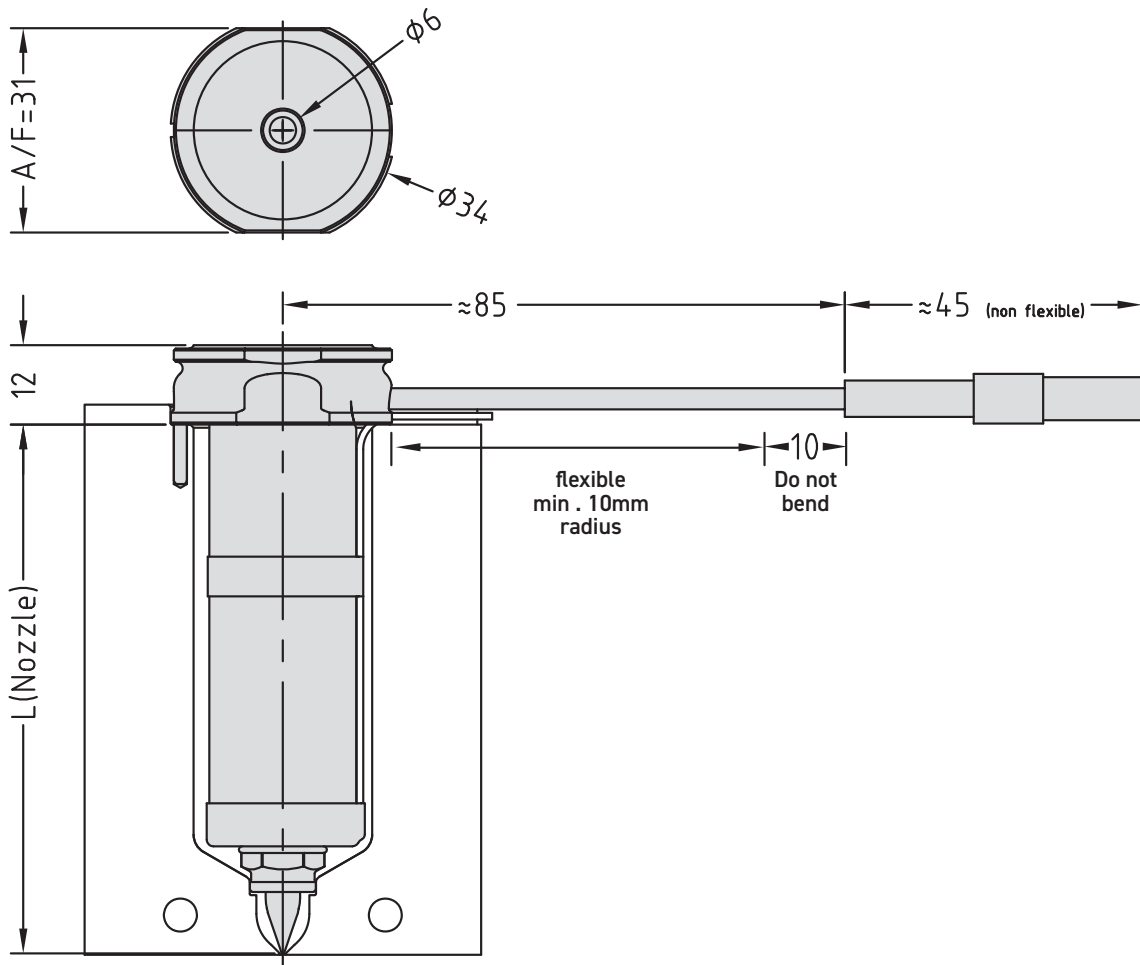
Nozzle Code \ Grade	F1G1H1	F1G2H1	F3G1H3	F3G2H3
BXTT+5	✓	✓	✓	✓
BXIT+5	✓	✓	✓	✓

To order a nozzle assembly:

Provide the Nozzle Code + Grade

(Order example: BXTT13075+5F1G1H1)

Nozzle Dimensions





Body, Tip & Nut Grade Availability

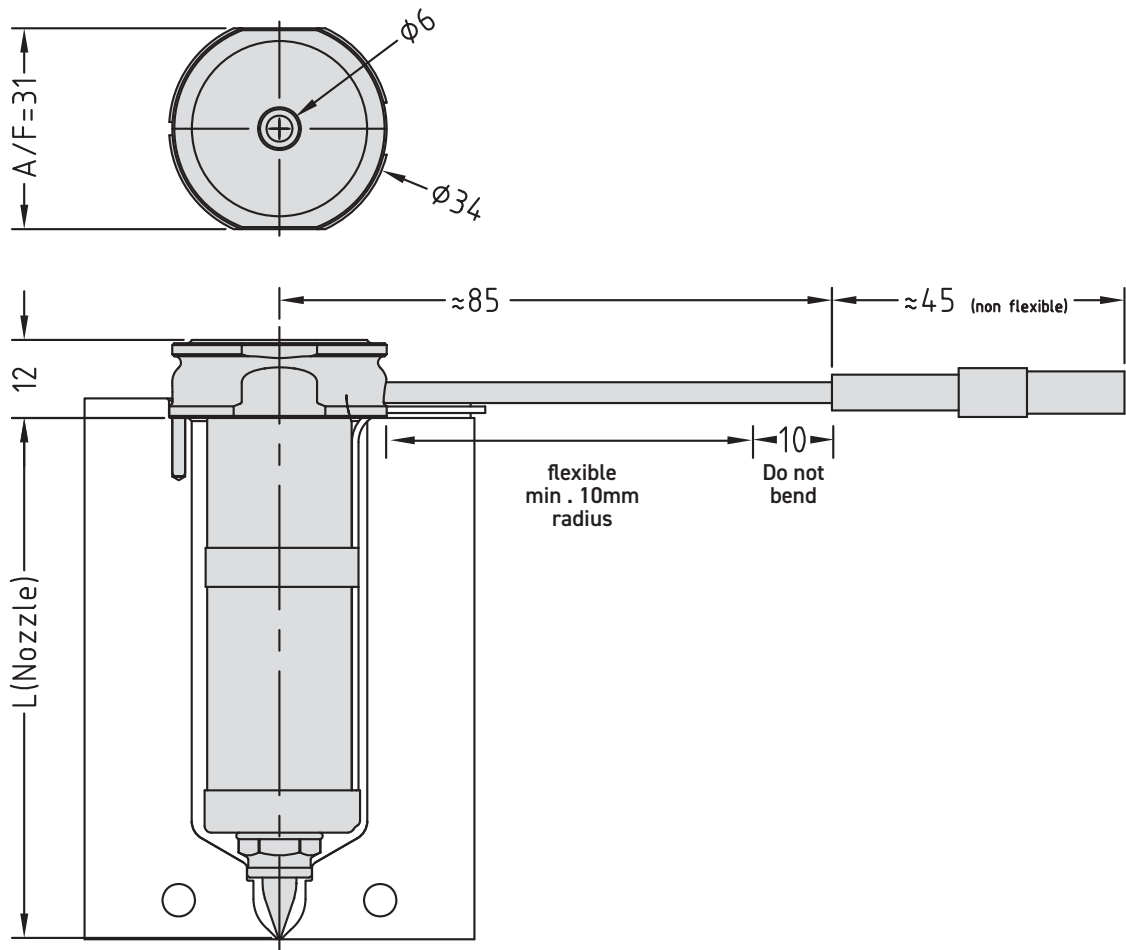
Nozzle Code \ Grade	F1G1H1	F1G2H1	F3G1H3	F3G2H3
BXTT+10	✓	✓	✓	✓
BXIT+10	✓	✓	✓	✓

**To order a nozzle assembly:**

Provide the Nozzle Code + Grade

(Order example: BXTT13075+10F1G1H1)

Nozzle Dimensions

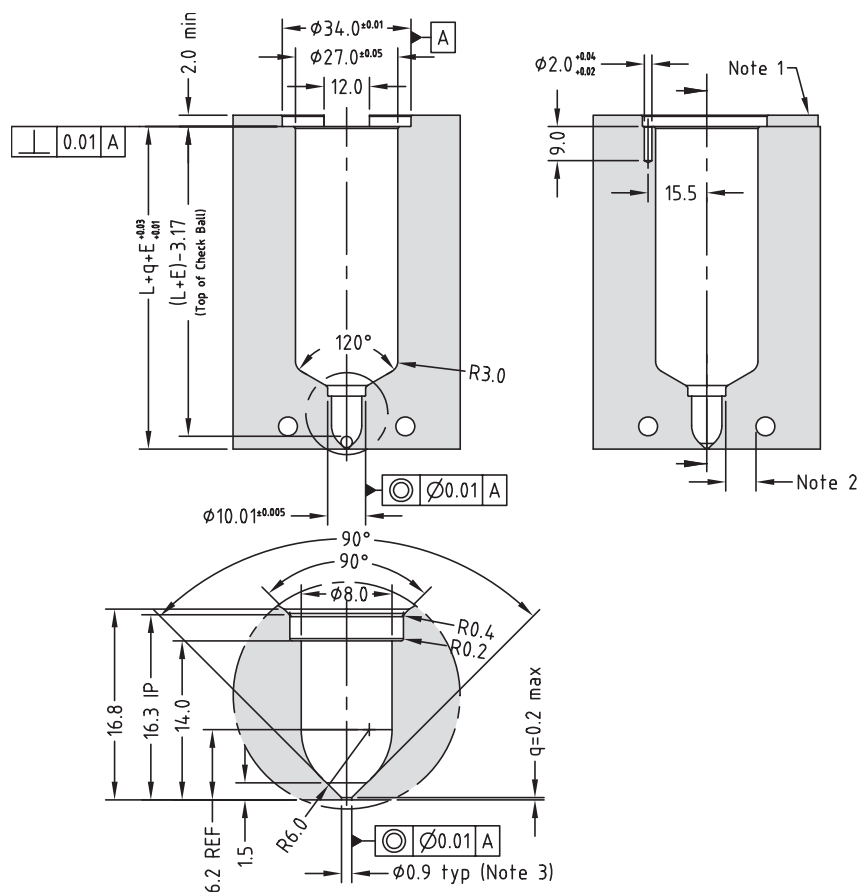




Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTT13045+10	BXIT13045+10	55	0.15	0.18
BXTT13055+10	BXIT13055+10	65	0.17	0.21
BXTT13065+10	BXIT13065+10	75	0.20	0.25
BXTT13075+10	BXIT13075+10	85	0.22	0.28
BXTT13085+10	BXIT13085+10	95	0.25	0.31
BXTT13095+10	BXIT13095+10	105	0.28	0.35
BXTT13105+10	BXIT13105+10	115	0.30	0.38
BXTT13115+10	BXIT13115+10	125	0.33	0.41
BXTT13130+10	BXIT13130+10	140	0.37	0.46
BXTT13145+10	BXIT13145+10	155	0.41	0.51
BXTT13160+10	BXIT13160+10	170	0.45	0.56
BXTT13175+10	BXIT13175+10	185	0.49	0.61
BXTT13200+10	BXIT13200+10	210	0.55	0.69
BXTT13225+10	BXIT13225+10	235	0.62	0.78

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip & Nut Material Grade Availability

Grade \ Nozzle Code	F1G1H1	F1G2H1	F1G5H1	F1G5H5	F3G1H3	F3G2H3	F3G5H3	F3G5H5
<b>13 Series Bush Nut</b>								
BXTBN	✓	✓	✓	✓	✓	✓	✓	✓
BXIBN	✓	✓	✓	✓	✓	✓	✓	✓
BXOBN	✓	✗	✓	✓	✓	✗	✓	✓
<b>13 Series Bush Nut Full Contact</b>								
BXTBE	✓	✓	✓	✗	✓	✓	✓	✗
BXIBE	✓	✓	✓	✗	✓	✓	✓	✗
BXOBE	✓	✗	✓	✗	✓	✗	✓	✗

Bush Nut Options

- BN - Standard bush nut
- BE - Full-contact bush nut\*

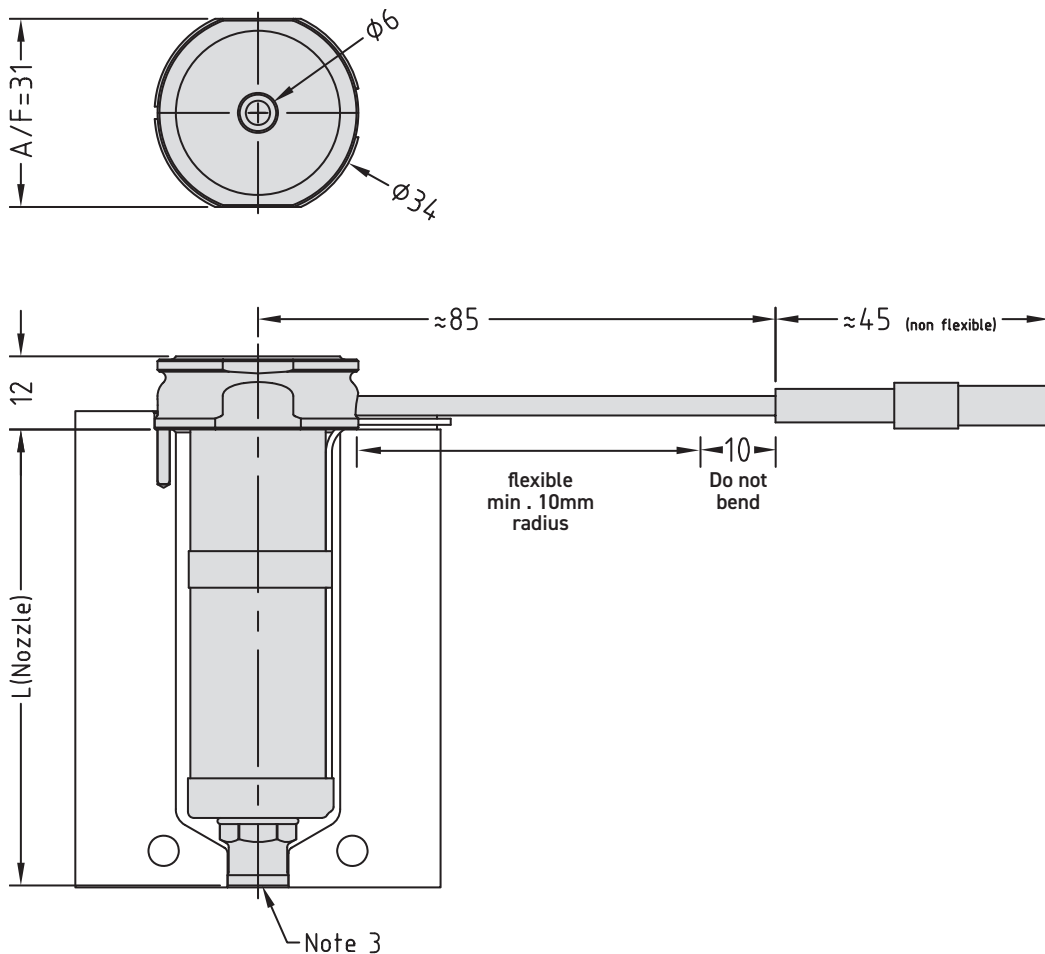
The nozzle codes listed to the right are for nozzle assemblies with a standard bush nut. To order a full-contact bush nut, replace the BN in the code with BE.

Standard Gate Diameters		
H1	0.9mm	1.1mm
H3	0.9mm	1.1mm
H5	1.4mm	

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter  
(Order example: BXTBN13075F1G1H1-09 )

Nozzle Dimensions





Body, Tip and Nut Material Grade Availability

Nozzle Code \ Grade	Grade							
	F1G1H1	F1G2H1	F1G5H1	F1G5H5	F3G1H3	F3G2H3	F3G5H3	F3G5H5
BXTSN	✓	✓	✓	✓	✓	✓	✓	✓
BXISN	✓	✓	✓	✓	✓	✓	✓	✓
BXOSN	✓	✗	✓	✓	✓	✗	✓	✓

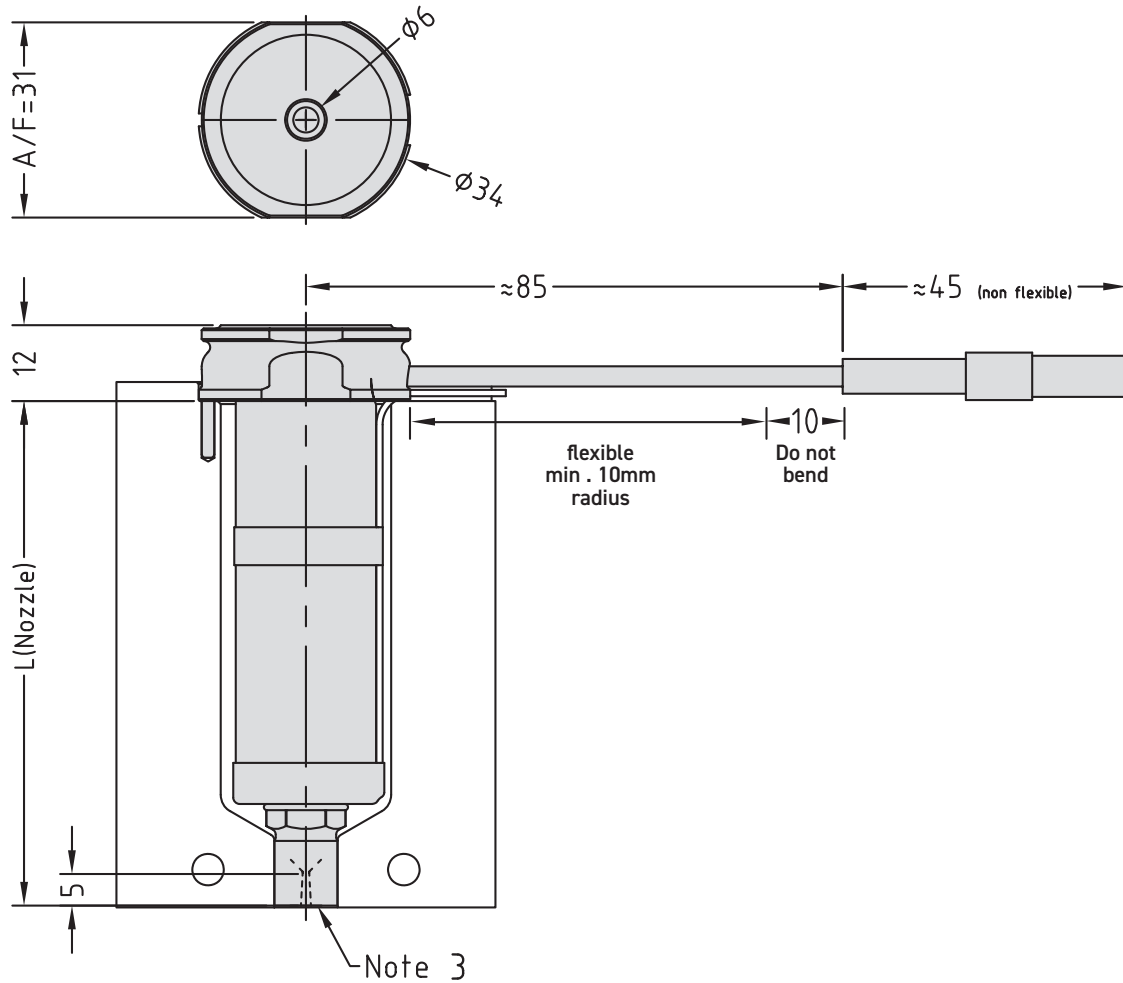
Standard Gate Diameters		
H1	0.9mm	1.3mm
H3	0.9mm	1.3mm
H5	1.6mm	

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter

(Order example: BXTSN13075F1G1H1-09)

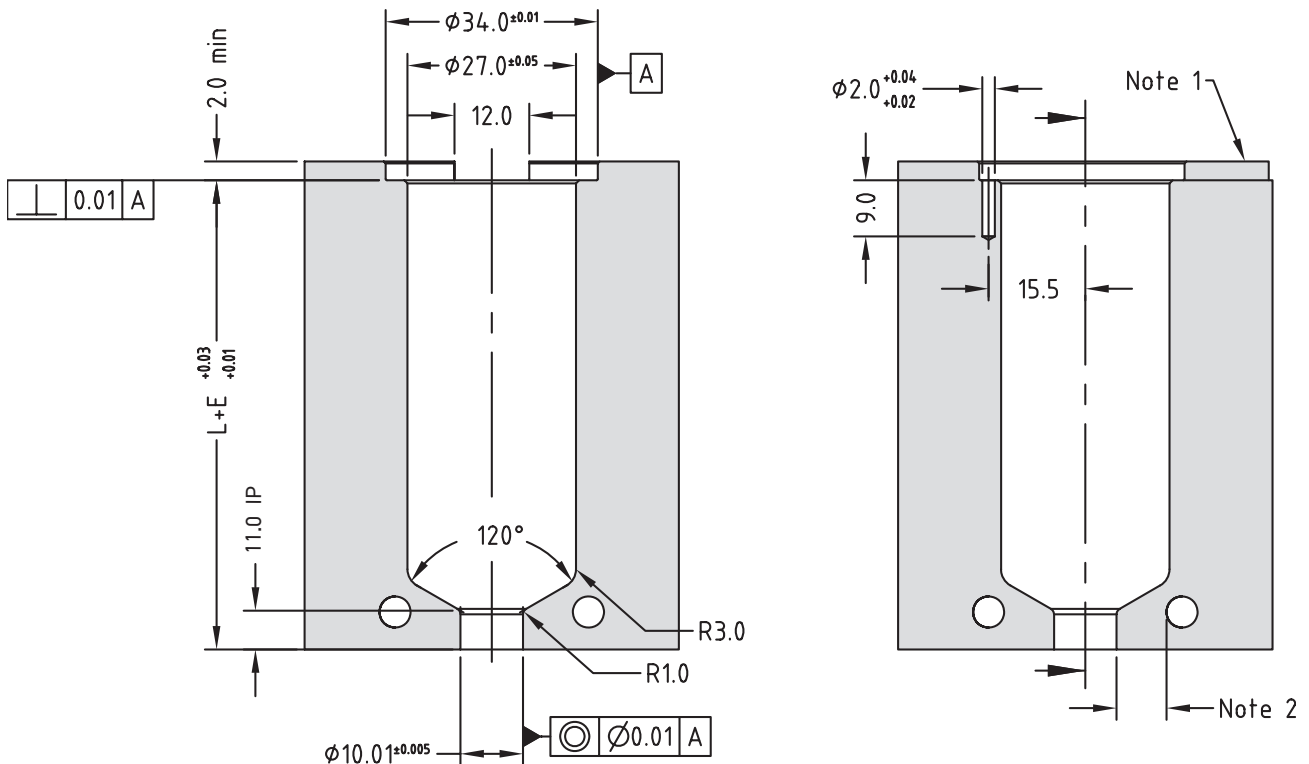
Nozzle Dimensions



Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTSN13045	BXISN13045	BXOSN13045	50.2	0.13	0.17
BXTSN13055	BXISN13055	BXOSN13055	60.2	0.16	0.20
BXTSN13065	BXISN13065	BXOSN13065	70.2	0.19	0.23
BXTSN13075	BXISN13075	BXOSN13075	80.2	0.21	0.26
BXTSN13085	BXISN13085	BXOSN13085	90.2	0.24	0.30
BXTSN13095	BXISN13095	BXOSN13095	100.2	0.26	0.33
BXTSN13105	BXISN13105	BXOSN13105	110.2	0.29	0.36
BXTSN13115	BXISN13115	BXOSN13115	120.2	0.32	0.40
BXTSN13130	BXISN13130	BXOSN13130	135.2	0.36	0.45
BXTSN13145	BXISN13145	BXOSN13145	150.2	0.40	0.50
BXTSN13160	BXISN13160	BXOSN13160	165.2	0.44	0.55
BXTSN13175	BXISN13175	BXOSN13175	180.2	0.48	0.59
BXTSN13200	BXISN13200	BXOSN13200	205.2	0.54	0.68
BXTSN13225	BXISN13225	BXOSN13225	230.2	0.61	0.76

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip and Nut Material Grade Availability

