

Maximum Performance (MaP™) Testing of Popular Toilet Models

A Cooperative Canadian and American Project

May 2004 – UPDATE #1

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Note: Original MaP™ Report outlining complete testing protocol and initial results can be found at:

http://www.cuwcc.org/Uploads/product/MaP_Final_Report.pdf

or

http://www.cwwa.ca/pdf_files/freepub_6Ltoiletreport04.pdf

Figure 1 - Models Clearing Less Than 250g: May 2004

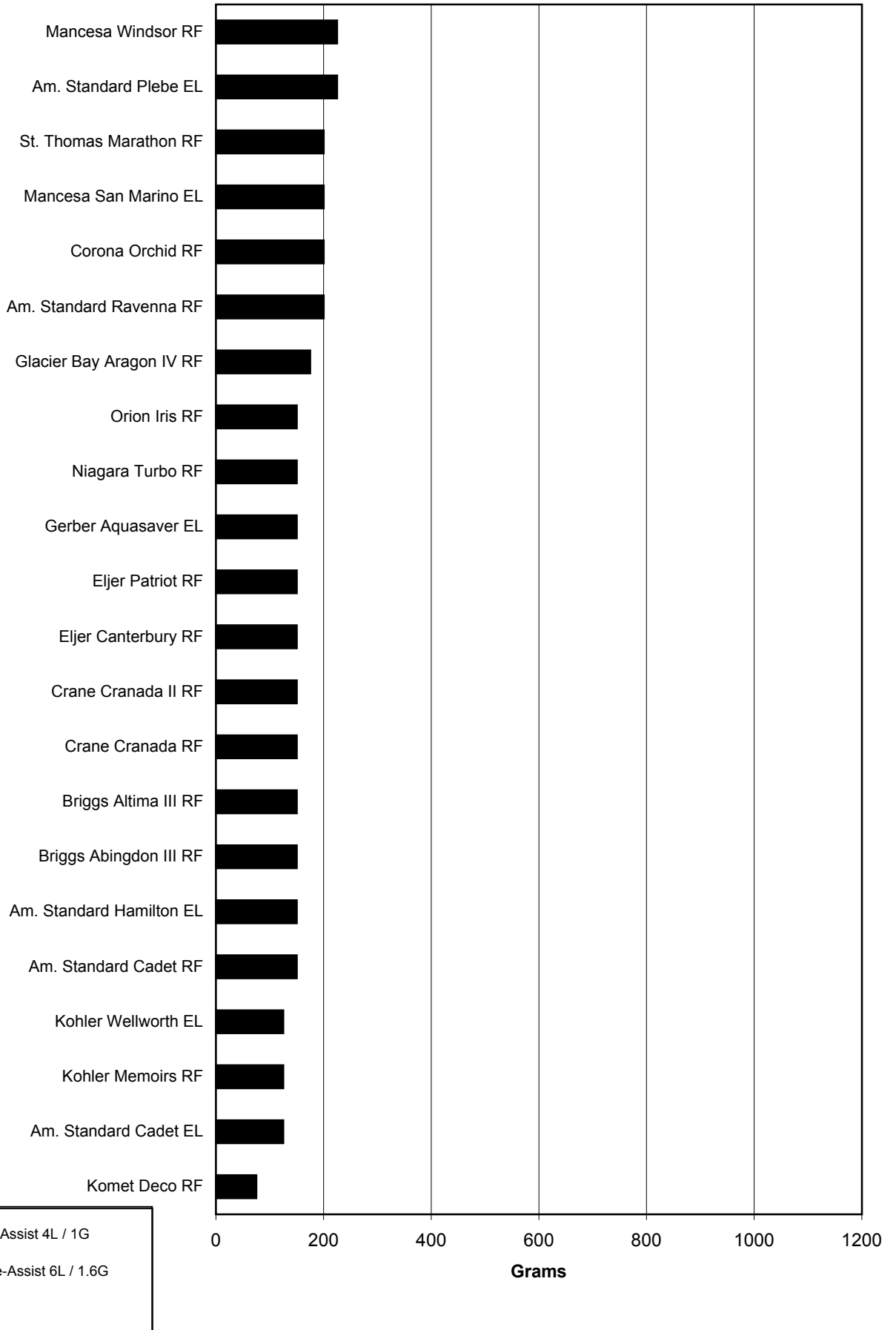


Figure 2 - Models Clearing Between 250g & 500g: May 2004

