Sl. No Specification

#### 2.08 Water Hammer Arrestors

- A Air Chamber: Fabricated from DN 25 (1") or larger pipes, 300 to 450 mm (12 to 18") long with end cap.
- Shock Absorbers: Stainless steel shell with stainless steel or elastomer nested bellows and male threaded connection, pre-charged with hydraulic displacement fluid and super pressurized with inert gas. Size shall be selected in accordance with manufacturer's recommendations. Ref: Josam 75000 series, **Mifab WHB series**

## 2.09 **Hose Bibs & Hydrants**

A Hose Bibs: Chrome plated brass, globe type with integral vacuum breaker with DN 15 (1/2") male threaded inlet and DN 20 ( 3/4") hose thread outlet and wall flange operated be by handle or loose key as required.

Ref: Woodford Model 24, Mifab MHY - 92 series

- B Hydrants: Assembly comprising the following:
- 1 Chrome plated brass, globe type with integral vacuum breaker with DN 15 ( 1/2") male threaded inlet and DN 20 (3/4") hose thread outlet and wall flange, operated by handle or loose key as required.
- 2 Cast brass housing with door housing lockable with the same key as the hose bib, suitable for recessed installation.

Ref: Woodford Model B 24, Mifab MHY - 95 series

### 2.10 Floor Drains

- A Type FD 1: For toilets on grade and toilets with sunken floor slabs.
- 1 Coated cast iron body with integral trap and cleaning plug, hub less side outlet and threaded auxiliary inlets ( up to 3 # as required ), reversible secured flashing collar with weep holes and adjustable satin nickel bronze 150 mm ( 6") square top with hinged solid cover.
- 2 Extension adaptors shall be provided to accommodate deeper floor finish where required. Ref: Jay R. Smith 2095 series with BHQ Tops, Mifab Model No F 1170 - C - SD6 - 1
- B Type FD 2: For toilers on elevated slabs with fixture waste piping at high level below
- 1 Coated cast iron body with gasket jointed bottom outlet, reversible, secured flashing collar with weep holes and adjustable satin nickel bronze, 150 mm (6") square top with hinged solid cover.
- 2 Fitting suitable for auxiliary inlet at high level below, P trap and extension adapters (to accommodate deeper floor finish) shall be furnished as part of the assembly as appropriate. Ref: Jay R. Smith 2010 LXH series with BHQ tops, **Mifab Model: F1100-6-SD6-1**

### 2.11 Funnel Floor Drains

- A Type FFD 1: For plant rooms with floor finish and waterproofing
- 1 Coated cast iron body with gasket jointed bottom outlet, reversible, secured flashing collar with weep holes and adjustable satin nickel bronze, 150 mm (6") round / square strainer top and round / oval funnel.

Ref : Jay R. Smith 3510 LXH series with F 12 / F 25 funnels, **Mifab Model No F 1100 - S6** series with **F4/** funnels

- B Type FFD 2: For plant rooms with concrete finish without wash proofing
- 1 Coated cast iron body with gasket jointed bottom outlet and adjustable medium duty ductile iron 215 mm ( 81/2") round strainer top and oval funnel.

Ref : Jay R. Smith 3610 LHX series with F 25 Funnels, **Mifab Model No F 1100 - C8 series** with **G funnel** 

#### 2.12 **Area Drains**

SI. No Specification

- A Type AD 1: For internal areas with floor finish and waterproofing
- Coated cast iron body with gasket jointed bottom outlet, reversible, secured flashing collar with weep holes and adjustable satin nickel bronze 150 mm (6") square strainer Ref: Jay R. Smith 2010 LXH series with B Top, **Mifab Model No F 1100 S6 series**
- B Type AD 2: For external areas with floor finish and waterproofing
- 1 Coated cast iron body with gasket jointed bottom outlet, reversible, secured flashing collar with weep holes and adjustable, reinforced, nickel bronze, 150 / 200 mm ( 6/8") round / square strainer.
  - Ref: Jay R. Smith 2010 LXH series with C/ K Top, Mifab Model No F 1100 series
- C Type AD 2: For internal / external areas with concrete finish and waterproofing
- Coated cast iron body with gasket jointed bottom outlet, sediment bucket and adjustable medium duty ductile iron 215 mm (81/2") round strainer top.
  - Ref : Jay R. Smith 2350 LXH series, **Mifab Model No F 1340 C TFB 14**
- Type AD 4: For internal / external areas with concrete finish without waterproofing medium duty ductile iron 215 mm (8 1/2") round strainer top.
   Ref: Jay R. Smith 2210 LXH series, Mifab Model No F 1320 C TFB 4