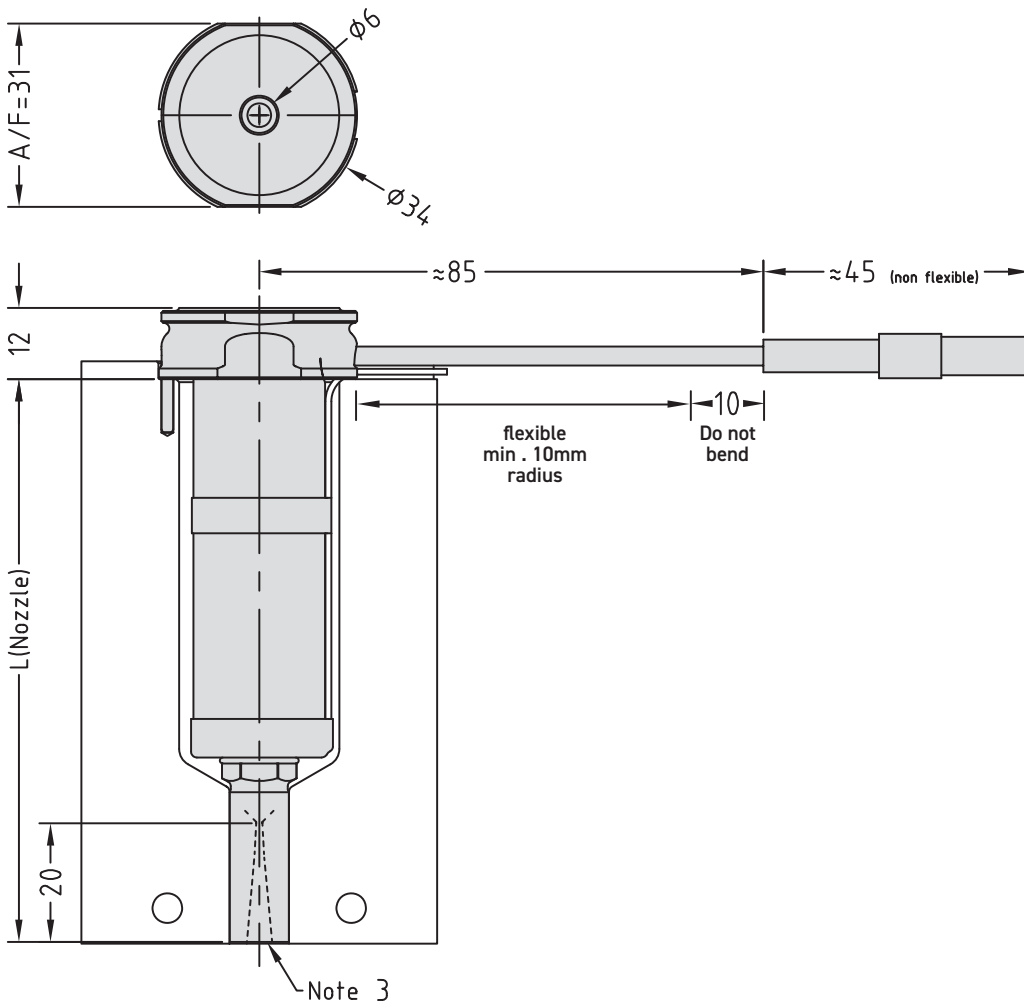
Nozzle Code	Grade		
	F1G1H1	F1G2H1	F1G5H1
BXTSX	✓	✓	✓
BXISX	✓	✓	✓
BXOSX	✓	✗	✓

Standard Gate Diameters	
H1	0.9mm

**To order a nozzle assembly:**

Provide the Nozzle Code + Grade + Gate Diameter  
 (Order example: BXTSX13075F1G1H1-09)

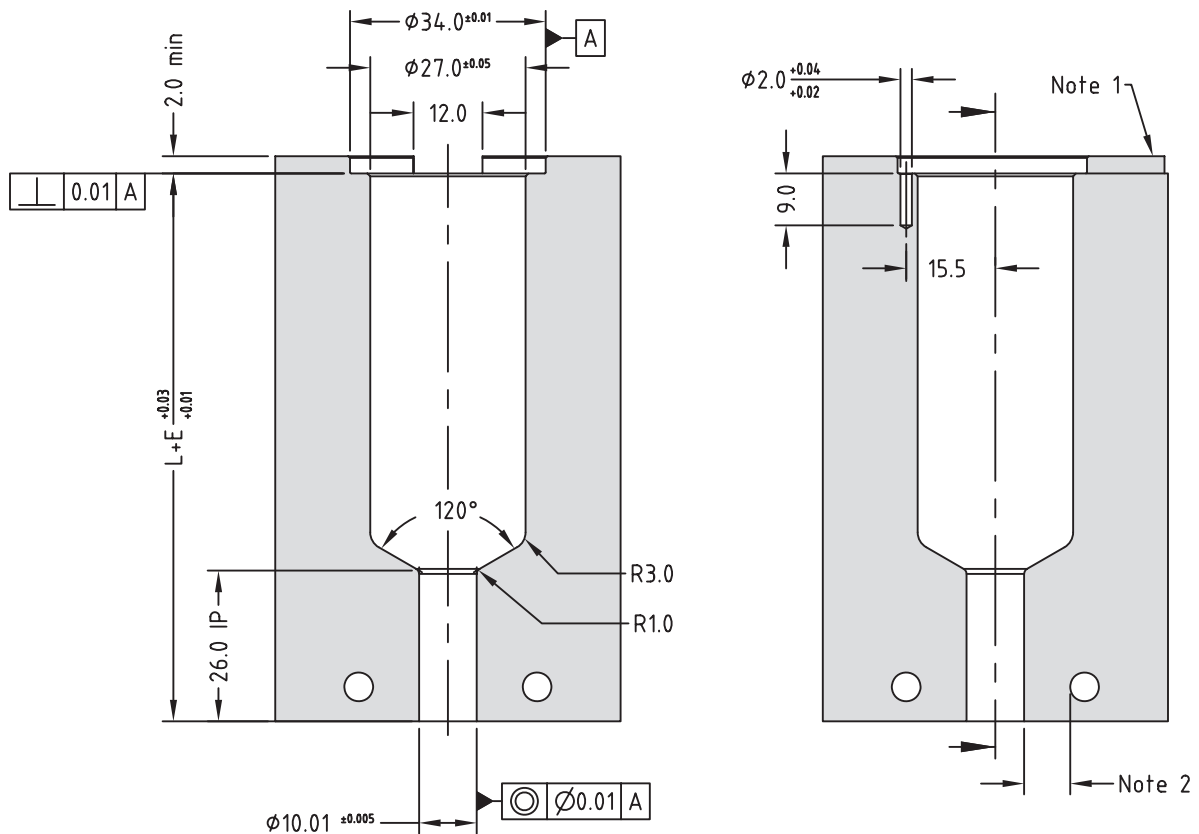
Nozzle Dimensions



Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTSX13045	BXISX13045	BXOSX13045	65.2	0.17	0.22
BXTSX13055	BXISX13055	BXOSX13055	75.2	0.20	0.25
BXTSX13065	BXISX13065	BXOSX13065	85.2	0.22	0.28
BXTSX13075	BXISX13075	BXOSX13075	95.2	0.25	0.31
BXTSX13085	BXISX13085	BXOSX13085	105.2	0.28	0.35
BXTSX13095	BXISX13095	BXOSX13095	115.2	0.30	0.38
BXTSX13105	BXISX13105	BXOSX13105	125.2	0.33	0.41
BXTSX13115	BXISX13115	BXOSX13115	135.2	0.36	0.45
BXTSX13130	BXISX13130	BXOSX13130	150.2	0.40	0.50
BXTSX13145	BXISX13145	BXOSX13145	165.2	0.44	0.55
BXTSX13160	BXISX13160	BXOSX13160	180.2	0.48	0.59
BXTSX13175	BXISX13175	BXOSX13175	195.2	0.52	0.64
BXTSX13200	BXISX13200	BXOSX13200	220.2	0.58	0.73
BXTSX13225	BXISX13225	BXOSX13225	245.2	0.65	0.81

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip and Nut Material Grade Availability

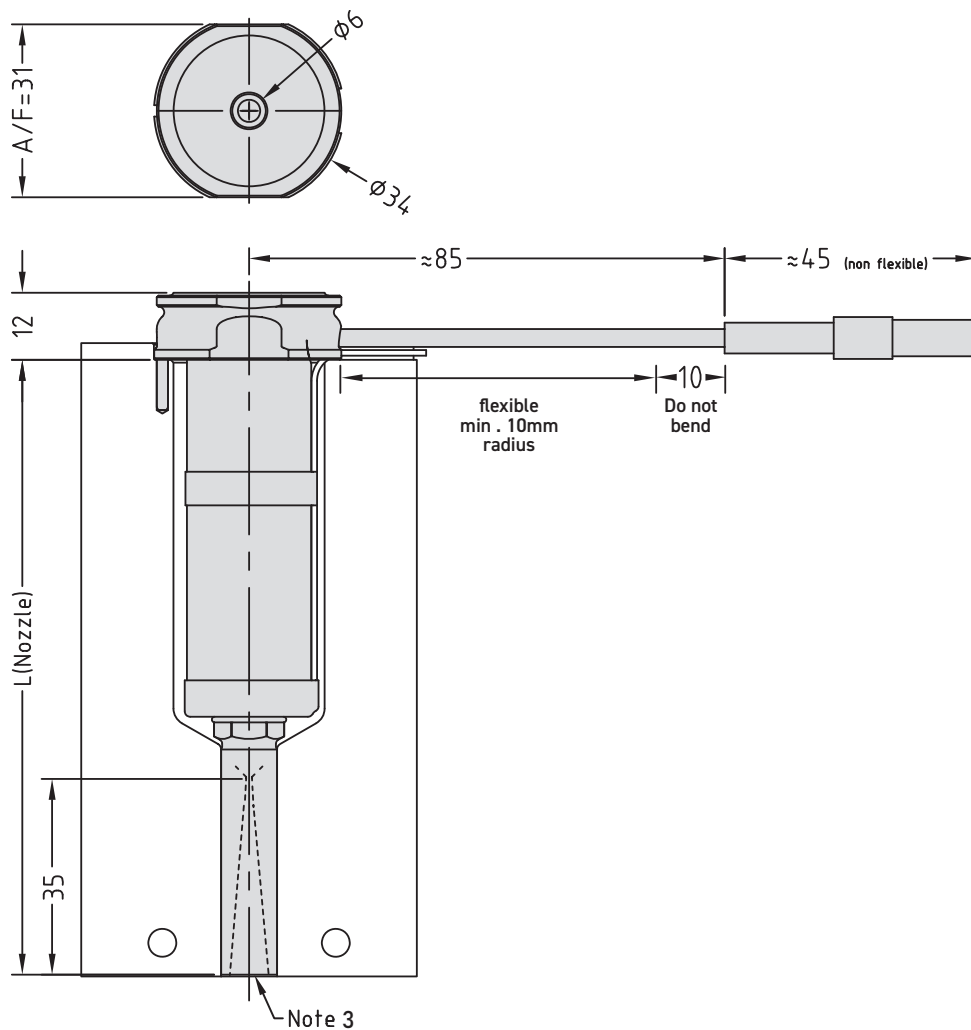
Nozzle Code	Grade		
	F1G1H1	F1G2H1	F1G5H1
BXTSL	✓	✓	✓
BXISL	✓	✓	✓
BXOSL	✓	✗	✓

Standard Gate Diameters	
H1	0.9mm

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter  
 (Order example: BXTSL13075F1G1H1-09)

Nozzle Dimensions

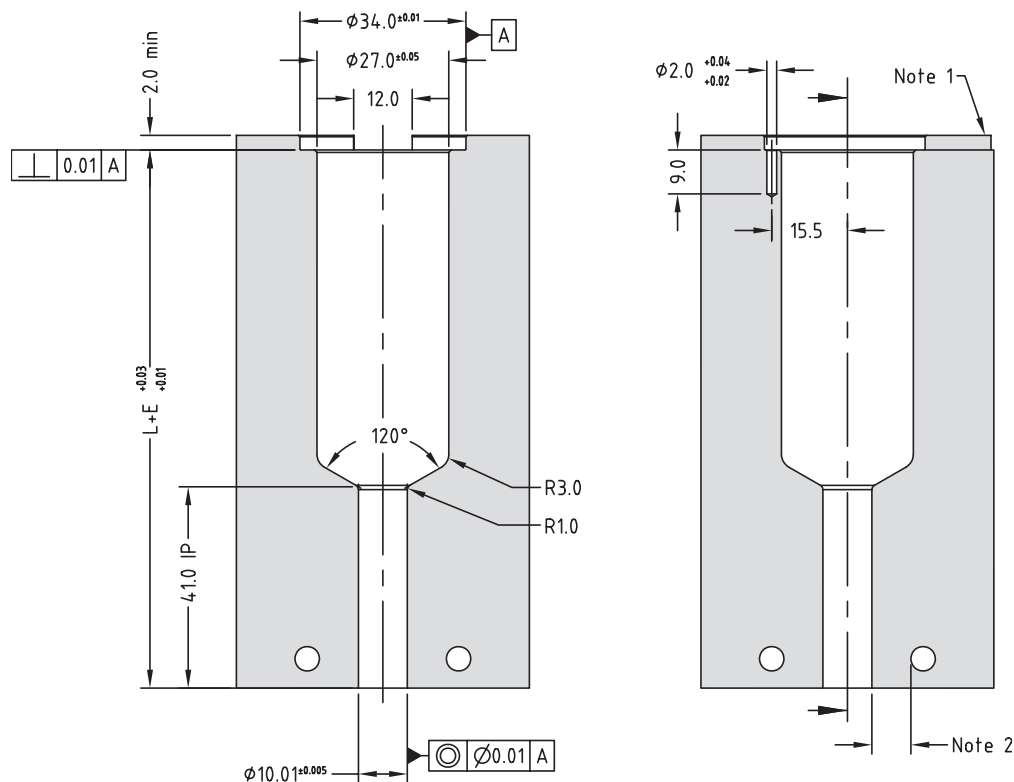




Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTSL13045	BXISL13045	BXOSL13045	80.2	0.21	0.26
BXTSL13055	BXISL13055	BXOSL13055	90.2	0.24	0.30
BXTSL13065	BXISL13065	BXOSL13065	100.2	0.26	0.33
BXTSL13075	BXISL13075	BXOSL13075	110.2	0.29	0.36
BXTSL13085	BXISL13085	BXOSL13085	120.2	0.32	0.40
BXTSL13095	BXISL13095	BXOSL13095	130.2	0.34	0.43
BXTSL13105	BXISL13105	BXOSL13105	140.2	0.37	0.46
BXTSL13115	BXISL13115	BXOSL13115	150.2	0.40	0.50
BXTSL13130	BXISL13130	BXOSL13130	165.2	0.44	0.55
BXTSL13145	BXISL13145	BXOSL13145	180.2	0.48	0.59
BXTSL13160	BXISL13160	BXOSL13160	195.2	0.52	0.64
BXTSL13175	BXISL13175	BXOSL13175	210.2	0.55	0.69
BXTSL13200	BXISL13200	BXOSL13200	235.2	0.62	0.78
BXTSL13225	BXISL13225	BXOSL13225	260.2	0.69	0.86

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

# **BX YCN Nut Thermal Gate 13 Series**

Nozzle Assembly Order Code for BX YCN Nut Thermal Gate 13 Series

NOZZLE RANGE	YCN NUT	NOZZLE SERIES	NOZZLE LENGTH	BODY GRADE	NUT GRADE	GATE PROFILE	POLYMER CLASSIFICATION	GATE DIAMETER
<b>BX</b>	<b>YCN</b>	<b>13</b>	<b>175</b>	<b>F1</b>	<b>H3</b>	<b>P4</b>	<b>F</b>	<b>-18</b>
			045 055 065 075 085 095 105 115 130 145 160 175 200 225	F1 F3	H3	P7 P4 N3	U (Unfilled) F (Filled) SP	EXAMPLE OF A FINAL ORDER CODE

\* See page 26 in the system selection guide for an explanation on gate profiles

Body & Nut Grade Availability

Nozzle Code	F1H3	F3H3
BXYCN	✓	✓

Refer to the system selection guide page 26 for selection the appropriate gate profile P7, P4 or N3.

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Profile  
(Order example: BXYCN13075F1H3P7U-12)

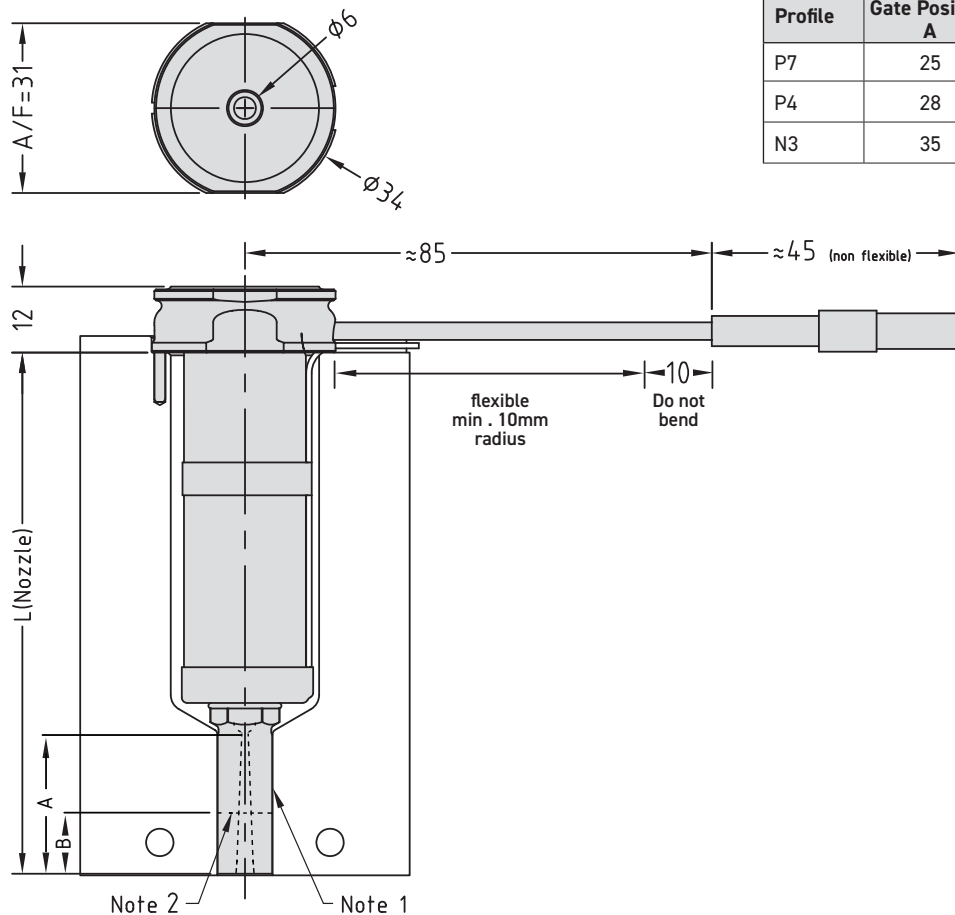
YCN Gate Profile Availability

Profile	Unfilled	Filled	Special
P7	P7U-12	P7F-16	P7-SP
P4	P4U-13	P4F-18	P4-SP
N3	N3U-13	N3F-16	N3-SP

Standard Gate Diameters

Nut Grade	P7U-12	P7F-16	P4U-13	P4F-18	N3U-13	N3F-16
H3	1.2mm	1.6mm	1.3mm	1.8mm	1.3mm	1.6mm

Nozzle Dimensions



Profile	Gate Position A	Cut Length B
P7	25	Contact Mastip
P4	28	
N3	35	

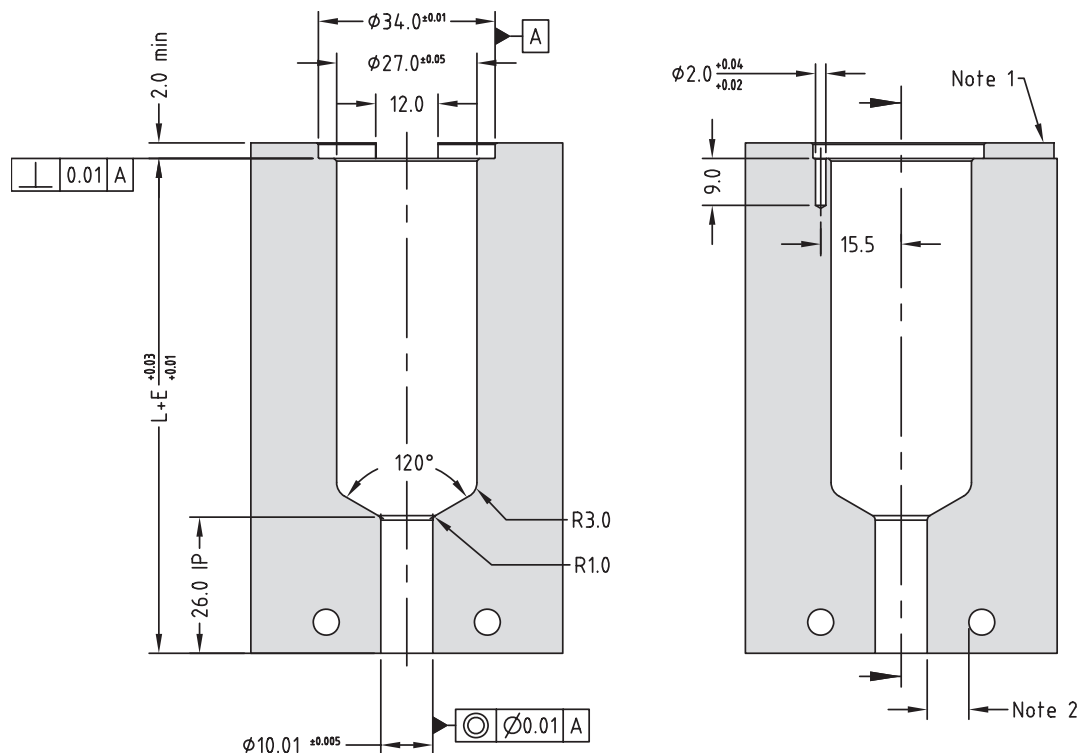
Note

1. Modify the contact area of the YCN nut to suit the application.
  2. Contact Mastip to reduce the length (B) of the YCN nut.
- Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.

YCN Open Nut Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXYCN13045	65.2	0.17	0.22
BXYCN13055	75.2	0.20	0.25
BXYCN13065	85.2	0.22	0.28
BXYCN13075	95.2	0.25	0.31
BXYCN13085	105.2	0.28	0.35
BXYCN13095	115.2	0.30	0.38
BXYCN13105	125.2	0.33	0.41
BXYCN13115	135.2	0.36	0.45
BXYCN13130	150.2	0.40	0.50
BXYCN13145	165.2	0.44	0.55
BXYCN13160	180.2	0.48	0.59
BXYCN13175	195.2	0.52	0.64
BXYCN13200	220.2	0.58	0.73
BXYCN13225	245.2	0.65	0.81

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$

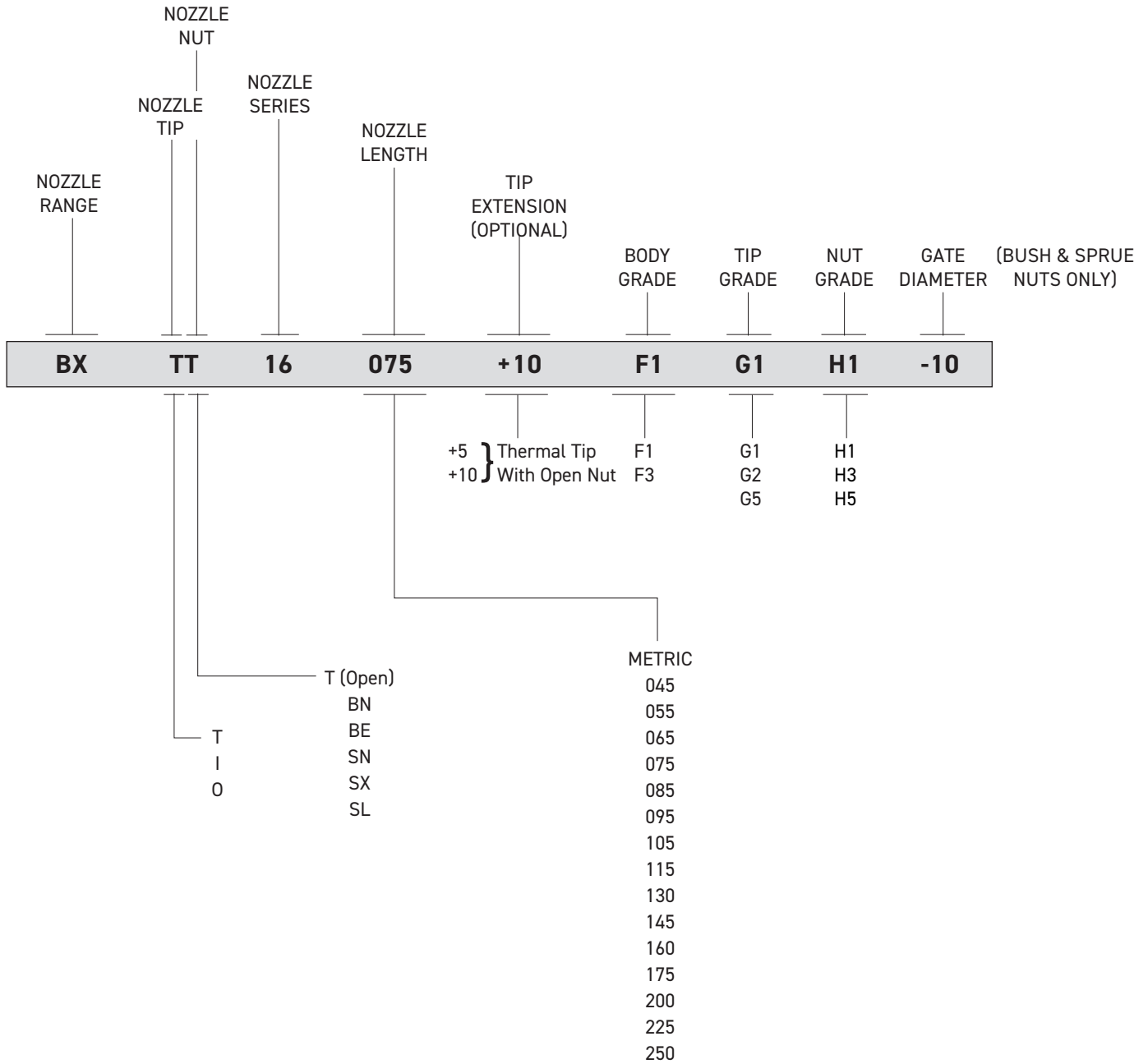


#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

# **BX Thermal Gate 16 Series**

Nozzle Assembly Order Code for BX Thermal Gate 16 Series



\* See page 10, 14 & 17 in the system selection guide for an explanation on the grades

