

GWR Solids Before ordering, validate your selections with a sales rep, as not all options are offered for every configuration.

Model Type		GWR-2000 Guided Wave Radar for Solids										
GW2												
Approvals												
CC		CC - CSA (IS) Class I, II, III, Div 1, Groups A, B, C, D, E, F, G										
CE		CE - CSA (XP) Class I, Div 1, Groups A, B, C, D, (DIP) Class II, III Div 1, Groups E, F, G										
CR		CR - CSA (DIP) Class II, DIV 1 Groups E, F, G										
IX		IX - Designed for unclassified area, non-EX environment										
FC		FC - FM (IS) Class I, II, III, Div 1, Groups A, B, C, D, E, F, G										
FR		FR - FM (DIP) Class II, DIV 1 Groups E, F, G										
FE		FE - FM (XP) Class I, Div 1, Groups A, B, C, D, (DIP) Class II, III Div 1, Groups E, F, G										
FA		FA - FM (NI) CL I, II, III, DIV2, GP ABCDFG										
Version												
A		A - Threaded connection to sensor for 4 mm cable										
F		F - Threaded connection to sensor for 8 mm cable or 5/8" rod										
H		H - Threaded connection for 16 mm cable or Rod										
Mounting												
TD		TD - Thread 3/4" NPT PN40, ASME B1.20.1 / 316L										
TH		TH - 1.5" NPT PN40, ASME B1.20.1 / 316L										
TK		TK - 2.0" NPT PN40, ASME B1.20.1 / 316L										
AB		AB - 2" 150lb RF, ASME B16.5 / 316/316L										
AC		AC - Flange 2" 300lb RF, ASME B16.5 / 316/316L										
AD		AD - 3" 150lb RF, ASME B16.5 / 316/316L										
AG		AG - 4" 150lb RF, ASME B16.5 / 316/316L										
Seal												
F		F - FKM (SHS FPM 70C3 GLT) / -40°F to +302°F (150°C)										
H		H - EPDM (A+P 75.5 / KW75F) / -40°F to +302°F (150°C)										
K		K - FFKM (Kalrez 6375) / -4°F (20°C) to +392°F (200°C)										
Output												
H		H - Two wire 4-20mA / HART*; 12-35V DC										
U		U - Four-wire Modbus (Requires Dual Chamber Housing); 8-30V DC										
I		I - Four-wire 4-20mA / HART*; 9.6-48V DC; 20-42V AC (Requires Dual Chamber Housing)										
B		B - Four-wire 4-20mA / HART*; 90-253 VAC; 50/60Hz (Requires Dual Chamber Housing)										
Housing												
A		A - Aluminium single chamber / IP66/IP68 (0.2bar)										
K		K - Plastic single chamber / IP66/IP67										
8		8 - Stainless steel single chamber (electropolished) / IP66/IP68 (0.2 bar)										
R		R - Plastic double chamber / IP66/IP67										
D		D - Aluminium double chamber / IP66/IP67										
W		W - Stainless steel double chamber / IP66/IP67										
Connection												
N		N - Two 1/2" NPT / blind plug in one opening										
Q		Q - Two 1/2" NPT / without plug in either opening										
Display												
X		X - Without inspection window or BinDisc										
A		A - Bindisc top mounted with display window										
F		F - Top mounted without BinDisc with inspection window										
B		B - Side mounted BinDisc with window										
K		K - Bindisc top mounted with display window & bluetooth communication BinDisc										
Probe/Rod												
XXX	X	None										
CXX		ft. single flexible 8 mm diameter 316 stainless steel cable, with counter weight (95 ft. maximum)										
RXX		in. solid 16mm diameter 316 stainless steel sensing rod (96 in. maximum)										
KXX		ft. single flexible 4 mm diameter 316 stainless steel cable, with counter weight (75 ft. maximum)										
GW2	.	IX	F	TH	F	H	A	N	A	X	00	Example Part Number



Guided Wave Radar for Solids

Guided wave radar provides highly accurate, continuous level measurement utilizing time domain reflectometry (TDR) to measure the distance, level, and volume of material contained in bins, tanks, and silos. It performs reliably and is immune to dust, humidity, temperature, pressure, and bulk density changes as well as noise that might be present when filling or emptying the vessel.