### 2.13 Water Tank Drains

- A Type WTD 1 : For concrete water tanks.
- $1\,$  All bronze drain with threaded bottom / side / oblique outlet, secured, low dome, clamp ring and shallow sump with flashing flange
  - Ref: Jay R. Smith 1620 series, Mifab Model No F 1400 series

#### 2.14 Roof Drain

- A Type RD 2: For small sized normal roofs used for activity.
- 1 Coated cast iron body with shallow sump, gasket jointed, bottom outlet, flashing clamp with seepage openings and extension as required and 200 mm (8") square, secured, flat ductile iron / galvanized cast iron / nickel bronze / polished bronze grate with square openings. Ref: Jay R. Smith 1470 series, Mifab Model No F 1100 -P series.
- B Type RD X : Coated cast iron body with hub less bottom outlet, flashing clamp, semi spherical dome and securing eyebolt.
  - Ref: Jay R. Smith Kuwait Foundry Fulbora, Mifab Model No F 1200 series
- C Type RD Y : Coated cast iron body with // hubless // side outlet, flashing clamp, semi cylindrical dome and securing eyebolt.
  - Ref: Jay R. Smith Kuwait Foundry Fulbora, Mifab Model No R 1200 series.

# 2.15 Rain Water Shoe

- A Type RWS:
- 1 Cast bronze, smooth profiled down spout nozzle with threaded inlet, complete with loose set wall flange with anchor lugs.
  - Ref: Jay R. Smith 1770 series, Mifab Model No R 1940 series

# 2.16 Roof Vent Terminal

A Type VTR

SI. No Specification

1 Coated cast iron vandal proof hooded vent cap with counter flashing collar, deep protective hood and recessed securing screws complete with flashing sleeve at the roof level.
Ref: Jay R. Smith 1748 series with 1760 series, Mifab Model No R 1930 series.

## 2.17 Floor Cleanouts

- A Type FCO 1, For internal areas with medium traffic.
- 1 Coated cast iron ferrule with gasket connection, bronze plug and seal, adjustable, ABS access housing and secured, 150 mm (6") square scoriated, nickel bronze top.Ref: Jay R. Smith 4051 series, **Mifab Model No C 1220 series.**
- B Type FCO 2, For internal areas with heavy traffic
- 1 Coated cast iron ferrule with gasket connection, bronze plug and seal, adjustable, Cast iron access housing and secured (by setscrew), round, scoriated, nickel bronze top. Ref: Jay R. Smith 4111 series, Mifab Model No C 1220 series.

# 2.18 Ground Cleanouts

- A Type GCO 1 : For paved areas with medium / heavy duty traffic
- 1 Casted cast iron ferrule with gasket connection, bronze plug and seal, adjustable, cast iron access housing and secured ( by set screw), round scoriated, cast iron top. Ref: Jay R. Smith 4231 series, **Mifab Model No C 1220 series.**
- Type GCO 2 : For unfinished areas.
- 1 Galvanized cast iron body with gasket jointed connection and bronze plug with seal, heavy duty, loose set housing and secured, scoriated, round cast iron tractor cover set in concrete pad. Ref: Jay R. Smith 4250 series, **Mifab Model No C 1220 series.**

## 2.19 Sanitary Floor Drains (Floor Sinks)

A Type FS - 1: For food processing areas, acid resistant, coated cast iron body with gasket jointed bottom outlet, aluminum sediment bucket and secured, nickel bronze, 305 mm (12") square, strainer top.

