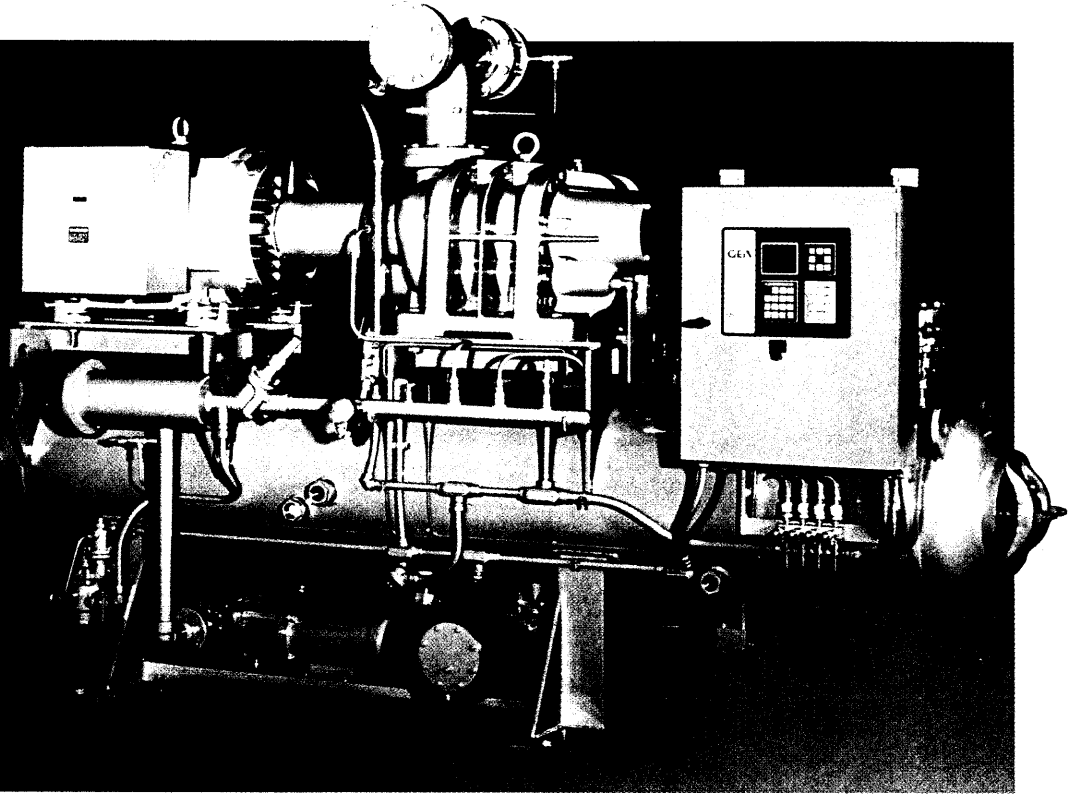




Refrigeration Division

FES Systems Inc.