Body, Tip & Nut Grade Availability

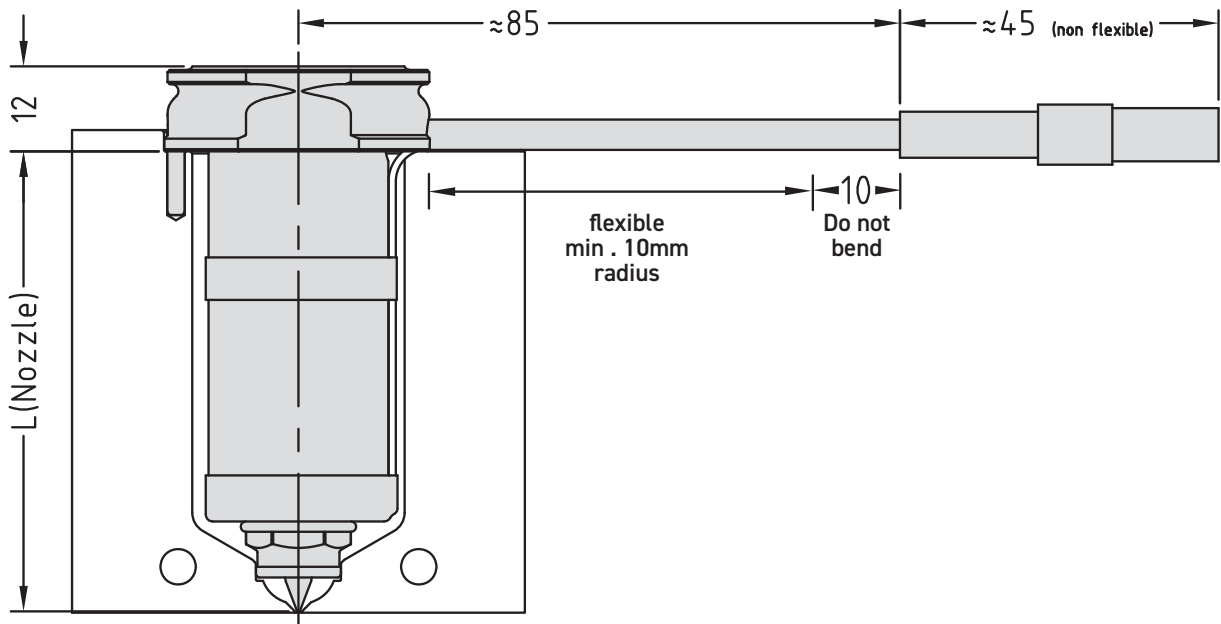
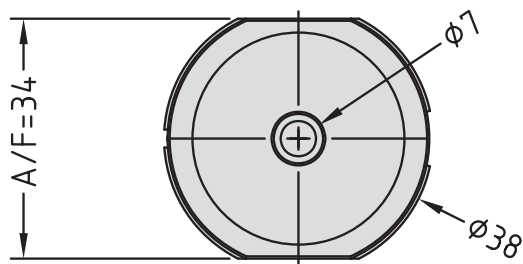
Nozzle Code \ Grade	F1G1H1	F1G2H1	F1G5H1	F3G1H3	F3G2H3	F3G5H3
BXTT	✓	✓	✓	✓	✓	✓
BXIT	✓	✓	✓	✓	✓	✓
BXOT	✓	✗	✓	✓	✗	✓

To order a nozzle assembly:

Provide the Nozzle Code + Grade

(Order example: BXTT16075F1G1H1)

Nozzle Dimensions

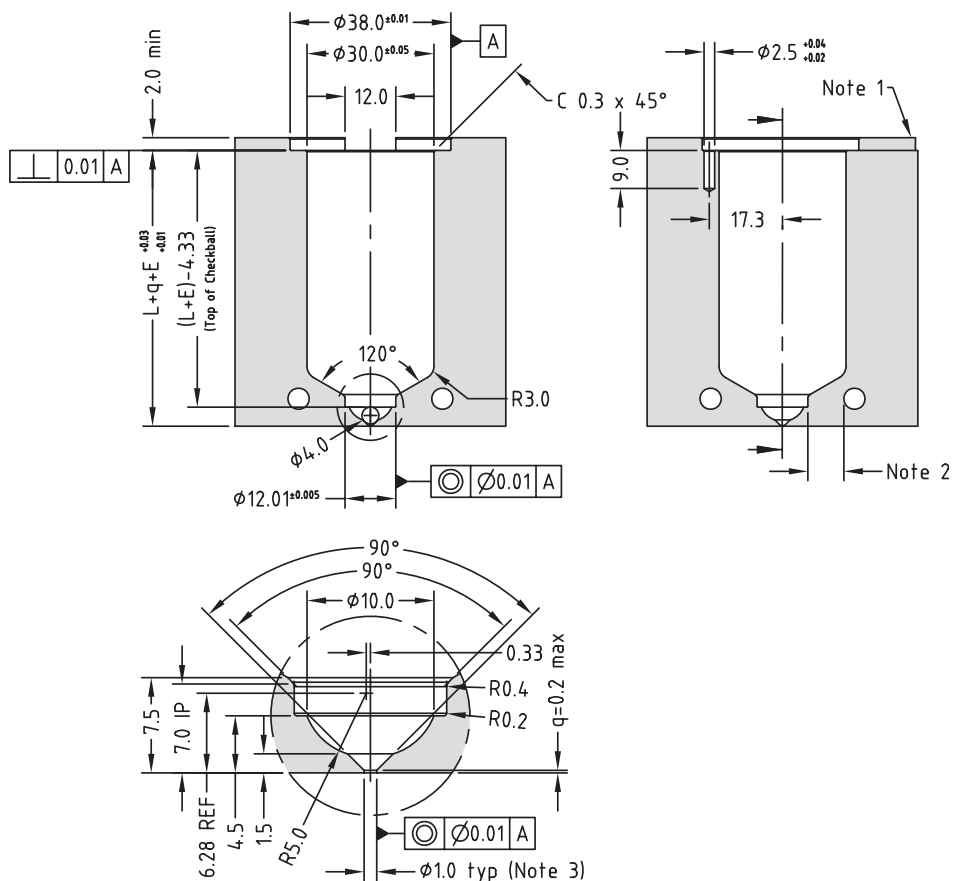




Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTT16045	BXIT16045	BXOT16045	45	0.12	0.15
BXTT16055	BXIT16055	BXOT16055	55	0.15	0.18
BXTT16065	BXIT16065	BXOT16065	65	0.17	0.21
BXTT16075	BXIT16075	BXOT16075	75	0.20	0.25
BXTT16085	BXIT16085	BXOT16085	85	0.22	0.28
BXTT16095	BXIT16095	BXOT16095	95	0.25	0.31
BXTT16105	BXIT16105	BXOT16105	105	0.28	0.35
BXTT16115	BXIT16115	BXOT16115	115	0.30	0.38
BXTT16130	BXIT16130	BXOT16130	130	0.34	0.43
BXTT16145	BXIT16145	BXOT16145	145	0.38	0.48
BXTT16160	BXIT16160	BXOT16160	160	0.42	0.53
BXTT16175	BXIT16175	BXOT16175	175	0.46	0.58
BXTT16200	BXIT16200	BXOT16200	200	0.53	0.66
BXTT16225	BXIT16225	BXOT16225	225	0.59	0.74
BXTT16250	BXIT16250	BXOT16250	250	0.66	0.83

Nozzle Fitment and Gate Dimensions

$$E = L \times 0.000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip & Nut Grade Availability

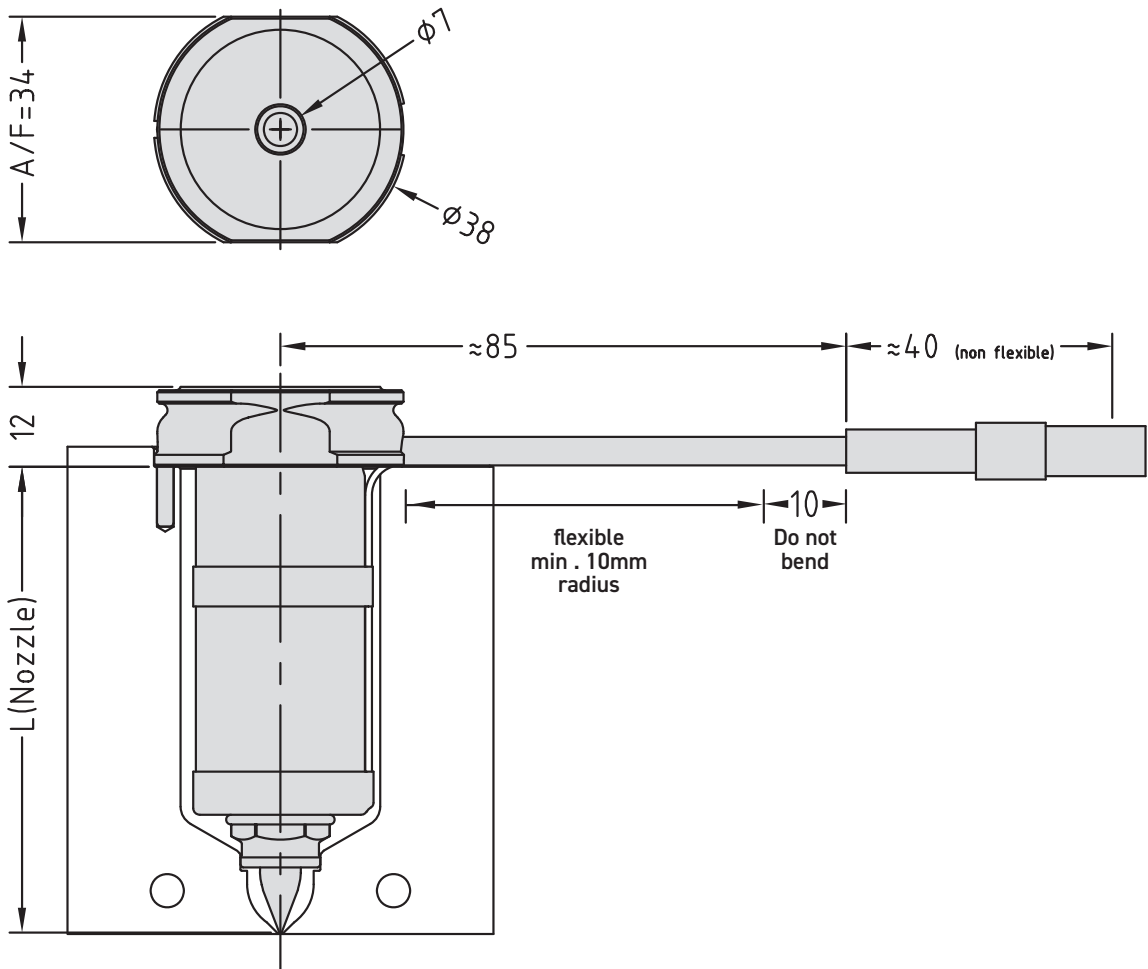
Nozzle Code \ Grade	F1G1H1	F1G2H1	F3G1H3	F3G2H3
BXTT+5	✓	✓	✓	✓
BXIT+5	✓	✓	✓	✓

To order a nozzle assembly:

Provide the Nozzle Code + Grade

(Order example: BXTT16075+5F1G1H1)

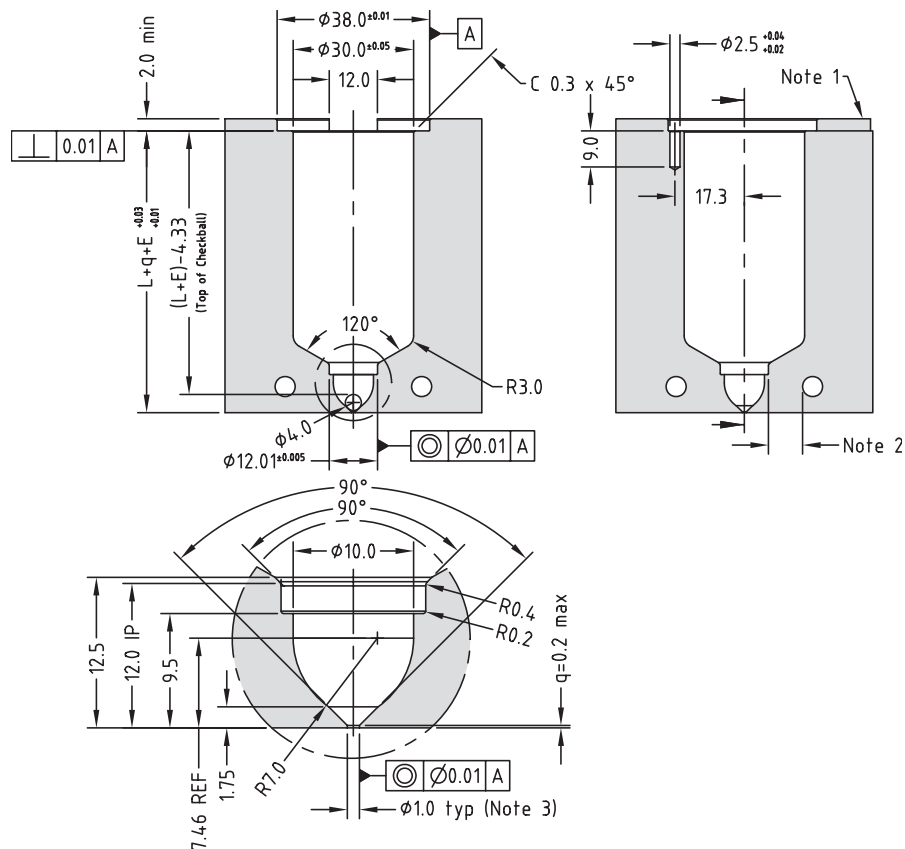
Nozzle Dimensions



Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTT16045+5	BXIT16045+5	50	0.13	0.17
BXTT16055+5	BXIT16055+5	60	0.16	0.20
BXTT16065+5	BXIT16065+5	70	0.18	0.23
BXTT16075+5	BXIT16075+5	80	0.21	0.26
BXTT16085+5	BXIT16085+5	90	0.24	0.30
BXTT16095+5	BXIT16095+5	100	0.26	0.33
BXTT16105+5	BXIT16105+5	110	0.29	0.36
BXTT16115+5	BXIT16115+5	120	0.32	0.40
BXTT16130+5	BXIT16130+5	135	0.36	0.45
BXTT16145+5	BXIT16145+5	150	0.40	0.50
BXTT16160+5	BXIT16160+5	165	0.44	0.54
BXTT16175+5	BXIT16175+5	180	0.48	0.59
BXTT16200+5	BXIT16200+5	205	0.54	0.68
BXTT16225+5	BXIT16225+5	230	0.61	0.76
BXTT16250+5	BXIT16250+5	255	0.67	0.84

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip & Nut Grade Availability

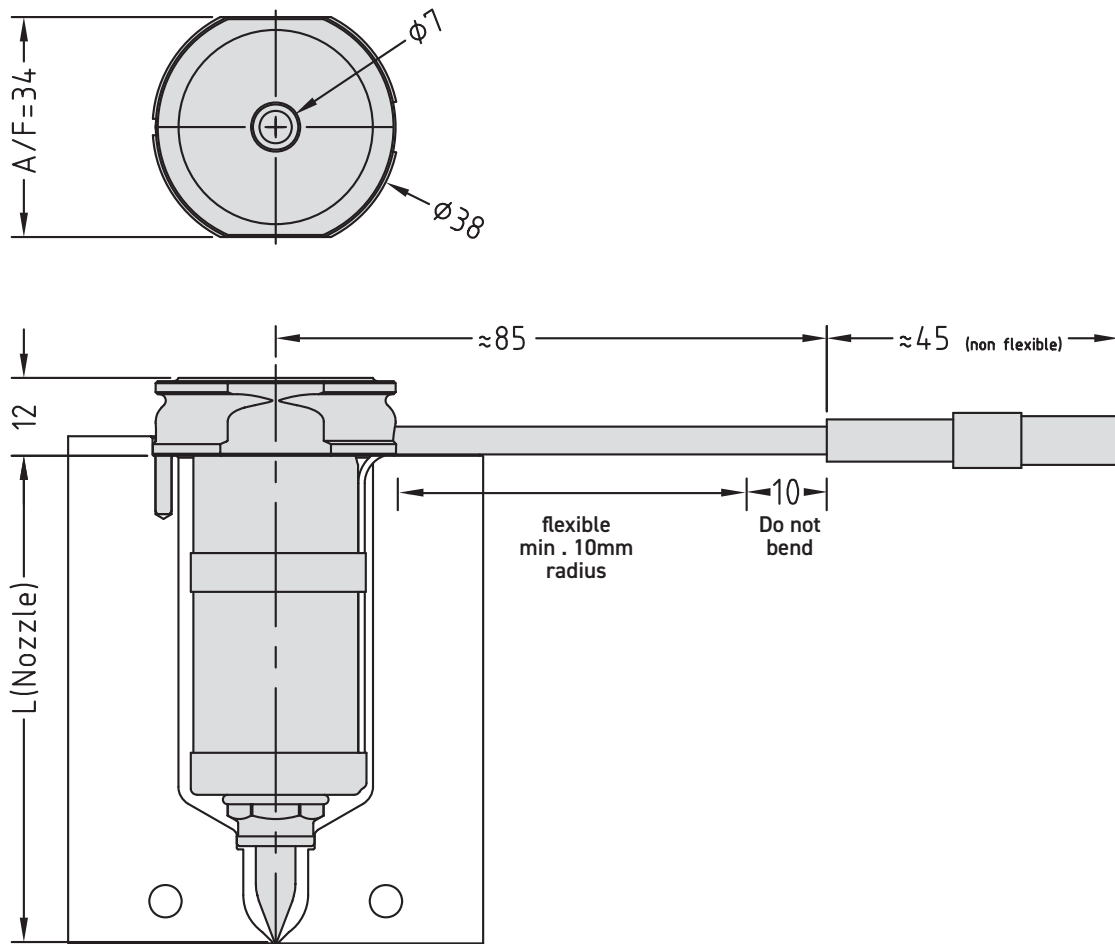
Nozzle Code \ Grade	F1G1H1	F1G2H1	F3G1H3	F3G2H3
BXTT+10	✓	✓	✓	✓
BXIT+10	✓	✓	✓	✓

To order a nozzle assembly:

Provide the Nozzle Code + Grade

(Order example: BXTT16075+10F1G1H1)

Nozzle Dimensions





Body, Tip & Nut Material Grade Availability

Grade \ Nozzle Code	F1G1H1	F1G2H1	F1G5H1	F1G5H5	F3G1H3	F3G2H3	F3G5H3	F3G5H5
<b>16 Series Bush Nut</b>								
BXTBN	✓	✓	✓	✓	✓	✓	✓	✓
BXIBN	✓	✓	✓	✓	✓	✓	✓	✓
BXOBN	✓	×	✓	✓	✓	×	✓	✓
<b>16 Series Bush Nut Full Contact</b>								
BXTBE	✓	✓	✓	×	✓	✓	✓	×
BXIBE	✓	✓	✓	×	✓	✓	✓	×
BXOBE	✓	×	✓	×	✓	×	✓	×

Bush Nut Options

- BN - Standard bush nut
- BE - Full-contact bush nut\*

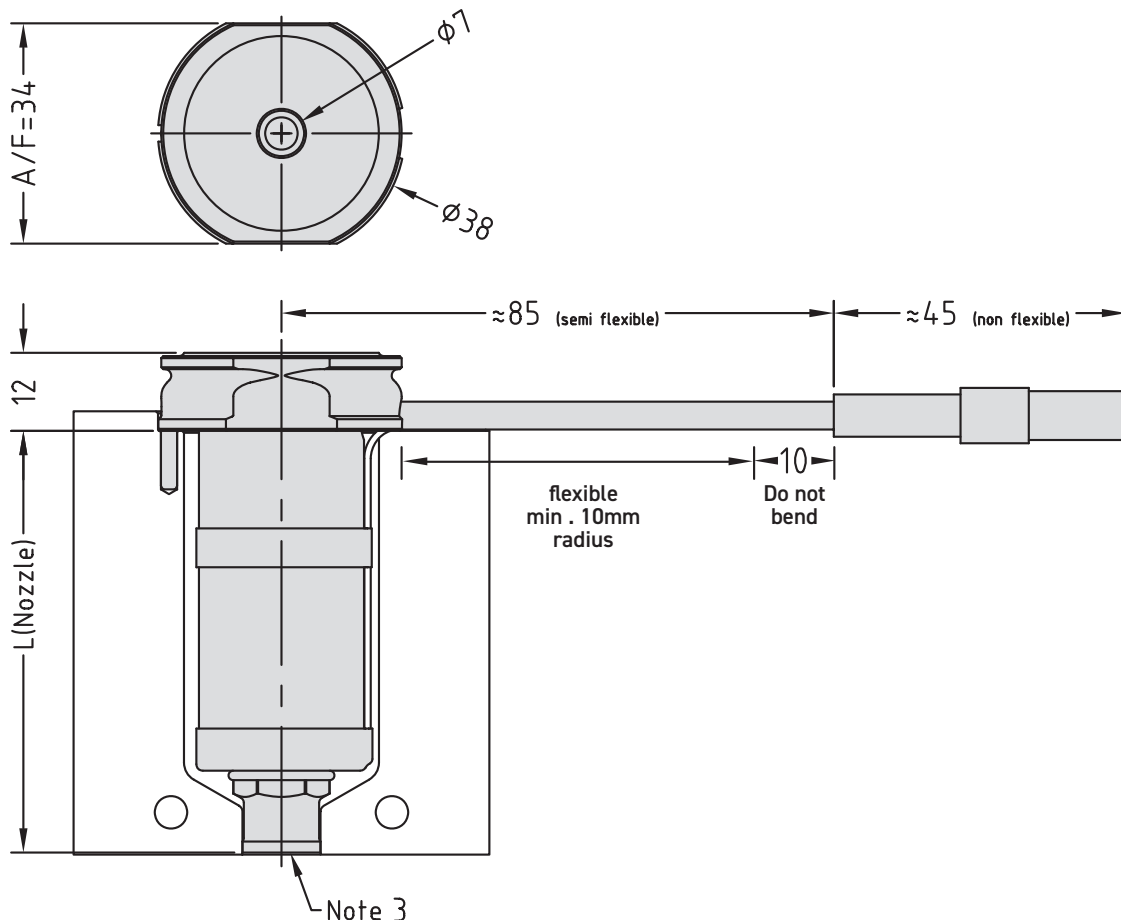
The nozzle codes listed to the right are for nozzle assemblies with a standard bush nut. To order a full-contact bush nut, replace the BN in the code with BE.

