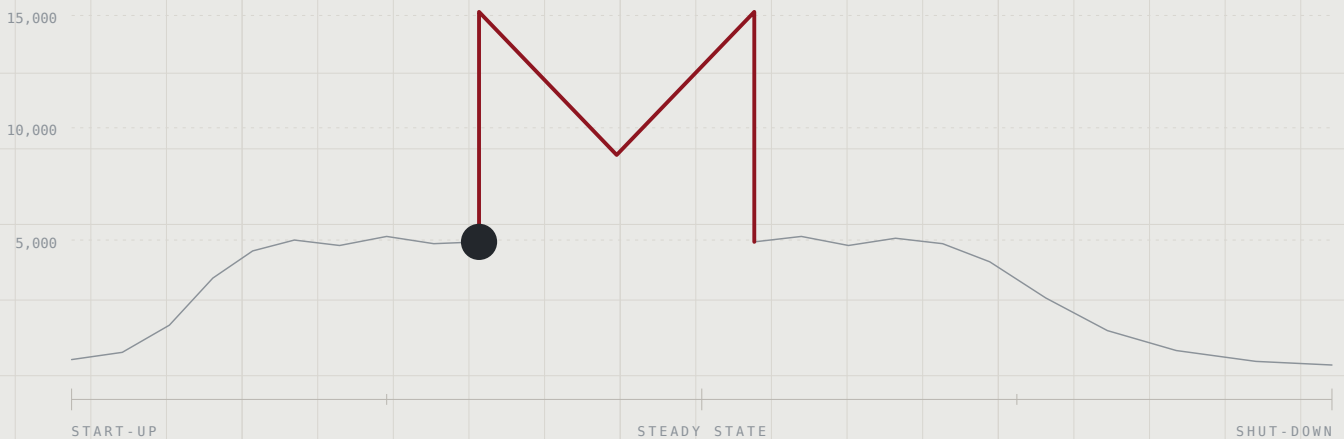




PRODUCT CATALOGUE

Melt pressure transducers & transmitters

Strain-gauge melt pressure instrumentation for plastics extrusion, compounding and moulding. Standard, mercury-free, NaK and FDA oil fills. Ranges from 300 to 30,000 psi. Inconel diaphragm as standard, not as an upgrade.



DIRECT REPLACEMENT FOR

Dynisco

Gefran

Gentran

Terwin

ISI

GP50



How to Specify

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HOW TO READ A MELTMAN PART NUMBER

GG

FILL

Standard

FS

BODY

Flexible stem

1

LENGTH

6" + 18"