GL Series Screw Compressor Package



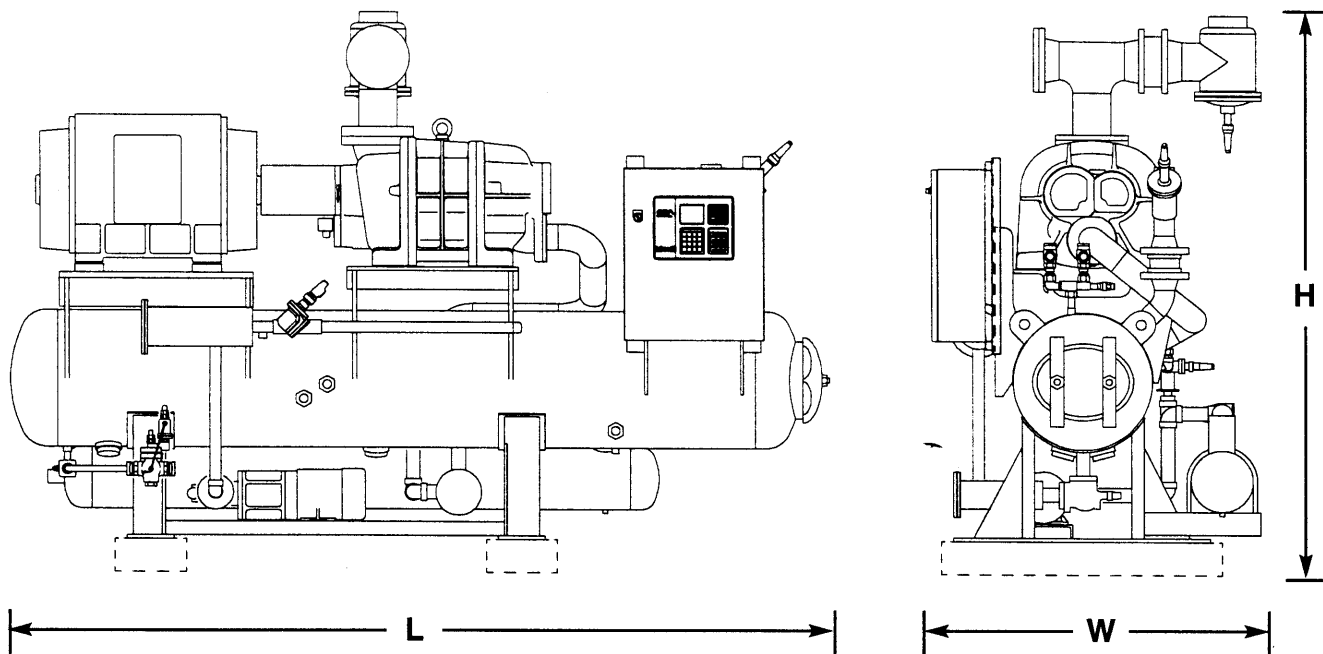
Compressor Features:

- Proprietary line-generated rotor profile and optimized rotor dimensions for improved volumetric efficiency and lower power consumption.
- 5:6 male to female lobe ratio for improved bearing load distribution, lower noise generation, and better bhp/ton performance.
- Patented gas pulsation protection system for smooth part-load operation at high pressure differentials.
- Patented flow-optimized suction inlet improves volumetric efficiency and reduces noise.
- Service-friendly design combines long-life sleeve bearings with easy access thrust bearings that can be replaced without removing the compressor.
- Double-acting hydraulic capacity control, infinitely adjustable from 10% to 100%.
- Unique Hermetic Differential Transformer (HDT) transmits slide valve position without wear or friction and requires no external seal.

Package Features:

- Multi-stage oil separator design guarantees low oil loss.
- Partial-flow, full-time oil pump.
- Three-way thermostatic oil temperature control valve standard with oil cooler options.
- Patented low pressure drop suction strainer.
- High performance, all steel, multiple disc coupling with factory assembled center member for quick installation and removal.
- Unique keyless frictional coupling hub on the compressor end provides an easily adjustable and releasable mechanical shrink fit. This feature provides all the benefits of a shrink fit, but with none of the problems.
- Uses industry standard size motors with oversized junction box for easier connection.
- Optional shimless motor mounts facilitate fast, easy, and accurate motor alignment checks.
- Advanced Micro III microprocessor control panel is standard with options for refrigeration system control.

GL Series Physical Data



Model	GL Series Compressor Package Data									
	Duty				Connections		Dimensions			Package Weight Less Motor (lbs.)
	High Stage		Booster		Suction (Inches)	Discharge (Inches)	L (Length)	W (Width)	H (Height)	
	TR	BHP	TR	BHP						
180GL	215.1	230.9	55.6	71.5	6	4	141	58	90	5,300
230GL	277.9	298.3	71.8	92.4	6	4	141	58	92	5,875
290GL	344.5	359.3	89.0	111.3	6	4	141	58	92	6,000
400GL	447.9	461.1	116.4	140.1	8	5	169	66	110	9,800
565GL	626.3	633.3	162.9	192.3	8	5	169	66	110	10,250
675GL	749.8	750.8	195.0	228.0	10	5	172	74	120	10,700
800GL	886.3	887.8	230.6	269.7	10	5	172	74	120	10,850
1025GL	1131.8	1133.3	294.4	344.2	8 or 10	4, 5, 6, or 8	C.F.	C.F.	C.F.	C.F.
1210GL	1336.2	1338.5	347.7	406.5	8 or 10	4, 5, 6, or 8	C.F.	C.F.	C.F.	C.F.
1435GL	1582.3	1584.4	411.5	481.2	10	4, 5, 6, 8, or 10	C.F.	C.F.	C.F.	C.F.