Description	CODE	Part No.
POWER PAC		
GWR-2000 Guided Wave Radar	GW2.	
APPROVALS		
Approvals: CC - CSA (IS) Class I, II, III, Div 1, Groups A, B, C, D, E, F, G	CC	
Approvals: CE - CSA (XP) Class I, Div 1, Groups A, B, C, D, (DIP) Class II, III Div 1, Groups E, F, G	CE	
Approvals: CR - CSA (DIP) Class II, DIV 1 Groups E, F, G	CR	
Approvals: IX - Designed for unclassified area, non-EX environment	IX	
Approvals: FC - FM (IS) Class I, II, III, Div 1, Groups A, B, C, D, E, F, G	FC	
Approvals: FR - FM (DIP) Class II, DIV 1 Groups E, F, G	FR	
Approvals: FE - FM (XP) Class I, Div 1, Groups A, B, C, D, (DIP) Class II, III Div 1, Groups E, F, G	FE	
Approvals: FA - FM (NI) Class I, II, III, Div 1, Groups A, B, C, D, E, F, G	FA	
VERSION		
Version: A - Threaded connection to sensor for 4 mm cable	A	
Version: F - Threaded connection to sensor for 8 mm cable or 5/8" rod	F	
Version: H - Threaded connection for 16 mm cable or Rod	H	
MOUNTING		
Mounting: TH - 1-1/2" NPT PN40, ASME B1.20.1 / 316L	TH	
Mounting: TK - 2.0" NPT PN40, ASME B1.20.1 / 316L	TK	
Mounting: AB - 2" 150lb RF, ASME B16.5 / 316/316L	AB	
Mounting: AD - 3" 150lb RF, ASME B16.5 / 316/316L	AD	
Mounting: AG - 4" 150lb RF, ASME B16.5 / 316/316L	AG	
Mounting: AC - Flange 2" 300lb RF, ASME B16.5 / 316/316L	AC	
Mounting: TD - Thread 3/4" NPT PN40, ASME B1.20.1 / 316L	TD	
SEAL		
Seal: H - EPDM (A+P 75.5 / KW75F) / -40°F to +302°F (150°C)	H	
Seal: K - FFKM (Kalrez 6375) / -4°F (20°C) to +392°F (200°C)	K	
Seal: F - FKM (SHS FPM 70C3 GLT) / -40°F to +302°F (150°C)	F	
OUTPUT		
Output: H - Two wire 4-20mA / HART®; 12-35V DC	H	
Output: U - Four-wire Modbus (Requires Dual Chamber Housing); 8-30V DC	U	
Output: I - Four-wire 4-20mA / HART®; 9.6-48V DC; 20-42V AC (Requires Dual Chamber Housing)	I	

Description	CODE	Part No.
Output: B - Four-wire 4-20mA / HART®; 90-253 VAC; 50/60Hz (Requires Dual Chamber Housing)	B	
HOUSING		
Housing: A - Aluminium single chamber / IP66/IP68 (0.2bar)	A	
Housing: K - Plastic single chamber / IP66/IP67	K	
Housing: 8 - Stainless steel single chamber (electropolished) / IP66/IP68 (0.2 bar)	8	
Housing: R - Plastic double chamber / IP66/IP67	R	
Housing: D - Aluminium double chamber / IP66/IP67	D	
Housing: W - Stainless steel double chamber / IP66/IP67	W	
CONNECTION		
Cable Entry: N - Two ½" NPT / blind plug in one opening	N	
Cable Entry: Q - Two ½" NPT / without plug in either opening	Q	
DISPLAY		
Display: X - Without inspection window or BinDisc	X	
Display: A - Bindisc top mounted with display window	A	
Display: F - Top mounted without BinDisc with inspection window	F	
Display: B - Side mounted BinDisc with window	B	
Display: K - Bindisc top mounted with display window & bluetooth communication BinDisc	K	
CERTIFICATES		
Certificates: X - None	X	
PROBE / ROD		
ft. single flexible 6 mm diameter 316 stainless steel cable, with counter weight (95 ft. maximum)	-CXX	
in. solid 16 mm diameter 316 stainless steel sensing rod (96 in. maximum)	-RXX	
ft. single flexible 4 mm diameter 316 stainless steel cable, with counter weight (75 ft. maximum)	-KXX	
MOUNTING PLATES		
GRMP-6 - 0° 1-1/2 " NPT Powder coated carbon steel mounting plate with half coupling		730-0298
GRMP-8 - 0° 1-1/2 " NPT Stainless steel mounting plate with half coupling		730-0469
GRMP-11 - 5° 1-1/2 " NPT Powder coated carbon steel mounting plate with half coupling		730-0501
GRMP-12 - 10° 1-1/2 " NPT Powder coated carbon steel mounting plate with half coupling		730-0502
GRMP-18 - 30° 1-1/2 " NPT Powder coated carbon steel mounting plate with half coupling		730-0633

GWR Liquids Before ordering, validate your selections with a sales rep, as not all options are offered for every configuration.