—

A

OUTPUT

3.3 mV/V

P

UNIT

psi × 1000

5

RANGE

0–5,000 psi

—

6B

CONNECTOR

6-pin bayonet

SI

DIAPHRAGM

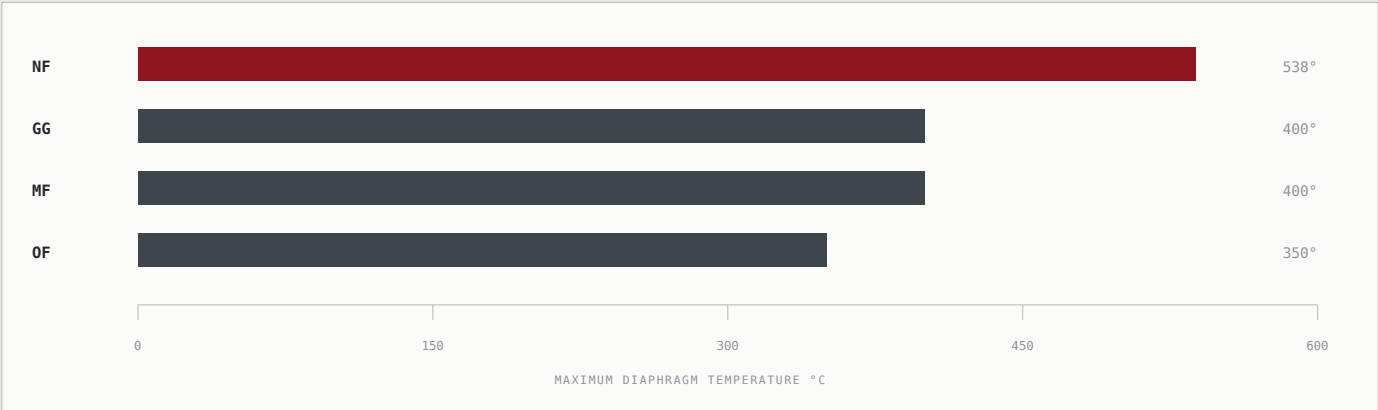
Std Inconel

Pressure code × unit multiplier = range. P 5 = 5,000 psi · B 3 = 300 bar. Thread and option codes are appended after the diaphragm code. Fill and body are independent — any of the four fills can be supplied in any of the five body types, with any output.

CHOOSING A FILL

CODE	FILL	MAX DIAPHRAGM TEMP	MERCURY FREE	SPECIFY WHEN
GG	Standard, fluid filled	750°F (400°C)	No	General extrusion, compounding and moulding
MF	Mercury free	750°F (400°C)	Yes	Plant policy, customer requirement or market regulation excludes mercury
NF	NaK	1000°F (538°C)	Yes	High-temperature engineering polymers; food, medical and pharmaceutical processes
OF	Diathermic oil, FDA	650°F (350°C)	Yes	Lower-temperature processes where FDA approval of the fill is the governing requirement

FILL & CEILING



Start with temperature. It removes options absolutely. Then apply the sanitary question — food, medical and pharmaceutical processes exclude mercury regardless of temperature. Whatever survives both is your fill. Then choose the body type from page 03 according to the space you have and whether you need melt temperature from the same hole.



Body Types

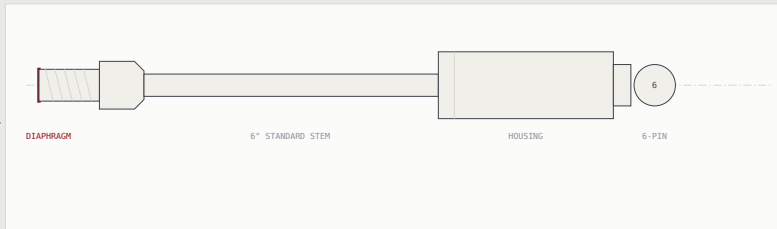
ANY FILL · ANY OUTPUT

All five body types are available in every fill — GG, MF, NF and OF — and with every output, from 3.3 mV/V transducers to 4–20 mA and voltage-output transmitters. Drawings are representative and not to scale.

RS

Rigid stem

Transducer / transmitter



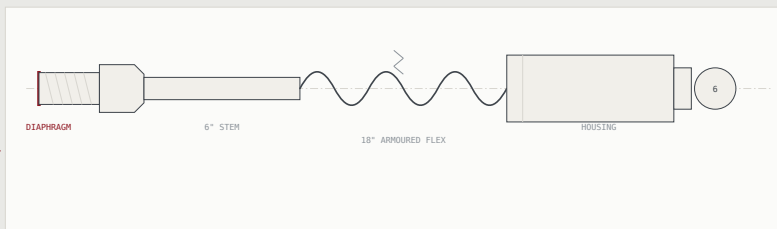
Housing sits directly at the mounting point. Simplest to install, lowest cost, and correct wherever there is room for it and the electronics are not in a hot spot.

Length 1 3" 2 6" 4 8" 5 9" 6 12"

FS

Rigid stem + flexible capillary

Transducer / transmitter



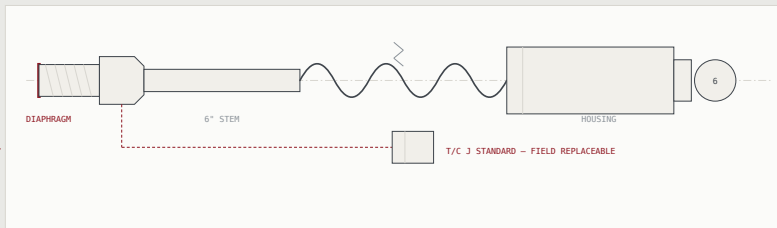
Armoured flexible capillary moves the housing away from the machine. The electronics sit somewhere cooler, and the connector can be positioned where a cable can actually be routed.