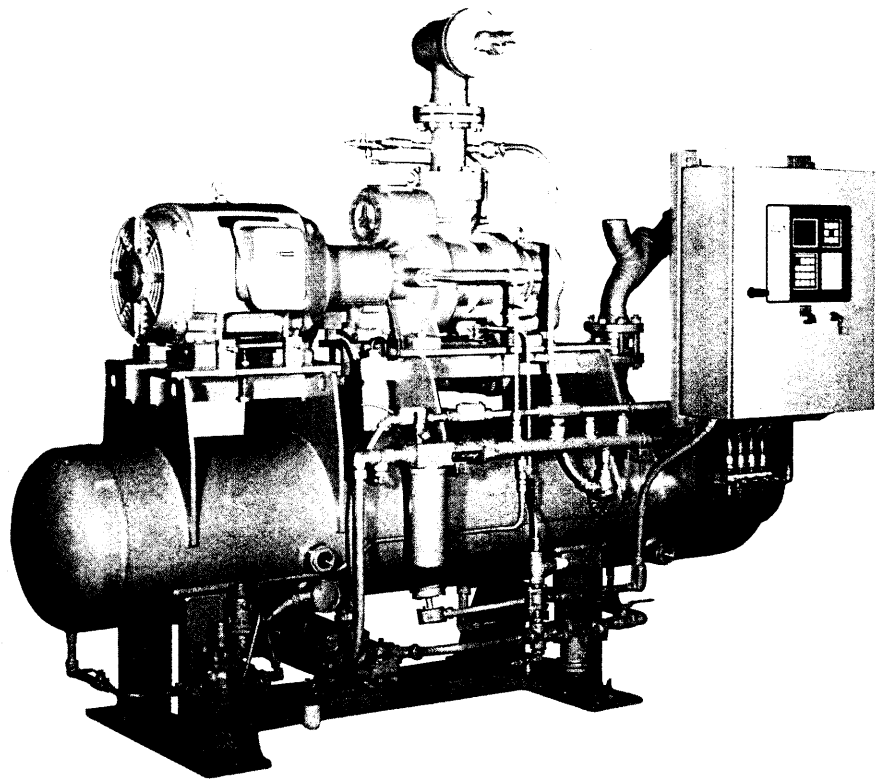
- Notes:**
1. High Stage performance data based on R-717@+20°F SST and 95°F SDT (0°F SSH, 10°F LSC)
 2. Booster performance data based on R-717@-40°F SST and +20°F IDT.
 3. High Stage models 180GL-800GL are top-mounted compressors on a horizontal oil separator and high stage models 1025GL-1435GL are base-mounted compressors with a vertical oil separator arrangement.
 4. All Booster models are top-mounted compressors on a horizontal separator.
 5. All connection sizes and dimensions shown above are for High Stage Packages only.
 6. C.F. - Consult Factory

Two-Year Package Warranty

FES Systems backs its screw compressor packages with a two-year warranty that covers the complete package. The compressor packages are delivered completely piped, wired and pre-tested on a structural steel base that can be moved into place for easy installation.



