

FIGURE 105-A: WELDED DISTRIBUTION MAINS (MSCL / PE)

NOTES Regarding Figure 105-A:

1. Welded MS pipework shown.
2. May be butt welded if PE.
One EF joint permitted as a final connection of the bypass pipework to the main. Ensure that the pipework either side of any EF weld is perfectly aligned prior to EF welding.
3. All sections of MS main (ie: sections between valves) need to be covered by the cathodic protection design and have test points constructed accordingly.

TABLE 105-A: BYPASS MAIN SIZING

MAIN SIZE (SEW, CWW)	MAIN SIZE (YVW)	BYPASS MAIN SIZE
>DN375 AND ≤ DN600	≥DN375 AND ≤ DN450	DN100 (OR 80 FOR SEW)
>DN600 AND ≤ DN1050	>DN450 AND < DN750	DN150
>DN1050 AND ≤ DN1200	≥DN750	DN225

NOTES Regarding Valves:

- A. All water supply valves to be anticlockwise closing.
- B. All valves shall be direct buried (not located in pits) unless otherwise directed.
- C. When two valves are directly off a tee, ensure valve bodies and surface covers do not clash and there is sufficient space to compact backfill and access & fasten bolts. Typically valve spindles shall be separated by at least 600.
- D. Bypass valves to be sized as per Table 105-A.
- E. YVW require bypass valves around DN300 divide valves when operating pressures > 50m.
- F. YVW require offtake valves > DN375 to be metal seated gate valves (Refer Table 105-B).

TABLE 105-B: DIVIDE AND OFFTAKE VALVE PREFERENCES

	≤ DN450 DIVIDE VALVES	> DN450 TO ≤ DN600 DIVIDE VALVES	> DN600 DIVIDE VALVES	≥ DN450 OFFTAKE VALVES
CWW		Butterfly valve		
SEW	Resilient seated gate valve	Resilient seated gate valve with integrated bypass	Butterfly valve	Resilient seated gate valve
YVW		Butterfly valve		Metal Seated gate valve

GENERAL NOTES:

1. Main sizes provided for example purposes only.
2. For corrosion protection of metallic mains, refer to drawings MRWA-W-306A & 400 and WSA03.
3. All large main (≥DN300) tee offtakes shall be flanged, with a valve always bolted to this flange.
4. Lengths shown with welded collars are MSCL pipe, cut to length & welded in situ. Refer to drawing MRWA-W-400 for details.
5. Direct property service connections are not permitted on mains ≥DN375.
6. Gibaults and adaptaflanges (uniflanges) are not permitted on new mains unless otherwise approved. Thrust type dismantling joints are acceptable in non buried applications.
7. Slip on or welded steel flanged pipe must be fabricated in an ISO-9001 accredited metal fabrication workshop (not on site).
8. Locate ≥DN450 divide valves at distinct low and high points where practical.
9. Scours are often best located at distribution divide valve bypass pipework, particularly where the ≥DN450 divide valve is located at a distinct low point. Refer pipework in blue.
10. Scours are usually sized as bypass valves (refer to Table 105-A).
11. Refer to MRWA-W-307 for details on scours.
12. Air valves may be required with / instead of the hydrant on the bypass. Refer to MRWA-W-304.
13. Valves and hydrants / air valves shall be separated by ≥800.

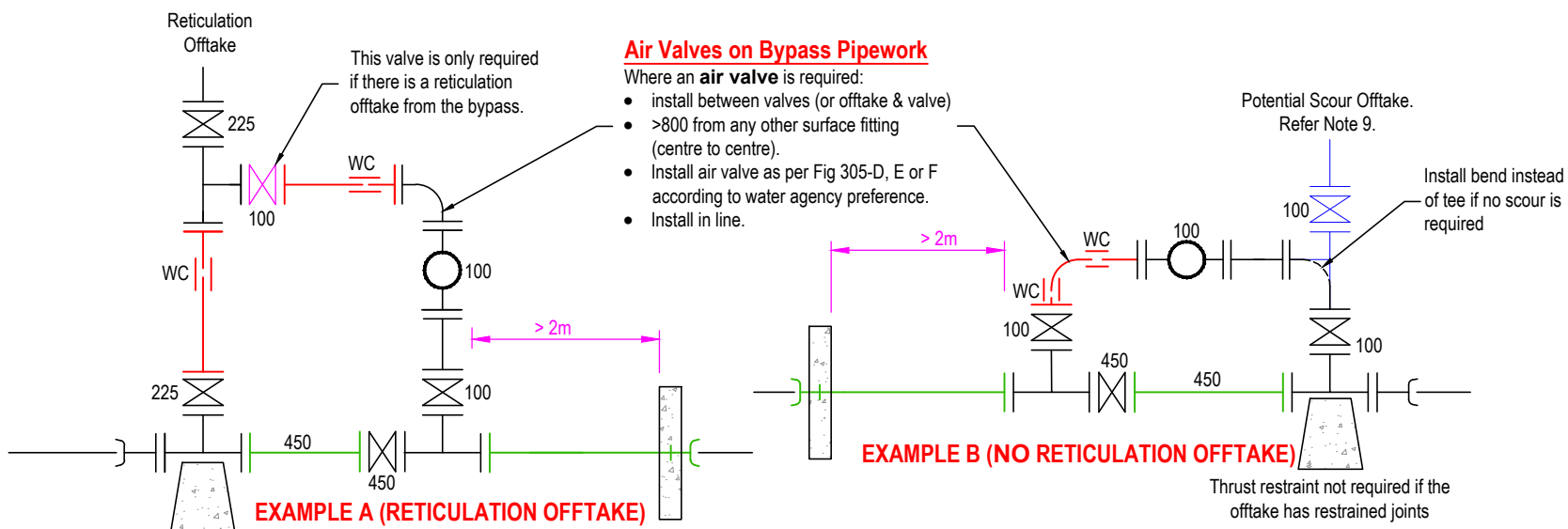


FIGURE 105-B: SOCKET / SPIGOT DISTRIBUTION MAINS (DI or FW-GRP)

NOTES Regarding Figure 105-B:

1. Pipework shown in red shall be welded steel. Provide coatings as per drawings MRWA-W-306A & 400. Cathodic protection of these short lengths is not required.
2. Di / FW GRP pipework shown in green is typically special order and there may be a long lead time before receipt of goods. MS pipe (without Cathodic Protection) may be used in lieu of Di / FW GRP.
3. Thrust blocks required where non-restrained rubber ring joints used. Refer MRWA-W-204 & MRWA-W-205A & 205B.
4. Socket joints shall not be blocked in weak ground (AHBP <50 kPa). Welded or thrust restrained joints must be used.

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MELBOURNE RETAIL WATER AGENCIES

MRWA WATER SUPPLY STANDARDS

**DISTRIBUTION MAIN
DIVIDE VALVE & BYPASS
ARRANGEMENTS FOR ≥ DN450 MAINS**

NOT TO SCALE

MRWA-W-105

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