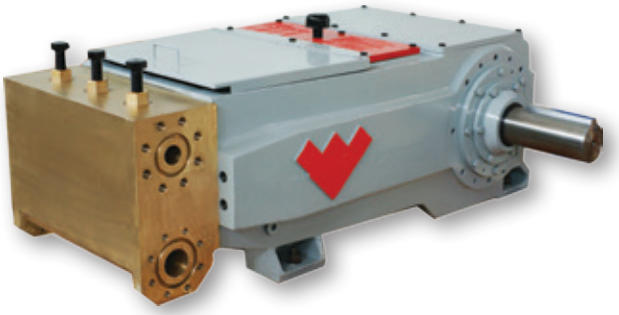
W200 Triplex Pump

Pump Specifications

Rated (HP, *kW*)	200	*149*
Stroke length (in., *mm*)	5	*127*
Maximum discharge pressure (PSI, *Bar*)		
W200H	5,000	*345*
W200M	3,350	*231*
W200L	1,680	*116*
Rated rod load (lb, *kg*)	11,870	*5,385*
API-674 speed, RPM	310	
Maximum speed, RPM	400	
Minimum speed, RPM	100	
Crankshaft dimensions (in., *mm*)		
Diameter	4.875	*124*
Length (long)	11.75	*298*
Length (short)	5.62	*143*
Keyway, width × depth (in., *mm*)	1.25 × .62	*32 × 16*
Oil capacity (gal, *l*)		
Pump	6.5	*24.6*
Reducer (varies with ratio)	3.5 to 6.5	*13 to 25*
Weight (lb, *kg*); estimates only		
Pump		
W200H	4,707	*2,135*
W200M	4,792	*2,174*
W200L	4,842	*2,196*
Reducer	1,100	*499*
Mechanical efficiency	90%	

Flange Connections

Pump Model	Discharge Connection Sizes (in., *mm*)	Suction Connection Sizes (in., *mm*)
W200H	2 *(50.8)* ANSI 2500 RJ	3 *(76.2)* API 2000 RJ
W200M	2 *(50.8)* API 5000 RJ	4 *(101.6)* ANSI 150 FF
W200L	3 *(76.2)* API 2000 RJ	6 *(152.4)* ANSI 150 FF



Standard Equipment

- Cast aluminum-bronze, forged duplex stainless steel, or forged carbon steel fluid ends
- Aluminum-bronze or duplex stainless steel stuffing boxes
- Various valve designs offered per fluid end style
- Tungsten carbide coated plungers over stainless steel base or solid ceramic plungers
- Double extended crankshaft
- Multiple plunger packing arrangements offered

Optional Accessories

- Weatherford bolt on gear reducers (ratios)
  - 2.89:1
  - 3.25:1
  - 3.36:1
  - 3.69:1
  - 4.38:1
  - 4.84:1
  - 5.63:1
- Packing lubricators
- Customized plunger packing arrangements
- Power end lube system
- Complete pump packages

