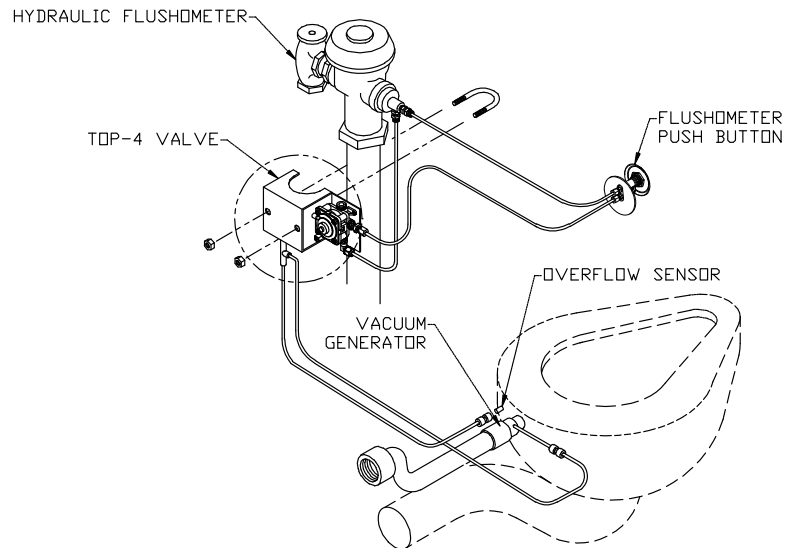


## T4 Toilet Overflow Preventer



### Recommended Specifications

Toilet overflow preventer shall be Willoughby Model No. **T4**.

The toilet overflow preventer shall be installed on a Willoughby toilet or combination toilet/lavatory fixture to prevent overflow. The unit shall consist of a vacuum operated disabler, a vacuum generator and an overflow sensor. The vacuum generator and overflow sensor shall be factory installed in all specially modified fixtures. The disabler valve shall be installed in the control circuit of a hydraulic flushometer. Vacuum connections between the disabler valve and the fixture shall be polyethylene tubing. After a backup, the unit shall be manually reset by a push button on the disabler valve. The unit shall allow no overflow and require no outside power source.

### Operation

During each flush cycle, water flowing through the fixture produces a vacuum at the vacuum generator. Normally, this vacuum is drawn unrestricted through the overflow sensor. Should the water level in the bowl rise due to in-

tentional blocking of the drain or a clog downstream of the fixture, it will cover the opening of the sensor. When water is drawn into the sensor, the majority of the vacuum will be redirected to the disabler valve. The disabler valve is normally open vacuum operated valve installed in the control circuit of a hydraulic flushometer. The vacuum closes the disabler valve thereby preventing any additional flushes until the unit is manually reset.

### Application

The toilet overflow preventer is recommended for facilities with high vandalism (prisons, parks, schools, etc.) and is normally used in conjunction with a back supply toilet or combination unit where an accessible pipe chase is provided.

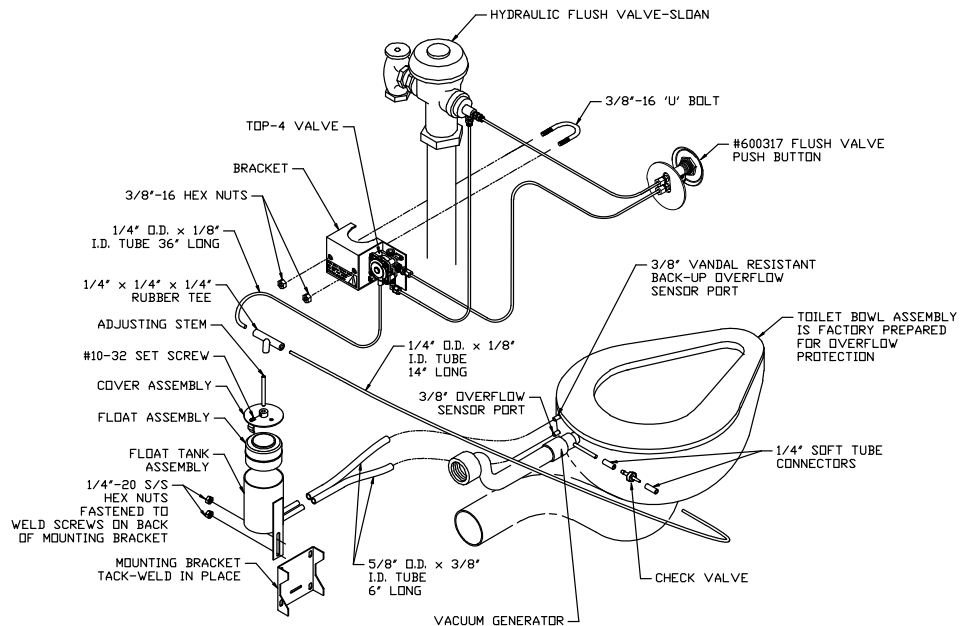
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## T4A Toilet Overflow Preventer with Auto-reset