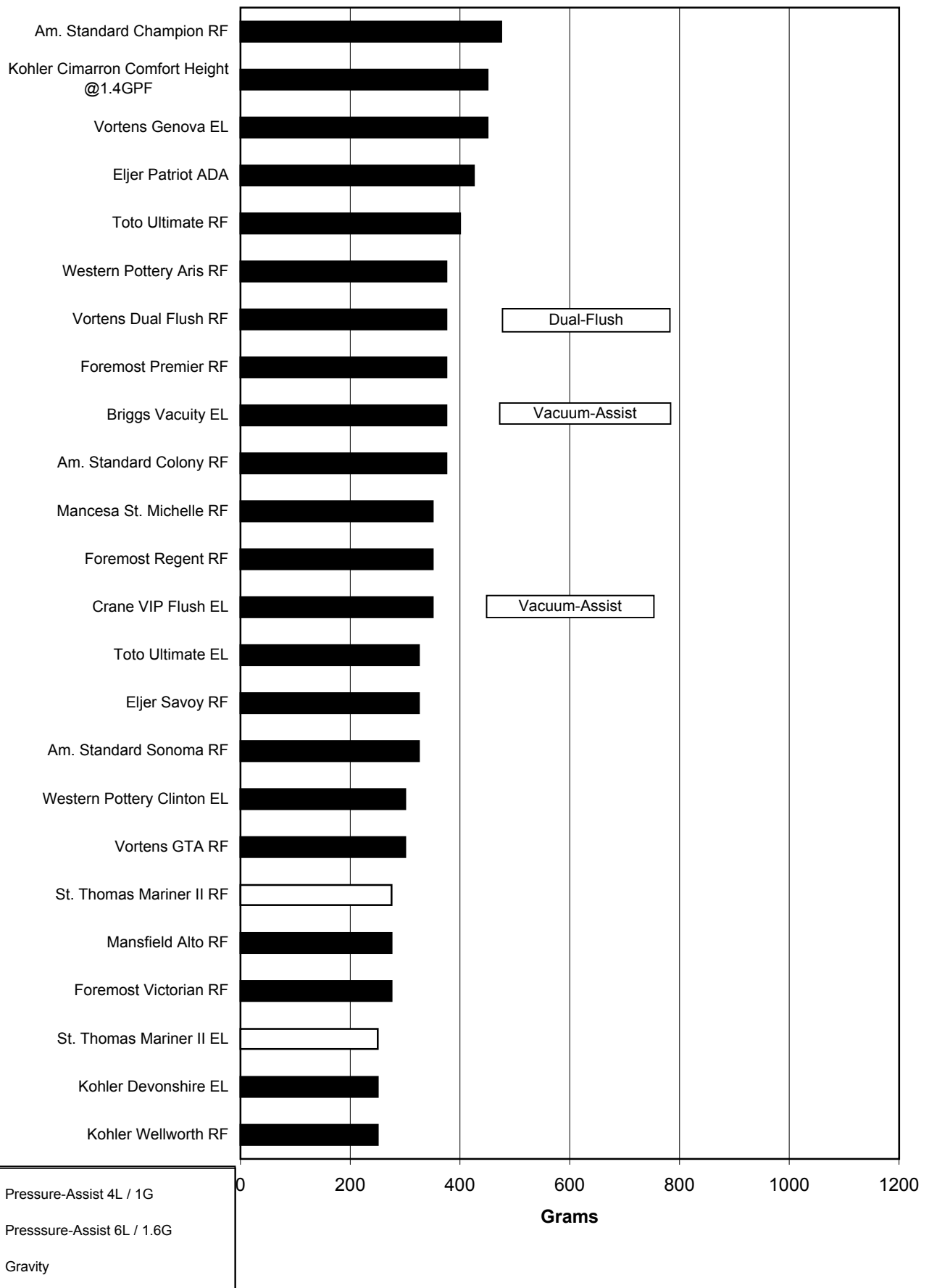
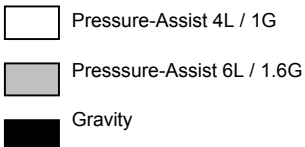
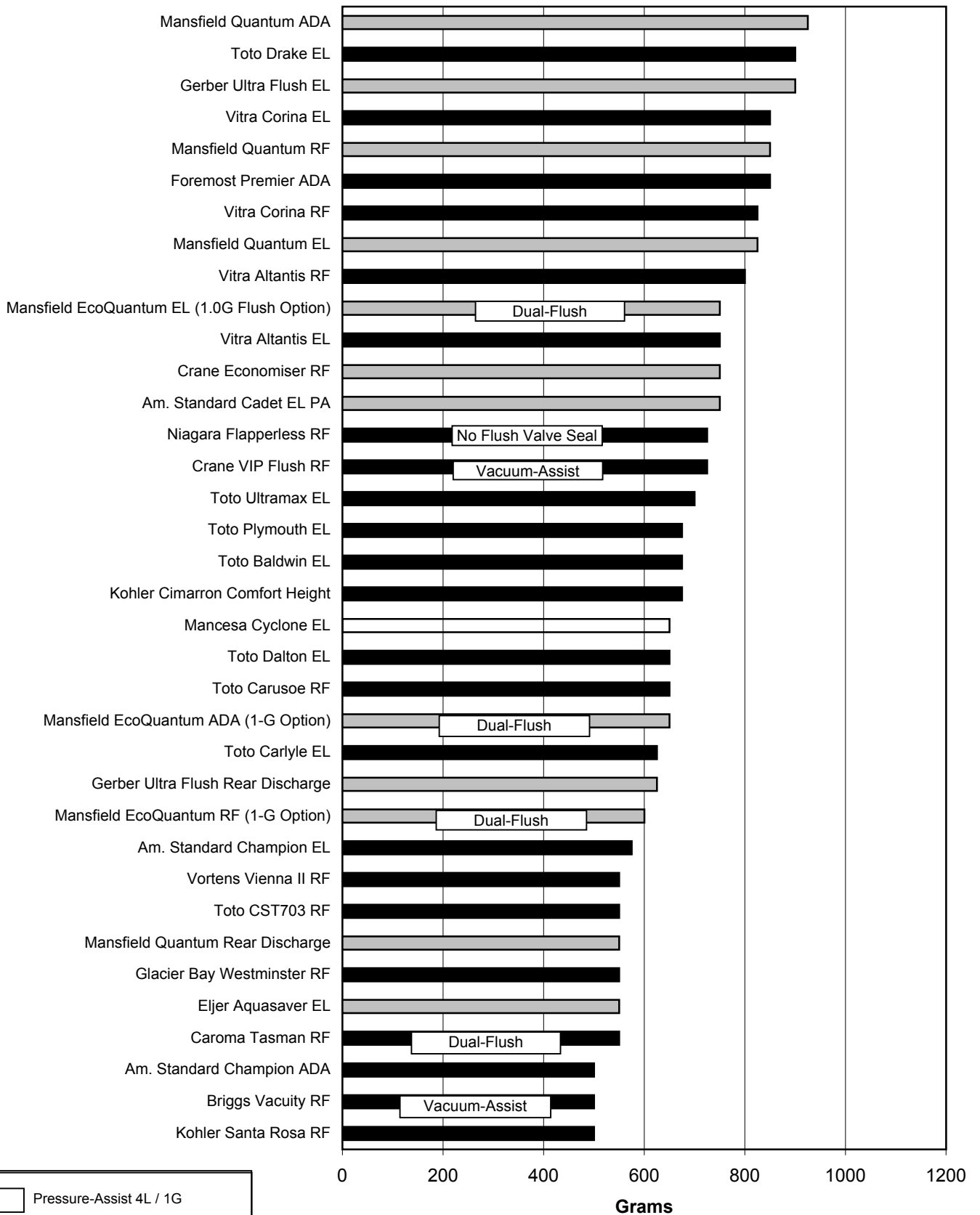


Figure 3 - Models Clearing Greater Than 500g: May 2004



May 2004 – MaP™ UPDATE

Table #1 - Toilet Make and Model Numbers (page 1 of 2)