Technical Support

pumps@weatherford.com
1-281-252-7867

W200 Triplex Pump
Performance Ratings

Model (standard)	Plunger Diameter (in.)	Gallons Per Revolution	Maximum Pressure PSI	100 RPM		150 RPM		200 RPM		310 RPM*		350 RPM		400 RPM	
				GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD	GPM	BPD
W200H	1.250	0.0797	5000	8.0	273	12.0	410	15.9	546	24.7	847	27.9	956	31.9	1093
	1.375	0.0964	5000	9.6	331	14.5	496	19.3	661	29.9	1025	33.7	1157	38.6	1322
	1.500	0.1147	5000	11.5	393	17.2	590	22.9	787	35.6	1220	40.2	1377	45.9	1574
	1.625	0.1347	5000	13.5	462	20.2	693	26.9	923	41.7	1431	47.1	1616	53.9	1847
	1.750	0.1562	4930	15.6	535	23.4	803	31.2	1071	48.4	1660	54.7	1874	62.5	2142
	1.875	0.1793	4300	17.9	615	26.9	922	35.9	1229	55.6	1906	62.8	2152	71.7	2459
	2.000	0.2040	3780	20.4	699	30.6	1049	40.8	1399	63.2	2168	71.4	2448	81.6	2798
W200M	2.000	0.2040	3350	20.4	699	30.6	1049	40.8	1399	63.2	2168	71.4	2448	81.6	2798
	2.125	0.2303	3350	23.0	790	34.5	1184	46.1	1579	71.4	2448	80.6	2764	92.1	3158
	2.250	0.2582	2990	25.8	885	38.7	1328	51.6	1770	80.0	2744	90.4	3098	103.3	3541
	2.375	0.2877	2680	28.8	986	43.2	1479	57.5	1973	89.2	3058	100.7	3452	115.1	3945
	2.500	0.3187	2420	31.9	1093	47.8	1639	63.7	2186	98.8	3388	111.6	3825	127.5	4371
	2.625	0.3514	2190	35.1	1205	52.7	1807	70.3	2410	108.9	3735	123.0	4217	140.6	4819
	2.750	0.3857	2000	38.6	1322	57.9	1984	77.1	2645	119.6	4099	135.0	4628	154.3	5289
W200L	2.750	0.3857	1680	38.6	1322	57.9	1984	77.1	2645	119.6	4099	135.0	4628	154.3	5289
	3.000	0.4590	1680	45.9	1574	68.8	2361	91.8	3147	142.3	4879	160.6	5508	183.6	6295
	3.250	0.5387	1430	53.9	1847	80.8	2770	107.7	3694	167.0	5725	188.5	6464	215.5	7388
	3.500	0.6247	1230	62.5	2142	93.7	3213	124.9	4284	193.7	6640	218.7	7497	249.9	8568
	3.750	0.7172	1070	71.7	2459	107.6	3688	143.4	4918	222.3	7623	251.0	8606	286.9	9836
	4.000	0.8160	940	81.6	2798	122.4	4197	163.2	5595	253.0	8673	285.6	9792	326.4	11191

Model (metric)	Plunger Diameter (in.)	Liters Per Revolution	Maximum Pressure BAR	100 RPM		150 RPM		200 RPM		310 RPM*		350 RPM		400 RPM	
				LPM	M^3/hr	LPM	M^3/hr	LPM	M^3/hr	LPM	M^3/hr	LPM	M^3/hr	LPM	M^3/hr
W200H	1.250	0.3016	345	30.2	1.8	45.2	2.7	60.3	3.6	93.5	5.6	105.6	6.3	120.6	7.2
	1.375	0.3650	345	36.5	2.2	54.7	3.3	73.0	4.4	113.1	6.8	127.7	7.7	146.0	8.8
	1.500	0.4343	345	43.4	2.6	65.1	3.9	86.9	5.2	134.6	8.1	152.0	9.1	173.7	10.4
	1.625	0.5097	345	51.0	3.1	76.5	4.6	101.9	6.1	158.0	9.5	178.4	10.7	203.9	12.2
	1.750	0.5912	340	59.1	3.5	88.7	5.3	118.2	7.1	183.3	11.0	206.9	12.4	236.5	14.2
	1.875	0.6786	296	67.9	4.1	101.8	6.1	135.7	8.1	210.4	12.6	237.5	14.3	271.5	16.3
	2.000	0.7721	260	77.2	4.6	115.8	6.9	154.4	9.3	239.4	14.4	270.2	16.2	308.9	18.5
W200M	2.000	0.7721	231	77.2	4.6	115.8	6.9	154.4	9.3	239.4	14.4	270.2	16.2	308.9	18.5
	2.125	0.8717	231	87.2	5.2	130.8	7.8	174.3	10.5	270.2	16.2	305.1	18.3	348.7	20.9
	2.250	0.9772	206	97.7	5.9	146.6	8.8	195.4	11.7	302.9	18.2	342.0	20.5	390.9	23.5
	2.375	1.0888	185	108.9	6.5	163.3	9.8	217.8	13.1	337.5	20.3	381.1	22.9	435.5	26.1
	2.500	1.2065	167	120.6	7.2	181.0	10.9	241.3	14.5	374.0	22.4	422.3	25.3	482.6	29.0
	2.625	1.3301	151	133.0	8.0	199.5	12.0	266.0	16.0	412.3	24.7	465.5	27.9	532.1	31.9
	2.750	1.4598	138	146.0	8.8	219.0	13.1	292.0	17.5	425.5	27.2	510.9	30.7	583.9	35.0
W200L	2.750	1.4598	116	146.0	8.8	219.0	13.1	292.0	17.5	425.5	27.2	510.9	30.7	583.9	35.0
	3.000	1.7373	116	173.7	10.4	260.6	15.6	347.5	20.8	538.6	32.3	608.1	36.5	694.9	41.7
	3.250	2.0389	99	203.9	12.2	305.8	18.4	407.8	24.5	632.1	37.9	713.6	42.8	815.6	48.9
	3.500	2.3647	85	236.5	14.2	354.7	21.3	472.9	28.4	733.0	44.0	827.6	49.7	945.9	56.8
	3.750	2.7145	74	271.5	16.3	407.2	24.4	542.9	32.6	841.5	50.5	950.1	57.0	1085.8	65.1
	4.000	3.0886	65	308.9	18.5	463.3	27.8	617.7	37.1	957.5	57.4	1081.0	64.9	1235.4	74.1