Ref: Jay R. Smith 3100 series, Mifab Model No. FS1730- FL-1

- B Type GS 2 : For food processing areas same as FS-1 but with 3/4 grate, **Mifab Model FS1730-FL-1-175.**
- C Type FS 3 : For food processing areas same as FS-1, but with 1/2 grate, **Mifab Model No. FS1730-FL-1-150.**
- D Type FS-4 : For food processing areas, same as FS 1 but with 150 mm dia, 150 mm high funnel, **Mifab Model No. FS1730-FL-1-F6.**
- E Type FS 5 : For food processing areas, same as FS 1 but with 225 x 92 x 95 mm high oval funnel, **Mifab Model No. FS1730-FL-1-G**

# 2.20 Can Wash Drains

Sl. No Specification

- A Type CWD 1: For garbage rooms, stainless steel body and grate and aluminum sediment bucket, gasket jointed bottom outlet, pipe assembly with adjustable bronze spray nozzle etc. complete with water supply control box of stainless steel construction with architrave and hinged, lockable cover. Assembly shall include screwdriver stops for cold and hot water supply, vacuum breaker and outlet for flashing supply.
  - Ref: Jay R. Smith 3371& 3380 series, Mifab Model No. FS1930 F L-Y -36 & F 1670

#### **Planter Drains** 2.21

A Type PD - 1 : For small areas on elevated slabs, coated cast iron body with shallow sump and threaded, bottom, side or oblique outlet, bronze flashing clamp, dome and stainless steel mesh

Ref: Jav R. Smith 2670 series, Mifab Model No. R 1400 - HM -83 series

#### **Trench Drains** 2.22

- A Trench drain for external paved areas, cast polymer concrete body ( 200 mm clear width and 100 mm depth) with hubless bottom outlet and medium duly (Class C 250), slotted (solid cover used away from sources of inflow) grey cast iron grate, complete with end plates, locking bars, fasteners etc.
  - Ref: Jay R. Smith, Mifab & No. ACO Drain Model N 200 H.
- B Trench Drains for Kitchen, all stainless steel trench with sloping bottom, integral frame, hubless, bottom / side outlet and medium duty, anti slip, grid pattern grate, complete with basket strainer, cup type trap and hubless bottom outlet.

Dimension of the assembly (length, width, depth etc.) shall suit architectural requirements, shown in drawings and loading shall be appropriate for the location and usage.

Ref: Jay R. Smith, & No. Caniveau Riviere 300 / 400 / 500 from Limatec, France; Mifab Model TL-1320-FL series

### **Interceptors**

## 2.23

- A Grease Interceptors for central kitchen, fabricated steel body with acid resistant coating (internal and external), threaded inlet and outlet connections with hubless adapters etc. for 6.31 lps (100 usgpm) flow and 91 kg (200 lbs) grease capacity complete with the following:
- 1 Integral extension
- 2 Air relief
- 3 Visible double wall trap
- 4 Removable baffles and gasket seated cover Ref: Jay R. Smith 8400, Mifab Model No.XL-MI-G series

#### Pit / Trench Gratings 2.24

- A Type TG 1: For use in plant areas, Fabricated from 25 x 6 mm (1 x 1/4") black steel flats spaced at 38 mm ( 1 1/2") both ways complete with frame with anchor lugs. Assembly shall be hot dip galvanized after fabrication. Length of the trench grating shall be formed of full numbers of 600 / 1000 mm (24 / 40") long grating sections.
- B Type TG -2: For use in unsophisticated areas with high wheel loading, heavy duty, coated cast iron, straight bar gully grate complete with 50 x 50 x 5 mm ( 2 x 2x 1/4" ) fabricated steel angle frame with anchor lugs with appropriate protective coating. Length of the trench grating shall be formed of full numbers of 600 mm (24") long grating sections.

Ref: Kuwait Foundry, Mifab Model No. T 1200 - F2 series