Standard Gate Diameters		
H1	1.0mm	1.2mm
H3	1.0mm	1.2mm
H5	1.5mm	

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter  
(Order example: BXTBN16075F1G1H1-10)

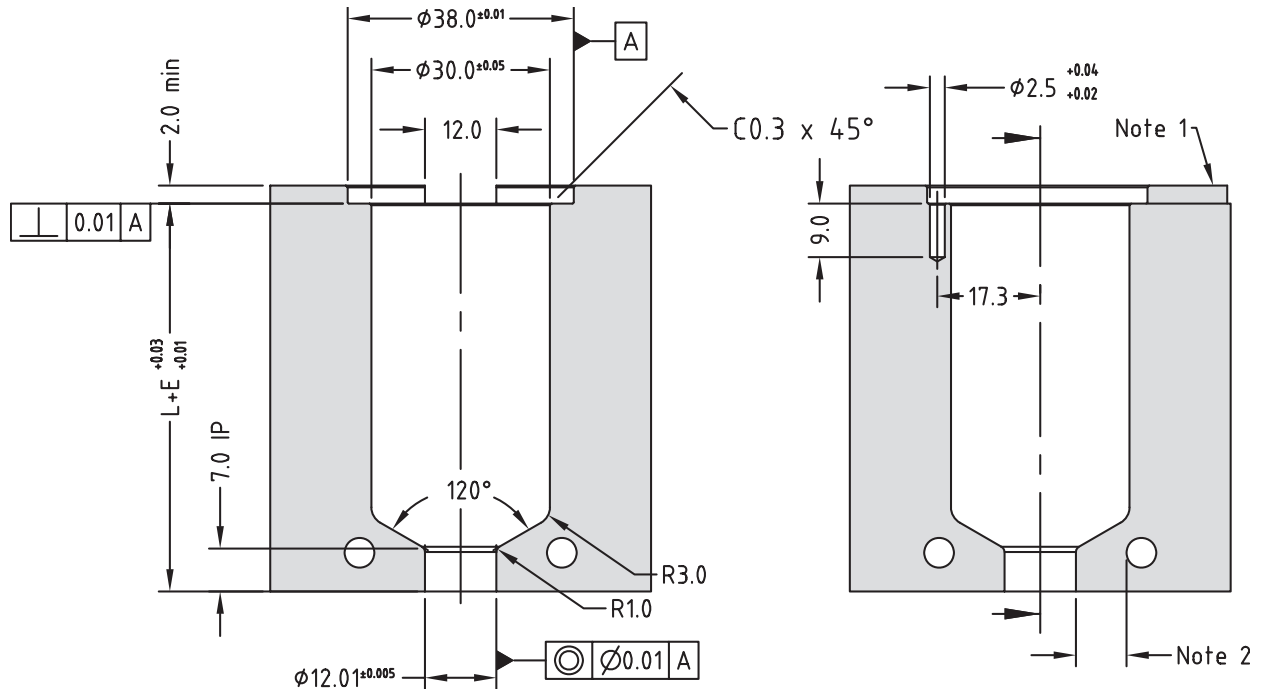
Nozzle Dimensions



Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTBN16045	BXIBN16045	BXOBN16045	45.2	0.12	0.15
BXTBN16055	BXIBN16055	BXOBN16055	55.2	0.15	0.18
BXTBN16065	BXIBN16065	BXOBN16065	65.2	0.17	0.22
BXTBN16075	BXIBN16075	BXOBN16075	75.2	0.20	0.25
BXTBN16085	BXIBN16085	BXOBN16085	85.2	0.22	0.28
BXTBN16095	BXIBN16095	BXOBN16095	95.2	0.25	0.31
BXTBN16105	BXIBN16105	BXOBN16105	105.2	0.28	0.35
BXTBN16115	BXIBN16115	BXOBN16115	115.2	0.30	0.38
BXTBN16130	BXIBN16130	BXOBN16130	130.2	0.34	0.43
BXTBN16145	BXIBN16145	BXOBN16145	145.2	0.38	0.48
BXTBN16160	BXIBN16160	BXOBN16160	160.2	0.42	0.53
BXTBN16175	BXIBN16175	BXOBN16175	175.2	0.46	0.58
BXTBN16200	BXIBN16200	BXOBN16200	200.2	0.53	0.66
BXTBN16225	BXIBN16225	BXOBN16225	225.2	0.59	0.74
BXTBN16250	BXIBN16250	BXOBN16250	250.2	0.66	0.83

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip and Nut Material Grade Availability

Nozzle Code	Grade	F1G1H1	F1G2H1	F1G5H1	F1G5H5	F3G1H3	F3G2H3	F3G5H3	F3G5H5
	BXTSN		✓	✓	✓	✓	✓	✓	✓
BXISN		✓	✓	✓	✓	✓	✓	✓	✓
BXOSN		✓	✗	✓	✓	✓	✗	✓	✓

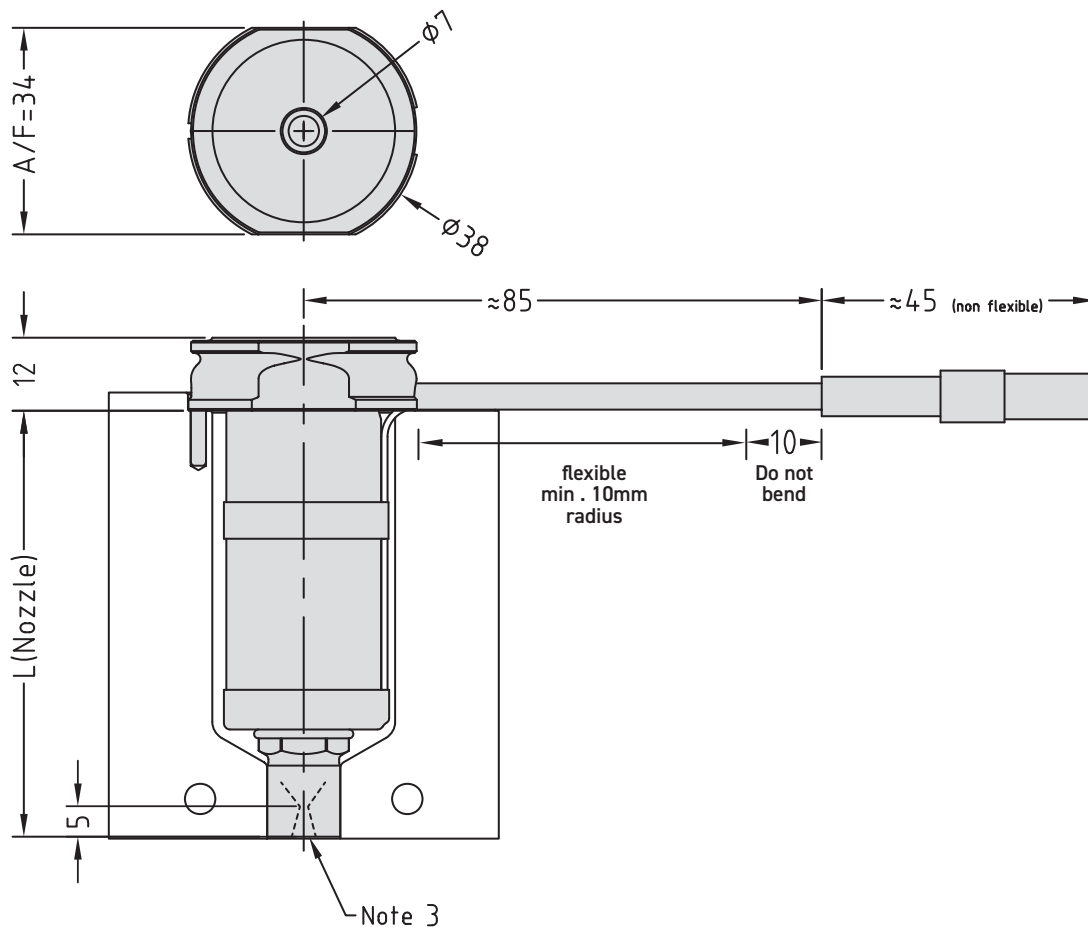
Standard Gate Diameters		
H1	1.0mm	1.4mm
H3	1.0mm	1.4mm
H5	1.7mm	

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter

(Order example: BXTSN16075F1G1H1-10)

Nozzle Dimensions

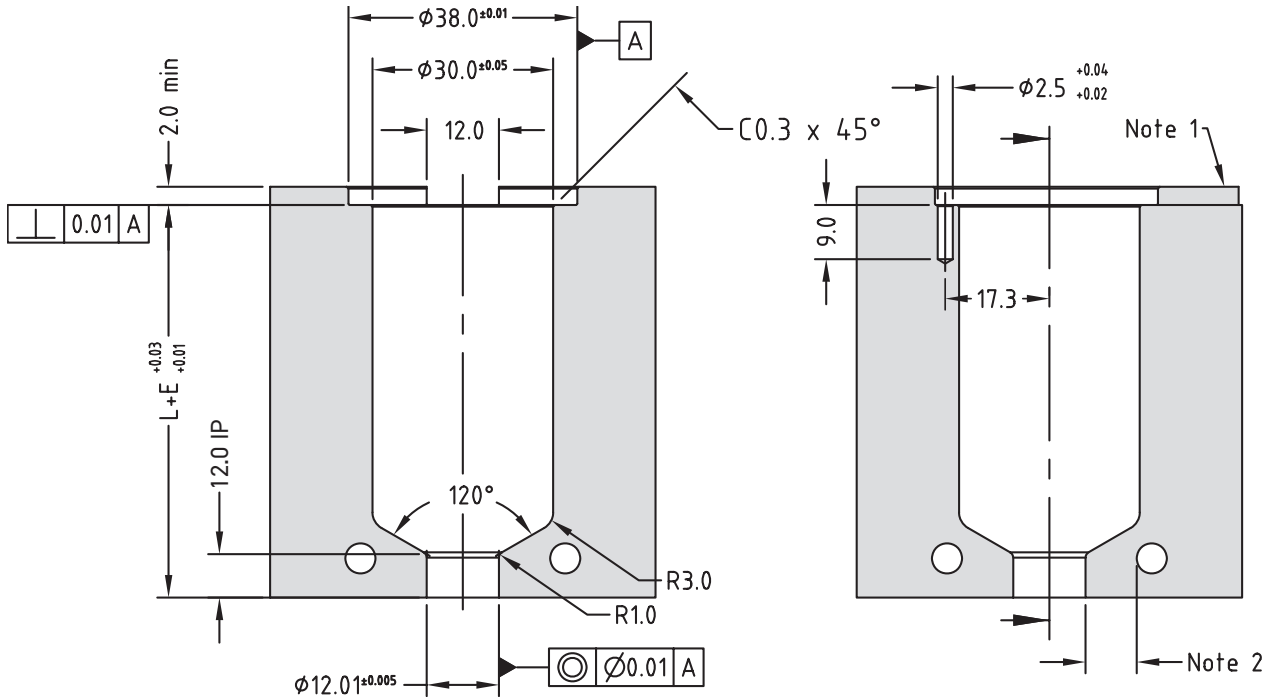




Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTSN16045	BXISN16045	BXOSN16045	50.2	0.13	0.17
BXTSN16055	BXISN16055	BXOSN16055	60.2	0.16	0.20
BXTSN16065	BXISN16065	BXOSN16065	70.2	0.19	0.23
BXTSN16075	BXISN16075	BXOSN16075	80.2	0.21	0.26
BXTSN16085	BXISN16085	BXOSN16085	90.2	0.24	0.30
BXTSN16095	BXISN16095	BXOSN16095	100.2	0.26	0.33
BXTSN16105	BXISN16105	BXOSN16105	110.2	0.29	0.36
BXTSN16115	BXISN16115	BXOSN16115	120.2	0.32	0.40
BXTSN16130	BXISN16130	BXOSN16130	135.2	0.36	0.45
BXTSN16145	BXISN16145	BXOSN16145	150.2	0.40	0.50
BXTSN16160	BXISN16160	BXOSN16160	165.2	0.44	0.55
BXTSN16175	BXISN16175	BXOSN16175	180.2	0.48	0.59
BXTSN16200	BXISN16200	BXOSN16200	205.2	0.54	0.68
BXTSN16225	BXISN16225	BXOSN16225	230.2	0.61	0.76
BXTSN16250	BXISN16250	BXOSN16250	255.2	0.67	0.84

Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip and Nut Material Grade Availability

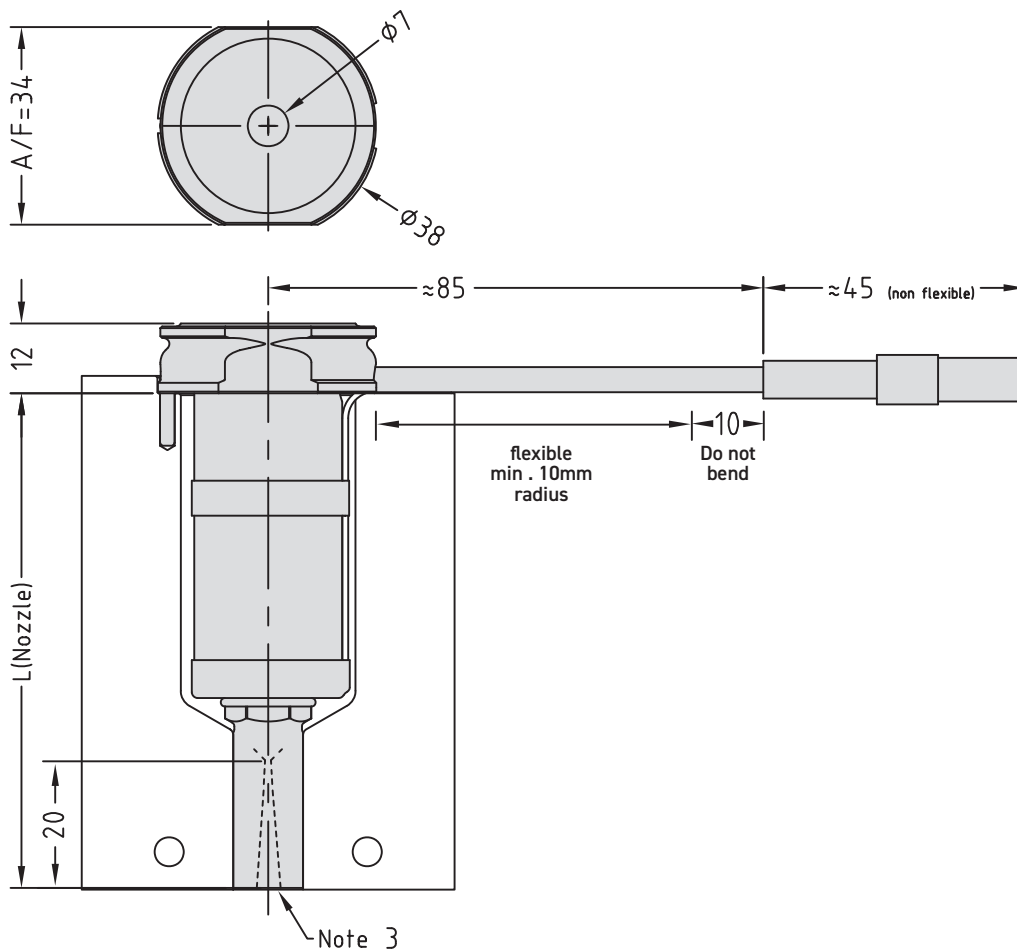
Nozzle Code	Grade		
	F1G1H1	F1G2H1	F1G5H1
BXTSX	✓	✓	✓
BXISX	✓	✓	✓
BXOSX	✓	✗	✓

Standard Gate Diameters	
H1	1.0mm

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter  
 (Order example: BXTSX16075F1G1H1-10)

Nozzle Dimensions





Body, Tip and Nut Material Grade Availability

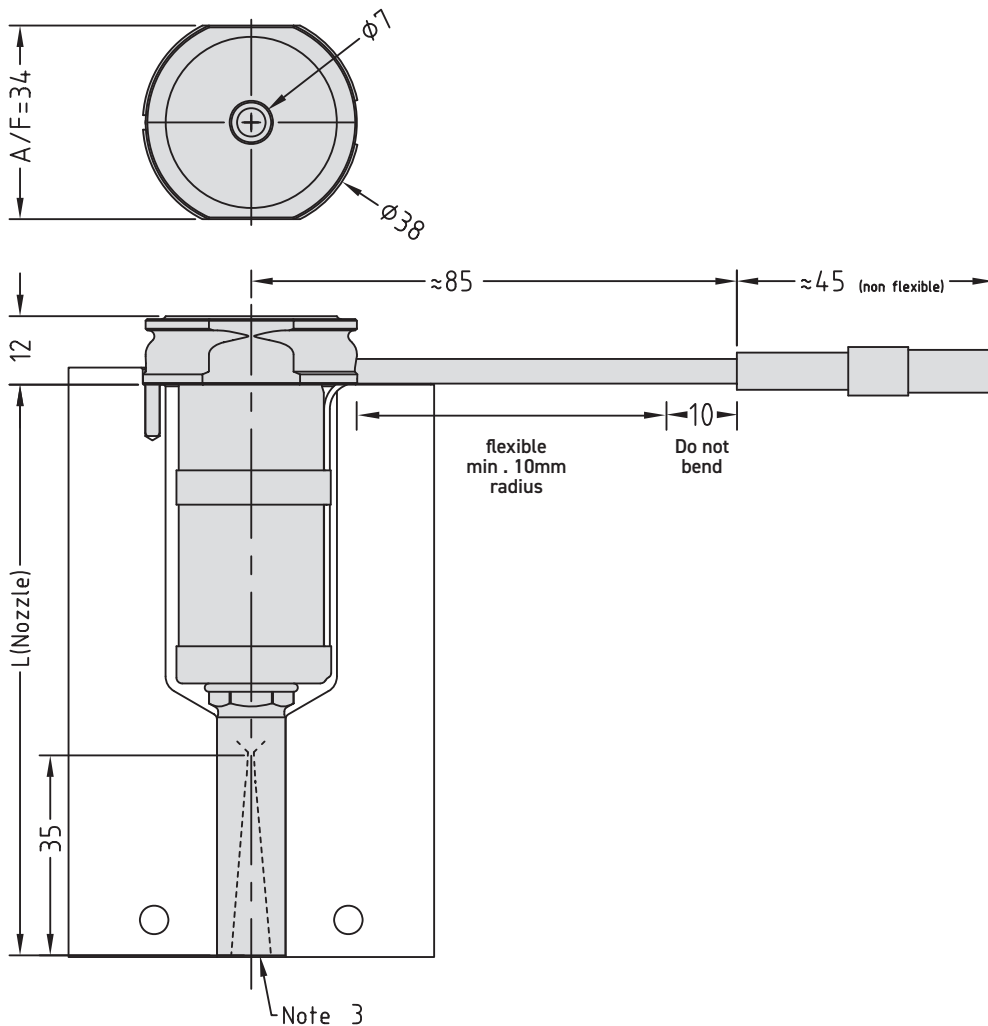
Nozzle Code	Grade		
	F1G1H1	F1G2H1	F1G5H1
BXTSL	✓	✓	✓
BXISL	✓	✓	✓
BXOSL	✓	✗	✓

Standard Gate Diameters	
H1	1.0mm

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter  
 (Order example: BXTSL16075F1G1H1-10)

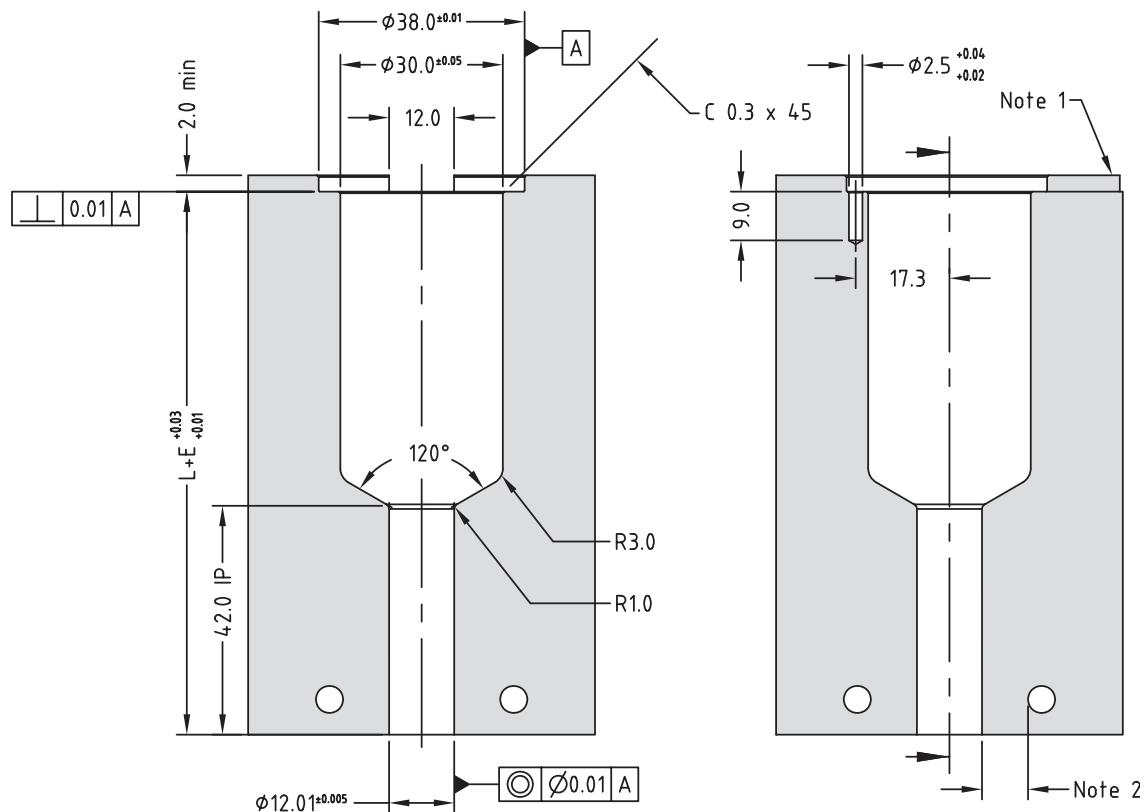
Nozzle Dimensions



Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTSL16045	BXISL16045	BXOSL16045	80.2	0.21	0.26
BXTSL16055	BXISL16055	BXOSL16055	90.2	0.24	0.30
BXTSL16065	BXISL16065	BXOSL16065	100.2	0.26	0.33
BXTSL16075	BXISL16075	BXOSL16075	110.2	0.29	0.36
BXTSL16085	BXISL16085	BXOSL16085	120.2	0.32	0.40
BXTSL16095	BXISL16095	BXOSL16095	130.2	0.34	0.43
BXTSL16105	BXISL16105	BXOSL16105	140.2	0.37	0.46
BXTSL16115	BXISL16115	BXOSL16115	150.2	0.40	0.50
BXTSL16130	BXISL16130	BXOSL16130	165.2	0.44	0.55
BXTSL16145	BXISL16145	BXOSL16145	180.2	0.48	0.59
BXTSL16160	BXISL16160	BXOSL16160	195.2	0.52	0.64
BXTSL16175	BXISL16175	BXOSL16175	210.2	0.55	0.69
BXTSL16200	BXISL16200	BXOSL16200	235.2	0.62	0.78
BXTSL16225	BXISL16225	BXOSL16225	260.2	0.69	0.86
BXTSL16250	BXISL16250	BXOSL16250	285.2	0.75	0.94

## Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



## Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

# **BX YCN Nut Thermal Gate 16 Series**

Nozzle Assembly Order Code for BX YCN Nut Thermal Gate 16 Series

NOZZLE RANGE	YCN NUT	NOZZLE SERIES	NOZZLE LENGTH	BODY GRADE	NUT GRADE	GATE PROFILE	POLYMER CLASSIFICATION	GATE DIAMETER
<b>BX</b>	<b>YCN</b>	<b>16</b>	<b>175</b>	<b>F1</b>	<b>H3</b>	<b>P4</b>	<b>F</b>	<b>-20</b>
			045	F1	H3	P7	U (Unfilled)	EXAMPLE OF A FINAL ORDER CODE
			055	F3		P4	F(Filled)	
			065			N3	SP	
			075					
			085					
			095					
			105					
			115					
			130					
			145					
			160					
			175					
			200					
			225					
			250					

\* See page 26 in the system selection guide for an explanation on gate profiles

Body & Nut Grade Availability

Nozzle Code	F1H3	F3H3
BXYCN	✓	✓

Refer to the system selection guide page 26 for selection the appropriate gate profile P7, P4 or N3.