*API Speed

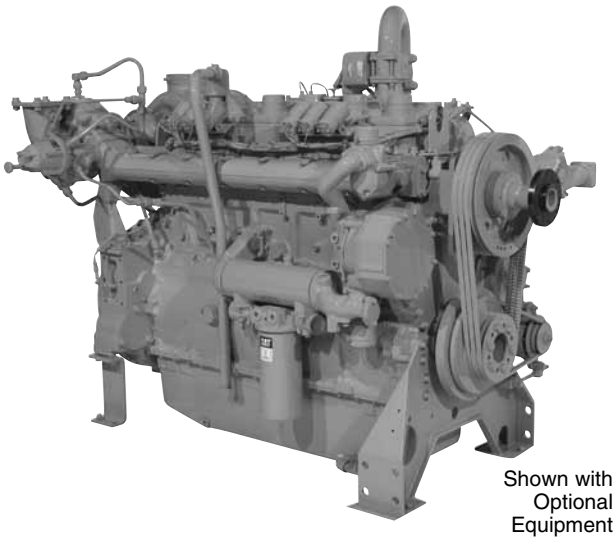
General Notes

1. Capacities shown are based on 100 percent volumetric efficiency. Actual capacities are lower, based on discharge pressure and fluid compressibility.
2. API-674 and NACE-compliant designs are available; consult Weatherford for details and exceptions to these standards.
3. For operation below 200 RPM, an auxiliary lubrication system is required.
4. Standard plunger sizes are shown, however other sizes are available upon request.
5. Spherical valves must be installed when using 4.00 in. plungers.

G3406 Gas Petroleum Engine

160-272 bkW (215-365 bhp) 1800 rpm

0.5% O_2 and 2.0% O_2 Ratings



Shown with Optional Equipment

CAT® ENGINE SPECIFICATIONS

In-line 6, 4-Stroke-Cycle

Emissions Settings	0.5% O_2 and 2.0% O_2
Bore	137 mm (5.4 in.)
Stroke	165 mm (6.5 in.)
Displacement	14.59 L (891 cu. in.)
Aspiration	Naturally Aspirated or Turbocharged-Aftercooled
Governor and Protection	Woodward PSG
Combustion	Rich Burn
Engine Weight, net dry (approx)	1360.8 kg (3000 lb)
Power Density	6.7 kg/kW (11 lb/bhp)
Power per Displacement	18.6 bhp/L
Total Cooling System Capacity	37.9 L (10 gal)
Jacket Water	30.3 L (8 gal)
SCAC	7.6 L (2 gal)
Lube Oil System (refill)	75.7 L (20 gal)
Oil Change Interval	750 hours
Rotation (from flywheel end)	Counterclockwise
Flywheel and Flywheel Housing	SAE No. 1
Flywheel Teeth	113

FEATURES

Engine Design
- Proven reliability and durability
- Ability to burn a wide spectrum of gaseous fuels
- Robust diesel strength design prolongs life and lowers owning and operating costs
- Broad operating speed range

Emissions
- Rich burn engine design easily meets emission requirements
- 0.5% O_2 rating meets U.S. EPA Spark Ignited Stationary NSPS Emissions for 2007/8 and 2010/11 with the use of aftermarket AFRC and TWC

Full Range of Attachments

Large variety of factory-installed engine attachments reduces packaging time

Testing

Every engine is full-load tested to ensure proper engine performance.

Gas Engine Rating Pro

GERP is a PC-based program designed to provide site performance capabilities for Cat® natural gas engines for the gas compression industry. GERP provides engine data for your site's altitude, ambient temperature, fuel, engine coolant heat rejection, performance data, installation drawings, spec sheets, and pump curves.

