

Explosion Proof Bearing Assembly Tip Sensitive

Class 1020

QUICK RELEASE, SPRING LOADED FITTING



Class 1020 Overview – Explosion Proof RTD Assemblies

- Tip sensitive, spring-loaded temperature sensor assembly
- Used in electric motors and generators for continuous sensing of the temperature of the bearings
- Approved for use in explosion proof and flameproof applications
- U.S. or European threads available

Additional Specifications

Temperature Range (Process):

-50 to 260°C

Material:

Tip-sensitive probe: stainless steel with copper or aluminum tip

- aluminum tip required for all ATEX Group IIC applications (acetylene gas atmosphere)

Spring-loaded, Quick Release Fittings: stainless steel

Connection Head: epoxy-coated aluminum or stainless steel

Terminal Block: 94V-0 rated fiberglass

Pressure Rating:

50 psi (3.4 bar)

Insulation Resistance:

1,000 megohms minimum between element and case at 500 VDC

100 megohms minimum between elements at 500 VDC (dual RTD sensors only)

Time Constant (typical 3 ft/sec in moving water):

3 seconds

Explosion Proof and Flameproof Ratings:

National and Canadian Electrical Code

Class I, Division 1, Groups B, C, and D

Class II/III, Division 1, Groups E, F, and G

T5 (Ta=80°C), T6 (Ta=65°C)

National Electrical Code (Article 505)

Class I, Zone 1, AEx d IIC

T5 (Ta=80°C), T6 (Ta=65°C)

Canadian Electrical Code (IEC 60079)

Class I, Zone 1, Ex d IIC

T5 (Ta=80°C), T6 (Ta=65°C)

ATEX

II 2 G Ex d IIC T5 (Ta=80°C), T6 (Ta=65°C) Gb

Hazardous Location Rating Verification:

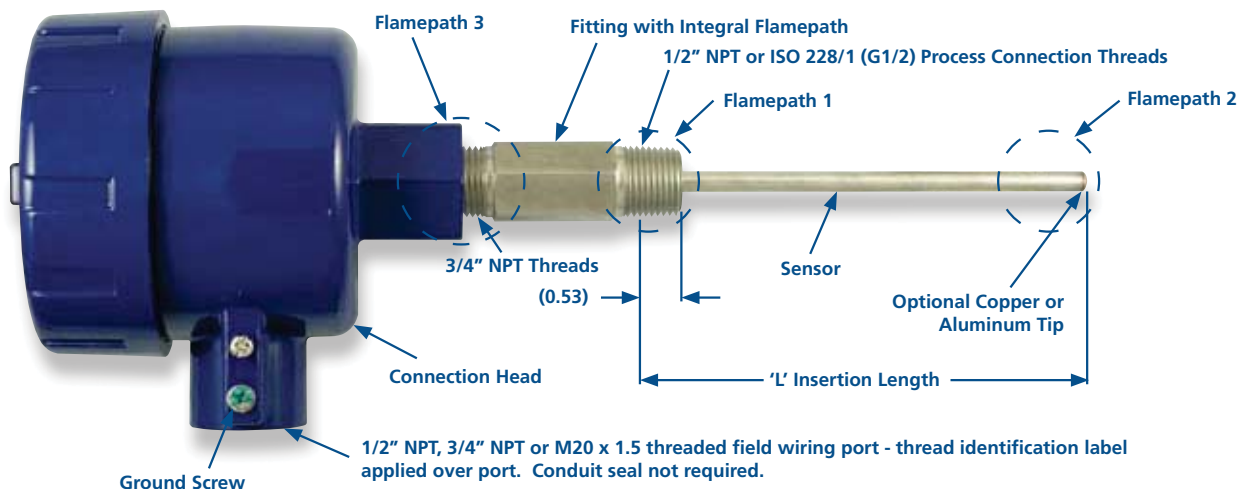
For RFQ's and orders, please specify Hazardous Location Rating requirements.