GM Series Screw Compressor Package



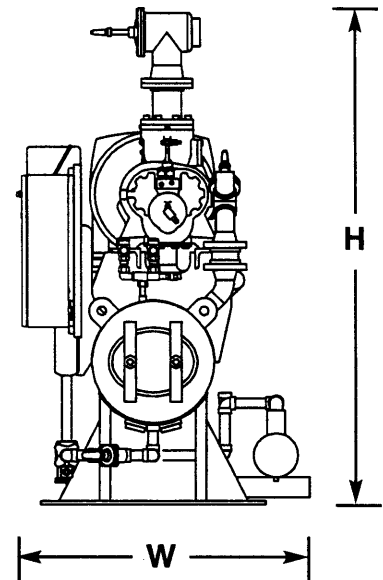
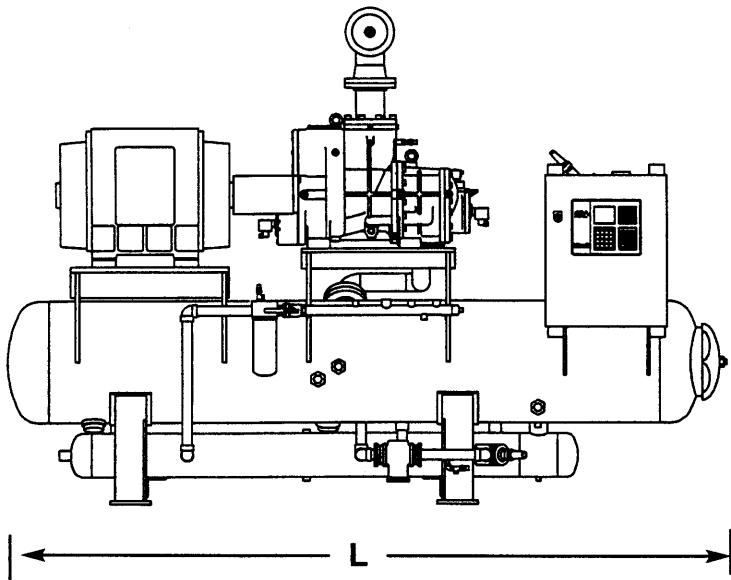
Compressor Features:

- Proprietary line-generated rotor profile and optimized rotor dimensions for improved volumetric efficiency and lower power consumption.
- 5:6 male to female lobe ratio for improved bearing load distribution, lower noise generation, and better bhp/ton performance.
- Patented gas pulsation protection system for smooth part-load operation at high pressure differentials.
- Patented flow-optimized suction inlet improves volumetric efficiency and reduces noise.
- High performance cylindrical roller bearings and duplex angular contact ball bearings.
- Double-acting hydraulic capacity control, infinitely adjustable from 10% to 100%.
- Unique Hermetic Differential Transformer (HDT) transmits slide valve position without wear or friction and requires no external seal.
- Integrated suction strainer and check valve.
- Internal oil pump for capacity control on high stage units.

Package Features:

- Multi-stage oil separator design guarantees low oil loss.
- Three-way thermostatic oil temperature control valve standard with oil cooler options.
- High performance, all steel, multiple disc coupling with factory assembled center member for quick installation and removal.
- Unique keyless frictional coupling hub on the compressor end provides an easily adjustable and releasable mechanical shrink fit. This feature provides all the benefits of a shrink fit, but with none of the problems.
- Optional shimless motor mounts facilitate fast, easy, and accurate motor alignment checks.
- Advanced Micro III microprocessor control panel is standard with options for refrigeration system control.

GM Series Physical Data



Model	GM Series Compressor Package Data									
	Duty				Connections		Dimensions			Package Weight Less Motor (lbs.)
	High Stage		Booster		Suction (inches)	Discharge (inches)	L (Length)	W (Width)	H (Height)	
	TR	BHP	TR	BHP						
110GM	118.8	128.3	30.7	40.2	4	3	110	54	85	
125GM	140.0	148.3	36.2	46.4	4	3	110	54	85	2,340
160GM	177.5	191.7	45.9	60.0	5	3	110	54	92	2,990
195GM	221.3	234.5	57.3	73.4	5	3	142	58	98	5,500

- Notes:**
1. High Stage performance data based on R-717@+20°F SST and 95°F SDT (0°F SSH, 10°F LSC)
 2. Booster performance data based on R-717@-40°F SST and +20°F IDT.

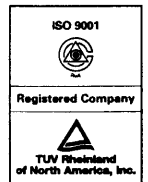
Two-Year Package Warranty

FES Systems backs its screw compressor packages with a two-year warranty that covers the complete package. The compressor packages are delivered completely piped, wired and pre-tested on a structural steel base that can be moved into place for easy installation.