## Recommended Specifications

Toilet overflow preventer shall be Willoughby Model No. **T4A**.

The toilet overflow preventer shall be installed on a Willoughby toilet or combination toilet/lavatory fixture to prevent overflow. The unit shall consist of a vacuum operated disabler, a vacuum generator, an overflow sensor, and a float sensor canister. The vacuum generator and overflow sensor shall be factory installed in all specially modified fixtures. The disabler valve shall be installed in the control circuit of a hydraulic flushometer. Vacuum connections between the disabler valve and the fixture shall be polyethylene tubing. After a backup, the unit shall automatically reset by the lowering of the water in the toilet bowl to normal level. The unit shall allow no overflow and require no outside power source.

## Operation

During each flush cycle, water flowing through the fixture produces a vacuum at the vacuum generator. Normally, this vacuum is drawn unrestricted through the overflow sensor. Should the water level in the bowl rise due to intentional blockage or down stream obstruction, water covers the overflow sensor port and fills the float canister. The float rises and directs the vacuum to the disabler valve.

The disabler valve is normally open vacuum operated valve installed in the control circuit of a hydraulic flushometer. The vacuum closes the disabler valve thereby preventing any additional flushes until the water level in the toilet bowl returns to normal. When the water level drops, the float canister drains back to the toilet bowl lowering the float. Once the float lowers to its normal position it permits air to enter the system opening the disabler valve and allows normal flush operation.

## Application

The toilet overflow preventer is recommended for facilities with high vandalism (prisons, parks, schools, etc.) and is normally used in conjunction with a back supply toilet or combination unit where an accessible pipe chase is provided.