Explosion Proof Bearing Assembly Tip Sensitive

Class 1020

QUICK RELEASE, SPRING LOADED FITTING

1020							Explosion Proof RTD Assembly						
Code		Configuration											
		Element	Accuracy	Temperature Coefficient	Color Code								
P2B3S	Platinum, Single, 3 Wire	100 Ohm +/- .12% at 0°C	.00385	Red/White/White									
P2B3D	Platinum, Dual, 3 Wire	100 Ohm +/- .12% at 0°C	.00385	Red/White/White // Blue/Yellow/Yellow									
P2B4S	Platinum, Single, 4 Wire	100 Ohm +/- .12% at 0°C	.00385	Red/Red/White/White									
P2A3S	Platinum, Single, 3 Wire	100 Ohm +/- .06% at 0°C	.00385	Red/White/White									
P2A3D	Platinum, Dual, 3 Wire	100 Ohm +/- .06% at 0°C	.00385	Red/White/White // Blue/Yellow/Yellow									
P2A4S	Platinum, Single, 4 Wire	100 Ohm +/- .06% at 0°C	.00385	Red/Red/White/White									
G2C3S	Platinum, Single, 3 Wire	100 Ohm +/- .5% at 0°C	.00392	Red/White/White									
G2C3D	Platinum, Dual, 3 Wire	100 Ohm +/- .5% at 0°C	.00392	Red/White/White // Blue/Yellow/Yellow									
G2C4S	Platinum, Single, 4 Wire	100 Ohm +/- .5% at 0°C	.00392	Red/Red/White/White									
P6B3S	Platinum, Single, 3 Wire	1,000 Ohm +/- .12% at 0°C	.00385	Red/White/White									
P6B3D	Platinum, Dual, 3 Wire	1,000 Ohm +/- .12% at 0°C	.00385	Red/White/White // Blue/Yellow/Yellow									
P6B4S	Platinum, Single, 4 Wire	1,000 Ohm +/- .12% at 0°C	.00385	Red/Red/White/White									
C1D3S	Copper, Single, 3 Wire	10 Ohm +/- .2% at 25°C	.00427	Red/White/White									
C1D4S	Copper, Single, 4 Wire	10 Ohm +/- .2% at 25°C	.00427	Red/Red/White/White									
N3C3S	Nickel, Single, 3 Wire	120 Ohm +/- .5% at 0°C	.00672	Red/White/White									
N3C3D	Nickel, Dual, 3 Wire	120 Ohm +/- .5% at 0°C	.00672	Red/White/White // Blue/Yellow/Yellow									
N3C4S	Nickel, Single, 4 Wire	120 Ohm +/- .5% at 0°C	.00672	Red/Red/White/White									
Code		'L' Insertion Length											
000		Specify in Inches (245 = 24.5) Minimum 1.0 inch and Maximum of 40.0 inches; 0.5 inch increments											
Code		Connection Head (Fiberglass Terminal Block Included)											
R		Large Aluminum Explosion Proof											
S		Large Stainless Steel Explosion Proof											
Code		Connection Head Conduit Thread											
4		1/2" NPT											
5		3/4" NPT											
6		M20 x 1.5, (Not for use in Canadian Divisions)											
Code		Spring Loaded Quick Release Fitting											
F		3/4" NPT Conduit x 1/2" NPT Process											
G		3/4" NPT Conduit x G 1/2 NPT Process											
Code		Sheath Diameter											
D		.215" Diameter											
E		.236" Diameter, (6mm)											
C		.250" Diameter											
							Enter Desired Part Number Here						
1020	P2B3S	125	R	5	F	D	Example Part Number						



Explosion Proof Bearing Assembly Tip Sensitive with Transmitter

Class 1021

QUICK RELEASE, SPRING LOADED FITTING



Class 1021 Overview – Explosion Proof RTD Assemblies

- Tip sensitive, spring-loaded temperature sensor assembly.
- Used in electric motors and generators for continuous sensing of the temperature of the bearings
- Approved for use in explosion proof and flameproof applications
- U.S. or European threads available

Additional Specifications

Temperature Range (Process):

-50 to 260°C

Material:

Tip-sensitive probe: stainless steel with copper or aluminum tip

- aluminum tip required for all ATEX Group IIC applications (acetylene gas atmosphere)

Spring-loaded, Quick Release Fittings: stainless steel

Connection Head: epoxy-coated aluminum or stainless steel

Transmitter: 94V-0 Rated

Pressure Rating:

50 psi (3.4 bar)

Insulation Resistance:

1,000 megohms minimum between element and case at 500 VDC

100 megohms minimum between elements at 500 VDC (dual RTD sensors only)

Time Constant (typical 3 ft/sec in moving water):