Make	Model	Flush Type	Bowl and Tank Model Nos.
American Standard	Plebe EL	Gravity	4392.312 tank & 3344.312 bowl
American Standard	Cadet EL	Gravity	2898.012, with 4112.016 tank & 3459.016 bowl
American Standard	Cadet RF	Gravity	2798.012, with 4112.016 tank & 3454.016 bowl
American Standard	Hamilton EL	Gravity	2092-0170-20
American Standard	Cadet (PA) EL	Pressure	4098.100.020 tank & 3099.016.020 bowl
American Standard	Champion ADA	Gravity	4260.016.020 tank, 3225.016.020 bowl
American Standard	Champion EL	Gravity	3121.016.020 bowl & 4260.016.020 tank
American Standard	Champion RF	Gravity	3110.016.020 bowl & 4260.016.020 tank
American Standard	Colony Afton RF	Gravity	4392.500.020 tank & 3038.016.020 bowl
American Standard	Ravenna RF	Gravity	4096.516.020 tank & 3454.016 bowl
American Standard	Sonoma RF	Gravity	4392.562.020 tank & 3338.012.020 bowl
Briggs (Proflo)	Abingdon III RF	Gravity	4229 = 4440t/4875b
Briggs (Proflo)	Altima III RF	Gravity	4232 = 4430t/4320b
Briggs (Proflo)	Vacuity EL	Vacuum	4400-130 tank & 4200=130 bowl
Briggs (Proflo)	Vacuity RF	Vacuum	4400-130 tank & 4310-130 bowl
Caroma	Tasman RF	Gravity	270 Suite - DUAL FLUSH
Corona	Orchid RF	Gravity	8510
Crane	Economiser RF	Pressure	3612 tank & 3824 bowl
Crane	VIP Flush EL	Vacuum	3976 tank & 3991 bowl
Crane	VIP Flush RF	Vacuum	3976 tank & 3995 bowl
Crane	Cranada RF	Gravity	3503 tank & 3415 bowl
Crane	Cranada II RF	Gravity	3742/3743 tank & 3503 bowl
Eljer	Aquasaver EL	Pressure	1417-00000/137-7025-00
Eljer	Canterbury RF	Gravity	081-1620-00
Eljer	Patriot RF	Gravity	091-2120, with 141-2120 tank/131-2120 bowl
Eljer	Patriot ADA EL	Gravity	141-0220-00 tank & 131-2175-00 bowl
Eljer	Savoy RF	Gravity	141-0260-82 tank & 131-2120-82 bowl
Foremost	Premier ADA	Gravity	LL-8207-HC bowl & T-8207 tank
Foremost	Premier RF	Gravity	T-8207-W tank & LL-8207-W bowl
Foremost	Regent RF	Gravity	T-5207-W tank & LL-5207-W bowl
Foremost	Victorian RF	Gravity	T-1207-W tank & LL-1207-W bowl
Gerber	Aquasaver EL	Gravity	21-712, with 28-790 tank
Gerber	Ultra Flush EL	Pressure	21-302
Gerber	Ultra Flush Rear Discharge	Pressure	28-380 tank & 21-374 bowl
Glacier Bay	Westminster RF	Gravity	455-685 tank (lined) and 445-684 bowl
Glacier Bay	Aragon IV RF	Gravity	164963
Kohler	Cimmaron Comfort Height	Gravity	4286-0 bowl & 4634-0 tank
Kohler	Devonshire EL	Gravity	4269-0 bowl & 4619-0 tank
Kohler	Memoirs RF	Gravity	4257-0 bowl & 4454-U-0 tank
Kohler	Santa Rosa RF	Gravity	3323-0
Kohler	Wellworth RF	Gravity	K3423 toilet, with 4620 tank/4277 bowl
Kohler	Wellworth EL	Gravity	K3422 toilet, with 4620 tank/4276 bowl
Komet	Deco RF	Gravity	DE 611 tank and DE 627 bowl
Mancesa	Cyclone EL	Pressure	2282W bowl
Mancesa	San Marino EL	Gravity	2262W bowl & 2261W tank
Mancesa	Ste. Michelle RF	Gravity	4260 tank, 2360 bowl
Mancesa	Windsor RF	Gravity	2700W bowl & 2711W tank