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Profile  
(Order example: BXYCN16075F1H3P7U-14)

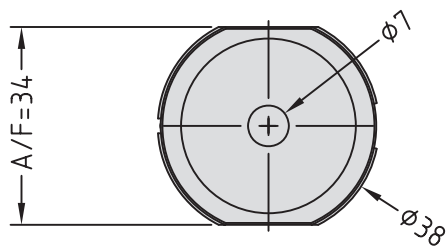
YCN Gate Profile Availability

Profile	Unfilled	Filled	Special
P7	P7U-14	P7F-18	P7-SP
P4	P4U-15	P4F-20	P4-SP
N3	N3U-15	N3F-20	N3-SP

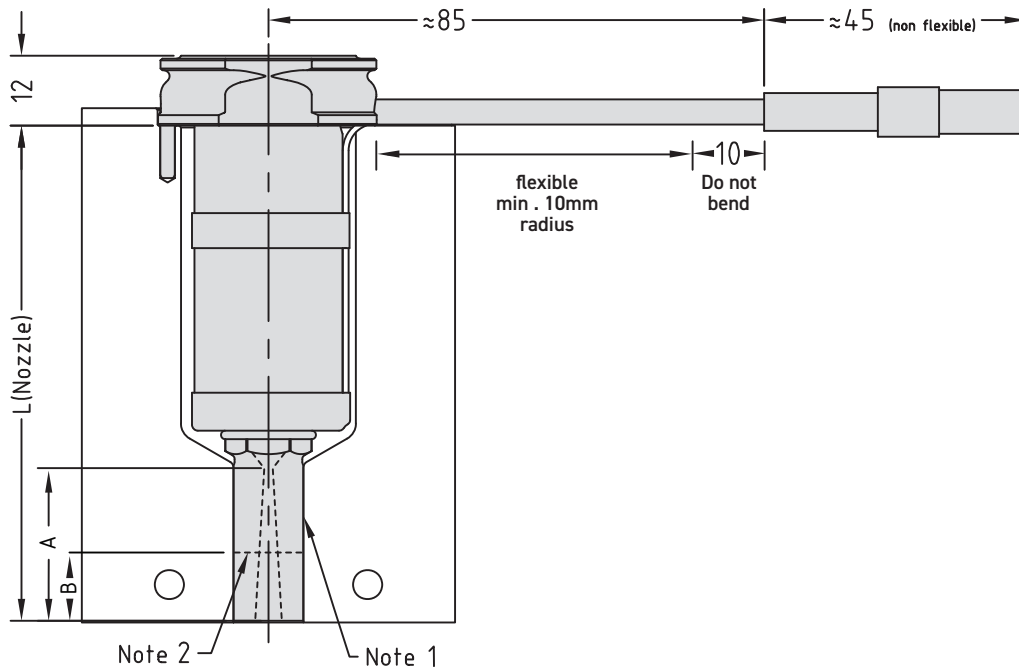
Standard Gate Diameters

Nut Grade	P7U-14	P7F-18	P4U-15	P4F-20	N3U-15	N3F-20
H3	1.4mm	1.8mm	1.5mm	2.0mm	1.5mm	2.0mm

Nozzle Dimensions



Profile	Gate Position A	Cut Length B
P7	26	Contact Mastip
P4	29	
N3	36	



Note

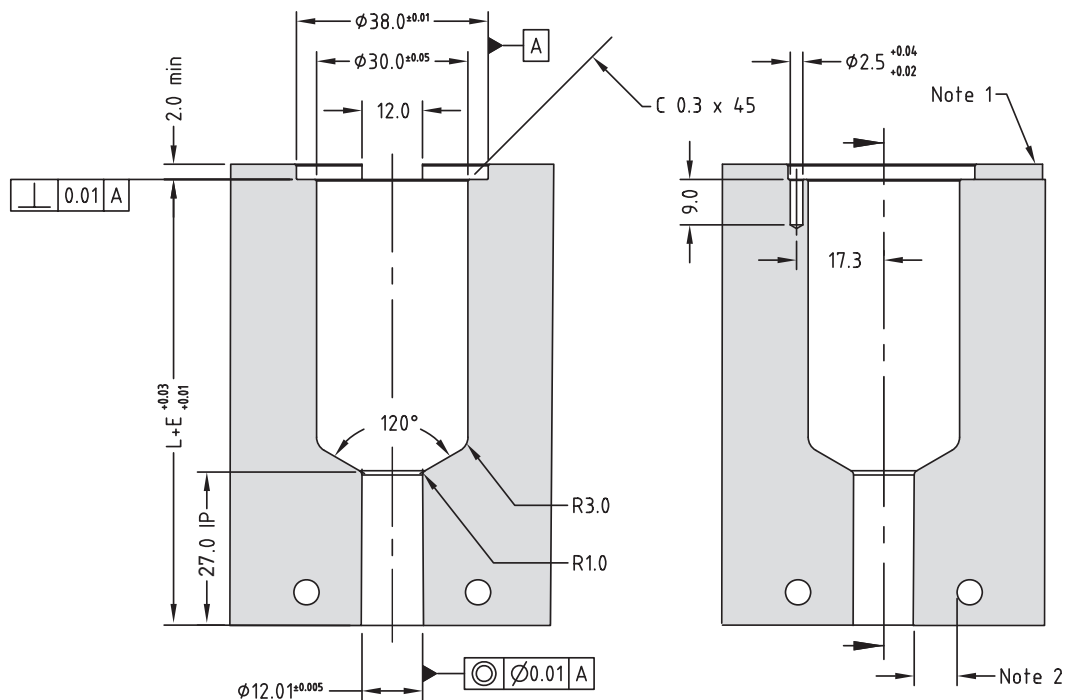
1. Modify the contact area of the YCN nut to suit the application.
  2. Contact Mastip to reduce the length (B) of the YCN nut.
- Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.



YCN Open Nut Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXYCN16045	65.2	0.17	0.22
BXYCN16055	75.2	0.20	0.25
BXYCN16065	85.2	0.22	0.28
BXYCN16075	95.2	0.25	0.31
BXYCN16085	105.2	0.28	0.35
BXYCN16095	115.2	0.30	0.38
BXYCN16105	125.2	0.33	0.41
BXYCN16115	135.2	0.36	0.45
BXYCN16130	150.2	0.40	0.50
BXYCN16145	165.2	0.44	0.55
BXYCN16160	180.2	0.48	0.59
BXYCN16175	195.2	0.52	0.64
BXYCN16200	220.2	0.58	0.73
BXYCN16225	245.2	0.65	0.81
BXYCN16250	270.2	0.71	0.89

Nozzle Fitment and Gate Dimensions

$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$



Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

# **BX Thermal Gate 19 Series**



Body, Tip & Nut Grade Availability

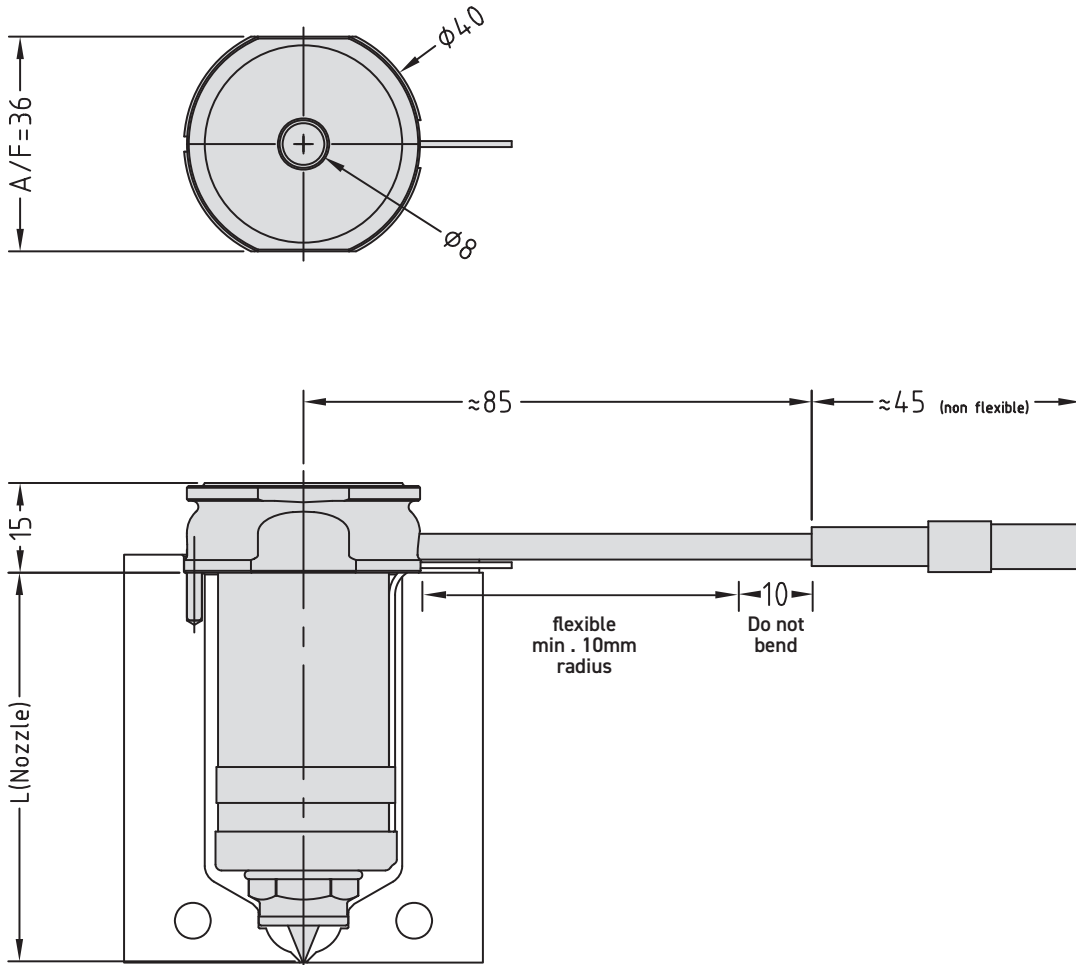
Nozzle Code \ Grade	F1G1H1	F1G2H1	F1G5H1	F3G1H3	F3G2H3	F3G5H3
BXTT	✓	✓	✓	✓	✓	✓
BXIT	✓	✓	✓	✓	✓	✓
BXOT	✓	✗	✓	✓	✗	✓

To order a nozzle assembly:

Provide the Nozzle Code + Grade

(Order example: BXTT19075F1G1H1)

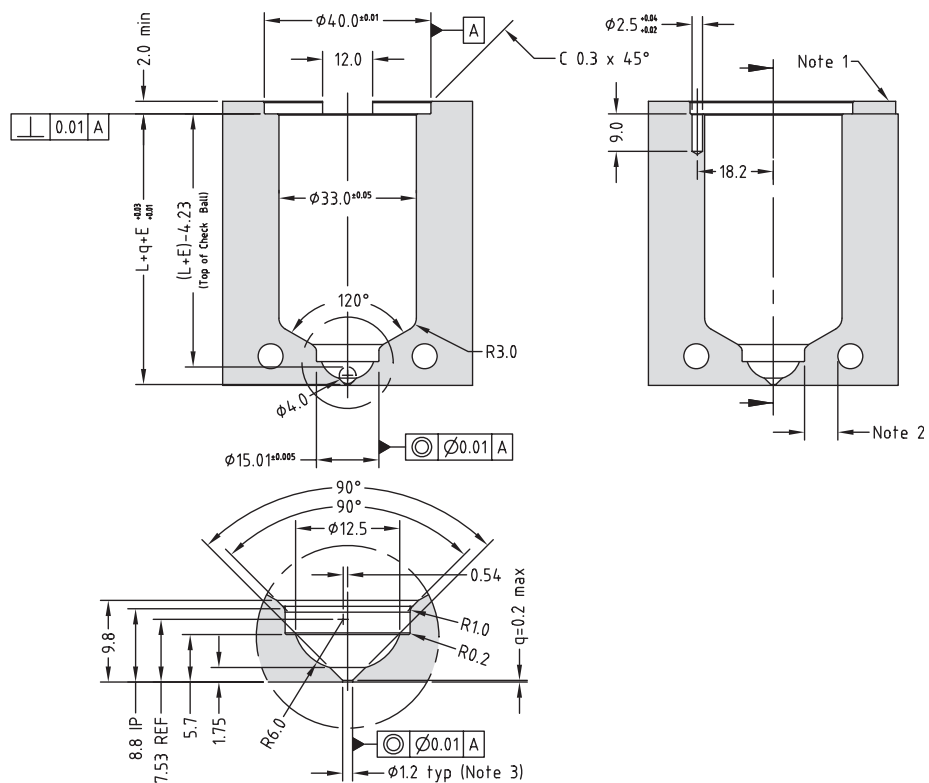
Nozzle Dimensions



Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTT19045	BXIT19045	BXOT19045	45	0.12	0.15
BXTT19055	BXIT19055	BXOT19055	55	0.15	0.18
BXTT19065	BXIT19065	BXOT19065	65	0.17	0.21
BXTT19075	BXIT19075	BXOT19075	75	0.20	0.25
BXTT19085	BXIT19085	BXOT19085	85	0.22	0.28
BXTT19095	BXIT19095	BXOT19095	95	0.25	0.31
BXTT19105	BXIT19105	BXOT19105	105	0.28	0.35
BXTT19115	BXIT19115	BXOT19115	115	0.30	0.38
BXTT19130	BXIT19130	BXOT19130	130	0.34	0.43
BXTT19145	BXIT19145	BXOT19145	145	0.38	0.48
BXTT19160	BXIT19160	BXOT19160	160	0.42	0.53
BXTT19175	BXIT19175	BXOT19175	175	0.46	0.58
BXTT19200	BXIT19200	BXOT19200	200	0.53	0.66
BXTT19225	BXIT19225	BXOT19225	225	0.59	0.74
BXTT19250	BXIT19250	BXOT19250	250	0.66	0.83
BXTT19275	BXIT19275	BXOT19275	275	0.73	0.91
BXTT19300	BXIT19300	BXOT19300	300	0.79	0.99

Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip & Nut Grade Availability

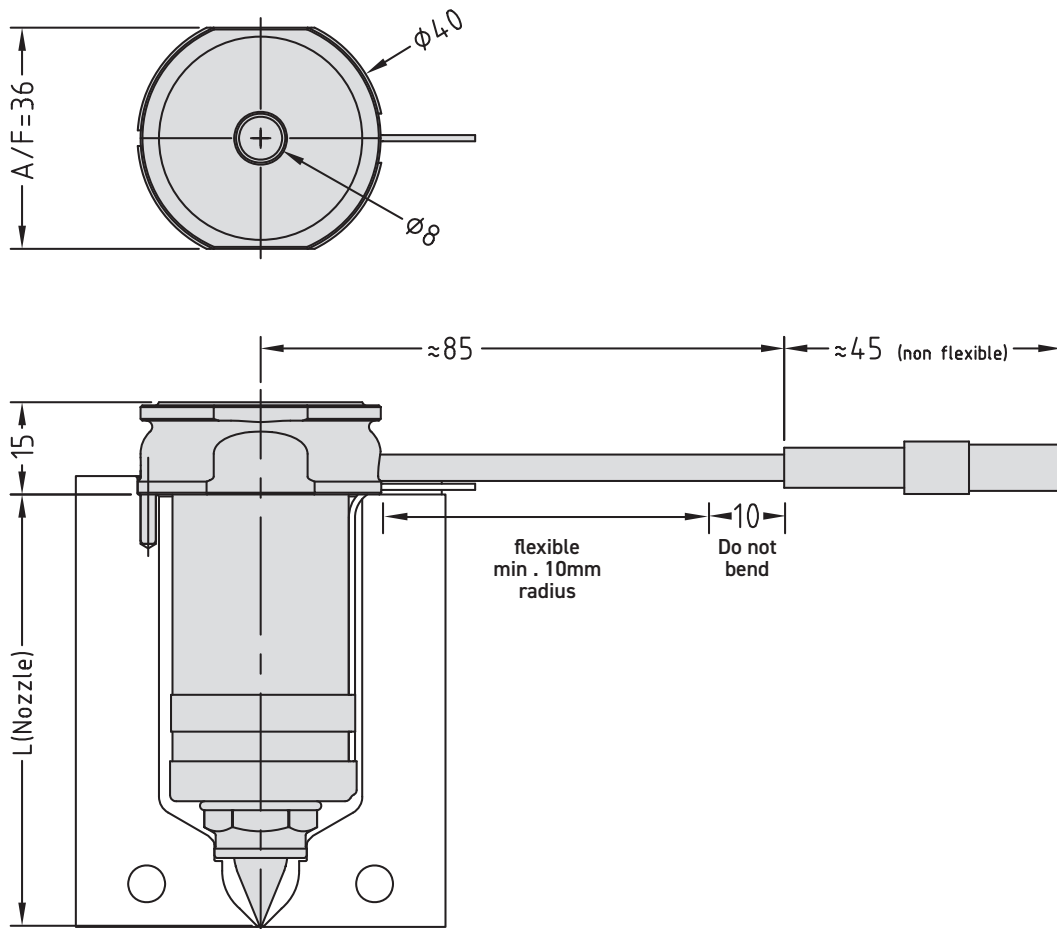
Nozzle Code \ Grade	F1G1H1	F1G2H1	F3G1H3	F3G2H3
BXTT+5	✓	✓	✓	✓
BXIT+5	✓	✓	✓	✓

**To order a nozzle assembly:**

Provide the Nozzle Code + Grade

(Order example: BXTT19075+5F1G1H1)

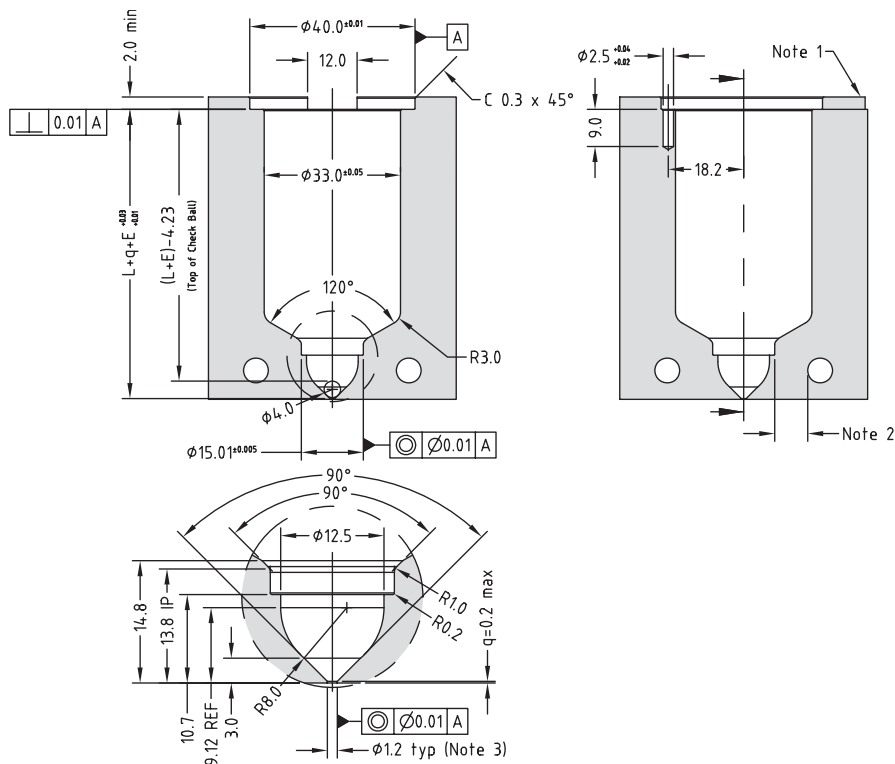
Nozzle Dimensions



Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTT19045+5	BXIT19045+5	50	0.13	0.17
BXTT19055+5	BXIT19055+5	60	0.16	0.20
BXTT19065+5	BXIT19065+5	70	0.18	0.23
BXTT19075+5	BXIT19075+5	80	0.21	0.26
BXTT19085+5	BXIT19085+5	90	0.24	0.30
BXTT19095+5	BXIT19095+5	100	0.26	0.33
BXTT19105+5	BXIT19105+5	110	0.29	0.36
BXTT19115+5	BXIT19115+5	120	0.32	0.40
BXTT19130+5	BXIT19130+5	135	0.36	0.45
BXTT19145+5	BXIT19145+5	150	0.40	0.50
BXTT19160+5	BXIT19160+5	165	0.44	0.54
BXTT19175+5	BXIT19175+5	180	0.48	0.59
BXTT19200+5	BXIT19200+5	205	0.54	0.68
BXTT19225+5	BXIT19225+5	230	0.61	0.76
BXTT19250+5	BXIT19250+5	255	0.67	0.84
BXTT19275+5	BXIT19275+5	280	0.74	0.92
BXTT19300+5	BXIT19300+5	305	0.81	1.01

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip & Nut Grade Availability

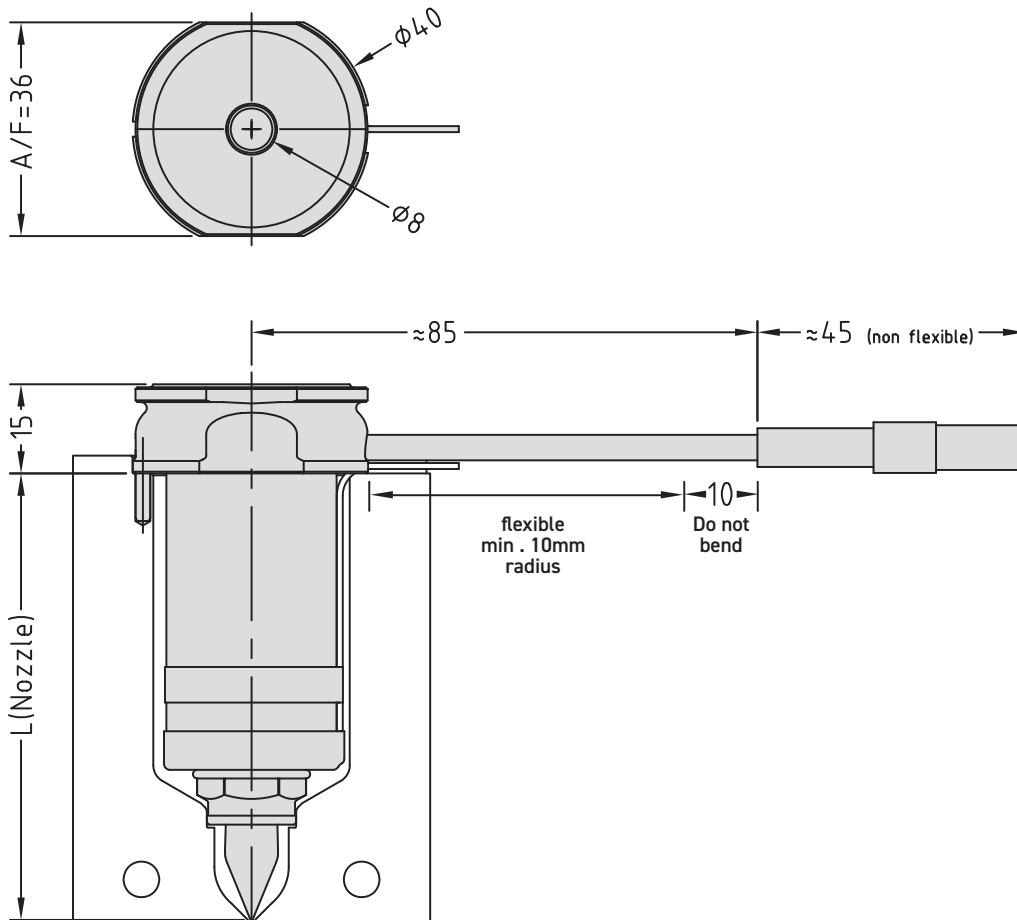
Nozzle Code \ Grade	F1G1H1	F1G2H1	F3G1H3	F3G2H3
BXTT+10	✓	✓	✓	✓
BXIT+10	✓	✓	✓	✓

To order a nozzle assembly:

Provide the Nozzle Code + Grade

(Order example: BXTT19075+10F1G1H1)

Nozzle Dimensions







Body, Tip & Nut Material Grade Availability

Grade \ Nozzle Code	F1G1H1	F1G2H1	F1G5H1	F1G5H5	F3G1H3	F3G2H3	F3G5H3	F3G5H5
<b>19 Series Bush Nut</b>								
BXTBN	✓	✓	✓	✓	✓	✓	✓	✓
BXIBN	✓	✓	✓	✓	✓	✓	✓	✓
BXOBN	✓	✗	✓	✓	✓	✗	✓	✓
<b>19 Series Bush Nut Full Contact</b>								
BXTBE	✓	✓	✓	✗	✓	✓	✓	✗
BXIBE	✓	✓	✓	✗	✓	✓	✓	✗
BXOBE	✓	✗	✓	✗	✓	✗	✓	✗

Bush Nut Options

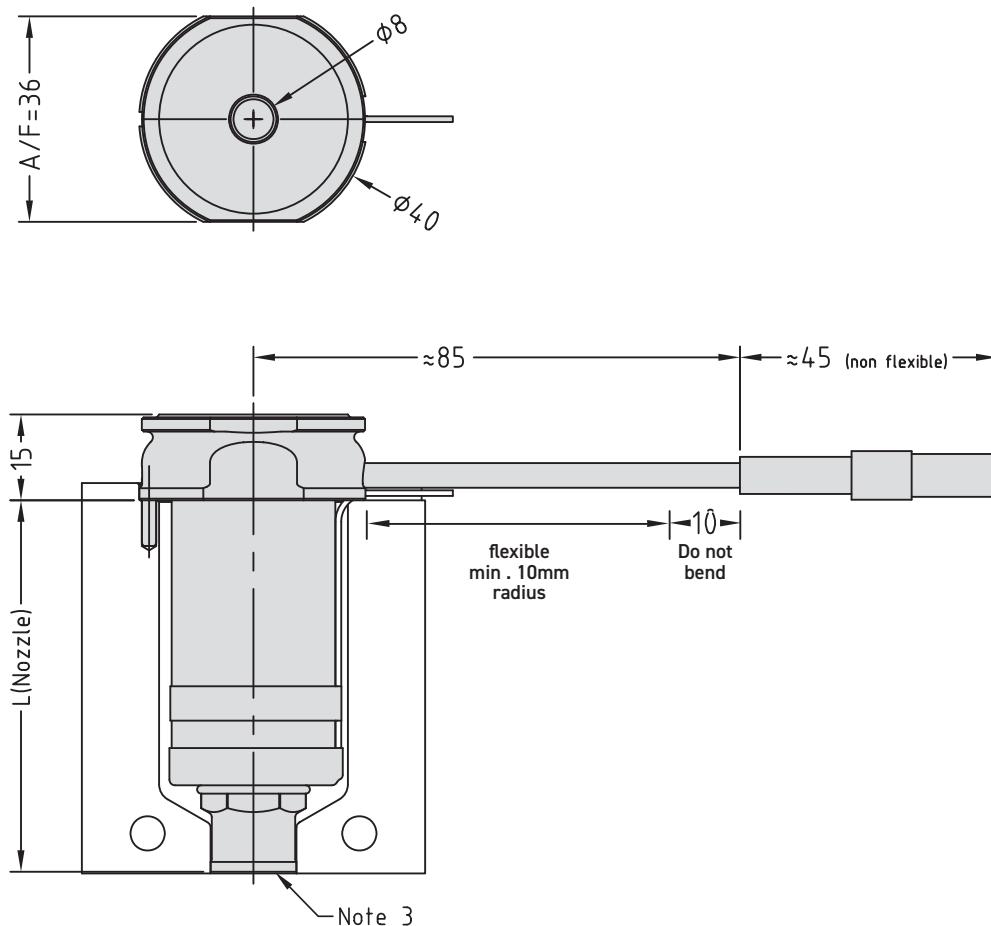
- BN - Standard bush nut
- BE - Full-contact bush nut\*

The nozzle codes listed to the right are for nozzle assemblies with a standard bush nut. To order a full-contact bush nut, replace the BN in the code with BE.

