

Maximum Performance (MaP)® of Toilet Fixtures - Flushometer Valve/Bowl Combinations

IMPORTANT NOTE: The evaluation and MaP measurement of the flushometer bowl/valve combinations shown below was performed using the existing MaP protocol designed for residential applications. A more rigorous MaP protocol for non-residential (public restroom) applications is under consideration. Results may change if the combinations shown below are re-tested using a (proposed) new commercial protocol.

July 9, 2021

MaP Report No. (for internal use)	Flushometer bowl							Flushometer valve										
	Manufacturer of the Bowl	Bowl/ Valve Combination Number (if available)	Bowl Model Name	Bowl Model Number	Spud	Rough-in (inches)*	Round (R) or Elongated (E) bowl	ADA Height Bowl	Rear Discharge (Back Outlet)	Floor- (F) OR Wall-Mounted (W)	WaterSense Compliant Bowl (certified)	Manufacturer of the Valve	Valve Model Number	MaP Performance Score	6-L (1.6-gal) Commercial Combination	4.8-L (1.25-gal) HET Commercial Combination	Rated HET Flush Volume	Valve design: D=Diaphragm; P=Piston

Conventional Flushometer Valve/Bowl Combinations (ULF: 1.6 gallon/6.0 litre max Effective Flush Volume)