GW3	GWR-3000 Guide Wave Radar for Liquids											
Approvals												
	CC	CC - CSA (IS) Class I, II, III, Div 1, Groups A, B, C, D, E, F, G										
	CE	CE - CSA (XP) Class I, Div 1, Groups A, B, C, D, (DIP) Class II, III Div 1, Groups E, F, G										
	CR	CR - CSA (DIP) Class II, Div 1 Groups E, F, G										
	IX	IX - Designed for unclassified area, non-EX environment										
	FC	FC - FM (IS) Class I, II, III, Div 1, Groups A, B, C, D, E, F, G										
	FR	FR - FM (DIP) Class II, Div 1 Groups E, F, G										
	FX	FX - Designed for unclassified area, non-EX environment, general purpose FM										
	AC	AC - AC - ATEX II 1G, II 1/2G, II 2G Ex Ia IIC T6...T1 Ga, Gb/Gb, Gb										
	FE	FE - FM (XP) Class I, Div 1, Groups A, B, C, D, (DIP) Class II, III Div 1, Groups E, F, G										
Version												
	A	A - Threaded connection to sensor for 4 mm cable										
	E	E - Threaded connection to sensor for 8 mm cable or 5/8" rod										
Mounting												
	TG	TG - 1.0" NPT PN40, ASME B1.20.1 / 316L										
	TH	TH - 1.5" NPT PN40, ASME B1.20.1 / 316L										
	TK	TK - 2.0" NPT PN40, ASME B1.20.1 / 316L										
	AB	AB - 2" 150lb RF, ASME B16.5 / 316/316L										
	AC	AC - 2" 300lb RF, ASME B16.5 / 316/316L										
	AD	AD - 3" 150lb RF, ASME B16.5 / 316/316L										
	AF	AF - 3" 300lb RF, ASME B16.5 / 316/316L										
	AG	AG - 4" 150lb RF, ASME B16.5 / 316/316L										
Seal												
	F	F - FKM (SHS FPM 70C3 GLT) / -40°F to +302°F (150°C)										
	G	G - FKM (SHS FPM 70C3 GLT) / -40°F(-40°C) to +302°F (150°C)										
	K	K - FFKM (Katz 6375) and PTFE / -4°F (-20°C) to +510°F (266°C)										
Output												
	H	H - Two wire 4-20mA / HART®; 12-35V DC										
	U	U - Four-wire Modbus (Requires Dual Chamber Housing); 8-30V DC										
	I	I - Four-wire 4-20mA / HART®; 9.6-48V DC; 20-42V AC (Requires Dual Chamber Housing)										
	B	B - Four-wire 4-20mA / HART®; 90-253 VAC; 50/60Hz (Requires Dual Chamber Housing)										
Housing												
	A	A - Aluminium single chamber / IP66/IP68 (0.2bar)										
	K	K - Plastic single chamber / IP66/IP67										
	S	S - Stainless steel single chamber (electropolished) / IP66/IP68 (0.2 bar)										
	R	R - Plastic double chamber / IP66/IP67										
	D	D - Aluminium double chamber / IP66/IP67										
	W	W - Stainless steel double chamber / IP66/IP67										
Connection												
	N	N - Two ½" NPT / blind plug in one opening										
	Q	Q - Two ½" NPT / without plug in either opening										
Display												
	X	X - Without inspection window or BinDisc										
	A	A - BinDisc top mounted with display window										
	F	F - Top mounted without BinDisc with inspection window										
	B	B - Side mounted BinDisc with window										
	K	K - BinDisc top mounted with display window & bluetooth communication BinDisc										
Probe/Rod												
	CXX	in. solid 8 mm diameter 316 stainless steel sensing rod (96 in. maximum)										
	TXX	ft. single flexible 4 mm diameter 316 stainless steel cable, with counter weight (75 ft. maximum)										
GW3	.	IX	F	TH	F	H	A	N	A	X	00	Example Part Number



Guided Wave Radar for Liquids

The GWR-3000 is a guided wave radar designed specifically for liquid applications. It uses time domain reflectometry (TDR) to continuously measure levels in tanks and standpipes. It is offered with either a cable or rod customized to the depth of the vessel. The GWR-3000 level sensor measures all types of liquids including those with steam, vapor, foam, condensation or those prone to residual buildup.