Product Support Offered Through Global Cat Dealer Network

More than 2,200 dealer outlets

Cat factory-trained dealer technicians service every aspect of your petroleum engine

Cat parts and labor warranty

Preventive maintenance agreements available for repair-before-failure options

S•O•S℠ program matches your oil and coolant samples against Caterpillar set standards to determine:
- Internal engine component condition
- Presence of unwanted fluids
- Presence of combustion by-products
- Site-specific oil change interval

Over 80 Years of Engine Manufacturing Experience

Over 60 years of natural gas engine production

Ownership of these manufacturing processes enables Caterpillar to produce high quality, dependable products.
- Cast engine blocks, heads, cylinder liners, and flywheel housings
- Machine critical components
- Assemble complete engine

Web Site

For all your petroleum power requirements, visit www.catoilandgas.cat.com.

STANDARD EQUIPMENT

Air Inlet System
Air cleaner — heavy-duty
Air cleaner rain cap
Service indicator

Control System
Governor — Woodward PSG mechanical
Governor locking — positive control

Cooling System
Thermostats and housing
Jacket water pump
Aftercooler water pump
Aftercooler core

Exhaust System
Watercooled exhaust manifolds
Dry exhaust elbow

Flywheel & Flywheel Housing
SAE No. 1 flywheel
SAE No. 1 flywheel housing
SAE standard rotation

Fuel System
Gas pressure regulator
Natural gas carburetor

Ignition System
Altronic III ignition system

Instrumentation
Service meter

Lube System
Crankcase breather — top mounted
Oil cooler
Oil filter — RH
Auxiliary oil reservoir
Oil pan — full sump
Oil filler in valve cover, dipstick — RH

Mounting System
Engine supports

Protection System
Shutoffs

General
Paint — Cat yellow
Crankshaft vibration damper and drive pulleys
Lifting eyes

OPTIONAL EQUIPMENT

Air Inlet System
Precleaner

Charging System
Battery chargers
Charging alternators
Charging alternators f/u/w c customer supplied shutoffs
Ammeter gauge
Ammeter gauge and wiring
Control mounting

Control System
PSG Woodward governor

Cooling System
Radiators
Non-sparking blower fan
Blower fans for customer supplied radiators
Fan drives for customer supplied radiators
ATAAC conversion
Aftercooler
Expansion tank
Heat exchangers

Exhaust System
Flexible fittings
Elbow
Flange
Pipe
Rain cap
Muffler

Fuel System
Fuel filter
Natural gas valve and jet kits

Ignition System
CSA shielded ignition
Wiring harness

Instrumentation
Gauges and instrument panels

Lube System
Auxiliary oil reservoir removal
Lubricating oil

Mounting System
Vibration isolators

Power Take-Offs
Auxiliary drive pulleys
Enclosed clutch and clutch support
Front stub shaft and flywheel stub shaft

Protection System
Gas valves

Starting System
Air starting motor
Electric air start control
Air pressure regulator
Air silencer
Electric starting motor — single 12- and 24-volt
Starting aids
Battery sets, cables, and rack

