

Abbreviations			
AD	Access Door	IL	Induction Loop
AAV	Automatic Air Vent	IL	Invert Level
AF	Axial Flow Fan	IP	IP Address Network Cameras
AHU	Air Handling Unit	IV	Isolating Valve
AP	Access Panel	KO	Knock-off Button
ASP	Anti Siphon Pipe	L	Lockable
BL	Bench Level	L/L	Low Level
B	Boiler	LLT	Low Limit Thermostat
BCHWS	Boosted Cold Water Service	LP	Low Pressure Switch
BHWSF	Boosted Hot Water Service Flow	LTHW	Low Temperature Hot Water
BHWSR	Boosted Hot Water Service Return	LTHWF	Low Temperature Hot Water Flow
C	Controller	LTHWR	Low Temperature Hot Water Return
CB	Cooler Battery	MA	Macerator
CU	Cooling Unit	MCC	Motor Control Centre
CC	Cap & Chain	MD	Motorised Damper
CF	Cold Feed	MIL	Mid Level
CO1	Contents Gauge Sensing Point	MTHW	Medium Temperature Hot Water
CG2	Contents Gauge	MTHWF	Medium Temperature Hot Water Flow
CH	Convectord Heater	MTHWR	Medium Temperature Hot Water Return
CHW	Chilled Water	MWS	Mains Water Supply
CHWF	Chilled Water Flow	NRD	Non-return Damper
CHWR	Chilled Water Return	NRV	Non-return Valve
CL	Cover Level	NV	Needle Valve
CM	Catmen Mixer	OF	Overflow
CONN	Connection	OV	Open Vent
CS	Commissioning Set	P	Pump
CTP	Constant Temperature Flow	PF	Puddle Flange
CTR	Constant Temperature Return	PG	Pressure Gauge
C/V	Ceiling Void Level	PRV	Pressure Relief Valve
CV	Check Valve	PTV	Pressure Tapped Valve
CWF	Condenser Water Flow	PUR	Pressurisation Unit Return
CWR	Condenser Water Return	RA	Radiator
CWS	Cold Water Service	RAD	Radiator
DC	Drain Cook	RE	Rodding Eye
DCV	Double Check Valve	REV	Relief Valve
CHWC	Domestic Hot Water Cylinder	RP	Radiant Panel
DF	Duplex Filter	R/R	Rate of Rise
DP	Differential Pressure Switch	RV	Regulating Valve
DP/CDV	Double Port Check Valve	RWO	Rain Water Outlet
DR	Dry Riser	RWP	Rain Water Pipe
DRI	Dry Riser Inlet	SED	Smoke Extract Duct
DRV	Double Regulating Valve	SD	Smoke Damper
DTG	Door Transfer Grille	SH	Space Heater
DW	Dishwasher	SOV	Solenoid Operating Valve
EDS	Extended Day Switch	SPC	Static Pressure Controller
EF	Extract Fan	SSL	Structural Slab Level
EH	Extract Hood	STH	Steam Humidifier
EV	Expansion Vessel	STR	Strainer
Ex	Denotes Existing	STS	Stub Stack
F	Fan	SRV	Safety Relief Valve
F/A	From Above	SV	Slip Valve
F/B	From Below	SVP	Soil Vent Pipe
FCU	Fan Coil Unit	SW	Sump Switch & Alarm
FD	Fire Damper	T	Thermostat
FE	Feed & Expansion	T/A	To Above
FF	Fridge Freezer	T/B	To Below
PHRS	Fire Hose Reel Supply	TH	Trace Heating
FMD	Flow Measure Device	TL	Thermal Link
FR	Fire	TP	Test Point
FRM	Fire Main	TR	Towel Rail
FRS	Fire Switch	TRV	Thermostatic Radiator Valve
FRV	Fire Valve	TS	Time Switch
FRS	Fire Stop	U	Untral
FS	Flow Switch	UIS	Underside
FSD	Fire & Smoke Damper	UTG	Un-trapped Gully
FT	Fused Temperature	VCD	Volume Control Damper
FZ	Freezer	VP	Vent Pipe
G	Gully	WC	Water Closet
GL	Ground Level	WD	Waste Disposal
GSD	General Supply Duct	WH	Water Heater
H	Humidistat	WHB	Wash Hand Basin
HB	Heater Battery	WM	Washing Machine
HD	Hand Dryer	WP	Weather Proof
HI	Hob Ignition	WPE	Warning Pipe
H/L	High Level	WVP	Waste Vent Pipe
HLB	High Level Below	WWP	Waste Water Preventer
HLT	High Limit Thermostat		
HP	High Pressure Switch		
HTHW	High Temperature Hot Water		
HTHWF	High Temperature Hot Water Flow		
HTHWR	High Temperature Hot Water Return		
HTR	Heater		
HWS	Hot Water Service		
BHWSF	Hot Water Service Flow		
BHWSR	Hot Water Service Return		