55-025	American Standard		Madera 1.6 EL	2234	Top	10	E			F	WS	American Standard	6147.161 and 6147SM.161	1,000	ULF			D	
17-032RN33-RN49	American Standard	2234660.020	Madera EL	2234.001	Top	10	E			F	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
55-028	American Standard		Afwall EC 1.6 EL (wall mount-ADA possible)	2257	Top	N.A.	E	ADA	R	W	WS	American Standard	6147.161 and 6147SM.161	1,000	ULF			D	
17-031RN33-RN49	American Standard	2257660.020	Afwall EL ADA	2257.101	Top	N.A.	E	ADA	R	W	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
30-077RN46	American Standard		Afwall EL ADA (1.6 gal/flush)	2257.101	Top	N.A.	E	ADA	R	W	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
30-077RN46	American Standard		Afwall FloWise EC EL ADA (1.6 gal/flush)	2284.011	Top	N.A.	E	ADA	R	W	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
30-077RN46	American Standard		Afwall EL ADA (1.6 gal/flush)	2634.101	Rear	N.A.	E	ADA	R	W	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
55-022	American Standard		Madera 1.6 EL ADA	3043	Top	10	E	ADA		F	WS	American Standard	6147.161 and 6147SM.161	1,000	ULF			D	
17-033RN33-RN49	American Standard	3043660.020	Madera EL ADA	3043.001	Top	10	E	ADA		F	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
55-028	American Standard		Afwall EC 1.6 EL (wall mount-ADA possible)	3351	Top	N.A.	E	ADA	R	W	WS	American Standard	6147.161 and 6147SM.161	1,000	ULF			D	
30-077RN46	American Standard	3351660.020	Afwall EC TS EL ADA (1.28 gal/flush)	3351.101	Top	N.A.	E	ADA	R	W	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
17-034RN33-RN49	American Standard	3351660.020	Afwall EL ADA	3351.101	Top	N.A.	E	ADA	R	W	WS	American Standard	6067.161.002 (hard wire)	1,000	ULF			P	
10-135RN28-RN44-RN60	American Standard		Afwall EL	3351.101	Top	N.A.	E	ADA	R	W	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
30-077RN46	American Standard		Afwall EC EL ADA (1.6 gal/flush)	3353.101	Rear	N.A.	E	ADA	R	W	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
55-025	American Standard		Madera 1.6 EL	3451	Top	10	E			F	WS	American Standard	6147.161 and 6147SM.161	1,000	ULF			D	
17-026RN33-RN49	American Standard	3451660.020	Madera EL	3451.001	Top	10	E			F	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
10-129RN28-RN44-RN60	American Standard		Madera EL	3451.001	Top	10	E			F	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
10-130RN28-RN44-RN60	American Standard		Madera EL	3453.001	Rear	10	E			F	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
55-022	American Standard		Madera 1.6 EL ADA	3461	Top	10	E	ADA		F	WS	American Standard	6147.161 and 6147SM.161	1,000	ULF			D	
17-027RN33-RN49	American Standard	3461660.020	Madera EL ADA	3461.001	Top	10	E	ADA		F	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
10-131RN28-RN44-RN60	American Standard		Madera EL ADA	3461.001	Top	10	E	ADA		F	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
40-014RN56	American Standard		Priolo EL	3690.001	Top	14	E		W	F	WS	American Standard	6065.111 (1.6 gpf)	1,000	ULF			P	WS
13-094RN28-RN44-RN60	American Standard		Priolo EL ADA	3695.001	Top	N.A.	E	ADA	R	F	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
13-094RN28-RN44-RN60	American Standard		Priolo EL ADA	3697.001	Rear	N.A.	E	ADA	R	F	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
25-052RN41-RN57	American Standard		Baby Devoro FV Universal (child's bowl height: 10.4-inch = 260 mm)	2282.001 (child's bowl height: 10.4-inch = 260 mm)	Top				S	F	WS	American Standard	6065.161.002	800	ULF			P	
30-077RN46	American Standard		Afwall FloWise EC EL ADA (1.6 gal/flush)	2296.019 (w/BPL)	Top	N.A.	E	ADA	R	W	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
27-001RN43-RN59	American Standard		Madera Youth FloWise (youth bowl height: 14-inch = 355 mm)	2599.001 (youth bowl height: 14-inch = 355 mm)	Top		E			F	WS	American Standard	6065.565.002	1,000	ULF			P	
30-077RN46	American Standard		Afwall EL ADA (1.6 gal/flush)	2633.101 (w/BPL)	Top	N.A.	E	ADA	R	W	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
10-135RN28-RN44-RN60	American Standard		Afwall EL	3352.101 (w/bedpan lugs)	Top	N.A.	E	ADA	R	W	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
30-077RN46	American Standard		Afwall EC EL ADA (1.6 gal/flush)	3352.101 (w/BPL)	Top	N.A.	E	ADA	R	W	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
30-077RN46	American Standard		Afwall EC EL ADA (1.6 gal/flush)	3354.101 (rear outlet w/BPL)	Top	N.A.	E	ADA	R	W	WS	American Standard	6065.161.002 (battery)	1,000	ULF			P	
22-070RN38-RN54	American Standard		Top Spud Rapidway EL (wall mount-ADA possible)	3445J.101	Top	N.A.	E	ADA	R	W		Sloan	Solaris 8111	600	ULF			D	
22-070RN38-RN54	American Standard		Back Spud Rapidway EL (wall mount-ADA possible)	3445L.101	Rear	N.A.	E	ADA	R	W		Sloan	Solaris 8111	600	ULF			D	
10-129RN28-RN44-RN60	American Standard		Madera EL	3452.001 (w/bedpan lugs)	Top	10	E			F	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
10-130RN28-RN44-RN60	American Standard		Madera EL	3455.001 (w/bedpan lugs)	Rear	10	E			F	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
10-131RN28-RN44-RN60	American Standard		Madera EL ADA	3462.001 (w/bedpan lugs)	Top	10	E	ADA		F	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
13-094RN28-RN44-RN60	American Standard		Priolo EL ADA	3696.001 (w/ bed pan lugs)	Top	N.A.	E	ADA	R	F	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
13-094RN28-RN44-RN60	American Standard		Priolo EL ADA	3698.001 (w/ bed pan lugs)	Rear	N.A.	E	ADA	R	F	WS	Toto	TET 1 DNCR (1-1/2")	1,000	ULF			P	
43-005RN59	AMTC	AEF**1012T16	None EL	AUT-1012	Top	10	E			F	WS	AMTC	AEF-801-**CT-16	800	ULF			D	
43-005RN59	AMTC	HSM1012T16	None EL	AUT-1012	Top	10	E			F	WS	AMTC	HSM-801-CT-16	800	ULF			D	
43-005RN59	AMTC	MF1012T16	None EL	AUT-1012	Top	10	E			F	WS	AMTC	MF-700-T16	800	ULF			D	
43-004RN59	AMTC	AEF**1012AT16	None EL ADA	AUT-1012A	Top	10	E	ADA		F	WS	AMTC	AEF-801-**CT-16	800	ULF			D	
43-004RN59	AMTC	HSM1012AT16	None EL ADA	AUT-1012A	Top	10	E	ADA		F	WS	AMTC	HSM-801-CT-16	800	ULF			D	
43-004RN59	AMTC	MF1012AT16	None EL ADA	AUT-1012A	Top	10	E	ADA		F	WS	AMTC	MF-700-T16	800	ULF			D	
43-003RN59	AMTC	AEF**1012WT16	None EL (wall mount-ADA possible)	AUT-1012W	Top	N.A.	E	ADA	R	W	WS	AMTC	AEF-801-**CT-16	800	ULF			D	
43-003RN59	AMTC	HSM1012WT16	None EL (wall mount-ADA possible)	AUT-1012W	Top	N.A.	E	ADA	R	W	WS	AMTC	HSM-801-CT-16	800	ULF			D	
43-003RN59	AMTC	MF1012WT16	None EL (wall mount-ADA possible)	AUT-1012W	Top	N.A.	E	ADA	R	W	WS	AMTC	MF-700-T16	800	ULF			D	