General
Damper guard

TECHNICAL DATA

G3406 Gas Petroleum Engine — 1800 rpm

		DM5302-01	TM8513-05	DM5084-03
Engine Power				
@ 100% Load	bkW (bhp)	242 (325)	160 (215)	205 (276)
@ 75% Load	bkW (bhp)	192 (244)	120 (161)	154 (207)
Engine Speed	rpm	**1800**	**1800**	**1800**
Max Altitude @ Rated Torque and 38°C (100°F)	m (ft)	1219.2 (4000)	0	914.4 (3000)
Speed Turndown @ Max Altitude, Rated Torque, and 38°C (100°F)	%	55	45	0
SCAC Temperature	°C (°F)	54 (130)	—	—
Emissions*				
NOx	g/bkW-hr (g/bhp-hr)	35.29 (26.31)	37.47 (27.94)	20.69 (15.43)
CO	g/bkW-hr (g/bhp-hr)	2.15 (1.6)	1.9 (1.4)	20.69 (15.42)
CO_2	g/bkW-hr (g/bhp-hr)	620 (463)	685 (511)	699 (521)
VOC**	g/bkW-hr (g/bhp-hr)	0.21 (.16)	0.24 (0.18)	—
Fuel Consumption***				
@ 100% Load	MJ/bkW-hr (Btu/bhp-hr)	9.96 (7037)	10.99 (7767)	10.49 (7418)
@ 75% Load	MJ/bkW-hr (Btu/bhp-hr)	10.53 (7443)	11.75 (8304)	11.44 (8082)
Heat Balance				
Heat Rejection to Jacket Water				
@ 100% Load	bkW (Btu/min)	200 (11,401)	160 (9081)	223 (12,709)
@ 75% Load	bkW (Btu/min)	173 (9822)	138 (7868)	178 (10,156)
Heat Rejection to Aftercooler				
@ 100% Load	bkW (Btu/min)	12.6 (716)	—	6.53 (372)
@ 75% Load	bkW (Btu/min)	7.9 (450)	—	3.86 (220)
Heat Rejection to Exhaust				
@ 100% Load	bkW (Btu/min)	161 (9180)	128 (7292)	140 (7991)
@ 75% Load	bkW (Btu/min)	125 (7091)	99 (5636)	105 (6022)
Exhaust System				
Exhaust Gas Flow Rate				
@ 100% Load	m^3/min (cfm)	38.74 (1368)	30.04 (1061)	33.1 (1168)
@ 75% Load	m^3/min (cfm)	30.33 (1071)	23.84 (842)	25.4 (900)
Exhaust Stack Temperature				
@ 100% Load	°C (°F)	526 (978)	560 (1040)	540 (1004)
@ 75% Load	°C (°F)	512 (953)	535 (995)	505 (942)
Intake System				
Air Inlet Flow Rate				
@ 100% Load	m^3/min (scfm)	13 (459)	9.68 (342)	10.84 (383)
@ 75% Load	m^3/min (scfm)	10.36 (366)	7.93 (280)	8.72 (308)
Gas Pressure	kPag (psig)	137-145 (19.9-21)	10.34-34.47 (1.5-5)	10.24-34.47 (1.5-5)

*at 100% load and speed, all values are listed as not to exceed

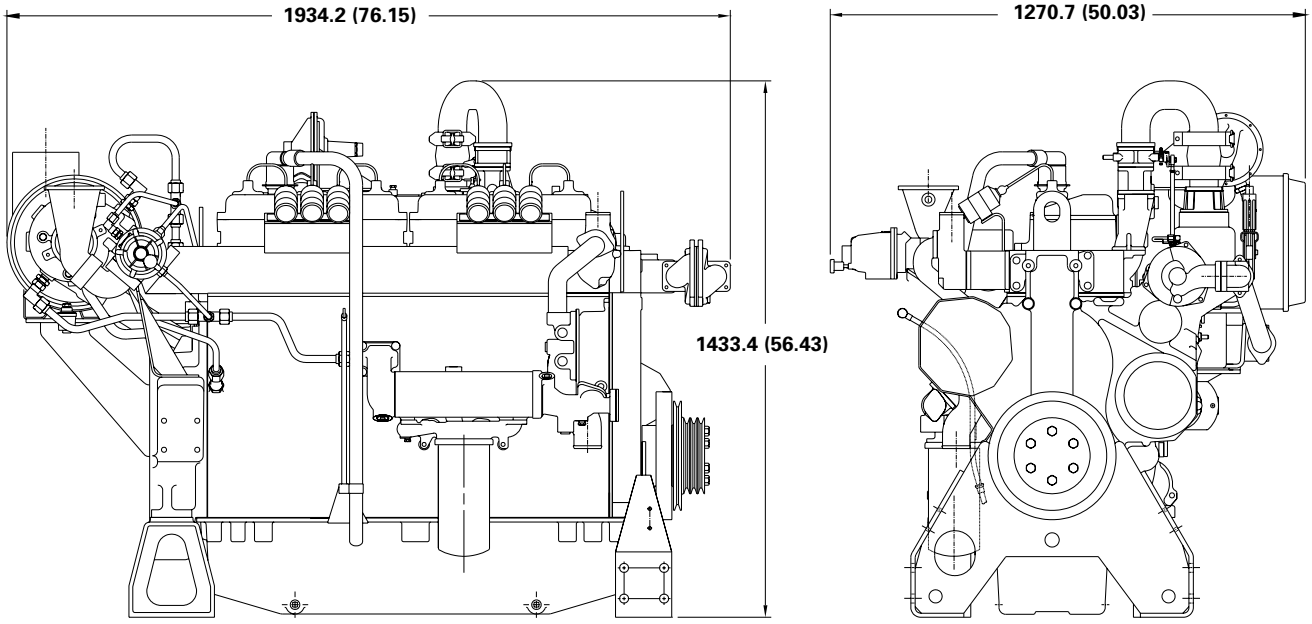
**Volatile organic compounds as defined in U.S. EPA 40 CFR 60, subpart JJJJ