Single Line Types	
	Low Level
	Below Floor/Hidden
	Above Ceiling
	High Level
	Trace Heating
	Pipework to be Removed
	Existing Pipework

Reference Tags	
	Air Conditioning Unit Tag
	Air Handling Unit Tag
	Attenuator Tag
	Boiler Tag
	Chiller Tag
	Condensor Tag
	Dosing Pot
	Door Transfer Grille
	Extract Diffuser/Grille Tag
	Extract Fan Tag
	External Louvre Tag
	Electric Panel Heater
	Electric Water Heater
	Fan Convactor
	Fan Coil Unit Tag
	Heating Coil Tag
	Heat Recovery Unit Tag
	Hybrid Thermal Mixing Unit Tag
	Louvre Tag
	Mech Vent Heat Recovery Unit Tag
	Natural Vent Heat Recovery Unit Tag
	Radiator Tag
	Radiant Panel Tag
	Supply Diffuser/Grille Tag
	Supply Fan/Grille Tag
	Trench Heater Tag
	Underfloor Heating Manifold Tag
	Water Heater (Calorifier)
	UFH Zone
	Pump/Boiler Reference
	Thermostatic Mixing Valve
	Flow Properties label Duct/Pipe

Schematic Symbols - Air	
	Standard Attenuator
	Crosstalk Attenuator
	Cross Flow Heat Recovery Unit
	Plate Heat Exchanger
	Coil - Cooling
	Coil - Heating
	Coil - Heating Electric
	Humidifier
	Bag Filter
	Panel Filter
	Fire Damper
	Fire Intumescent Collar
	Fire/Smoke Damper
	Motorised Damper
	Smoke Damper
	Volume Control Damper
	Duct Access Panel
	Roof Terminal

Control & Sensor Symbols	
	Air Conditioning Controller
	Air Conditioning Controller - Remote
	Building Management System Control
	Controller
	Fan Controller
	Heat Controller
	Heat Interface Unit
	Humidistat
	Temperature Sensor
	Thermostat
	Thermal Link
	Carbon Monoxide Detector/Alarm
	Carbon Dioxide Detector/Alarm
	Leak Detector (Refrigerant)
	Natural Gas Detector
	Carbon Dioxide Detector Traffic Light

Heating & Cooling Symbols	
	Radiator
	LST Radiator
	Existing Radiator
	Electric Radiator
	Trench Heater
Sprinkler Symbols	
	Sprinkler Head Below Ceiling
	Sprinkler Head Above Ceiling

Ductwork/Air	
	Ductwork - Rectangular flanges on
	Ductwork - Rectangular flanges start
	Ductwork - Rectangular flanges end
	Ductwork - Rectangular flanges off
	Ductwork - Rectangular Fire rated flanges on
	Ductwork - Rectangular Fire rated flanges start
	Ductwork - Rectangular Fire rated flanges end
	Ductwork - Rectangular Fire rated flanges off
	Ductwork - Rectangular Bend
	Ductwork - Rectangular Set-Up
	Ductwork - Rectangular Set-Down
	Rectangular Duct Shoe Directional
	Rectangular Duct Shoe Equal
	Rectangular Concentric Transition
	Rectangular Eccentric Transition
	Rect Duct - Tee
	Rectangular Duct Break
	Access Panel - Top of Duct
	Access Panel - Below Duct
	Extract Fan - Ceiling Mounted
	Extract Fan - Wall/Window mounted
	Fan - Centrifugal (Schematic)
	Condenser
	Air Cooled Chiller
	Door Transfer Grille
	Wall mounted FCU
	Ceiling Cassette FCU
	Suspended Cassette FCU
	Ducted Cassette FCU
	Condensor Outdoor Unit
	Outdoor Unit VRF
	Hybrid Vent Unit
	Hybrid Vent Unit + Heater Battery