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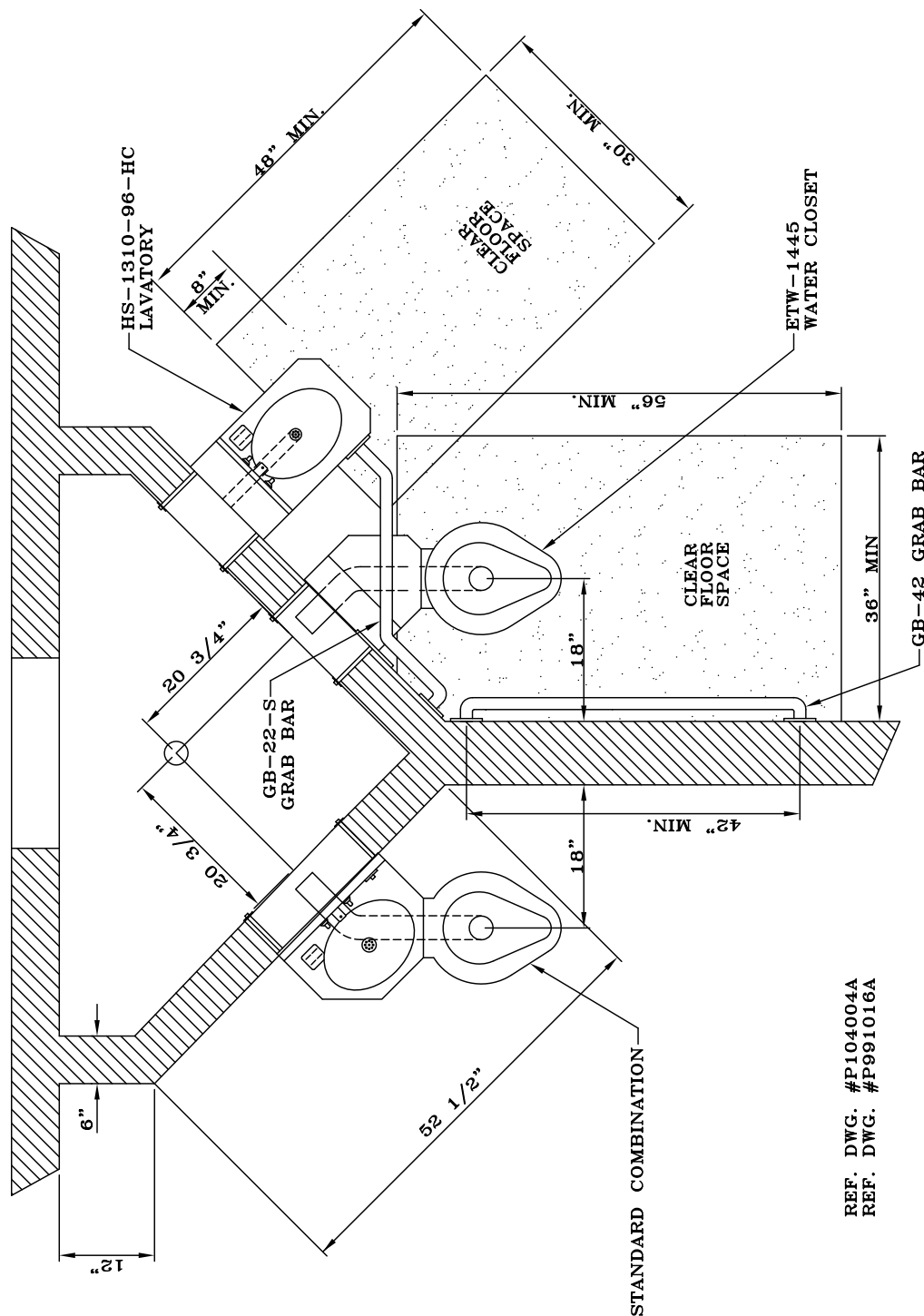
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## 1445/1310 Series