***ISO 3046/1

G3406 GAS PETROLEUM ENGINE

160-272 bkW (215-365 bhp)

GAS PETROLEUM ENGINE



PACKAGE DIMENSIONS		
Length	mm (in.)	1934.2 (76.15)
Width	mm (in.)	1270.7 (50.03)
Height	mm (in.)	1433.4 (56.43)
Shipping Weight	kg (lb)	1360.8 (3000)

Note: General configuration not to be used for installation. See general dimension drawings for detail.

Dimensions are in mm (inches).

RATING DEFINITIONS AND CONDITIONS

Engine performance is obtained in accordance with SAE J1995, ISO3046/1, BS5514/1, and DIN6271/1 standards.

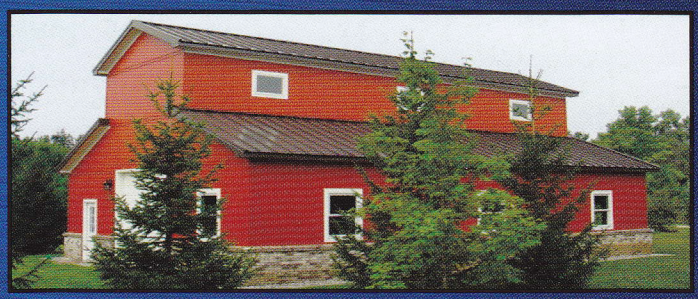
Transient response data is acquired from an engine/generator combination at normal operating temperature and in accordance with ISO3046/1 standard ambient conditions. Also in accordance with SAE J1995, BS5514/1, and DIN6271/1 standard reference conditions.

Conditions: Power for gas engines is based on fuel having an LHV of 33.74 kJ/L (905 Btu/cu ft) at 101 kPa (29.91 in. Hg) and 15° C (59° F). Fuel rate is based on a cubic meter at 100 kPa (29.61 in. Hg) and 15.6° C (60.1° F). Air flow is based on a cubic foot at 100 kPa (29.61 in. Hg) and 25° C (77° F). Exhaust flow is based on a cubic foot at 100 kPa (29.61 in. Hg) and stack temperature.

Performance Numbers: DM5302-01, TM8513-05, DM5084-03
LEHW0029-01 (7-10)

metal sales
manufacturing corporation

Roof and Wall Colors



MS Colorfast45® Paint System — 29 & 26 Gauge

White (30) ☆	Polar White (80) ☆	Light Stone (63) ☆	Mocha Tan (22) ☆	Carlsbad Canyon (10) ☆
Ash Grey (25) ☆	Charcoal (17) ☆	Burnished Slate (49) ☆	Burgundy (15) ☆	Ocean Blue (35) ☆
Forest Green (26) ☆	Fern Green (07) Low Gloss ☆	Patina Green (58) ☆	Black (06) ☆	Patriot Red (73) ☆
Native Copper (95) ☆ Upcharge will apply	Rustic Steel (W45) PVDF ☆ *26 Ga. Only* Upcharge will apply	Galvalume (41) ☆ Non-Painted Finish 25 Year Warranty	Red (24) ☆ Red (23) Low Gloss 29 Ga. ☆	Brown (12) ☆ Brown (11) Low Gloss 29 Ga. ☆

MS Colorfast45® Paint System — 29 Gauge Only

Ivory (28) ☆	Dark Blue (21) ☆	Blue (09) ☆	Mocha Brown (13) ☆

ENERGY STAR PARTNER

☆All Colors Meet or Exceed Steep Slope ENERGY STAR® Requirements

45 Year Paint Warranty

www.metalsales.us.com

metal sales
manufacturing corporation

7990 East I-25, Frontage Road
Longmont, CO 80504
800.289.7663 Toll Free
303.702.5440 Phone
800.289.1617 Fax

MS(1R)/5-11

All colors carry a 45 year limited paint warranty
Color selections are close representations but are limited by processing and viewing conditions. Actual samples are available by request.