Standard Gate Diameters		
H1	1.2mm	1.4mm
H3	1.2mm	1.4mm
H5	1.7mm	

**To order a nozzle assembly:**  
Provide the Nozzle Code + Grade + Gate Diameter  
(Order example: BXTBN19075F1G1H1-12)

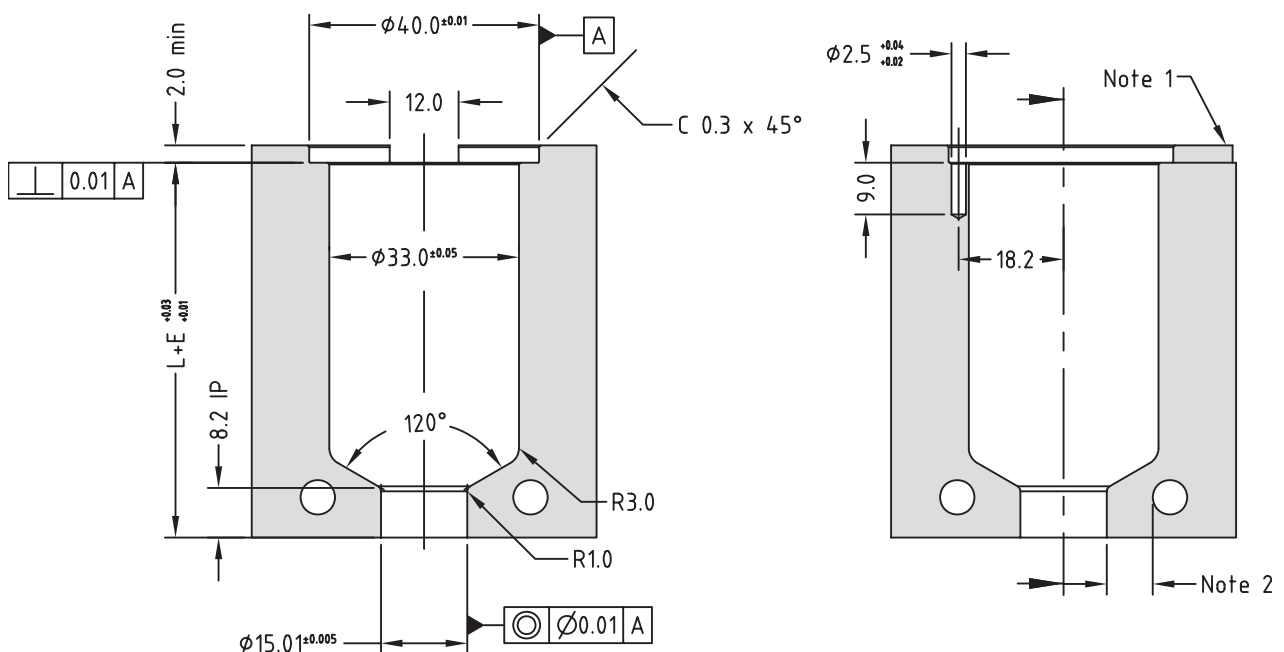
Nozzle Dimensions



Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTBN19045	BXIBN19045	BXOBN19045	45.2	0.12	0.15
BXTBN19055	BXIBN19055	BXOBN19055	55.2	0.15	0.18
BXTBN19065	BXIBN19065	BXOBN19065	65.2	0.17	0.22
BXTBN19075	BXIBN19075	BXOBN19075	75.2	0.20	0.25
BXTBN19085	BXIBN19085	BXOBN19085	85.2	0.22	0.28
BXTBN19095	BXIBN19095	BXOBN19095	95.2	0.25	0.31
BXTBN19105	BXIBN19105	BXOBN19105	105.2	0.28	0.35
BXTBN19115	BXIBN19115	BXOBN19115	115.2	0.30	0.38
BXTBN19130	BXIBN19130	BXOBN19130	130.2	0.34	0.43
BXTBN19145	BXIBN19145	BXOBN19145	145.2	0.38	0.48
BXTBN19160	BXIBN19160	BXOBN19160	160.2	0.42	0.53
BXTBN19175	BXIBN19175	BXOBN19175	175.2	0.46	0.58
BXTBN19200	BXIBN19200	BXOBN19200	200.2	0.53	0.66
BXTBN19225	BXIBN19225	BXOBN19225	225.2	0.59	0.74
BXTBN19250	BXIBN19250	BXOBN19250	250.2	0.66	0.83
BXTBN19275	BXIBN19275	BXOBN19275	275.2	0.73	0.91
BXTBN19300	BXIBN19300	BXOBN19300	300.2	0.79	0.99

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip and Nut Material Grade Availability

Nozzle Code	Grade	F1G1H1	F1G2H1	F1G5H1	F1G5H5	F3G1H3	F3G2H3	F3G5H3	F3G5H5
	BXTSN		✓	✓	✓	✓	✓	✓	✓
BXISN		✓	✓	✓	✓	✓	✓	✓	✓
BXOSN		✓	✗	✓	✓	✓	✗	✓	✓

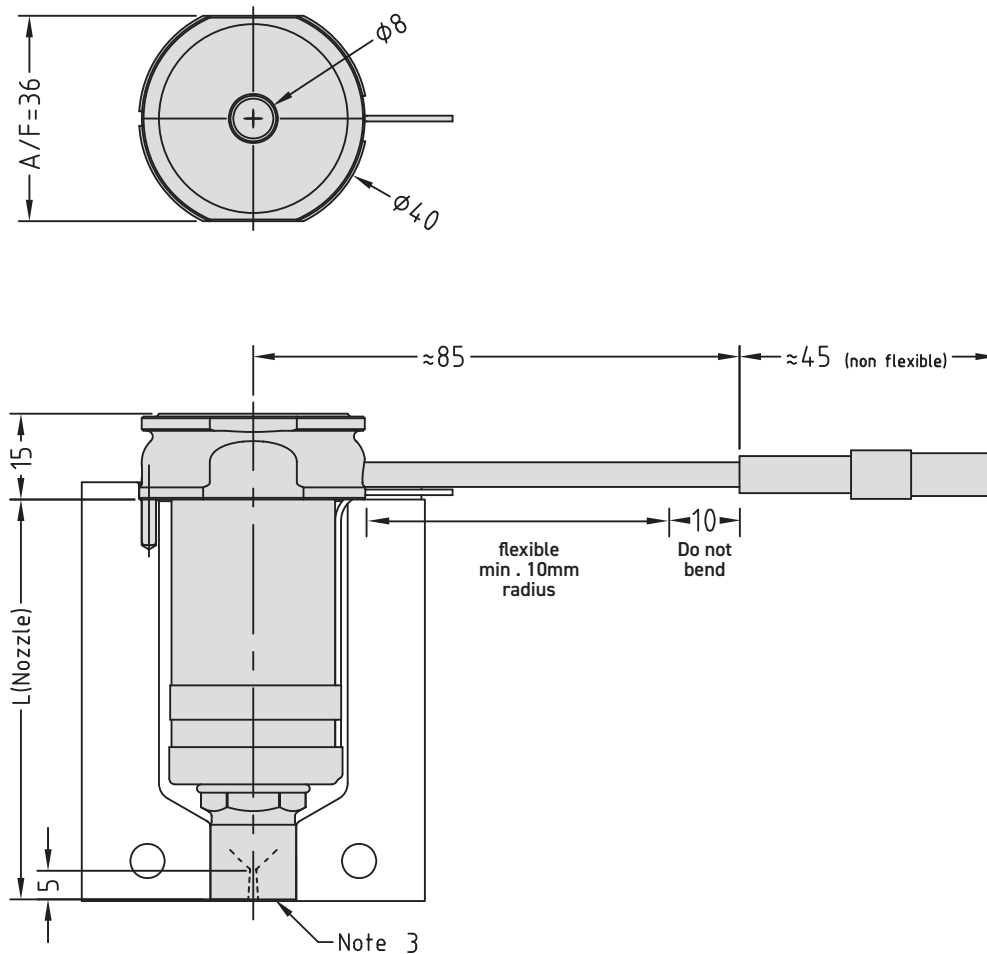
Standard Gate Diameters		
H1	1.2mm	1.6mm
H3	1.2mm	1.6mm
H5	2.0mm	

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter

(Order example: BXTSN19075F1G1H1-12)

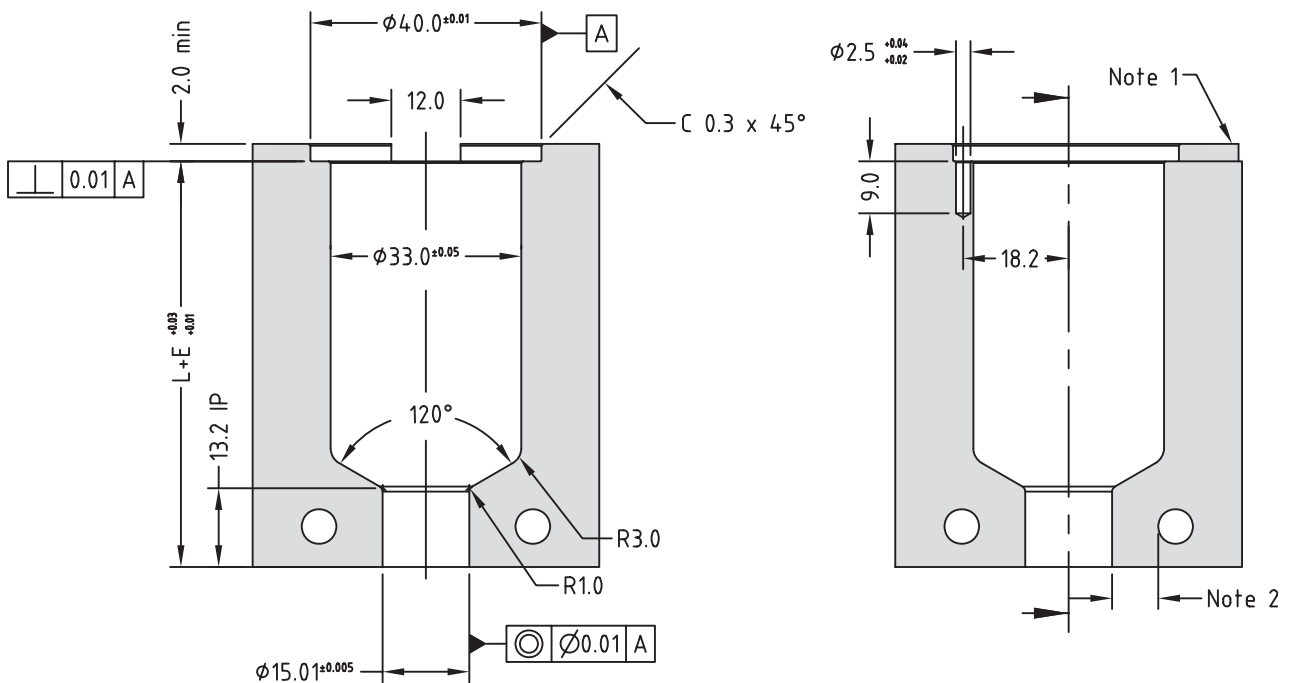
Nozzle Dimensions



Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTSN19045	BXISN19045	BXOSN19045	50.2	0.13	0.17
BXTSN19055	BXISN19055	BXOSN19055	60.2	0.16	0.20
BXTSN19065	BXISN19065	BXOSN19065	70.2	0.19	0.23
BXTSN19075	BXISN19075	BXOSN19075	80.2	0.21	0.26
BXTSN19085	BXISN19085	BXOSN19085	90.2	0.24	0.30
BXTSN19095	BXISN19095	BXOSN19095	100.2	0.26	0.33
BXTSN19105	BXISN19105	BXOSN19105	110.2	0.29	0.36
BXTSN19115	BXISN19115	BXOSN19115	120.2	0.32	0.40
BXTSN19130	BXISN19130	BXOSN19130	135.2	0.36	0.45
BXTSN19145	BXISN19145	BXOSN19145	150.2	0.40	0.50
BXTSN19160	BXISN19160	BXOSN19160	165.2	0.44	0.55
BXTSN19175	BXISN19175	BXOSN19175	180.2	0.48	0.59
BXTSN19200	BXISN19200	BXOSN19200	205.2	0.54	0.68
BXTSN19225	BXISN19225	BXOSN19225	230.2	0.61	0.76
BXTSN19250	BXISN19250	BXOSN19250	255.2	0.67	0.84
BXTSN19275	BXISN19275	BXOSN19275	280.2	0.74	0.92
BXTSN19300	BXISN19300	BXOSN19300	305.2	0.81	1.01

## Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



## Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

Body, Tip and Nut Material Grade Availability

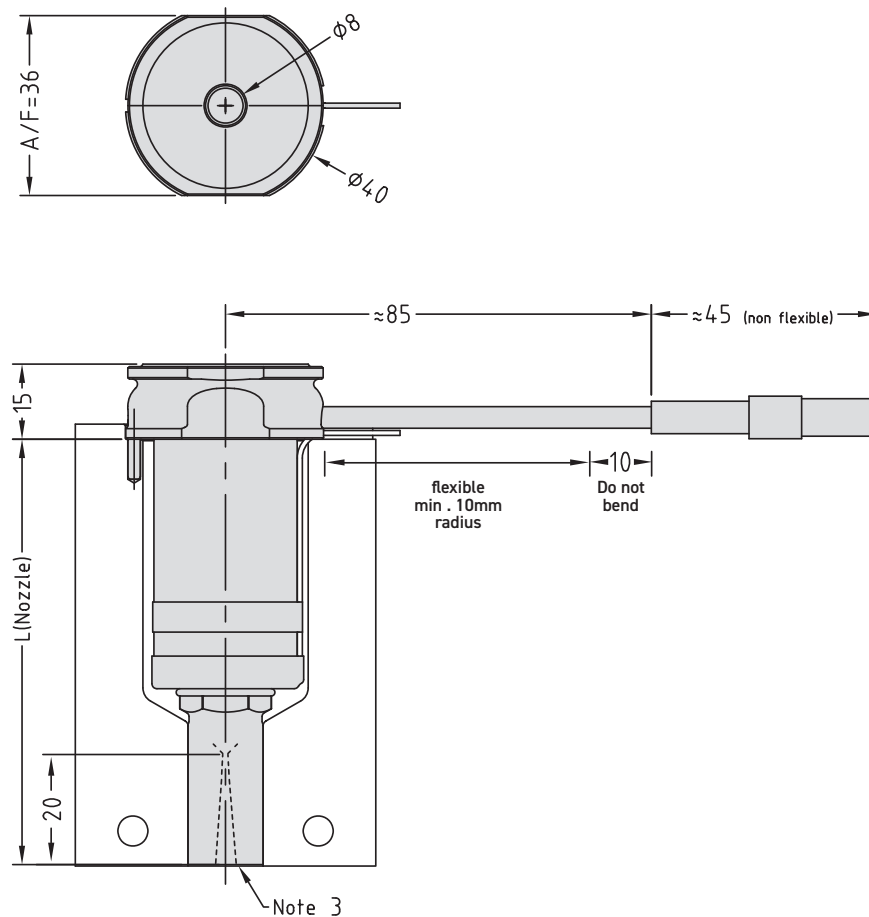
Nozzle Code	Grade		
	F1G1H1	F1G2H1	F1G5H1
BXTSX	✓	✓	✓
BXISX	✓	✓	✓
BXOSX	✓	✗	✓

Standard Gate Diameters	
H1	1.2mm

**To order a nozzle assembly:**

Provide the Nozzle Code + Grade + Gate Diameter  
 (Order example: BXTSX19075F1G1H1-12)

Nozzle Dimensions





Body, Tip and Nut Material Grade Availability

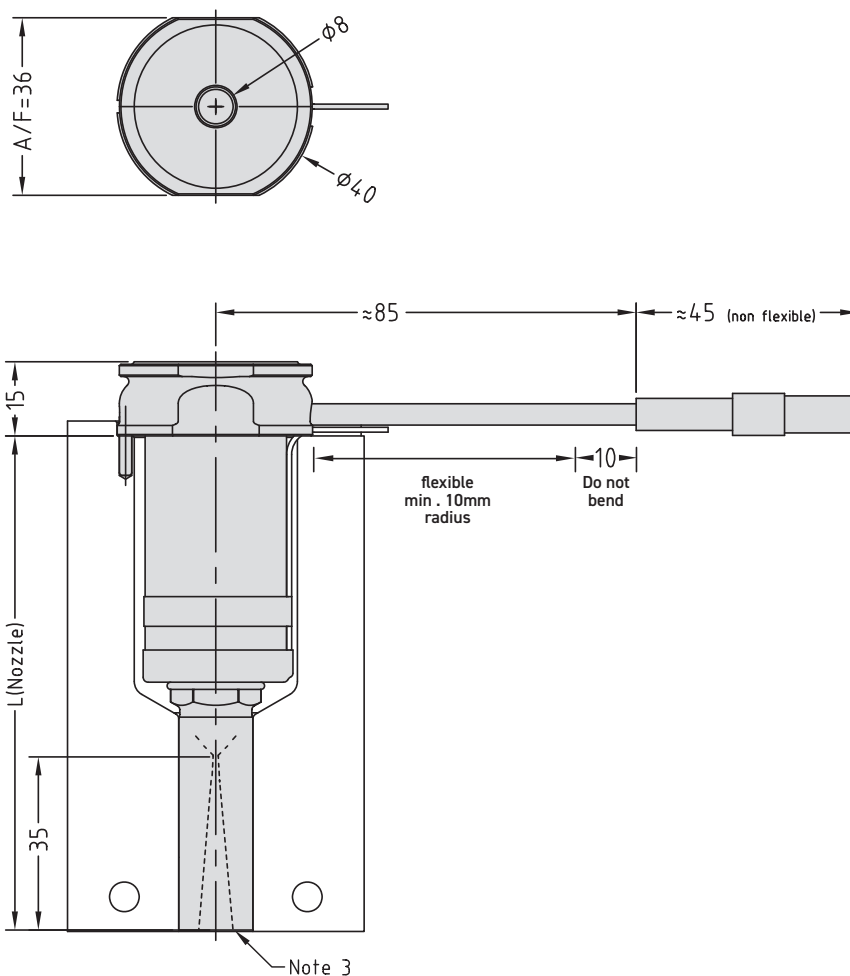
Nozzle Code	Grade		
	F1G1H1	F1G2H1	F1G5H1
BXTSL	✓	✓	✓
BXISL	✓	✓	✓
BXOSL	✓	×	✓

Standard Gate Diameters	
H1	1.2mm

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter  
 (Order example: BXTSL19075F1G1H1-12)

Nozzle Dimensions

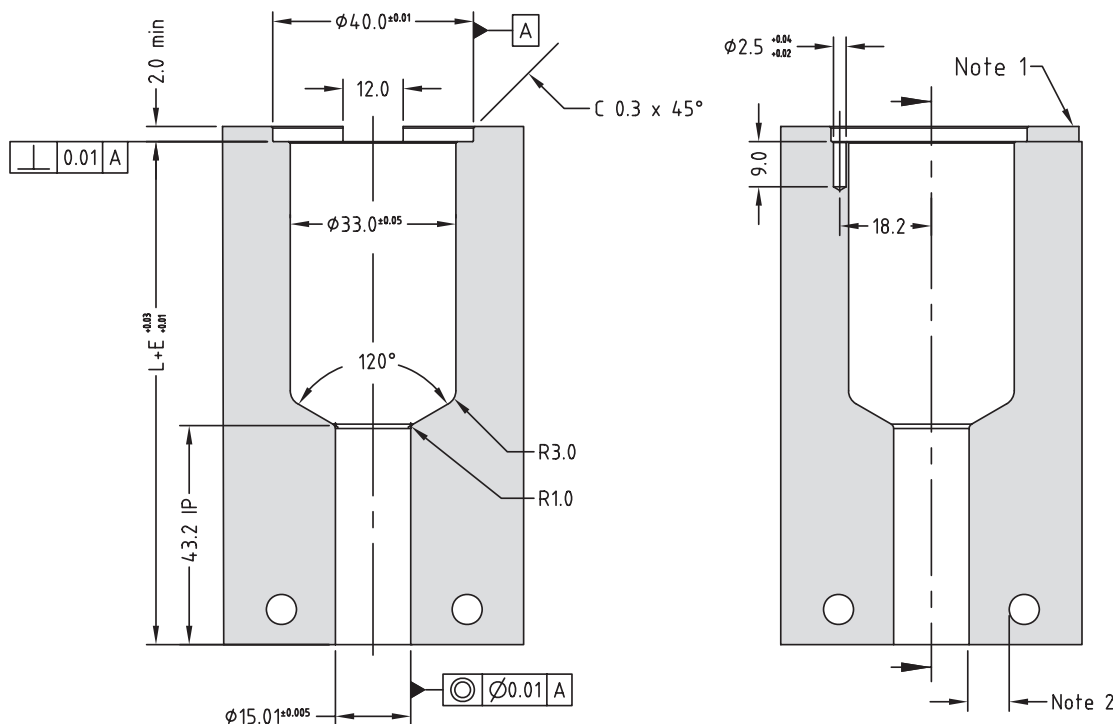




Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTSL19045	BXISL19045	BXOSL19045	80.2	0.21	0.26
BXTSL19055	BXISL19055	BXOSL19055	90.2	0.24	0.30
BXTSL19065	BXISL19065	BXOSL19065	100.2	0.26	0.33
BXTSL19075	BXISL19075	BXOSL19075	110.2	0.29	0.36
BXTSL19085	BXISL19085	BXOSL19085	120.2	0.32	0.40
BXTSL19095	BXISL19095	BXOSL19095	130.2	0.34	0.43
BXTSL19105	BXISL19105	BXOSL19105	140.2	0.37	0.46
BXTSL19115	BXISL19115	BXOSL19115	150.2	0.40	0.50
BXTSL19130	BXISL19130	BXOSL19130	165.2	0.44	0.55
BXTSL19145	BXISL19145	BXOSL19145	180.2	0.48	0.59
BXTSL19160	BXISL19160	BXOSL19160	195.2	0.52	0.64
BXTSL19175	BXISL19175	BXOSL19175	210.2	0.55	0.69
BXTSL19200	BXISL19200	BXOSL19200	235.2	0.62	0.78
BXTSL19225	BXISL19225	BXOSL19225	260.2	0.69	0.86
BXTSL19250	BXISL19250	BXOSL19250	285.2	0.75	0.94
BXTSL19275	BXISL19275	BXOSL19275	310.2	0.82	1.02
BXTSL19300	BXISL19300	BXOSL19300	335.2	0.88	1.11

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
  3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

# **BX YCN Nut Thermal Gate 19 Series**

Nozzle Assembly Order Code for BX YCN Nut Thermal Gate 19 Series

NOZZLE RANGE	YCN NUT	NOZZLE SERIES	NOZZLE LENGTH	BODY GRADE	NUT GRADE	GATE PROFILE	POLYMER CLASSIFICATION	GATE DIAMETER
<b>BX</b>	<b>YCN</b>	<b>19</b>	<b>175</b>	<b>F1</b>	<b>H3</b>	<b>P4</b>	<b>F</b>	<b>-25</b>
			045	F1	H3	P7	U (Unfilled)	EXAMPLE OF A FINAL ORDER CODE
			055	F3		P4	F (Filled)	
			065			N3	SP	
			075					
			085					
			095					
			105					
			115					
			130					
			145					
			160					
			175					
			200					
			225					
			250					
			275					
			300					

\* See page 26 in the system selection guide for an explanation on gate profiles

Body & Nut Grade Availability

Nozzle Code	F1H3	F3H3
BXYCN	✓	✓

Refer to the system selection guide page 26 for selection the appropriate gate profile P7, P4 or N3.