### Handicap Toilet With Lavatory Unit Layout

WILLOUGHBY



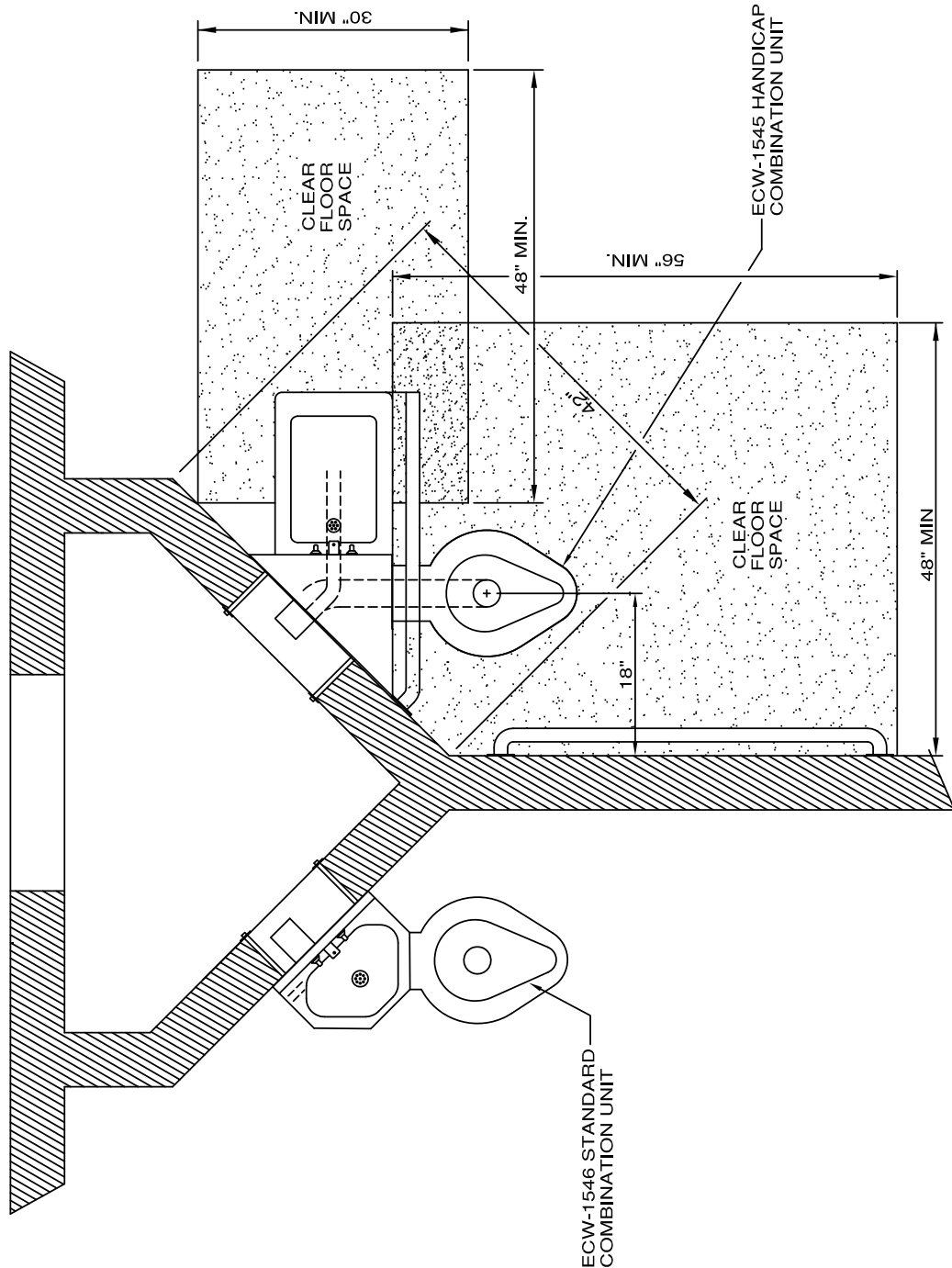
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### Handicap Combination Unit Layout