MaP Report No. (for internal use)	Flushometer bowl										Flushometer valve							
	Manufacturer of the Bowl	Bowl/ Valve Combination Number (if available)	Bowl Model Name	Bowl Model Number	Spud	Rough-in (inches)*	Round (R) or Elongated (E) bowl	ADA Height Bowl	Rear Discharge (Back Outlet)	Floor- (F) OR Wall-Mounted (W)	WaterSense Compliant Bowl (certified)	Manufacturer of the Valve	Valve Model Number	MaP Performance Score	6-L (1.6-gal) Commercial Combination	4.8-L (1.28-gal) HET Commercial Combination	Rated HET Flush Volume	Valve design: D=Diaphragm; P=Piston
44-092RN60	Gerber		None RF	Z5-820	Top	10	R			F	WS	Sloan	111-1.6	1,000	ULF			D
32-043RN48	Kohler		Kingston EL (wall mount-ADA possible)	K-4325	Top	N.A.	E	ADA	R	F	WS	Moen	8310M16	1,000	ULF			P
30-046RN46	Sloan Valve		EL	ST2009	Top	10	E	ADA	R	F	WS	Sloan	Royal 111-1.6	1,000	ULF			D
30-042RN46	Sloan Valve		EL ADA	ST2029	Top	10	E	ADA	R	F	WS	Sloan	Royal 111-1.6	1,000	ULF			D
30-039RN46	Sloan Valve		EL (wall mount-ADA possible)	ST2059	Top	N.A.	E	ADA	R	W	WS	Sloan	Royal 111-1.6	1,000	ULF			D
32-116RN48	Sloan Valve		Efficiency Series (child's bowl height: 10.5-inch = 267 mm)	ST2309 (child's bowl height: 10.5-inch = 267 mm)	Top	10				F	WS	Sloan	Royal 111-1.6	1,000	ULF			D
45-024RN61	Sloan Valve		EL (juvenile bowl height: 13.5-inch = 343 mm)	ST2449	Top	10	E			F	WS	Sloan	Royal 111-1.6	1,000	ULF			D
24-120RN40-RN56	Toto		EL	CT705EN*	Top	12	E			F	WS	Toto	TMT 1NNC	600	ULF			P
24-103RN40-RN56	Toto		EL (wall mount-ADA possible)	CT708E	Top	N.A.	E	ADA	R	W	WS	Toto	TMT 1NNC	600	ULF			P
21-089RN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	Z6000AV-WS1	800	ULF			D
21-089RN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	Z6000PL-WS1	800	ULF			D
21-097RN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	Z6200-WS1	800	ULF			P
21-089dRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZEMS6000AV-WS1	800	ULF			D
21-089RN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZEMS6000PL-WS1	800	ULF			D
21-097CRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZEMS6200-WS1	800	ULF			D
21-097dRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZEMS6200-WS1-IS	800	ULF			D
21-089bRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZER6000AV-WS1	800	ULF			D
21-089gRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZER6000PL-WS1	800	ULF			D
21-089RN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZER6200-WS1	800	ULF			P
21-089hRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZR6000AV-WS1	800	ULF			D
21-089RN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5615-BWL (wall-hung-back outlet)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZR6000PL-WS1	800	ULF			D
21-089kRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	Z6000AV-WS1	800	ULF			D
21-089pRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	Z6000PL-WS1	800	ULF			D
21-089RN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	Z6200-WS1	800	ULF			P
21-089nRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZEMS6000AV-WS1	800	ULF			D
21-089sRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZEMS6000PL-WS1	800	ULF			D
21-097gRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZEMS6200-WS1	800	ULF			D
21-097hRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZEMS6200-WS1-IS	800	ULF			D
21-089iRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZER6000AV-WS1	800	ULF			D
21-089qRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZER6000PL-WS1	800	ULF			D
21-097fRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZER6200-WS1	800	ULF			P
21-089mRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZR6000AV-WS1	800	ULF			D
21-089rRN37-RN53	Zurn		EL (wall mount-ADA possible)	Z5616-BWL (wall-hung-back outlet with BPL)	Top	N.A.	E	ADA	R	W	WS	Zurn	ZR6000PL-WS1	800	ULF			D
52-004	Zurn		Ecovantage EL (wall mount-ADA possible)	Z5617-BWL	Rear	N.A.	E	ADA	R	W	WS	Zurn	Z61****-WS1	1,000	ULF			D
52-005	Zurn		Ecovantage EL (wall mount-ADA possible)	Z5617-BWL	Rear	N.A.	E	ADA	R	W	WS	Zurn	Z62****-WS1	1,000	ULF			P
52-004	Zurn		Ecovantage EL (wall mount-ADA possible)	Z5617-BWL	Rear	N.A.	E	ADA	R	W	WS	Zurn	ZEMS61****-WS1	1,000	ULF			D
52-005	Zurn		Ecovantage EL (wall mount-ADA possible)	Z5617-BWL	Rear	N.A.	E	ADA	R	W	WS	Zurn	ZEMS62****-WS1	1,000	ULF			P
52-004	Zurn		Ecovantage EL (wall mount-ADA possible)	Z5617-BWL	Rear	N.A.	E	ADA	R	W	WS	Zurn	ZER61****-WS1	1,000	ULF			D
52-005	Zurn		Ecovantage EL (wall mount-ADA possible)	Z5617-BWL	Rear	N.A.	E	ADA	R	W	WS	Zurn	ZER62****-WS1	1,000	ULF			P
52-004	Zurn		Ecovantage EL (wall mount-ADA possible)	Z5617-BWL	Rear	N.A.	E	ADA	R	W	WS	Zurn	ZH61****-WS1	1,000	ULF			D
52-005	Zurn		Ecovantage EL (wall mount-ADA possible)	Z5617-BWL	Rear	N.A.	E	ADA	R	W	WS	Zurn	ZH62****-WS1	1,000	ULF			P
19-049RN36-RN52	Zurn		EL	Z5640 (back outlet)	Top		E			F		Zurn	Z6000AV-WS1	1,000	ULF			D
41-011RN57	Zurn		EL	Z5655-BWL1	Top	12	E	ADA		F	WS	Zurn	ZTR6200-W1S	1,000	ULF			P
41-011RN57	Zurn		EL	Z5656-BWL1 w/BPL	Top	12	E	ADA		F	WS	Zurn	ZTR6200-W1S	1,000	ULF			P
41-011RN57	Zurn		EL	Z5657-BWL1 w/AM glaze	Rear	12	E	ADA		F	WS	Zurn	ZTR6200-W1S	1,000	ULF			P
41-016RN57	Zurn		EL ADA	Z5665-BWL1	Top	12	E	ADA		F	WS	Zurn	ZTR6200-W1S	1,000	ULF			P
41-016RN57	Zurn		EL ADA	Z5666-BWL1 w/BPL	Top	12	E	ADA		F	WS	Zurn	ZTR6200-W1S	1,000	ULF			P
41-016RN57	Zurn		EL ADA	Z5667-BWL1 w/AM glaze	Rear	12	E	ADA		F	WS	Zurn	ZTR6200-W1S	1,000	ULF			P