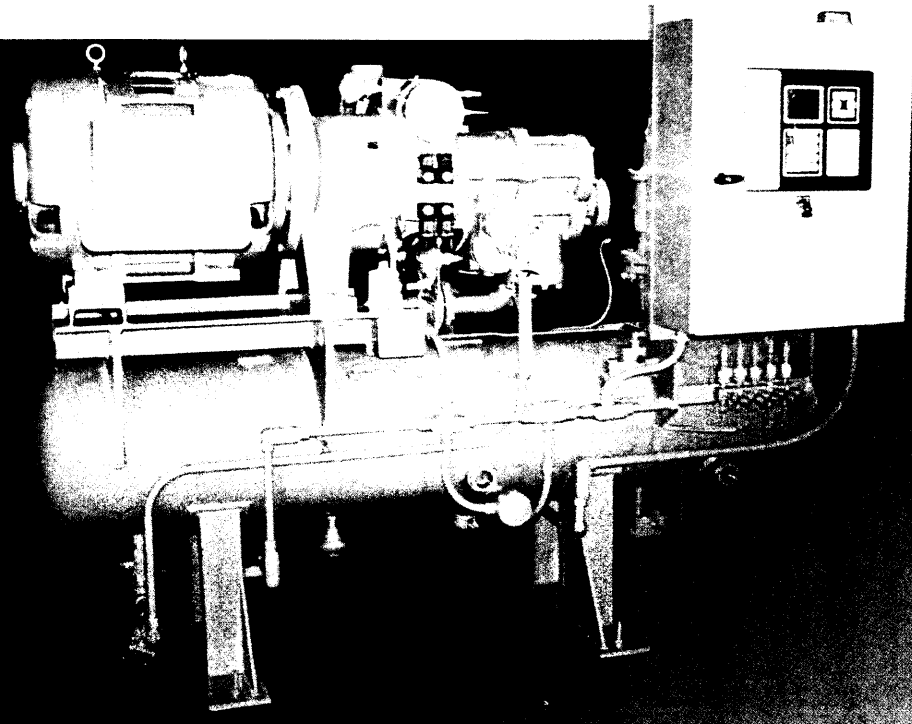
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Form No.
GM02-01

GS Series Screw Compressor Package



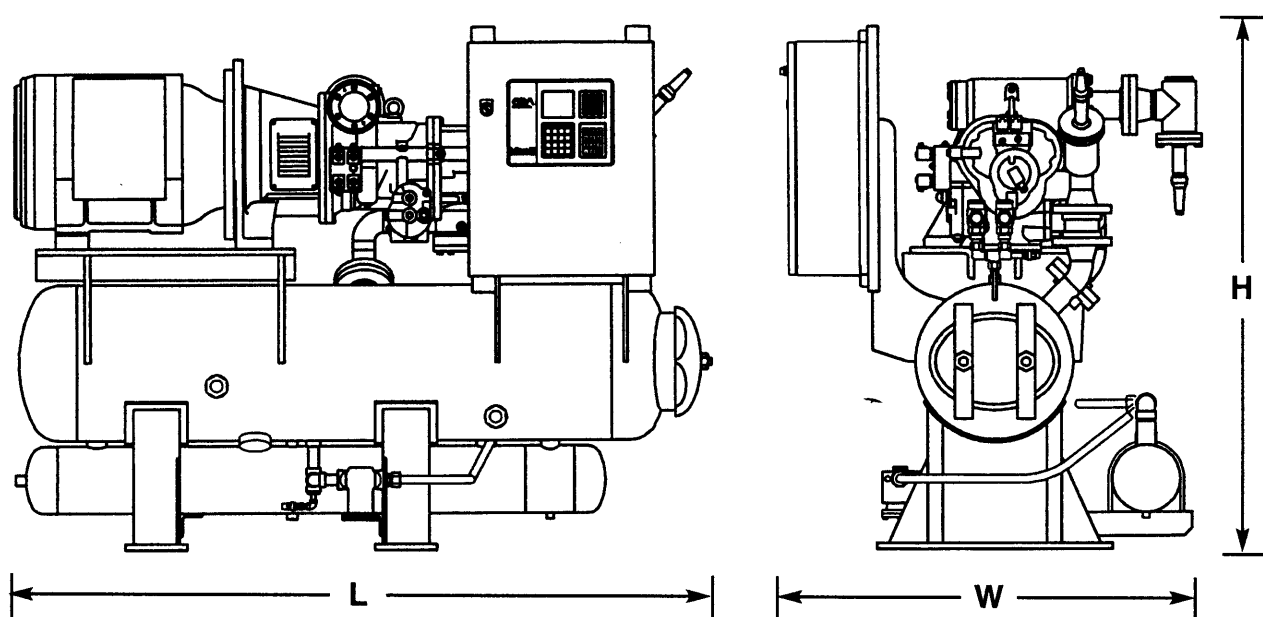
Compressor Features:

- Proprietary line-generated rotor profile and optimized rotor dimensions for improved volumetric efficiency and lower power consumption.
- 5:6 male to female lobe ratio for improved bearing load distribution, lower noise generation, and better bhp/ton performance.
- Patented gas pulsation protection system for smooth part-load operation at high pressure differentials.
- Patented flow-optimized suction inlet improves volumetric efficiency and reduces noise.
- High performance cylindrical roller bearings and duplex angular contact ball bearings.
- Double-acting hydraulic capacity control, infinitely adjustable from 10% to 100%.
- Unique Hermetic Differential Transformer (HDT) transmits slide valve position without wear or friction and requires no external seal.
- Integrated suction strainer and check valve.
- Internal oil pump for capacity control on high stage units.
- Integrated oil filter and metering valve.

Package Features:

- Multi-stage oil separator design guarantees low oil loss.
- Three-way thermostatic oil temperature control valve standard with oil cooler options.
- High performance, steel, elastomeric coupling with high torque center member for quick installation and removal.
- Unique keyless frictional coupling hub on the compressor end provides an easily adjustable and releasable mechanical shrink fit. This feature provides all the benefits of a shrink fit, but with none of the problems.
- Nema C Face-Mounted Motor bolts to the coupling housing and requires no alignment.
- Advanced Micro III microprocessor control panel is standard with options for refrigeration system control.

GS Series Physical Data



Model	GS Series Compressor Package Data									
	Duty				Connections		Dimensions			Package Weight Less Motor (lbs.)
	High Stage		Booster		Suction (Inches)	Discharge (Inches)	L (Length)	W (Width)	H (Height)	
	TR	BHP	TR	BHP						
55GS	55.2	62.3	14.3	19.5	2 1/2	2	89	53	67	2,000
60GS	65.4	73.7	16.9	23.1	2 1/2	2	89	53	67	2,000
75GS	78.5	86.7	20.3	27.1	3	2 1/2	89	53	67	2,700
85GS	92.9	102.5	24.0	32.1	3	2 1/2	89	53	67	2,700

- Notes:**
1. High Stage performance data based on R-717@+20°F SST and 95°F SDT (0°F SSH, 10°F LSC)
 2. Booster performance data based on R-717@-40°F SST and +20°F IDT.

Two-Year Package Warranty

FES Systems backs its screw compressor packages with a two-year warranty that covers the complete package. The compressor packages are delivered completely piped, wired and pre-tested on a structural steel base that can be moved into place for easy installation.

GEA FES Systems Inc.