Length 1 6"+18" 2 12"+18" 3 6"+30" 4 12"+30" 5 8"+18" 6 9"+18" 7 3"+18"

PT

Pressure + temperature

Transducer / transmitter



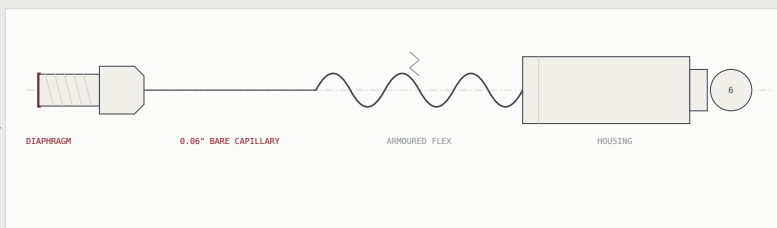
A temperature sensor behind the pressure diaphragm gives both readings from a single mounting hole. Field replaceable without removing the pressure sensor, which matters because thermocouples fail more often than diaphragms do.

Length as FS · sensor – T/C J TK T/C K RT Pt100

NS

Narrow space

Transducer / transmitter



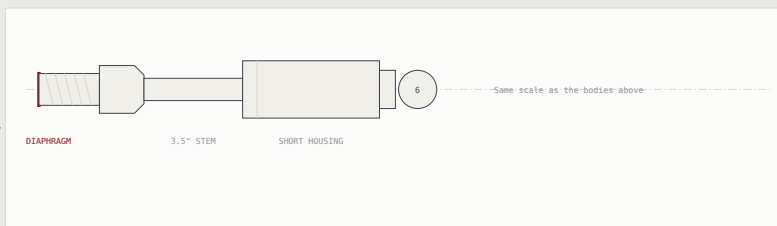
Die faces, adapter blocks and screen changers are crowded, and "there is no room for the sensor" is a common reason a measurement point goes unmonitored. NS removes the rigid stem entirely.

Length A 28" flex B 60" flex C 10" cap + 18" flex D 10" cap + 30" flex

CP

Compact

Transducer / transmitter



A shortened body for installations where axial clearance behind the mounting point is the constraint rather than radial space. Same diaphragm, same bridge, same fills.

Length 3 3.5" stem · from 0–1,000 psi



Fills & Specification

GG · MF · NF · OF

HOW THE SENSOR WORKS

A melt pressure sensor does not measure pressure where you read it. Process pressure deflects a thin diaphragm at the tip. A sealed, fluid-filled capillary transmits that deflection to a second diaphragm inside the housing, several inches away and much cooler, where a four-active-arm 350 Ω Wheatstone bridge converts it to a millivolt signal proportional to pressure. An internal shunt calibration resistor lets you verify sensor and instrument agree at 80% of full scale without a pressure source. The fluid in that capillary is what the fill code selects, and it governs the temperature the sensor will survive.

GG — STANDARD, FLUID FILLED

The industry reference, and the sensor most extrusion lines are already running. Excellent temperature stability across a wide band, which is what keeps the reading honest as a barrel heats up and settles.

750°F (400°C) · 0.5% FS · 15 psi/100°F

MF — MERCURY FREE

Mechanically and electrically identical to GG, with a mercury-free fill. Same rating, same bodies, same mounting. Specify where mercury is excluded by plant policy, customer requirement, or regulation in the market you ship into.

750°F (400°C) · 0.5% FS · 18 psi/100°F

NF — NaK

Sodium-potassium fill raises the ceiling well past what any other fill will tolerate. High temperature — PEEK, PEI, PPS and high-temperature polyamides. Sanitary processes — food, medical and pharmaceutical work, where the fill must be regarded as safe in the event of a breach.

1000°F (538°C) · 1.0% FS · 10 psi/100°F

OF — DIATHERMIC OIL, FDA

FDA-approved fill for lower-temperature processes where approval of the fill itself is the governing requirement. The ceiling is the constraint — inside the window for food-contact and medical tubing work, but it will not survive a high-temperature engineering polymer.