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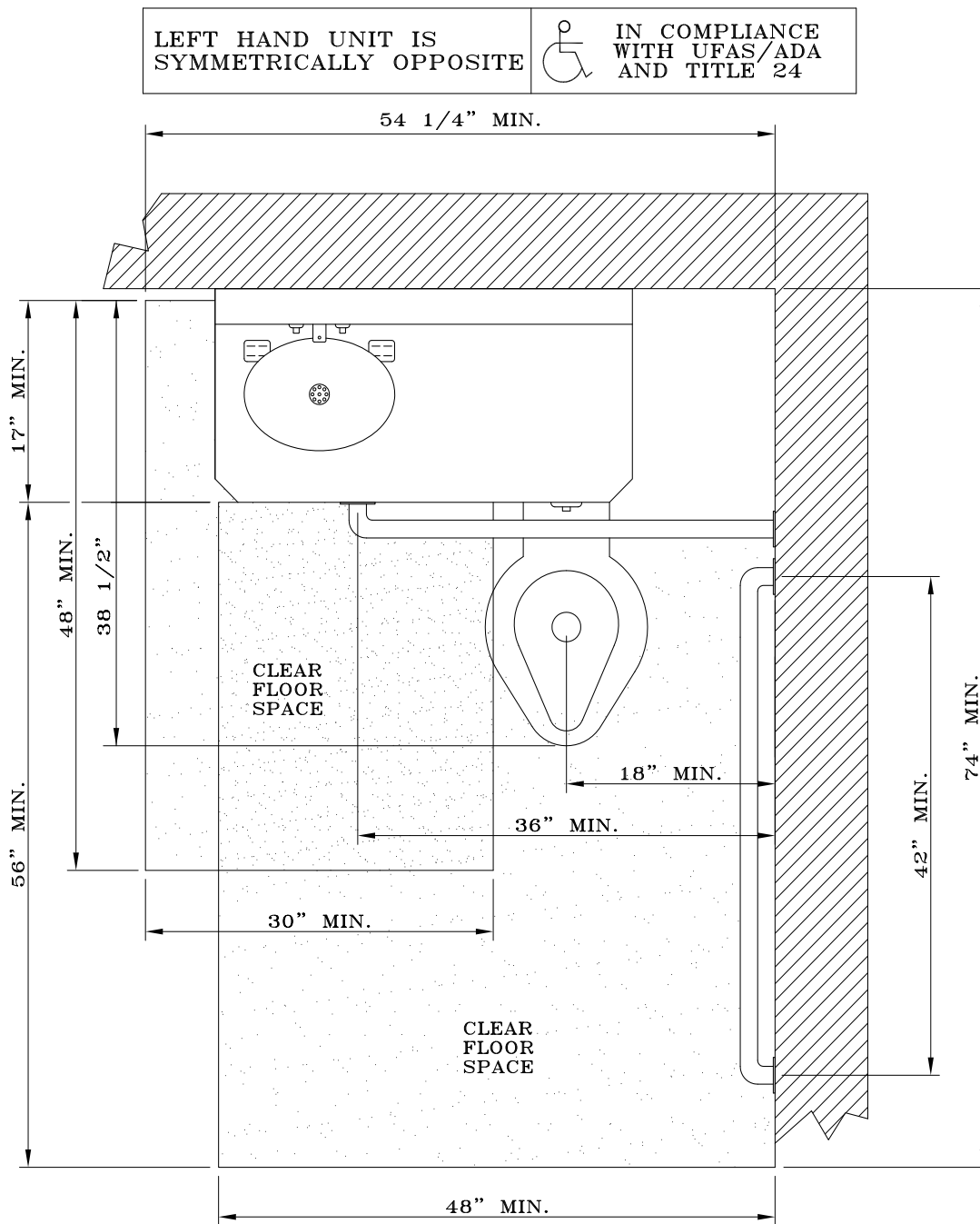
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## 3696 Series

### Handicap Combination Unit Layout



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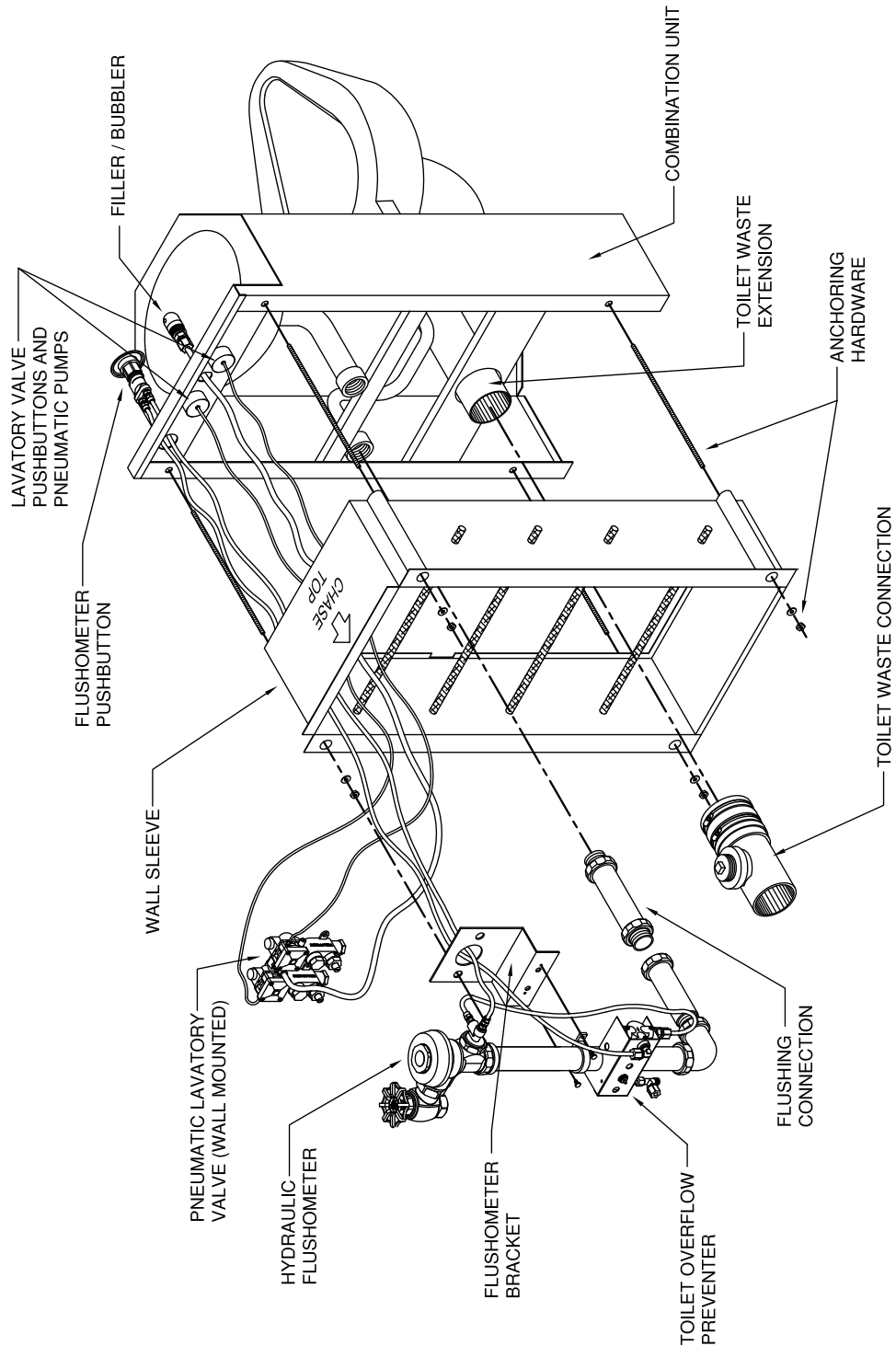