3 seconds

Explosion Proof and Flameproof Ratings:

National and Canadian Electrical Code

Class I, Division 1, Groups B, C, and D

Class II/III, Division 1, Groups E, F, and G

T5 (Ta=80°C), T6 (Ta=65°C)

National Electrical Code (Article 505)

Class I, Zone 1, AEx d IIC

T5 (Ta=80°C), T6 (Ta=65°C)

Canadian Electrical Code (IEC 60079)

Class I, Zone 1, Ex d IIC

T5 (Ta=80°C), T6 (Ta=65°C)

ATEX

II 2 G Ex d IIC T5 (Ta=80°C), T6 (Ta=65°C) Gb

Hazardous Location Rating Verification:

For RFQ's and orders, please specify

Hazardous Location Rating requirements.

Transmitter Specifications

Output:

4 to 20 mA over specified range, linear with temperature

Calibration Accuracy:

RTD - max. of +/-0.1% or +/-0.2°C of span

TC - max. of +/-0.1% or +/-20µV of span

Linearity:

RTD - 0.1% of span

TC - 0.2% of span

Ambient Operating Temperature:

-40 to 85°C

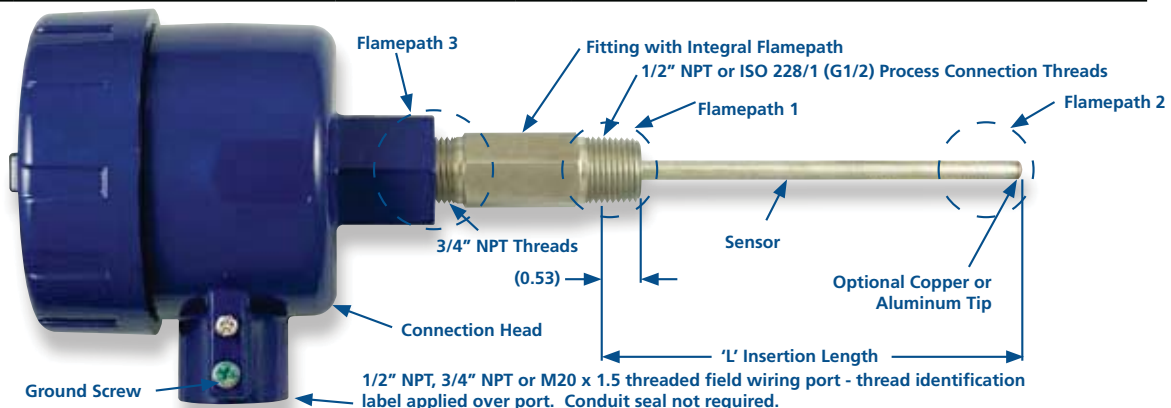
Supply Voltage:

8 to 32 VDC

Explosion Proof Bearing Assembly Tip Sensitive with Transmitter

Class 1021
QUICK RELEASE, SPRING LOADED FITTING

1021 Explosion Proof RTD Assembly with Transmitter											
Code	Configuration										
	Element	Accuracy	Temperature Coefficient	Color Code							
P2B3S	Platinum, Single, 3 Wire	100 Ohm +/- .12% at 0°C	.00385	Red/White/White							
P2B3D	Platinum, Dual, 3 Wire	100 Ohm +/- .12% at 0°C	.00385	Red/White/White // Blue/Yellow/Yellow							
P2B4S	Platinum, Single, 4 Wire	100 Ohm +/- .12% at 0°C	.00385	Red/Red/White/White							
P2A3S	Platinum, Single, 3 Wire	100 Ohm +/- .06% at 0°C	.00385	Red/White/White							
P2A3D	Platinum, Dual, 3 Wire	100 Ohm +/- .06% at 0°C	.00385	Red/White/White // Blue/Yellow/Yellow							
P2A4S	Platinum, Single, 4 Wire	100 Ohm +/- .06% at 0°C	.00385	Red/Red/White/White							
G2C3S	Platinum, Single, 3 Wire	100 Ohm +/- .5% at 0°C	.00392	Red/White/White							
G2C3D	Platinum, Dual, 3 Wire	100 Ohm +/- .5% at 0°C	.00392	Red/White/White // Blue/Yellow/Yellow							
G2C4S	Platinum, Single, 4 Wire	100 Ohm +/- .5% at 0°C	.00392	Red/Red/White/White							
P6B3S	Platinum, Single, 3 Wire	1,000 Ohm +/- .12% at 0°C	.00385	Red/White/White							
P6B3D	Platinum, Dual, 3 Wire	1,000 Ohm +/- .12% at 0°C	.00385	Red/White/White // Blue/Yellow/Yellow							
P6B4S	Platinum, Single, 4 Wire	1,000 Ohm +/- .12% at 0°C	.00385	Red/Red/White/White							
C1D3S	Copper, Single, 3 Wire	10 Ohm +/- .2% at 25°C	.00427	Red/White/White							
C1D4S	Copper, Single, 4 Wire	10 Ohm +/- .2% at 25°C	.00427	Red/Red/White/White							
N3C3S	Nickel, Single, 3 Wire	120 Ohm +/- .5% at 0°C	.00672	Red/White/White							
N3C3D	Nickel, Dual, 3 Wire	120 Ohm +/- .5% at 0°C	.00672	Red/White/White // Blue/Yellow/Yellow							
N3C4S	Nickel, Single, 4 Wire	120 Ohm +/- .5% at 0°C	.00672	Red/Red/White/White							
Code	'L' Insertion Length										
000	Specify in Inches (245 = 24.5) Minimum 1.0 inch and Maximum of 40.0 inches; 0.5 inch increments										
Code	Connection Head (Fiberglass Terminal Block Included)										
R	Large Aluminum Explosion Proof										
S	Large Stainless Steel Explosion Proof										
Code	Connection Head Conduit Thread										
4	1/2" NPT										
5	3/4" NPT										
6	M20 x 1.5, (Not for use in Canadian Divisions)										
Code	Spring Loaded Quick Release Fitting										
F	3/4" NPT Conduit x 1/2" NPT Process										
G	3/4" NPT Conduit x G 1/2 NPT Process										
Code	Sheath Diameter										
D	.215" Diameter										
E	.236" Diameter, (6mm)										
C	.250" Diameter										
Code	Transmitter										
T	Programmable Analog Transmitter 10°C min. span (Ni and Pt), 100°C min. span (Cu)										
Code	Transmitter Minimum Temperature -50°C (4mA output)										
N50	Use "N" to designate negative temperatures Use "P" for positive temperatures Example N50 = negative 50 degrees										
Code	Transmitter Maximum Temperature +260°C (20mA output)										
P100	Use "N" to designate negative temperatures Use "P" for positive temperatures Example P100 = positive 100 degrees										
Code	Temperature Scale										
F	Fahrenheit										
C	Celsius										
Enter Desired Part Number Here											
1021	P2B3S	125	R	5	F	D	T	N50	P100	C	Example Part Number



Fax Free: 888.873.5033

WWW.RTDCOMPANY.COM

Toll Free: 800.899.9783

Explosion Proof Bearing Assembly Tip Sensitive Thermocouple

Class 1022

QUICK RELEASE, SPRING LOADED FITTING



Class 1022 Overview – Explosion Proof Thermocouple Assemblies

- Tip sensitive, spring-loaded temperature sensor assembly.
- Used in electric motors and generators for continuous sensing of the temperature of the bearings
- Approved for use in explosion proof and flameproof applications
- U.S. or European threads available

Additional Specifications

Temperature Range (Process):

-50 to 260°C

Material:

Tip-sensitive probe: stainless steel with copper or aluminum tip (application dependent)

Spring-loaded, Quick Release Fittings: stainless steel

Connection Head: epoxy-coated aluminum or stainless steel

Terminal Block: 94V-0 rated fiberglass

Pressure Rating:

50 psi (3.4 bar)

Insulation Resistance:

1,000 megohms minimum between element and case at 500 VDC (Ungrounded TC Only)

Time Constant (typical 3 ft/sec in moving water):

3 seconds

Explosion Proof and Flameproof Ratings:

National and Canadian Electrical Code

Class I, Division 1, Groups B, C, and D

Class II/III, Division 1, Groups E, F, and G

T5 (Ta=80°C), T6 (Ta=65°C)

National Electrical Code (Article 505)

Class I, Zone 1, AEx d IIC

T5 (Ta=80°C), T6 (Ta=65°C)

Canadian Electrical Code (IEC 60079)