Refrigeration Division

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Form No.
GS02-01

FES SCREW COMPRESSOR CROSS REFERENCE TABLE

FES Model	Swept Volume (CFM)	R-717 High Stage Discharge Capacity (#/min)	R-22 High Stage Discharge Capacity (#/min)	R-717 Booster Discharge Capacity (#/min)				R-22 Booster Discharge Capacity (#/min)			
				Intermediate Temperature (°F)				Intermediate Temperature (°F)			
				-10	0	10	20	-10	0	10	20
8L / 25	71	10.3	26.7	3.0	3.7	4.7	5.8	8.8	10.8	13.1	15.8
105 / 35	105	15.3	39.4	4.4	5.5	6.9	8.5	13.0	16.0	19.4	23.4
115 / 50	153	22.2	57.5	6.4	8.0	10.0	12.4	19.0	23.3	28.3	34.1
55GS	164	6.0	15.4	1.7	2.2	2.7	3.3	5.1	6.2	7.6	9.1
60GS	188	6.8	17.7	2.0	2.5	3.1	3.8	5.8	7.2	8.7	10.5
125 / 64	203	7.4	19.1	2.1	2.7	3.3	4.1	6.3	7.7	9.4	11.3
65R	207	7.5	19.4	2.2	2.7	3.4	4.2	6.4	7.9	9.6	11.5
6S	208	7.6	19.5	2.2	2.7	3.4	4.2	6.5	7.9	9.6	11.6
70L	223	8.1	20.9	2.3	2.9	3.7	4.5	6.9	8.5	10.3	12.4
75GS	228	8.3	21.4	2.4	3.0	3.7	4.6	7.1	8.7	10.5	12.7
85GS	264	9.6	24.8	2.7	3.5	4.3	5.3	8.2	10.0	12.2	14.7
95	278	10.1	26.1	2.9	3.7	4.6	5.6	8.6	10.6	12.9	15.5
85R	280	10.2	26.3	2.9	3.7	4.6	5.7	8.7	10.7	12.9	15.6
90L / 13L / 90	283	10.3	26.6	2.9	3.7	4.6	5.7	8.8	10.8	13.1	15.8
100	292	10.6	27.4	3.0	3.8	4.8	5.9	9.1	11.1	13.5	16.3
110GM	335	12.2	31.5	3.5	4.4	5.5	6.8	10.4	12.7	15.5	18.7
110R	345	12.5	32.4	3.6	4.5	5.7	7.0	10.7	13.1	16.0	19.2
120	367	13.3	34.5	3.8	4.8	6.0	7.4	11.4	14.0	17.0	20.5
125GM	387	14.1	36.3	4.0	5.1	6.3	7.8	12.0	14.7	17.9	21.6
1305 / 16MX / 130X	397	14.4	37.3	4.1	5.2	6.5	8.0	12.3	15.1	18.4	22.1
135	398	14.5	37.4	4.1	5.2	6.5	8.1	12.3	15.1	18.4	22.2
132L / 165 / 132	415	15.1	39.0	4.3	5.4	6.8	8.4	12.9	15.8	19.2	23.1
135R	420	15.3	39.4	4.4	5.5	6.9	8.5	13.0	16.0	19.4	23.4
140	439	16.0	41.2	4.6	5.8	7.2	8.9	13.6	16.7	20.3	24.5
1555 / 16LX / 155X	477	17.3	44.8	5.0	6.3	7.8	9.7	14.8	18.1	22.1	26.6
160GM	490	17.8	46.0	5.1	6.4	8.0	9.9	15.2	18.6	22.7	27.3
160R	500	18.2	46.9	5.2	6.6	8.2	10.1	15.5	19.0	23.1	27.9
160L / 16L / 160	502	18.2	47.1	5.2	6.6	8.2	10.2	15.6	19.1	23.2	28.0
175	544	19.8	51.1	5.7	7.1	8.9	11.0	16.9	20.7	25.2	30.3
1805 / 195X / 180X	570	20.7	53.5	5.9	7.5	9.3	11.5	17.7	21.7	26.4	31.8
180	571	20.7	53.6	5.9	7.5	9.4	11.6	17.7	21.7	26.4	31.8
180GL	572	20.8	53.7	6.0	7.5	9.4	11.6	17.7	21.8	26.4	31.9
180R	575	20.9	54.0	6.0	7.6	9.4	11.6	17.8	21.9	26.6	32.1
195GM	611	22.2	57.4	6.4	8.0	10.0	12.4	19.0	23.2	28.2	34.1
19M	663	24.1	62.2	6.9	8.7	10.9	13.4	20.6	25.2	30.7	37.0
225	710	25.8	66.7	7.4	9.3	11.6	14.4	22.0	27.0	32.8	39.6
230GL	739	26.9	69.4	7.7	9.7	12.1	15.0	22.9	28.1	34.2	41.2
2355 / 19MX / 235X	775	28.2	72.8	8.1	10.2	12.7	15.7	24.0	29.5	35.8	43.2
255	776	28.2	72.9	8.1	10.2	12.7	15.7	24.1	29.5	35.9	43.3
235R	780	28.3	73.2	8.1	10.2	12.8	15.8	24.2	29.7	36.1	43.5