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## Typical Combination Unit Installation

### TYPICAL WILLOUGHBY COMBINATION UNIT INSTALLATION



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## Flush Valve Selection Chart

FLUSH VALVE	COMPATIBILITY CHART	MECH'L SLOAN	HYDRAULIC SLOAN	ACTUATOR	MECH'L ZURN	HYDRAULIC ZURN	MECH'L DELANY	HYDRAULIC DELANY
ECF-1546-C-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECF-1546-L/R-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECF-1846-C-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECF-1846-C-ON-FA	FRONT ACCESS COMBINATION	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECF-1846-L/R-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	603	1223
ECF-1846-L/R-ON-FA	FRONT ACCESS COMBINATION	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECF-1897-L/R-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	603	1223
ECF-1897-L/R-ON-FA	FRONT ACCESS COMBINATION	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECF-2046-L/R-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	603	1223
ECF-2046-L/R-ON-FA	FRONT ACCESS COMBINATION	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECF-2696-L/R-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	603	1223
ECF-2845-L/R-ON-FA-HC	HANDICAP COMBI W/ INTEGRAL, FLUSH VLV	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECF-2897-L/R-ON-FA-HC	HANDICAP COMBI W/ INTEGRAL, FLUSH VLV	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECW-1545-L/R-ON-HC	HANDICAP COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	603	1223
ECW-1546-C-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	603	1223
ECW-1546-C-F	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	603	1223
ECW-1546-L/R-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	603	1223
ECW-1546-L/R-OF	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	603	1223
ECW-1846-C-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	603	1223
ECW-1846-C-ON-FA	FRONT ACCESS COMBINATION	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECW-1846-C-F	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECW-1846-L/R-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECW-1846-L/R-ON-FA	FRONT ACCESS COMBINATION	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECW-1846-L/R-OF	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECW-1897-L/R-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECW-1897-L/R-ON-FA	FRONT ACCESS COMBINATION	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECW-1897-L/R-OF	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECW-2046-L/R-ON	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECW-2046-L/R-ON-FA	FRONT ACCESS COMBINATION	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECW-2046-L/R-OF	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECW-2696-L/R-OF	COMBINATION	603	9603	MBFW	Z-6603XL	ZH-6603XL	623	1223
ECW-3696-L/R-ON-FA-HC	HANDICAP COMBI W/ INTEGRAL, FLUSH VLV	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ECW-3696-L/R-OF-FA-HC	HANDICAP COMBI W/ INTEGRAL, FLUSH VLV	N/A	950	MBPM	N/A	ZH-6150XL	N/A	1233
ETF-1490-FM-BS	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETF-1490-FM-BS-10"-FA	FRONT ACCESS WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240