Class I, Zone 1, Ex d IIC

T5 (Ta=80°C), T6 (Ta=65°C)

ATEX

II 2 G Ex d IIC T5 (Ta=80°C), T6 (Ta=65°C) Gb

Hazardous Location Rating Verification:

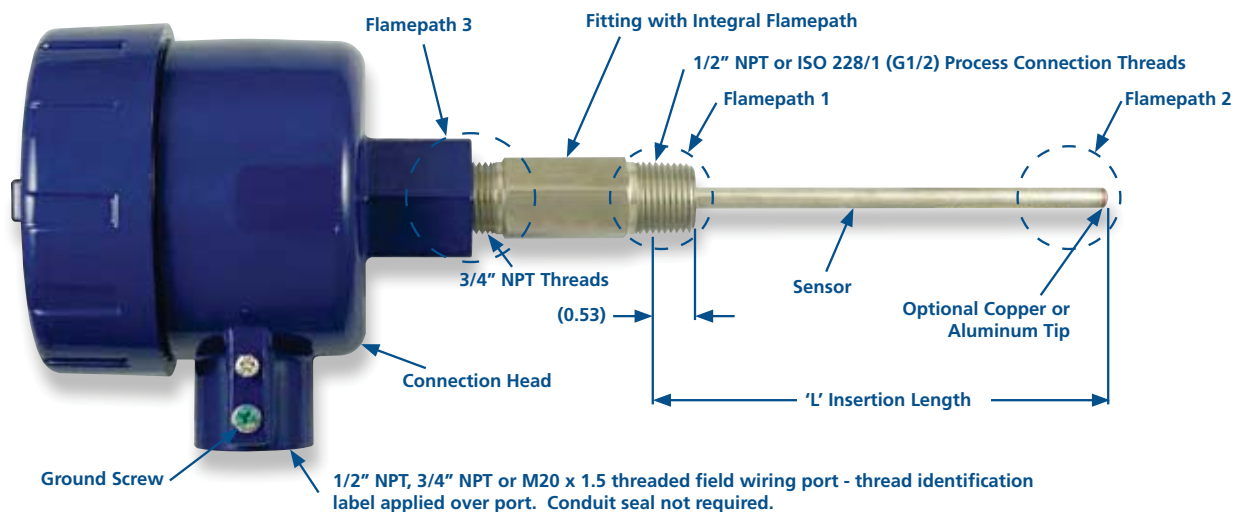
For RFQ's and orders, please specify Hazardous Location Rating requirements.

Explosion Proof Bearing Assembly Tip Sensitive Thermocouple

Class 1022

QUICK RELEASE, SPRING LOADED FITTING

1022 Explosion Proof Thermocouple Assembly								
Code	Accuracy							
	Type	Element	Color Code					
T	T	Single	Red/Blue					
J	J	Single	Red/White					
K	K	Single	Red/Yellow					
E	E	Single	Red/Purple					
TT	T	Dual	Red/Blue // Red/Blue					
JJ	J	Dual	Red/White // Red/White					
KK	K	Dual	Red/Yellow // Red/Yellow					
EE	E	Dual	Red/Purple // Red/Purple					
	Code	Junction Style						
	G	Grounded						
	U	Ungrounded						
	Code	'L' Insertion Length						
	000	Specify in Inches (245 = 24.5) Minimum 1.0 inch and Maximum of 40.0 inches; 0.5 inch increments						
	Code	Connection Head (Fiberglass Terminal Block Included)						
	R	Large Aluminum Explosion Proof						
	S	Large Stainless Steel Explosion Proof						
	Code	Connection Head Conduit Thread						
	4	1/2" NPT						
	5	3/4" NPT						
	6	M20 x 1.5, (Not for use in Canadian Divisions)						
	Code	Spring Loaded Quick Release Fitting						
	F	3/4" NPT Conduit x 1/2" NPT Process						
	G	3/4" NPT Conduit x G 1/2 NPT Process						
	Code	Sheath Diameter						
	D	.215" Diameter						
	E	.236" Diameter, (6mm)						
	C	.250" Diameter						
Enter Desired Part Number Here								
1022	J	G	125	R	5	F	D	Example Part Number