270	853	31.0	80.1	8.9	11.2	14.0	17.3	26.5	32.4	39.4	47.6
2705 / 19MLX / 270X	855	31.1	80.3	8.9	11.2	14.0	17.3	26.5	32.5	39.5	47.7
270R	860	31.3	80.7	9.0	11.3	14.1	17.4	26.7	32.7	39.8	47.9
19L	894	32.5	83.9	9.3	11.7	14.7	18.1	27.7	34.0	41.3	49.8
290GL	917	33.3	86.1	9.5	12.0	15.0	18.6	28.5	34.9	42.4	51.1
305	932	33.9	87.5	9.7	12.2	15.3	18.9	28.9	35.5	43.1	52.0
315R	952	34.6	89.4	9.9	12.5	15.6	19.3	29.5	36.2	44.0	53.1
3155 / 19LX / 315X	962	35.0	90.3	10.0	12.6	15.8	19.5	29.8	36.6	44.5	53.6
350	1061	38.6	99.6	11.0	13.9	17.4	21.5	32.9	40.4	49.1	59.2
385	1110	40.3	104.2	11.6	14.6	18.2	22.5	34.4	42.2	51.3	61.9
3855 / 235X / 385X	1114	40.5	104.6	11.6	14.6	18.3	22.6	34.6	42.4	51.5	62.1
400GL	1165	42.3	109.4	12.1	15.3	19.1	23.6	36.1	44.3	53.9	64.9
23M	1250	45.4	117.4	13.0	16.4	20.5	25.3	38.8	47.5	57.8	69.7
4355 / 235MX / 435X	1253	45.5	117.6	13.0	16.5	20.5	25.4	38.9	47.7	57.9	69.9
420	1264	45.9	118.7	13.2	16.6	20.7	25.6	39.2	48.1	58.4	70.5
475GL	1380	50.1	129.6	14.4	18.1	22.6	28.0	42.8	52.5	63.8	76.9
480	1390	50.5	130.5	14.5	18.3	22.8	28.2	43.1	52.9	64.3	77.5
5055 / 23MX / 505X	1513	55.0	142.0	15.7	19.9	24.8	30.6	46.9	57.6	70.0	84.4
500	1516	55.1	142.3	15.8	19.9	24.8	30.7	47.0	57.7	70.1	84.5
565GL	1632	59.3	153.2	17.0	21.4	26.7	33.1	50.6	62.1	75.5	91.0
550	1668	60.6	156.6	17.4	21.9	27.3	33.8	51.8	63.4	77.1	93.0
575	1670	60.7	156.8	17.4	21.9	27.4	33.8	51.8	63.5	77.2	93.1
5755 / 23MLX / 575X	1670	60.7	156.8	17.4	21.9	27.4	33.8	51.8	63.5	77.2	93.1
23L	1685	61.2	158.2	17.5	22.1	27.6	34.1	52.3	64.1	77.9	93.9
6505 / 23LX / 650X	1879	68.3	176.4	19.6	24.7	30.8	38.1	58.3	71.5	86.9	104.8
675GL	1953	71.0	183.4	20.3	25.6	32.0	39.6	60.6	74.3	90.3	108.9
28M	2059	74.8	193.3	21.4	27.0	33.7	41.7	63.9	78.3	95.2	114.8
7705 / 23LLX / 770X	2227	80.9	209.1	23.2	29.2	36.5	45.1	69.1	84.7	103.0	124.2
775	2230	81.0	209.4	23.2	29.3	36.5	45.2	69.2	84.8	103.1	124.3
800GL	2309	83.9	216.8	24.0	30.3	37.8	46.8	71.6	87.8	106.8	128.7
9305 / 325X / 930X	2673	97.1	251.0	27.8	35.1	43.8	54.1	82.9	101.7	123.6	149.0
28L	2775	100.8	260.5	28.9	36.4	45.5	56.2	86.1	105.6	128.3	154.7
970	2780	101.0	261.0	28.9	36.5	45.6	56.3	86.3	105.7	128.5	155.0
1025GL	2949	107.2	276.9	30.7	38.7	48.3	59.7	91.5	112.2	136.3	164.4
1160	3330	121.0	312.6	34.7	43.7	54.6	67.4	103.3	126.7	154.0	185.7
11605 / 32MX / 1160X	3341	121.4	313.7	34.8	43.9	54.8	67.7	103.7	127.1	154.5	186.3
32M	3364	122.2	315.8	35.0	44.2	55.1	68.1	104.4	128.0	155.5	187.5
1210GL	3482	126.5	326.9	36.2	45.7	57.1	70.5	108.0	132.4	161.0	194.1
13355 / 32LX / 1335X	3758	136.6	352.8	39.1	49.3	61.6	76.1	116.6	142.9	173.8	209.5
1435GL	4122	149.8	387.0	42.9	54.1	67.6	83.5	127.9	156.8	190.6	229.8
32L	4206	152.8	394.9	43.8	55.2	68.9	85.2	130.5	160.0	194.5	234.5
15505	4454	161.9	418.2	46.4	58.5	73.0	90.2	138.2	169.4	205.9	248.3