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Profile  
(Order example: BXYCN19075F1H3P7U-18)

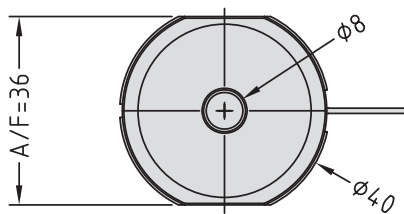
YCN Gate Profile Availability

Profile	Unfilled	Filled	Special
P7	P7U-18	P7F-22	P7-SP
P4	P4U-20	P4F-25	P4-SP
N3	N3U-20	N3F-25	N3-SP

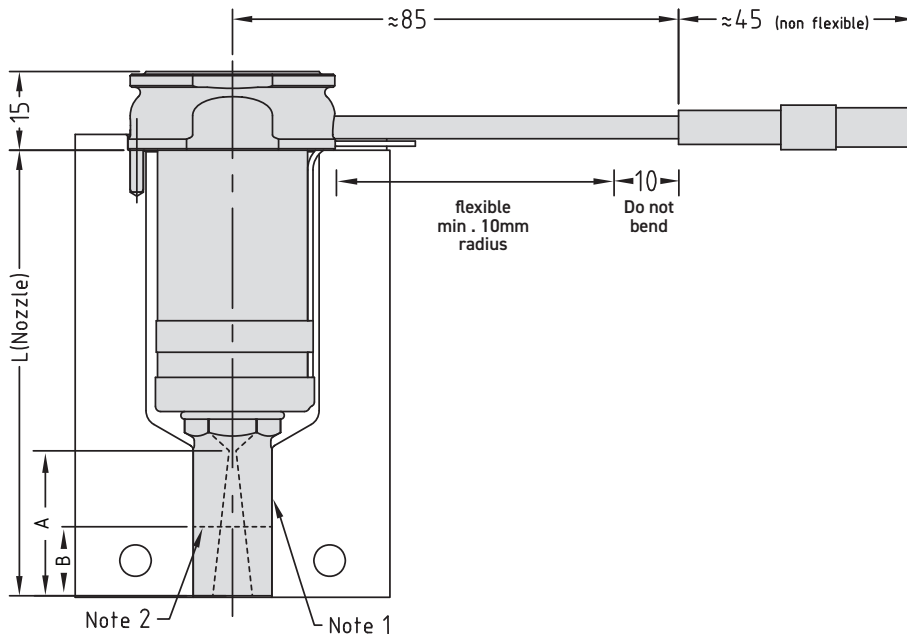
Standard Gate Diameters

Nut Grade	P7U-18	P7F-22	P4U-20	P4F-25	N3U-20	N3F-25
H3	1.8mm	2.2mm	2.0mm	2.5mm	2.0mm	2.5mm

Nozzle Dimensions



Profile	Gate Position A	Cut Length B
P7	29	Contact Mastip
P4	32	
N3	39	



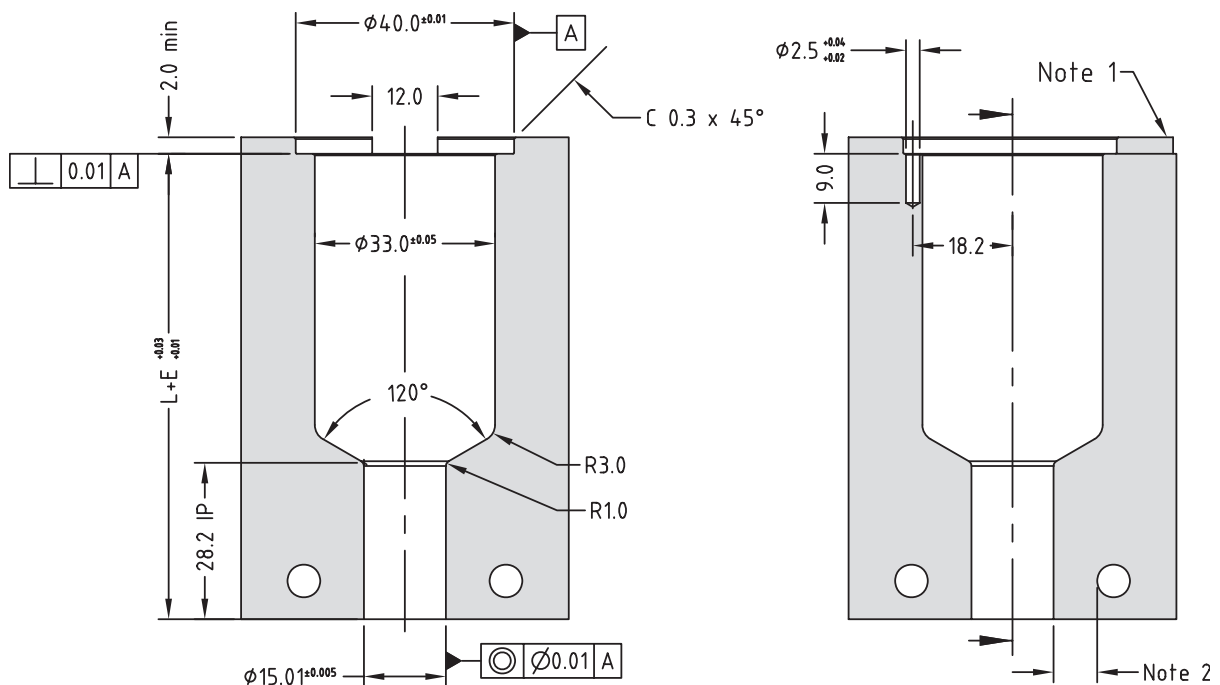
Note

1. Modify the contact area of the YCN nut to suit the application.
  2. Contact Mastip to reduce the length (B) of the YCN nut.
- Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.

One-Hole Torpedo Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXYCN19045	65.2	0.17	0.22
BXYCN19055	75.2	0.20	0.25
BXYCN19065	85.2	0.22	0.28
BXYCN19075	95.2	0.25	0.31
BXYCN19085	105.2	0.28	0.35
BXYCN19095	115.2	0.30	0.38
BXYCN19105	125.2	0.33	0.41
BXYCN19115	135.2	0.36	0.45
BXYCN19130	150.2	0.40	0.50
BXYCN19145	165.2	0.44	0.55
BXYCN19160	180.2	0.48	0.59
BXYCN19175	195.2	0.52	0.64
BXYCN19200	220.2	0.58	0.73
BXYCN19225	245.2	0.65	0.81
BXYCN19250	270.2	0.71	0.89
BXYCN19275	295.2	0.78	0.97
BXYCN19300	320.2	0.85	1.06

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$

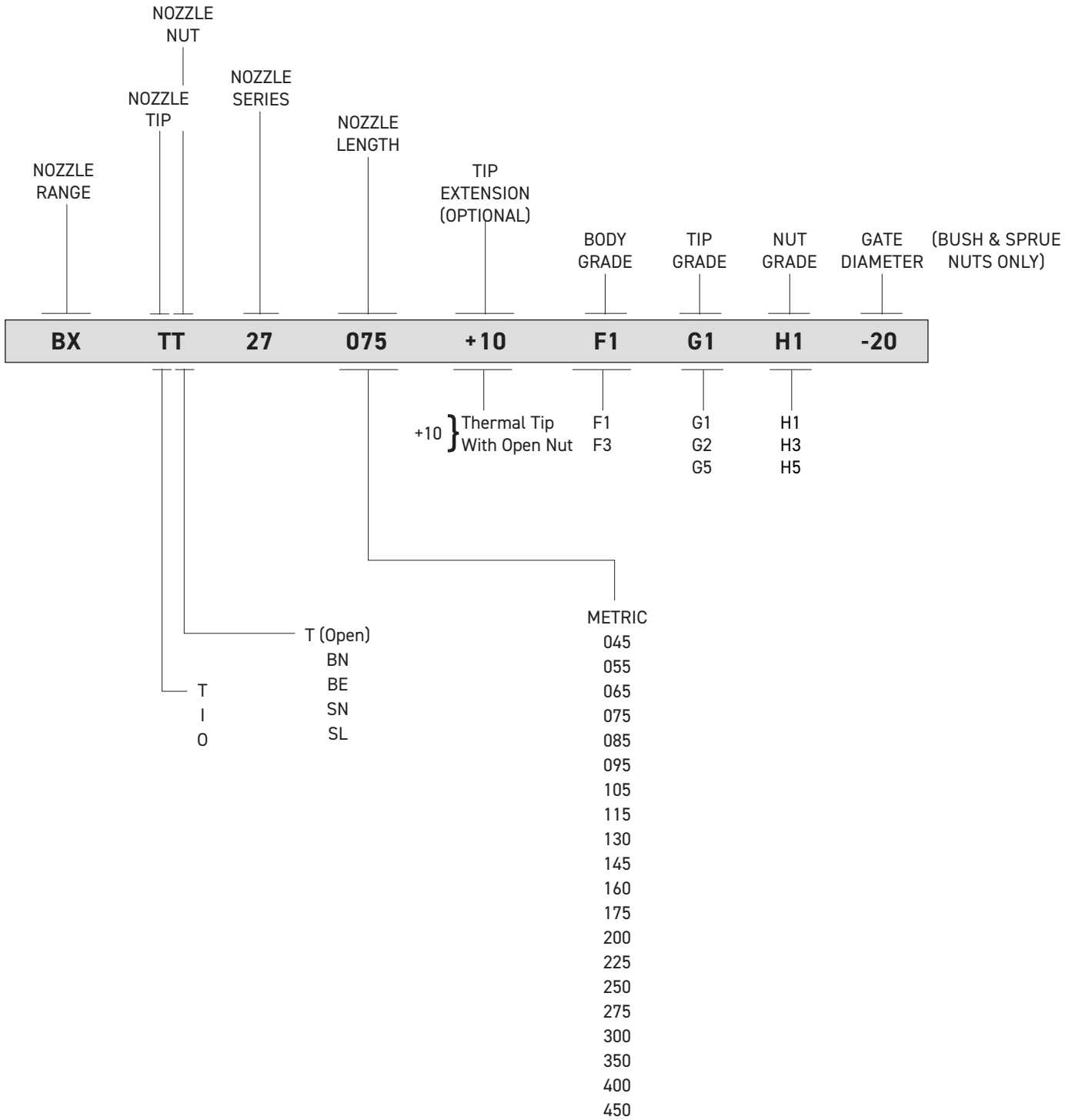


#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.

# **BX Thermal Gate 27 Series**

Nozzle Assembly Order Code for BX Thermal Gate 27 Series



\* See page 10, 14 & 17 in the system selection guide for an explanation on the grades

Body, Tip & Nut Grade Availability

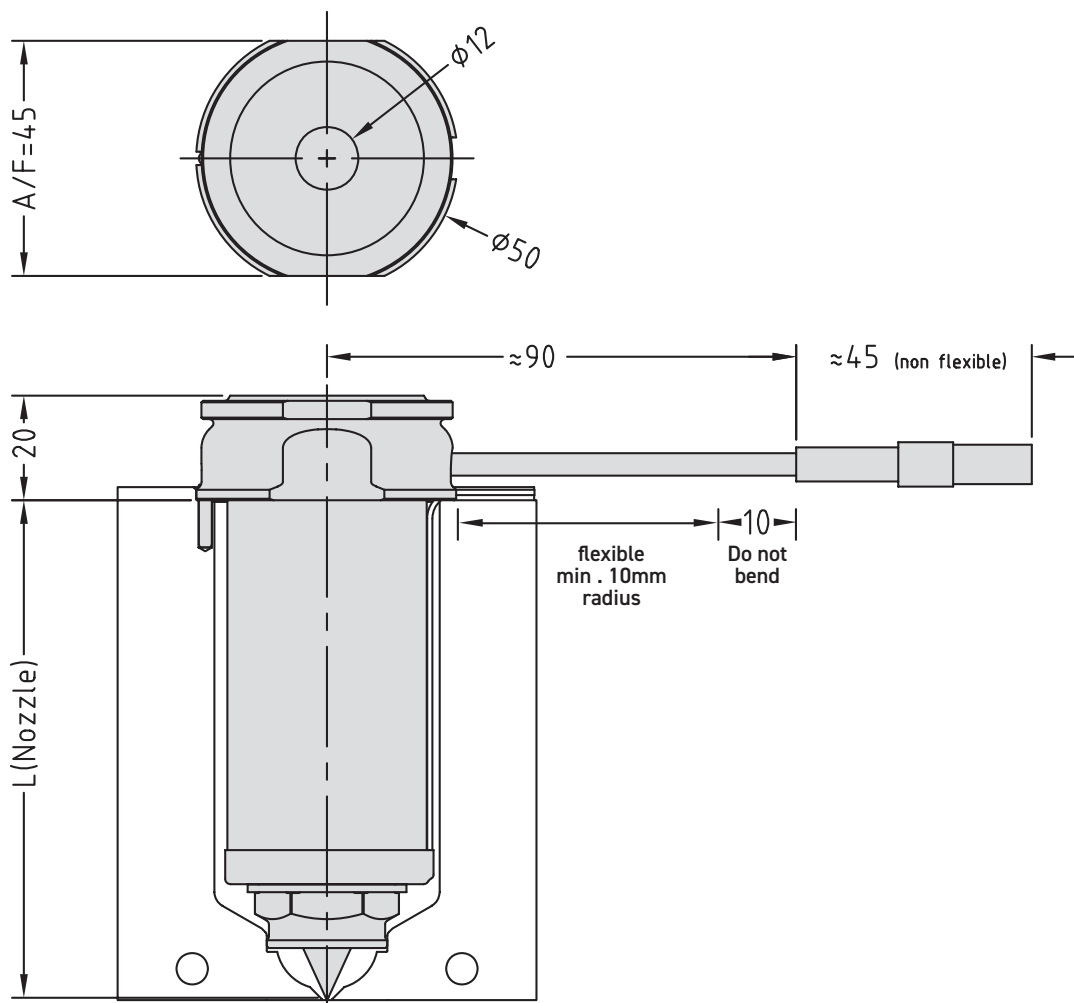
Nozzle Code \ Grade	F1G1H1	F1G2H1	F1G5H1	F3G1H3	F3G2H3	F3G5H3
BXTT	✓	✓	✓	✓	✓	✓
BXIT	✓	✓	✓	✓	✓	✓
BXOT	✓	✗	✓	✓	✗	✓

**To order a nozzle assembly:**

Provide the Nozzle Code + Grade

(Order example: BXTT27075F1G1H1)

Nozzle Dimensions

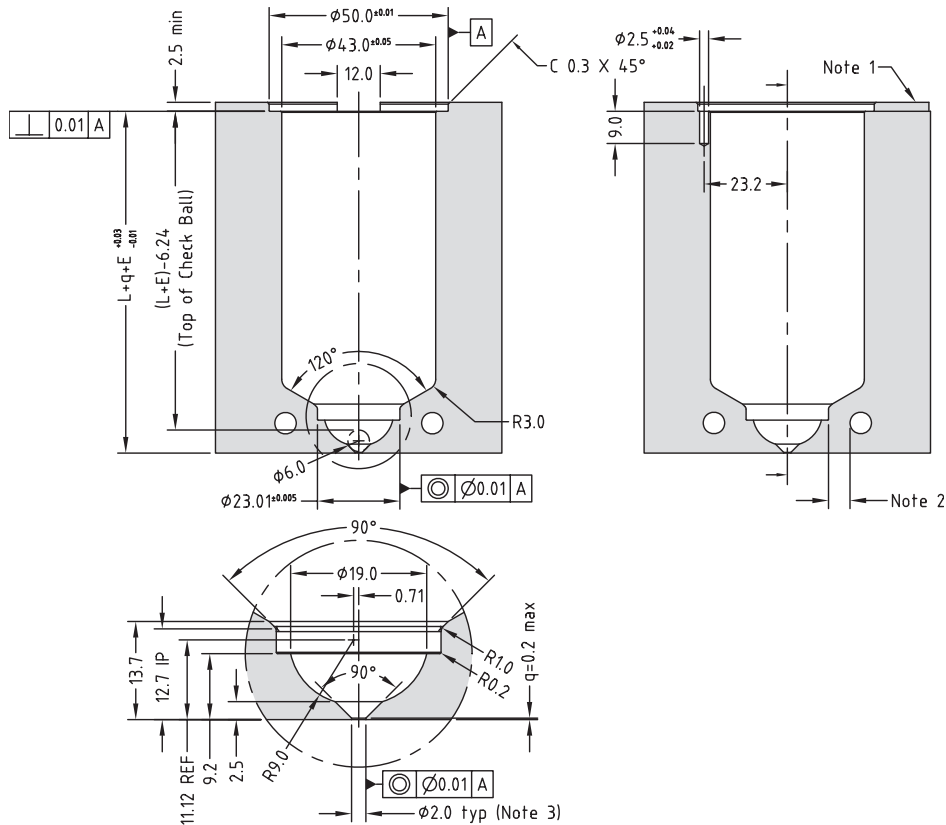




Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTT27075	BXIT27075	BXOT27075	75	0.20	0.25
BXTT27085	BXIT27085	BXOT27085	85	0.22	0.28
BXTT27095	BXIT27095	BXOT27095	95	0.25	0.31
BXTT27105	BXIT27105	BXOT27105	105	0.28	0.35
BXTT27115	BXIT27115	BXOT27115	115	0.30	0.38
BXTT27130	BXIT27130	BXOT27130	130	0.34	0.43
BXTT27145	BXIT27145	BXOT27145	145	0.38	0.48
BXTT27160	BXIT27160	BXOT27160	160	0.42	0.53
BXTT27175	BXIT27175	BXOT27175	175	0.46	0.58
BXTT27200	BXIT27200	BXOT27200	200	0.53	0.66
BXTT27225	BXIT27225	BXOT27225	225	0.59	0.74
BXTT27250	BXIT27250	BXOT27250	250	0.66	0.83
BXTT27275	BXIT27275	BXOT27275	275	0.73	0.91
BXTT27300	BXIT27300	BXOT27300	300	0.79	0.99
BXTT27350	BXIT27350	BXOT27350	350	0.92	1.16
BXTT27400	BXIT27400	BXOT27400	400	1.06	1.32
BXTT27450	BXIT27450	BXOT27450	450	1.19	1.49

Nozzle Fitment and Gate Dimensions

$$E = L \times 0.000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



Note

1. Wire channel to suit mould.
2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.

Body, Tip & Nut Grade Availability

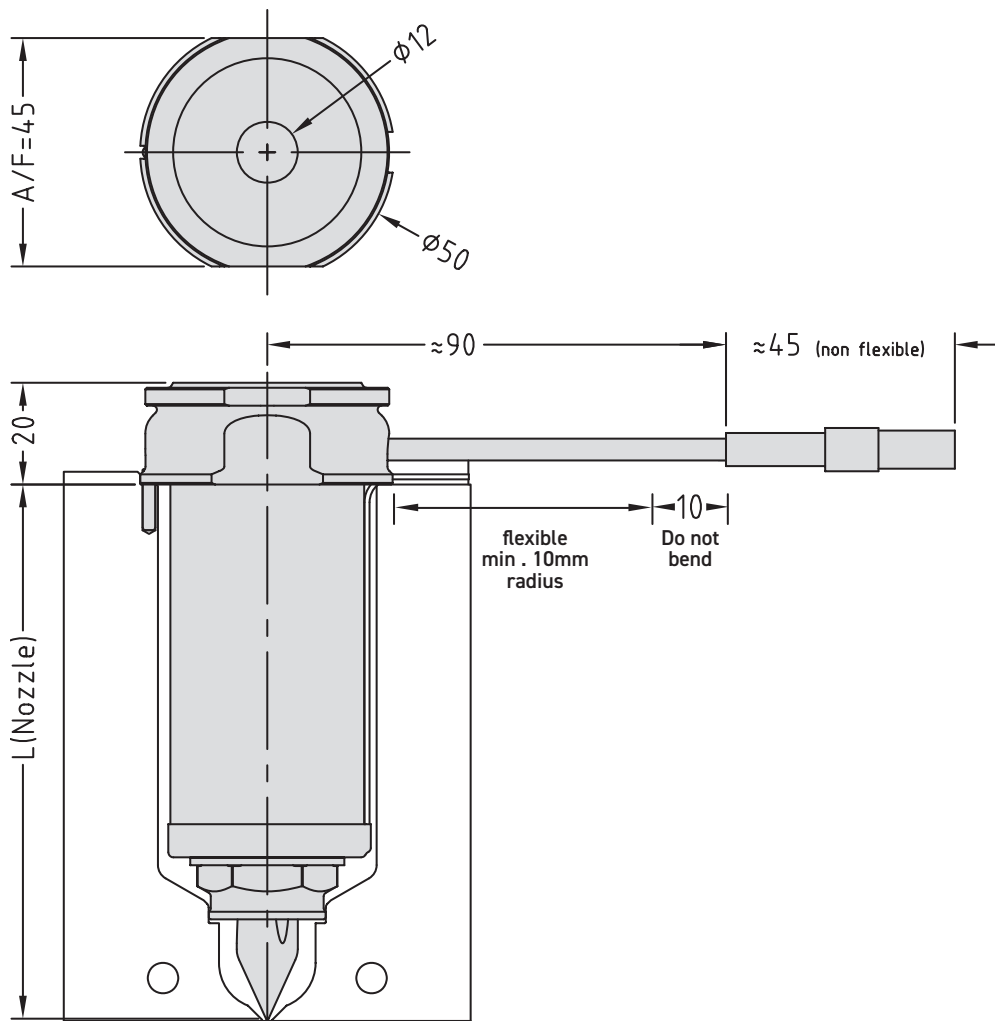
Nozzle Code \ Grade	F1G1H1	F1G2H1	F3G1H3	F3G2H3
BXTT+10	✓	✓	✓	✓
BXIT+10	✓	✓	✓	✓

To order a nozzle assembly:

Provide the Nozzle Code + Grade

(Order example: BXTT27075+10F1G1H1)

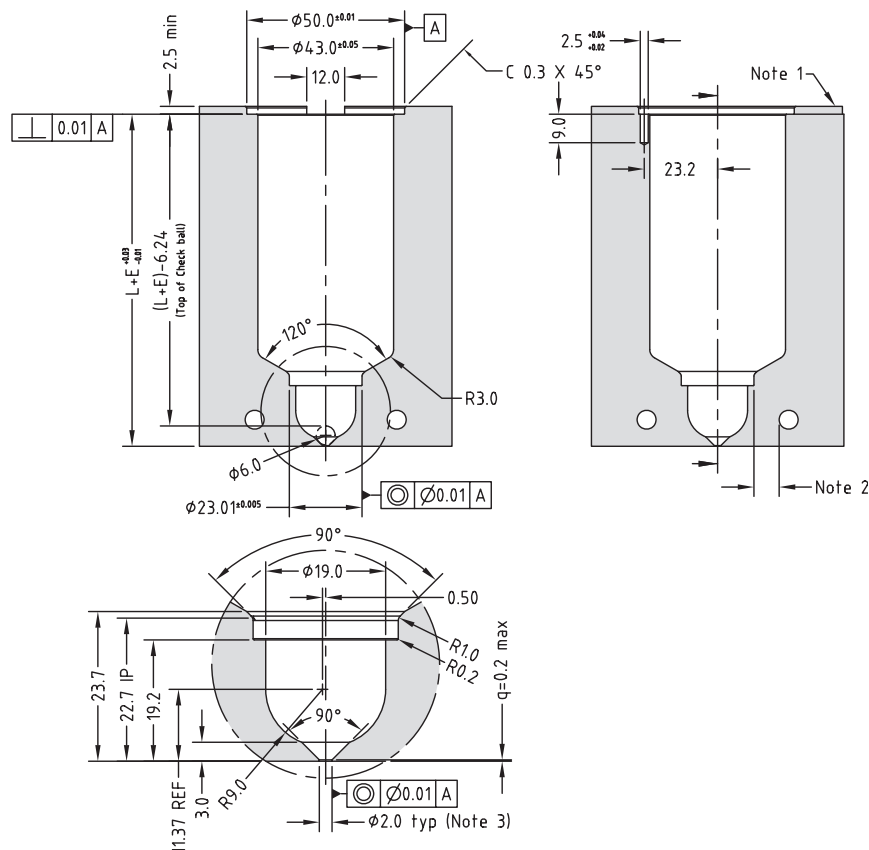
Nozzle Dimensions



Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTT27075+10	BXIT27075+10	85	0.22	0.28
BXTT27085+10	BXIT27085+10	95	0.25	0.31
BXTT27095+10	BXIT27095+10	105	0.28	0.35
BXTT27105+10	BXIT27105+10	115	0.30	0.38
BXTT27115+10	BXIT27115+10	125	0.33	0.41
BXTT27130+10	BXIT27130+10	140	0.37	0.46
BXTT27145+10	BXIT27145+10	155	0.41	0.51
BXTT27160+10	BXIT27160+10	170	0.45	0.56
BXTT27175+10	BXIT27175+10	185	0.49	0.61
BXTT27200+10	BXIT27200+10	210	0.55	0.69
BXTT27225+10	BXIT27225+10	235	0.62	0.78
BXTT27250+10	BXIT27250+10	260	0.69	0.86
BXTT27275+10	BXIT27275+10	285	0.75	0.94
BXTT27300+10	BXIT27300+10	310	0.82	1.02
BXTT27350+10	BXIT27350+10	360	0.95	1.19
BXTT27400+10	BXIT27400+10	410	1.08	1.35
BXTT27450+10	BXIT27450+10	460	1.21	1.52

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
3. Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.