Explosion Proof Bearing Assembly Tip Sensitive Thermocouple with Transmitter

Class 1023

QUICK RELEASE, SPRING LOADED FITTING



Class 1023 Overview – Explosion Proof Thermocouple Assemblies

- Tip sensitive, spring-loaded temperature sensor assembly.
- Used in electric motors and generators for continuous sensing of the temperature of the bearings
- Approved for use in explosion proof and flameproof applications
- U.S. or European threads available

Additional Specifications

Temperature Range (Process):

-50 to 260°C

Material:

Tip-sensitive probe: stainless steel with copper or aluminum tip (application dependent)

Spring-loaded, Quick Release Fittings: stainless steel

Connection Head: epoxy-coated aluminum or stainless steel

Transmitter: 94V-0 Rated

Pressure Rating:

50 psi (3.4 bar)

Insulation Resistance:

1,000 megohms minimum between element and case at 500 VDC (Ungrounded TC Only)

Time Constant (typical 3 ft/sec in moving water):

3 seconds

Explosion Proof and Flameproof Ratings:

National and Canadian Electrical Code

Class I, Division 1, Groups B, C, and D

Class II/III, Division 1, Groups E, F, and G

T5 (Ta=80°C), T6 (Ta=65°C)

National Electrical Code (Article 505)

Class I, Zone 1, AEx d IIC

T5 (Ta=80°C), T6 (Ta=65°C)

Canadian Electrical Code (IEC 60079)

Class I, Zone 1, Ex d IIC

T5 (Ta=80°C), T6 (Ta=65°C)

ATEX

II 2 G Ex d IIC T5 (Ta=80°C), T6 (Ta=65°C) Gb

Hazardous Location Rating Verification:

For RFQ's and orders, please specify Hazardous Location Rating requirements.

Transmitter Specifications

Output:

4 to 20 mA over specified range, linear with temperature

Calibration Accuracy:

RTD - max. of +/-0.1% or +/-0.2°C of span

TC - max. of +/-0.1% or +/-20µV of span

Linearity:

RTD - 0.1% of span

TC - 0.2% of span

Ambient Operating Temperature:

-40 to 85°C

Supply Voltage:

8 to 32 VDC

Explosion Proof Bearing Assembly Tip Sensitive Thermocouple with Transmitter

Class 1023
QUICK RELEASE, SPRING LOADED FITTING

1023	Explosion Proof Thermocouple Assembly with Transmitter											
Code	Accuracy											
	Type	Element						Color Code				
T	T	Single						Red/Blue				
J	J	Single						Red/White				
K	K	Single						Red/Yellow				
E	E	Single						Red/Purple				
TT	T	Dual						Red/Blue // Red/Blue				
JJ	J	Dual						Red/White // Red/White				
KK	K	Dual						Red/Yellow // Red/Yellow				
EE	E	Dual						Red/Purple // Red/Purple				
Code	Junction Style											
	G	Grounded										
U	Ungrounded											
Code	'L' Insertion Length											
	000	Specify in Inches (245 = 24.5) Minimum 1.0 inch and Maximum of 40.0 inches; 0.5 inch increments										
Code	Connection Head (Fiberglass Terminal Block Included)											
	R	Large Aluminum Explosion Proof										
S	Large Stainless Steel Explosion Proof											
Code	Connection Head Conduit Thread											
	4	1/2" NPT										
5	3/4" NPT											
6	M20 x 1.5, (Not for use in Canadian Divisions)											
Code	Spring Loaded Quick Release Fitting											
	F	3/4" NPT Conduit x 1/2" NPT Process										
G	3/4" NPT Conduit x G 1/2 NPT Process											
Code	Sheath Diameter											
	D	.215" Diameter										
E	.236" Diameter, (6mm)											
C	.250" Diameter											
Code	Transmitter											
	T	Programmable Analog Transmitter 50°C min. span for thermocouples										
Code	Transmitter Minimum Temperature -50°C (4mA output)											
	N50	Use "N" to designate negative temperatures Use "P" for positive temperatures Example N50 = negative 50 degrees										
Code	Transmitter Maximum Temperature +260°C (20mA output)											
	P100	Use "N" to designate negative temperatures Use "P" for positive temperatures Example P100 = positive 100 degrees										
Code	Temperature Scale											
	F	Fahrenheit										
C	Celsius											
Enter Desired Part Number Here												
1023	J	G	125	R	5	F	D	T	N50	P100	C	Example Part Number

(See page 34 for product photo and details.)