Ductwork/Air	
	Ductwork - Circular flanges on
	Ductwork - Circular flanges start
	Ductwork - Circular flanges end
	Ductwork - Circular flanges off
	Ductwork - Circular Fire rated flanges on
	Ductwork - Circular Fire rated flanges start
	Ductwork - Circular Fire rated flanges end
	Ductwork - Circular Fire rated flanges off
	Ductwork - Circular Bend
	Ductwork - Circular Bend set up
	Ductwork - Circular Bend set down
	Circular Duct Shoe Equal
	Circular Duct Shoe Directional
	Circular Duct - Equal Reducer
	Circular Duct - Eccentric Reducer
	Ductwork - Circular Tee Equal
	Circular Duct Break
	Flexible Duct
	Supply Grille Rectangular
	Extract Grille Rectangular
	Supply Grille Circular
	Extract Grille Circular
	Swirl Grille
	Slot Diffuser
	Extract Air Arrow
	Supply Air Arrow
	Fire Damper
	Fire/Smoke Damper
	Smoke Damper
	Fire Intumescent Collar
	VCD - Volume Control Damper
	MD - Motorised Control Damper
	Louvre/Grille
	Flow Arrow
	Pipe Break
	Pipe Continuation

Pipework/Water	
	Pipework Drop
	Pipework Rise
	Pipework Tee
	Trapped Waste
	Stub Stack
	Rodding Eye Horizontal
	Rodding Eye Vertical
	Gully
	Hot & Cold Water Outlets
	Hot Water Outlet
	Cold Water Outlet (including WC)
	Hot & Cold Water Outlets with TMV opt1
	Hot & Cold Water Outlets with TMV opt2
	Shower Outlet
	Anti-siphon Hot & Cold Water Outlets
	Anti-siphon Hot Water Outlet
	Anti-siphon Cold Water Outlet
	Anti-siphon Hot & Cold Water Outlets with TMV opt1
	Anti-siphon Hot & Cold Water Outlets with TMV opt2
	Anti-siphon Shower Outlet
	Gas Outlet
	WC waste connection (AGD)
	Pump
	Pump Existing (Optional)
	Break Tank Boost Pump
	Gas Meter
	Gas Cock
	Gas Solenoid Valve
	Gas Outlet

Gas Symbols	
	Gas Meter
	Gas Cock
	Gas Solenoid Valve
	Gas Outlet
	Air/Dirt Separator
	Puddle Flange
	Flanged End
	Capped End
	Gas Meter
	Heat Meter
	Water Meter
	Emergency Knock Off/Stop
	Low Loss Header

General	
	Flow Metering Device
	Strainer
	Union
	Dosing Pot option 1
	Dosing Pot option 2
	Pressure Gauge
	Temperature Gauge
	Pressure Sensor
	Temperature Sensor
	Test Point
	Purge Point
	Flexible Pipework Connection
	Removable bypass loop
	Electronic Scale Inhibitor
	Scale Inhibitor
	Condensate Trap
	Tun Dish
	Tun Dish to condensate drain
	Tun Dish to Atmosphere
	Expansion Vessel
	Expansion Vessel & Valve
	Expansion Vessel & 3-port Relief Valve
	Air/Dirt Separator
	Puddle Flange
	Flanged End
	Capped End
	Gas Meter
	Heat Meter
	Water Meter
	Emergency Knock Off/Stop
	Low Loss Header