May 2004 – MaP™ UPDATE

Table #1 - Toilet Make and Model Numbers (page 2 of 2)

Make	Model	Flush Type	Bowl and Tank Model Nos.
Mansfield	Alto RF	Gravity	130-160
Mansfield	EcoQuantum ADA	Pressure	11901000 tank & 14901000 bowl
Mansfield	EcoQuantum EL	Pressure	11901000 tank & 14701000 bowl
Mansfield	EcoQuantum RF	Pressure	11901000 tank & 14601000 bowl
Mansfield	Quantum ADA	Pressure	12301000 tank & 14901000 bowl
Mansfield	Quantum EL	Pressure	12301000 tank & 14701000 bowl
Mansfield	Quantum RF	Pressure	12301000 tank & 14601000 bowl
Mansfield	Quantum Rear Discharge	Pressure	12301000 tank & 14901000 bowl
Niagara	Flapperless RF	Gravity	N2216B bowl & N2216T tank
Niagara	Turbo RF	Gravity	N2220
Orion	Iris RF	Gravity	51073 tank & 50073 bowl
St. Thomas	Marathon RF	Gravity	6201.010
St. Thomas	Mariner II EL	Pressure	6207.020
St. Thomas	Mariner II RF	Pressure	6207.020
Toto	Baldwin EL	Gravity	ST7845 tank & C7845F bowl
Toto	Carlyle EL	Gravity	MS874114SG
Toto	Carusoe RF	Gravity	ST706 tank & C715 bowl
Toto	Dalton EL	Gravity	ST733 tank & C734F bowl
Toto	Drake EL	Gravity	CST744S
Toto	CST703 RF	Gravity	CST703
Toto	Plymouth EL	Gravity	MS924154F
Toto	Ultramax EL	Gravity	MS854114S
Toto	Ultimate EL	Gravity	MS854114
Toto	Ultimate RF	Gravity	MS853113
Vitra	Atlantis EL	Gravity	6853 tank, 5051 bowl
Vitra	Atlantis RF	Gravity	6853 tank, 5050 bowl
Vitra	Corina EL	Gravity	5070-003-0122 tank & 5069-003-0075 bowl
Vitra	Corina RF	Gravity	5070-003-0122 tank & 5068-003-0075 bowl
Vortens	Dual Flush RF	Gravity	3208-02-V bowl & 3420-02-V tank
Vortens	Genova EL	Gravity	3421-02-V tank & 3121-02-V bowl
Vortens	GTA RF	Gravity	3412 tank, 3200 bowl
Vortens	Vienna II RF	Gravity	3412 tank, 3207 bowl
Western Pottery	Aris RF	Gravity	822 bowl
Western Pottery	Clinton EL	Gravity	832 bowl

May 2004 – MaP™ UPDATE

Table #2 - Flush Volume at Waterline (page 1 of 2)