650°F (350°C)

DIAPHRAGM SELECTION

CODE	MATERIAL	SPECIFY FOR
SI	Standard Inconel	General purpose. Fitted as standard, not charged as an upgrade — the tip is where these sensors fail, so that is where the material belongs
IT	Inconel tip + threads	Where the thread as well as the tip is exposed to melt
HT	Hastelloy tip + threads	Corrosive melts — PVC, halogenated and fluoropolymers
TN	Titanium nitride	Abrasive melts — glass-filled and mineral-filled compounds
TA	Ti aluminium nitride	Abrasive melts at higher temperature
CN	Chromium nitride	Alternative hard coating for abrasive service
DP	Diamond particulate	Extreme abrasion — heavily filled compounds, contaminated regrind

SPECIFICATIONS — COMMON TO ALL BODIES AND FILLS UNLESS NOTED

MECHANICAL		TEMPERATURE		ELECTRICAL	
Ranges	0–300 to 0–30,000 psi	Max diaph. GG/MF	750°F (400°C)	Sensor	350 Ω bridge
Combined error	0.5% of FS	Max diaph. NF	1000°F (538°C)	Standard output	3.3 mV/V
NF fill	1.0% of FS	Max diaph. OF	650°F (350°C)	Int. shunt cal	80% of FS
Optional accuracy	0.25% of FS	Max housing	250°F (120°C)	Excitation, mV/V	7–12 V (10 V rec.)
Repeatability	±0.2%	Zero shift GG	15 psi/100°F	Supply, 4–20 mA	14–36 VDC
Overload	2× full scale	Zero shift MF/NF	18 / 10 psi/100°F	Supply, 0–10 V	14–36 VDC
Mount torque	150–500 in-lb	Zero shift, elect.	1%/100°F	Supply, 0–5 V	11–36 VDC



Complete Order Code

ALL FILLS · ALL BODIES

One code covers the whole range — fill × body × length × output

ORDER CODE

XX XX X — X X XX — XX XX — opt

FILL	BODY	LENGTH — RS & CP	LENGTH — FS & PT
GG Standard	RS Rigid stem	1 3" 2 6"	1 6"+18" 2 12"+18"
MF Mercury free	FS Stem + flex	4 8" 5 9"	3 6"+30" 4 12"+30"
NF NaK	PT Pressure + temp	6 12"	5 8"+18" 6 9"+18"
OF Oil, FDA	NS Narrow space	3 3.5" — CP only	7 3"+18"
	CP Compact		

LENGTH — NS	OUTPUT	PRESSURE UNIT	PRESSURE
A 28" flex	A 3.3 mV/V	P psi × 1000	0.3 0.5 0.75
B 60" flex	B 2.5 mV/V	B bar × 100	1 1.5 3 5
C 10" cap + 18" flex	H 2.0 mV/V	M MPa	7.5 10 15
D 10" cap + 30" flex	C 4–20 mA	K kg/cm²	20 30
	D 0–5 VDC		
	E 1–5 VDC		
	F 0–10 VDC		
	G 4–20 mA wire		

CONNECTOR	DIAPHRAGM	THREAD	OPTIONS — APPEND AS NEEDED
6B 6-pin bayonet	SI Standard Inconel	— 1/2"-20 UNF	— T/C J — PT standard
6S 6-pin screw	CN Chromium nitride	18 M18×1.5	TK Thermocouple K
8S 8-pin screw	TN Titanium nitride	14 M14×1.5	RT Pt100 RTD
CS 5-pin China standard	TA Ti aluminium nitride	10 M10×1.0	25 0.25% accuracy
4D 4-pin DIN	IT Inconel tip + threads		EV Epoxy fill
.5T 1/2"NPT + 36" Teflon	HT Hastelloy tip + threads		W TIG welded can + epoxy
	DP Diamond particulate		IP IP65 washdown
			VO Voltage output, 3 wire
			RL Remote + local zero