Valves	
	Automatic Air Vent
	Automatic Bypass Valve
	Bypass Valve
	Commissioning Set
	Check Valve
	Drain Cock
	Double Check Valve
	Differential Pressure Control valve
	Double Regulating valve
	Expansion Relief valve
	Expansion Relief valve option 2
	Filling valve
	Gas Cock
	Gas Solenoid valve
	Isolating Valve
	Lock Shield Valve
	Non Return Valve
	Needle Valve
	Orifice Valve
	Pressure Relief Valve
	Pressure Relief Valve - straight through
	Pressure Reducing Valve
	RPZ Valve
	Regulating valve
	Stop Cock
	Safety Relief Valve
	Temperature Relief valve
	Thermostatic Regulating Bypass valve
	Thermostatic Mixing Valve
	Thermostatic Radiator Valve
	Water Solenoid
	2 Port Valve
	2 Way Motorised Valve
	3 Port Valve
	3 Way Motorised Valve
	3 Port Divering Valve
	3 Port Mixing Valve
	4 Port Control Valve

Notes:

- Do not scale this drawing (printed or electronic versions).
- This drawing indicates design intent only and shall not be used as a working drawing or installation drawing. The contractor shall be responsible for producing his own fully coordinated working drawings.
- Contractors must check all dimensions on site prior to ordering materials or commencing work. Any discrepancies must be reported to the engineer immediately.
- This drawing is copyright and is for use on this site only.
- All structural & architectural elements, where indicated, have been imported from the engineers drawings and reference should be made to the individual structural / architectural drawings for exact dimensions.
- This drawing should be read in conjunction with all relevant consultants, specialist sub-contractors, supply chain drawings and specifications for exact setting out, size and type of component.
- Discrepancies and/or ambiguities within this drawing, between it and information given elsewhere, must be reported immediately to Ingleton Wood for clarification before proceeding.
- All works to be carried out in accordance with the latest British Standards/Codes of Practice/Building Regulations unless specifically directed otherwise in the specification.
- Responsibility for the reproduction of this drawing in paper form, or if issued in electronic format, lies with the recipient to check that all information has been replicated in full and is correct when compared to the original paper or electronic image.
- Graphical representations of equipment on this drawing have been co-ordinated, but are approximations only. Please refer to specifications and / or details for actual sizes and or specific contractor construction information.
- All builders work associated with the mechanical and electrical services installation must be included for.
- Contractor to review site Asbestos register prior to commencing works.
- All necessary decommissioning, isolation, draining down, refilling and water treatment etc associated with the existing heating and domestic water systems in order to facilitate the works shall be included for.
- Stripping out and alterations to domestic water services shall not leave any dead legs on pipe work, however short.
- All pipe work located within ceiling/roof/service voids, ducts, enclosures, plant rooms, or externally shall be insulated in accordance with the mechanical services specification.
- All supply and extract ductwork located within ceiling/roof/service voids, ducts, enclosures, plant rooms, or externally shall be insulated in accordance with the mechanical services specification.
- All pipe work/ductwork services located externally shall also be waterproofed in addition to being fitted with thermal insulation.

Ingleton Wood LLP shall have no liability to the Employer arising out of any unauthorized modification or amendment to, or any transmission, copy or use of the material, or any proprietary work contained therein, by the Employer, Other Project Team Member, or any other third party.

All dimensions are to be checked and verified on-site by the Main Contractor prior to commencement; any discrepancies are to be reported to the Contract Administrator.

This drawing is to be read in conjunction with all other relevant drawings and specifications

Do Not Scale

© Ingleton Wood LLP

P01	Review & Comment Issue	25.05.22	HW	TS
Rev	Description	Date	Chk	Apr
Project No: 502319		Scale @ A3: NTS		Drawn By: KS

Project:
Orpen Village Hall
Solar PV & WC Works
80 Chapel Road, West Bergholt
Essex, CO6 3HL

Client:
West Bergholt Parish Council

Title:
Mechanical Services Symbols Chart

Drawing Number:
OMHALL - IWD - XX - XX - DR - M-4000

Status: S3 | Purpose of Issue: Review & Comment

Revision: P01

Ingleton
Wood

Property and Construction
Consultants
Issuing office: Colchester
T: 01206 224270
www.ingletonwood.co.uk

Vision, form and function