Notes: *-Rough-in dimension shown is the actual dimension of the tested installation; some bowls on this list may accommodate BOTH 10-inch and 12-inch rough-in
RF – Round-front toilet bowl

MaP Report No. (for internal use)	Flushometer bowl								Flushometer valve									
	Manufacturer of the Bowl	Bowl/ Valve Combination Number (if available)	Bowl Model Name	Bowl Model Number	Spud	Rough-in (inches)*	Round (R) or Elongated (E) bowl	ADA Height Bowl	Rear Discharge (Back Outlet)	Floor- (F) OR Wall-Mounted (W)	WaterSense Compliant Bowl (certified)	Manufacturer of the Valve	Valve Model Number	MaP Performance Score	6-L (1.6-gal) Commercial Combination	4.8-L (1.28-gal) HET Commercial Combination	Rated HET Flush Volume	Valve design: P=Pliston

EL - Elongated-front toilet bowl

N.A. - Wall (rear) outlet bowl. Rough-in dimension is NOT applicable.

S - Special bowl height for child installations as follows:

Amer Std Approx. 10.4 inches to 14 inches (260 to 355 mm)
 Gerber Approx. 13.4 inches (340 mm)

ADA-Meets bowl-height requirements of Americans with Disabilities Act; does NOT imply that fixture meets any other ADA requirements.

G - Gallons per Flush

L - Litres per Flush

BPL - Bowl with Bed Pan Lugs