WORKED EXAMPLES

PART NUMBER	READS AS
GGRS2-AP5-6BSI	Standard fill, rigid stem 6", 3.3 mV/V, 0–5,000 psi, 6-pin bayonet, standard Inconel, 1/2"-20 UNF
GGFS1-CP10-6BSI	Standard fill, stem + flex 6"+18", 4–20 mA transmitter, 0–10,000 psi, 6-pin bayonet, standard Inconel
NFPT1-AP10-6BIT-TK	NaK fill, pressure + temperature, 6"+18", 3.3 mV/V, 0–10,000 psi, 6-pin bayonet, Inconel tip and threads, thermocouple K
MFNSC-AP5-6BHT-18	Mercury-free fill, narrow space, 10" capillary + 18" flex, 3.3 mV/V, 0–5,000 psi, 6-pin bayonet, Hastelloy tip and threads, M18×1.5
OFRS2-AB3-6BSI-25	FDA oil fill, rigid stem 6", 3.3 mV/V, 0–300 bar, 6-pin bayonet, standard Inconel, 0.25% accuracy

Not sure which code you need? Give us the process conditions — melt temperature, working pressure, polymer, the space around the mounting point and what the sensor connects to — and we will build the part number for you. If you are replacing a competitor sensor, the part number on the old unit is usually all we need.



Accessories, Technical Notes & Contact

REFERENCE

CABLES & CONNECTORS

JACKET	RATING	SPECIFY WHEN
PVC	105°C	Routed away from the barrel, no mechanical exposure
PTFE	200°C	Close to heated zones, oils or solvents present
PTFE + braid	200°C	Abrasion, or where the cable is handled often
PTFE + armour	200°C	Crush risk — trays, walkways, trolley routes

MOUNTING & HOLE PREPARATION

ITEM	DETAIL
Hole cut kits	1/2"-20 UNF · M18×1.5 · 5/8"-11 · 3/4"-16
Hole clean kits	Same thread sizes
Tip spacers	0.025 · 0.032 · 0.045 · 0.063 · 0.090"
Hole plugs	Slot · 3" hex · 6" hex
Thread adaptors	M18 → 1/2"-20 UNF
Mounting brackets	All flex-stem builds

TECHNICAL NOTES

MOUNTING HOLE

A sensor reads what is in front of its diaphragm. Polymer that has degraded and carbonised in the bore ahead of the tip will falsify the reading, and no amount of recalibration will fix it.

The diaphragm should finish flush with the bore wall. Proud, and it takes abrasive impact. Recessed, and polymer stagnates in front of it.

Torque to 150–500 in-lb. Under-tightening leaks; over-tightening distorts the diaphragm and shifts the zero permanently.

Fit a hole plug whenever a sensor is out. An open bore fills with degraded polymer.

ZERO & SHUNT CALIBRATION

Zero drift with temperature is normal and specified. Zero the sensor at operating temperature, not cold.

Internal shunt calibration unbalances the bridge by a known amount equal to 80% of full scale, letting you verify that sensor and instrument agree without a pressure source.

It checks the electrical path, not the diaphragm. A shunt calibration will pass on a sensor with a coated or blocked tip.

Choose a full scale that puts normal running pressure near mid-span, not at the bottom.

DIAPHRAGM SELECTION

Abrasion thins the diaphragm until it ruptures. Filled compounds and contaminated regrind do this. Answer with a hard coating — TN, TA or DP.

Corrosion attacks the metal chemically and can perforate a diaphragm showing no wear at all. Change the base alloy — HT or IT — because a coating with a pinhole is no protection.

Seeing both? Coat a corrosion-resistant base.

CROSS-REFERENCE

Direct replacement for Dynisco, Gefran, Gentran, Terwin, ISI and GP50. Send us the part number from the sensor you are replacing — or a photograph of the label if it is unreadable — and we will confirm the Meltman equivalent, with no wiring changes and no modification to the mounting bore. If you have no number at all, tell us the machine make and model and we will work backwards.

WARRANTY & SUPPORT

Warranty	One year against manufacturing defects
Support	Every enquiry is read by someone who understands the products
Hours	Monday to Saturday, business hours IST

CONTACT

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