Body, Tip & Nut Material Grade Availability

Grade \ Nozzle Code	F1G1H1	F1G2H1	F1G5H1	F1G5H5	F3G1H3	F3G2H3	F3G5H3	F3G5H5
<b>27 Series Bush Nut</b>								
BXTBN	✓	✓	✓	✓	✓	✓	✓	✓
BXIBN	✓	✓	✓	✓	✓	✓	✓	✓
BXOBN	✓	×	✓	✓	✓	×	✓	✓
<b>27 Series Bush Nut Full Contact</b>								
BXTBE	✓	✓	✓	×	✓	✓	✓	×
BXIBE	✓	✓	✓	×	✓	✓	✓	×
BXOBE	✓	×	✓	×	✓	×	✓	×

Bush Nut Options

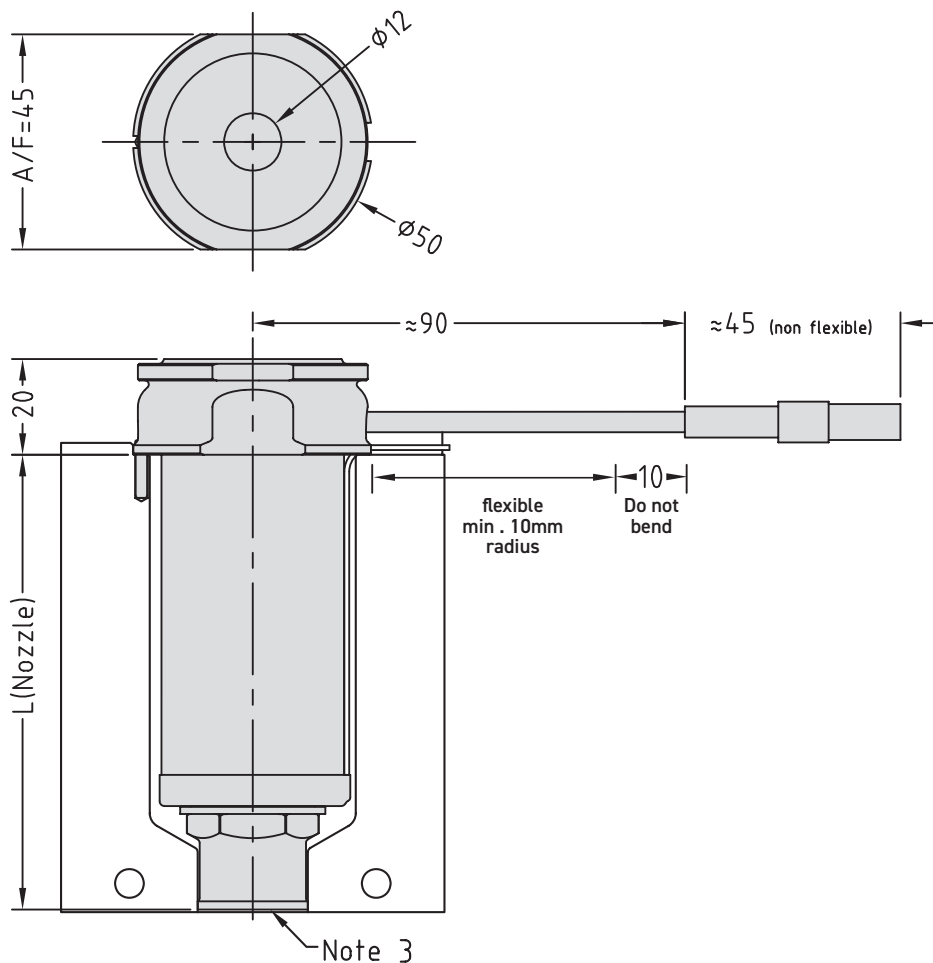
- BN - Standard bush nut
- BE - Full-contact bush nut\*

The nozzle codes listed to the right are for nozzle assemblies with a standard bush nut. To order a full-contact bush nut, replace the BN in the code with BE.

Standard Gate Diameters		
H1	2.0mm	2.3mm
H3	2.0mm	2.3mm
H5	2.6mm	

**To order a nozzle assembly:**  
 Provide the Nozzle Code + Grade  
 (Order example: BXTBN27075F1G1H1-20)

Nozzle Dimensions





Body, Tip and Nut Material Grade Availability

Nozzle Code \ Grade	Grade							
	F1G1H1	F1G2H1	F1G5H1	F1G5H5	F3G1H3	F3G2H3	F3G5H3	F3G5H5
BXTSN	✓	✓	✓	✓	✓	✓	✓	✓
BXISN	✓	✓	✓	✓	✓	✓	✓	✓
BXOSN	✓	✗	✓	✓	✓	✗	✓	✓

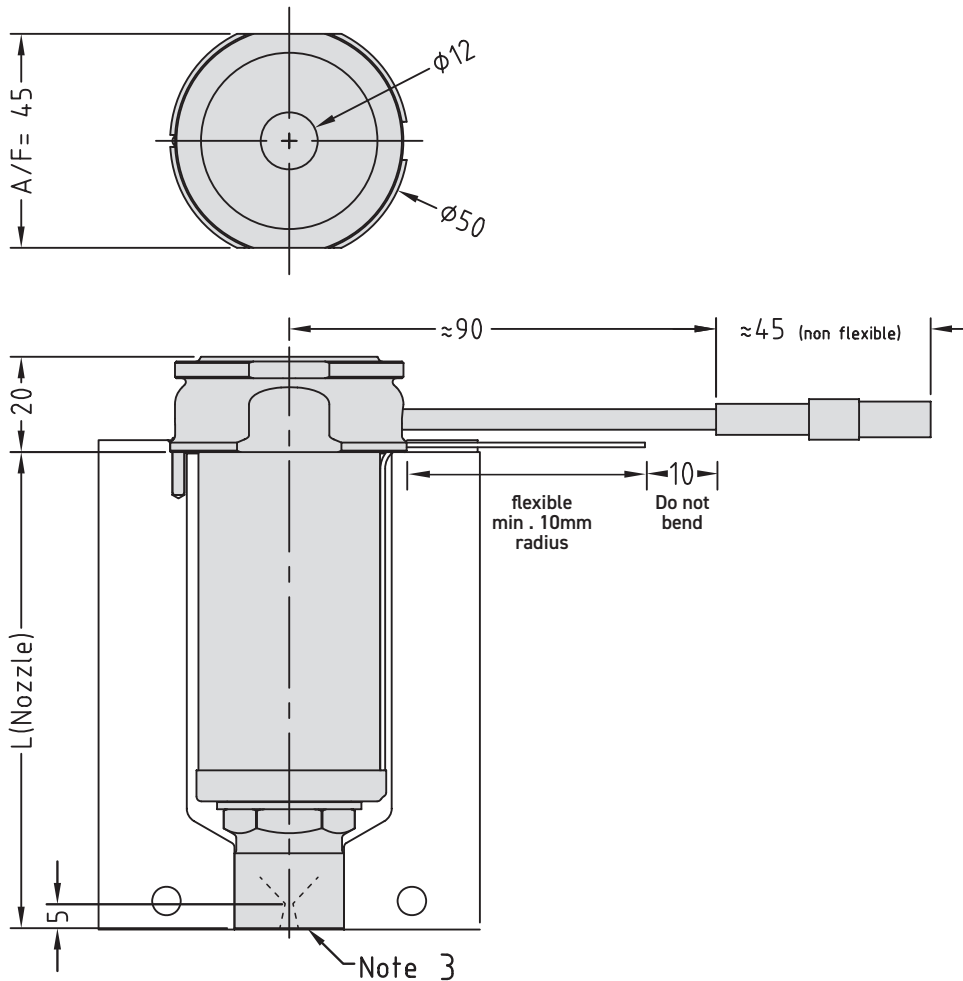
Standard Gate Diameters		
H1	2.0mm	2.5mm
H3	2.0mm	2.5mm
H5	2.8mm	

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter

(Order example: BXTSN27075F1G1H1-20)

Nozzle Dimensions





Body, Tip and Nut Material Grade Availability

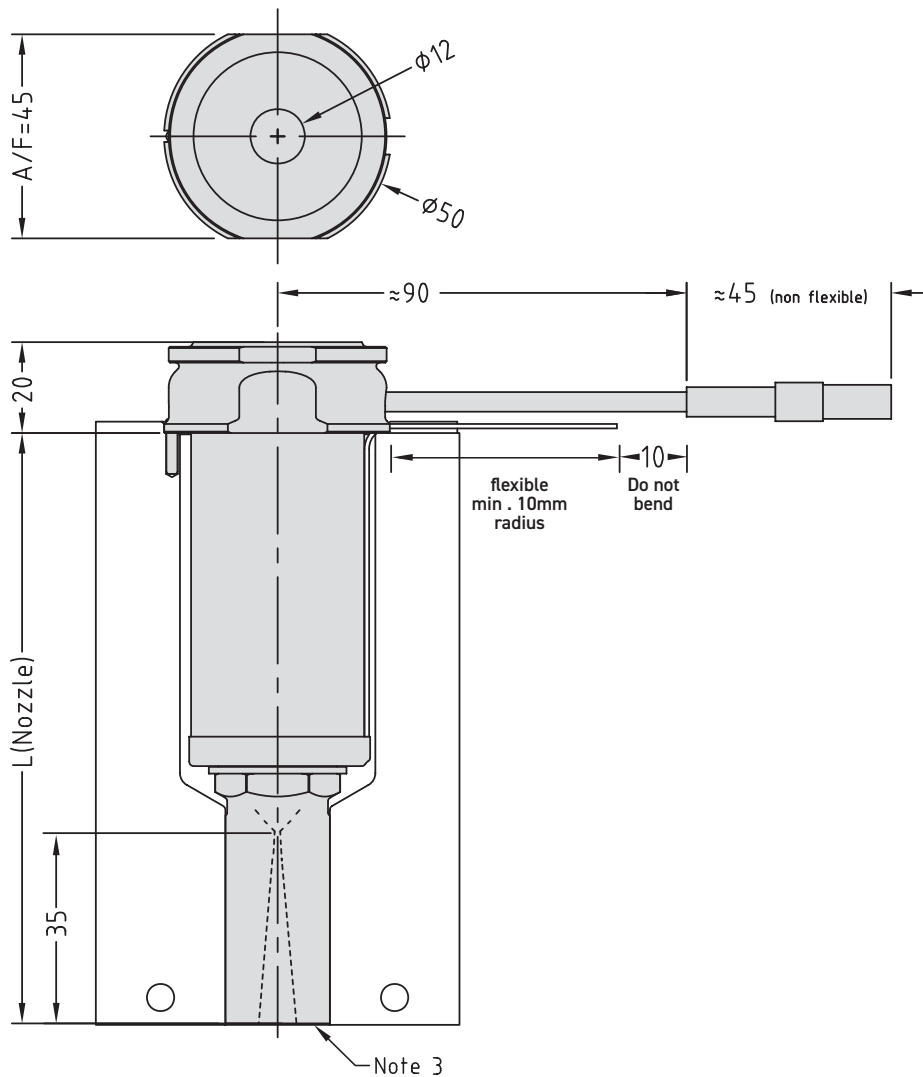
Nozzle Code	Grade		
	F1G1H1	F1G2H1	F1G5H1
BXTSL	✓	✓	✓
BXISL	✓	✓	✓
BXOSL	✓	✗	✓

Standard Gate Diameters	
H1	2.0mm

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Diameter  
 (Order example: BXTSL27075F1G1H1-20)

Nozzle Dimensions

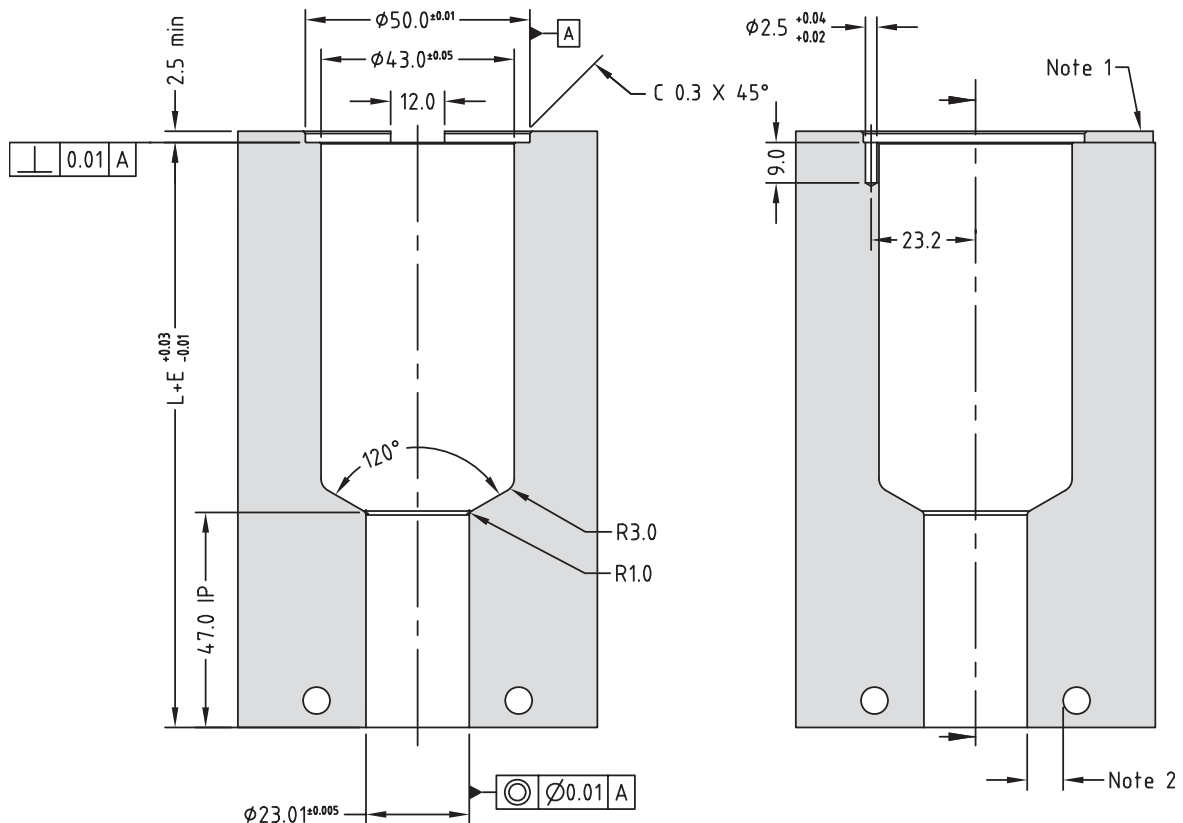




Multi-Hole Torpedo Nozzle Code	One-Hole Torpedo Nozzle Code	Open Tip Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXTSL27075	BXISL27075	BXOSL27075	110.2	0.29	0.36
BXTSL27085	BXISL27085	BXOSL27085	120.2	0.32	0.40
BXTSL27095	BXISL27095	BXOSL27095	130.2	0.34	0.43
BXTSL27105	BXISL27105	BXOSL27105	140.2	0.37	0.46
BXTSL27115	BXISL27115	BXOSL27115	150.2	0.40	0.50
BXTSL27130	BXISL27130	BXOSL27130	165.2	0.44	0.55
BXTSL27145	BXISL27145	BXOSL27145	180.2	0.48	0.59
BXTSL27160	BXISL27160	BXOSL27160	195.2	0.52	0.64
BXTSL27175	BXISL27175	BXOSL27175	210.2	0.55	0.69
BXTSL27200	BXISL27200	BXOSL27200	235.2	0.62	0.78
BXTSL27225	BXISL27225	BXOSL27225	260.2	0.69	0.86
BXTSL27250	BXISL27250	BXOSL27250	285.2	0.75	0.94
BXTSL27275	BXISL27275	BXOSL27275	310.2	0.82	1.02
BXTSL27300	BXISL27300	BXOSL27300	335.2	0.88	1.11
BXTSL27350	BXISL27350	BXOSL27350	385.2	1.02	1.27
BXTSL27400	BXISL27400	BXOSL27400	435.2	1.15	1.44
BXTSL27450	BXISL27450	BXOSL27450	485.2	1.28	1.60

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
3. Modify gate diameter and land to suit the part. Supplied with  $\phi 2.0$  → See Gate Modifications in Technical Specifications.

# **BX YCN Nut Thermal Gate 27 Series**

Nozzle Assembly Order Code for BX YCN Nut Thermal Gate 27 Series

NOZZLE RANGE	YCN NUT	NOZZLE SERIES	NOZZLE LENGTH	BODY GRADE	NUT GRADE	GATE PROFILE	POLYMER CLASSIFICATION	GATE DIAMETER
<b>BX</b>	<b>YCN</b>	<b>27</b>	<b>175</b>	<b>F1</b>	<b>H3</b>	<b>P4</b>	<b>F</b>	<b>-30</b>
			045	F1	H3	P7	U (Unfilled)	EXAMPLE OF A FINAL ORDER CODE
			055	F3		P4	F (Filled)	
			065			N3	SP	
			075					
			085					
			095					
			105					
			115					
			130					
			145					
			160					
			175					
			200					
			225					
			250					
			275					
			300					
			350					
			400					
			450					

\* See page 26 in the system selection guide for an explanation on gate profiles

Body & Nut Grade Availability

Nozzle Code	F1H3	F3H3
BXYCN	✓	✓

Refer to the system selection guide page 26 for selection the appropriate gate profile P7, P4 or N3.

To order a nozzle assembly:

Provide the Nozzle Code + Grade + Gate Profile  
(Order example: BXYCN27075F1H3P7U-22)

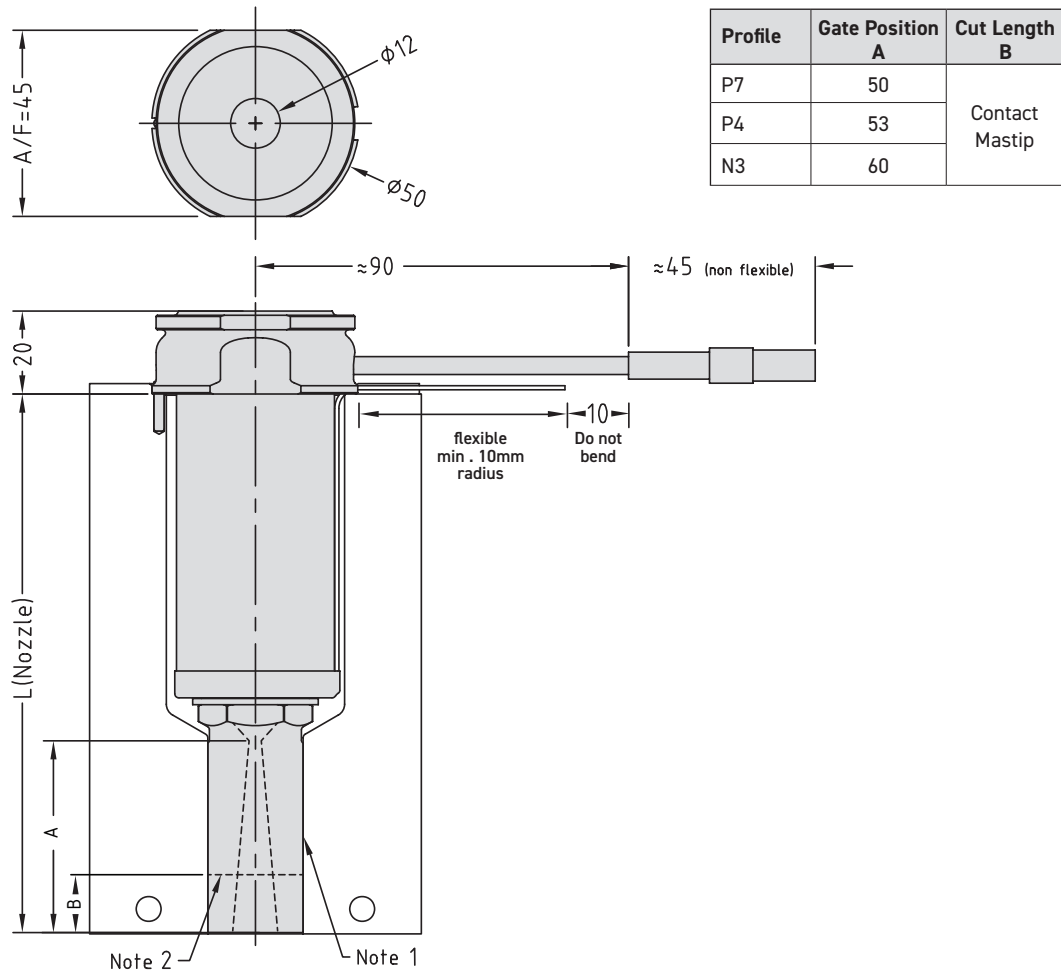
YCN Gate Profile Availability

Profile	Unfilled	Filled	Special
P7	P7U-22	P7F-27	P7-SP
P4	P4U-25	P4F-30	P4-SP
N3	N3U-25	N3F-30	N3-SP

Standard Gate Diameters

Nut Grade	P7U-22	P7F-27	P4U-25	P4F-30	N3U-25	N3F-30
H3	2.2mm	2.7mm	2.5mm	3.0mm	2.5mm	3.0mm

Nozzle Dimensions



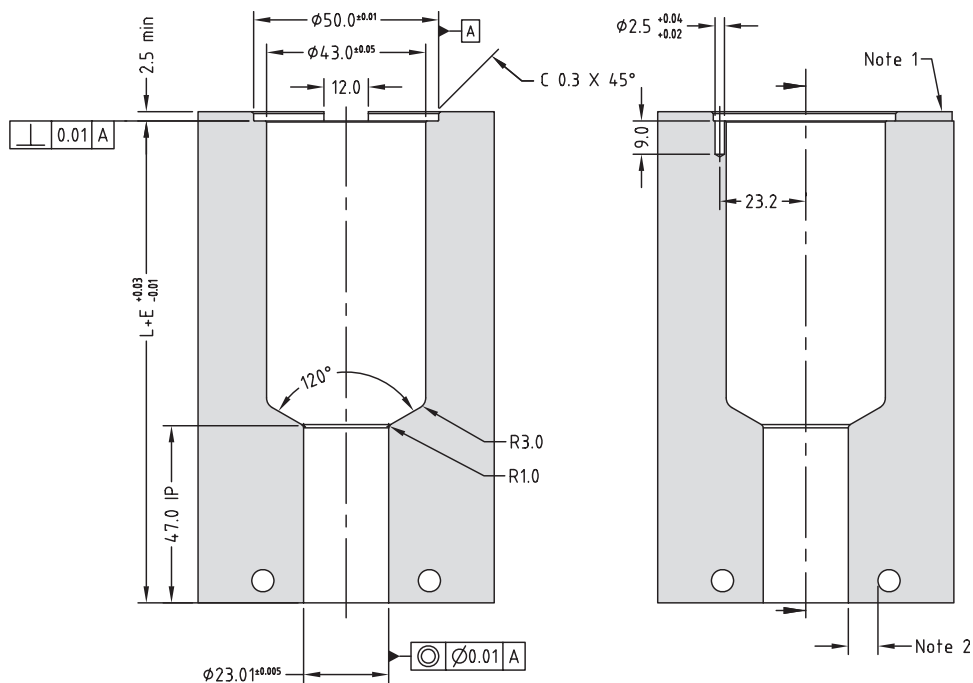
Note

1. Modify the contact area of the YCN nut to suit the application.
  2. Contact Mastip to reduce the length (B) of the YCN nut.
- Modify gate diameter and land to suit the part. → See Gate Modifications in Technical Specifications.

YCN Open Nut Nozzle Code	L	E@ΔT =200C	E@ΔT =250C
BXYCN27075	110.2	0.29	0.36
BXYCN27085	120.2	0.32	0.40
BXYCN27095	130.2	0.34	0.43
BXYCN27105	140.2	0.37	0.46
BXYCN27115	150.2	0.40	0.50
BXYCN27130	165.2	0.44	0.55
BXYCN27145	180.2	0.48	0.59
BXYCN27160	195.2	0.52	0.64
BXYCN27175	210.2	0.55	0.69
BXYCN27200	235.2	0.62	0.78
BXYCN27225	260.2	0.69	0.86
BXYCN27250	285.2	0.75	0.94
BXYCN27275	310.2	0.82	1.02
BXYCN27300	335.2	0.88	1.11
BXYCN27350	385.2	1.02	1.27
BXYCN27400	435.2	1.15	1.44
BXYCN27450	485.2	1.28	1.60

### Nozzle Fitment and Gate Dimensions

$$E = L \times 0.0000132 \times (\text{nozzle temp. } ^\circ\text{C} - \text{mould temp. } ^\circ\text{C})$$



#### Note

1. Wire channel to suit mould.
  2. Gate cooling is critical for correct operation and gate quality. → See Cooling section in Technical Specifications.
- \* Minimum steel strength ( $\sigma_y$ ) of hot runner plates 800MPa.



Mastip Head Office New Zealand

**Mastip Head Office New Zealand**

Phone: +64 9 970 2100

Email: nz.solutions@mastip.com

**Mastip Regional Office Vietnam**

Phone: +84 93 8877488

Email: vietnam@mastip.com

**Mastip Regional Office China**

Phone: +86 755 84193188

Email: china@mastip.com

**Mastip Regional Office Europe**

Phone: +33 0 809 400 076

Email: mastip@mastip.eu

**Mastip Regional Office North America**

Phone: +1 262 644 9400

Email: northamerica@mastip.com