Description	CODE	Part No.
POWER PAC		
GWR-3000 Guided Wave Radar	GW3.	
APPROVALS		
Approvals: CC - CSA (IS) Class I, II, III, Div 1, Groups A, B, C, D, E, F, G	CC	
Approvals: CE - CSA (XP) Class I, Div 1, Groups A, B, C, D, (DIP) Class II, III Div 1, Groups E, F, G	CE	
Approvals: CR - CSA (DIP) Class II, DIV 1 Groups E, F, G	CR	
Approvals: IX - Designed for unclassified area, non-EX environment	IX	
Approvals: FC - FM (IS) Class I, II, III, Div 1, Groups A, B, C, D, E, F, G	FC	
Approvals: FR - FM (DIP) Class II, DIV 1 Groups E, F, G	FR	
Approvals: AC - ATEX II 1G, II 1/2G, II 2G Ex ia IIC T6...T1 Ga, Gb/Gb, Gb	AC	
Approvals: FE - FM (XP) Class I, Div 1, Groups A, B, C, D, (DIP) Class II, III Div 1, Groups E, F, G	FE	
VERSION		
Version: A - Threaded connection to sensor for 4 mm cable	A	
Version: E - Threaded connection to sensor for 8 mm cable or 5/8" rod	E	
MOUNTING		
Mounting: TG - 1.0" NPT PN40, ASME B1.20.1 / 316L	TG	
Mounting: TH - 1-1/2" NPT PN40, ASME B1.20.1 / 316L	TH	
Mounting: TK - 2.0" NPT PN40, ASME B1.20.1 / 316L	TK	
Mounting: AB - 2" 150lb RF, ASME B16.5 / 316/316L	AB	
Mounting: AC - 2" 300lb RF, ASME B16.5 / 316/316L	AC	
Mounting: AD - 3" 150lb RF, ASME B16.5 / 316/316L	AD	
Mounting: AF - 3" 300lb RF, ASME B16.5 / 316/316L	AF	
Mounting: AG - 4" 150lb RF, ASME B16.5 / 316/316L	AG	
SEAL		
Seal: K - FFKM (Kalrez 6375) and PTFE / -4°F (-20°C) to +510°F (266°C)	K	
Seal: G - FKM (SHS FPM 70C3 GLT) / -40°F (-40°C) to +302°F (150°C)	G	
Seal: F - FKM (SHS FPM 70C3 GLT) / -40°F to +302°F (150°C)	F	
OUTPUT		
Output: H - Two wire 4-20mA / HART®; 12-35V DC	H	
Output: U - Four-wire Modbus (Requires Dual Chamber Housing); 8-30V DC	U	
Output: I - Four-wire 4-20mA / HART®; 9.6-48V DC; 20-42V AC (Requires Dual Chamber Housing)	I	

Description	CODE	Part No.
Output: B - Four-wire 4-20mA / HART®; 90-253 VAC; 50/60Hz (Requires Dual Chamber Housing)	B	
HOUSING		
Housing: A - Aluminium single chamber / IP66/IP68 (0.2bar)	A	
Housing: K - Plastic single chamber / IP66/IP67	K	
Housing: 8 - Stainless steel single chamber (electropolished) / IP66/IP68 (0.2 bar)	8	
Housing: R - Plastic double chamber / IP66/IP67	R	
Housing: D - Aluminium double chamber / IP66/IP67	D	
Housing: W - Stainless steel double chamber / IP66/IP67	W	
CONNECTION		
Cable Entry: N - Two ½" NPT / blind plug in one opening	N	
Cable Entry: Q - Two ½" NPT / without plug in either opening	Q	
DISPLAY		
Display: X - Without inspection window or BinDisc	X	
Display: A - Bindisc top mounted with display window	A	
Display: F - Top mounted without BinDisc with inspection window	F	
Display: B - Side mounted BinDisc with window	B	
Display: K - Bindisc top mounted with display window & bluetooth communication BinDisc	K	
CERTIFICATES		
Certificates: X - None	X	
PROBE / ROD		
inch solid 8 mm diameter 316 stainless steel sensing rod (96 in. max)	-CXX	
ft. Single flexible 4 mm diameter 316 stainless steel cable, with counter weight (75 ft max)	-RXX	
MOUNTING PLATES		
GRMP-6 - 0° 1-1/2 " NPT Powder coated carbon steel mounting plate with half coupling		730-0298
GRMP-8 - 0° 1-1/2 " NPT Stainless steel mounting plate with half coupling		730-0469
GRMP-11 - 5° 1-1/2 " NPT Powder coated carbon steel mounting plate with half coupling		730-0501
GRMP-12 - 10° 1-1/2 " NPT Powder coated carbon steel mounting plate with half coupling		730-0502
GRMP-18 - 30° 1-1/2 " NPT Powder coated carbon steel mounting plate with half coupling		730-0633