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When specifying low flow toilets, the accompanying flush valve must be a low flow flush valve:

**Delany** low flow: add "1" suffix.

**Sloan** low flow: add "1.6" suffix (Exception: for model #110-1.6, use model #111)

**Zurn** low flow: add "WS-1" suffix



## Flush Valve Selection Chart

FLUSH VALVE	COMPATIBILITY CHART		MECH'L SLOAN	HYDRAULIC SLOAN	ACTUATOR	MECH'L ZURN	HYDRAULIC ZURN	MECH'L DELANY	HYDRAULIC DELANY
	FRONT ACCESS COMBINATION	WATER CLOSET							
ETF-1490-FM-BS-12"-FA	FRONT ACCESS COMBINATION	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETF-1490-FM-BS-FA	FRONT ACCESS COMBINATION	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETF-1490-FM-BS-HC	HANDICAP WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETF-1490-FM-BS-HC-FA	HANDICAP FRONT ACCESS WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETF-1490-FM-TS	WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETF-1490-FM-TS-10"-FA	FRONT ACCESS WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETF-1490-FM-TS-12"-FA	FRONT ACCESS WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETF-1490-FM-TS-FA	FRONT ACCESS WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETF-1490-FM-TS-HC	HANDICAP WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETF-1490-FM-TS-HC-FA	HANDICAP FRONT ACCESS WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETW-1445-FM-BS-HC-L/R	HANDICAP WATER CLOSET	WATER CLOSET	N/A	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETW-1445-OF-BS-HC-L/R	HANDICAP WATER CLOSET	WATER CLOSET	N/A	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETW-1490-CM-BS	WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETW-1490-CM-TS	WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETW-1490-ES	WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETW-1490-FM-BS	WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETW-1490-FM-BS-FA	FRONT ACCESS WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETW-1490-FM-BS-HC	HANDICAP WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETW-1490-FM-BS-HC-FA	HANDICAP FRONT ACCESS WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETW-1490-FM-TS	WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETW-1490-FM-TS-FA	FRONT ACCESS WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETW-1490-FM-TS-HC	HANDICAP WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETW-1490-FM-TS-HC-FA	HANDICAP FRONT ACCESS WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETW-1490-OF-BS	WATER CLOSET	WATER CLOSET	611	910	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETW-1490-OF-TS	WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETWS-1490-CM-BS	WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETWS-1490-CM-TS	WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETWS-1490-FM-BS	WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETWS-1490-FM-BS-FA	FRONT ACCESS WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETWS-1490-FM-BS-FA-HC	HANDICAP FRONT ACCESS WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETWS-1490-FM-BS-HC	HANDICAP WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240
ETWS-1490-FM-TS	WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETWS-1490-FM-TS-FA	FRONT ACCESS WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETWS-1490-FM-TS-FA-HC	HANDICAP FRONT ACCESS WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETWS-1490-FM-TS-HC	HANDICAP WATER CLOSET	WATER CLOSET	110	910	MBFW	Z-6606XL	ZH-6606XL	439	1239
ETWS-1490-1490-OF-BS	WATER CLOSET	WATER CLOSET	611	9603	MBFW	Z-6611XL	ZH-6603XL	540	1240

When specifying low flow toilets, the accompanying flush valve must be a low flow flush valve:

**Delany** low flow: add "1" suffix.

**Sloan** low flow: add "1.6" suffix (Exception: for model #110-1.6, use model #111)

**Zurn** low flow: add "WS-1" suffix