Make	Model	Volume (L)	Volume (G)	Comments
St. Thomas	Mariner II EL	3.6	0.95	4-L / 1-gal PA
St. Thomas	Mariner II RF	3.7	0.98	4-L / 1-gal PA
Eljer	Aquasaver EL	4.5	1.19	6-L / 1.6-gal PA
Foremost	Premier ADA	5.0	1.32	
Kohler	Devonshire EL	5.0	1.32	Adjustable Float
Kohler	Cimarron Comfort Height @1.4GPF	5.1	1.33	
American Standard	Hamilton EL	5.1	1.35	
American Standard	Ravenna RF	5.2	1.37	
Crane	Cranada RF	5.2	1.37	Rubber Flapper Chain
Glacier Bay	Westminster RF	5.3	1.40	Rubber Flapper Chain
Vortens	Dual Flush RF	5.4 / 3.9	1.42 / 1.00	Dual Flush
Western Pottery	Clinton EL	5.4	1.42	
Briggs (Proflo)	Vacuity RF	5.5	1.45	Vacuum-Assist
Crane	VIP Flush EL	5.5	1.45	Vacuum-Assist
Toto	Ultimate EL	5.5	1.45	3" Flapper
Eljer	Canterbury RF	5.6	1.48	
Briggs (Proflo)	Vacuity EL	5.6	1.48	Vacuum-Assist
Foremost	Regent RF	5.6	1.48	
Vortens	GTA RF	5.6	1.48	
American Standard	Cadet RF	5.7	1.51	
Foremost	Premier RF	5.7	1.51	
Kohler	Memoirs RF	5.8	1.53	Adjustable Float
American Standard	Cadet EL	5.8	1.53	
Crane	Economiser RF	5.8	1.53	6-L / 1.6-gal PA
Gerber	Ultra Flush EL	5.8	1.53	6-L / 1.6-gal PA
Mansfield	Alto RF	5.8	1.53	Proprietary Flush Valve Seal
Mancesa	St. Michelle RF	5.8	1.53	
Eljer	Savoy RF	5.9	1.55	
Kohler	Cimarron Comfort Height	5.9	1.55	
Mancesa	San Marino EL	5.9	1.55	Rubber Flapper Chain
Mancesa	Windsor RF	5.9	1.55	Rubber Flapper Chain
Western Pottery	Aris RF	5.9	1.55	
American Standard	Champion RF / EL / ADA	5.9	1.55	Proprietary Flush Valve Seal
Niagara	Turbo RF	5.9	1.55	
Toto	CST 703 RF	5.9	1.55	
Toto	Plymouth EL	5.9	1.55	
Vortens	Vienna II RF	5.9	1.56	
Eljer	Patriot ADA	5.9	1.55	
Vitra	Corina EL	5.9	1.55	
Vitra	Corina RF	5.9	1.55	
Corona	Orchid	6.0	1.59	
American Standard	Colony Afton RF	6.0	1.59	Adjustable Float
American Standard	Sonoma RF	6.0	1.59	
Caroma	Tasman RF	6.0	1.59	Dual-Flush
Crane	VIP Flush RF	6.0	1.59	Vacuum-Assist

May 2004 – MaP™ UPDATE

Table #2 - Flush Volume at Waterline (page 2 of 2)

Make	Model	Volume (L)	Volume (G)	Comments
Kohler	Wellworth RF	6.0	1.59	Adjustable Float
Kohler	Wellworth EL	6.0	1.59	Adjustable Float
Niagara	Flapperless RF	6.0	1.59	No Flush Valve Seal
Orion	Iris RF	6.0	1.59	Adjustable Float, Rubber Chain
Vortens	Genova EL	6.0	1.59	
Vitra	Atlantis RF	6.0	1.59	
Vitra	Atlantis EL	6.0	1.59	
Mansfield	EcoQuantum RF, EL, ADA	6.1 / 3.4	1.60 / 0.91	6/4 L, 1.6/1.0 g Dual-flush PA
Mansfield	Quantum RF, EL, ADA	6.1	1.61	6-L / 1.6-gal PA
Toto	Baldwin EL	6.1	1.61	
Foremost	Victorian RF	6.2	1.64	
American Standard	Cadet (Press.Assist) EL	6.2	1.64	6-L / 1.6-gal PA
Toto	Dalton EL	6.3	1.66	
Toto	Carusoe RF	6.3	1.66	
Crane	Cranada II RF	6.3	1.66	Rubber Flapper Chain
Toto	Carlyle EL	6.3	1.66	
Toto	Drake EL	6.3	1.66	3" Flapper
Gerber	Aquasaver EL	6.5	1.72	Rubber Flapper Chain
Kohler	Santa Rosa RF	6.5	1.72	
Toto	Ultramax EL	6.5	1.72	3" Flapper
Eljer	Patriot RF	6.6	1.74	
Toto	Ultimate RF	6.8	1.80	3" Flapper
Briggs (Proflo)	Abingdon III RF	6.9	1.82	Rubber Flapper Chain
American Standard	Plebe EL	7.2	1.90	Adjustable Float
Briggs (Proflo)	Altima III RF	7.3	1.93	Rubber Flapper Chain
Glacier Bay	Aragon IV RF	7.3	1.93	
St. Thomas	Marathon RF	7.6	2.01	
Komet	Deco RF	9.5	2.50	No Water Line Indicator