

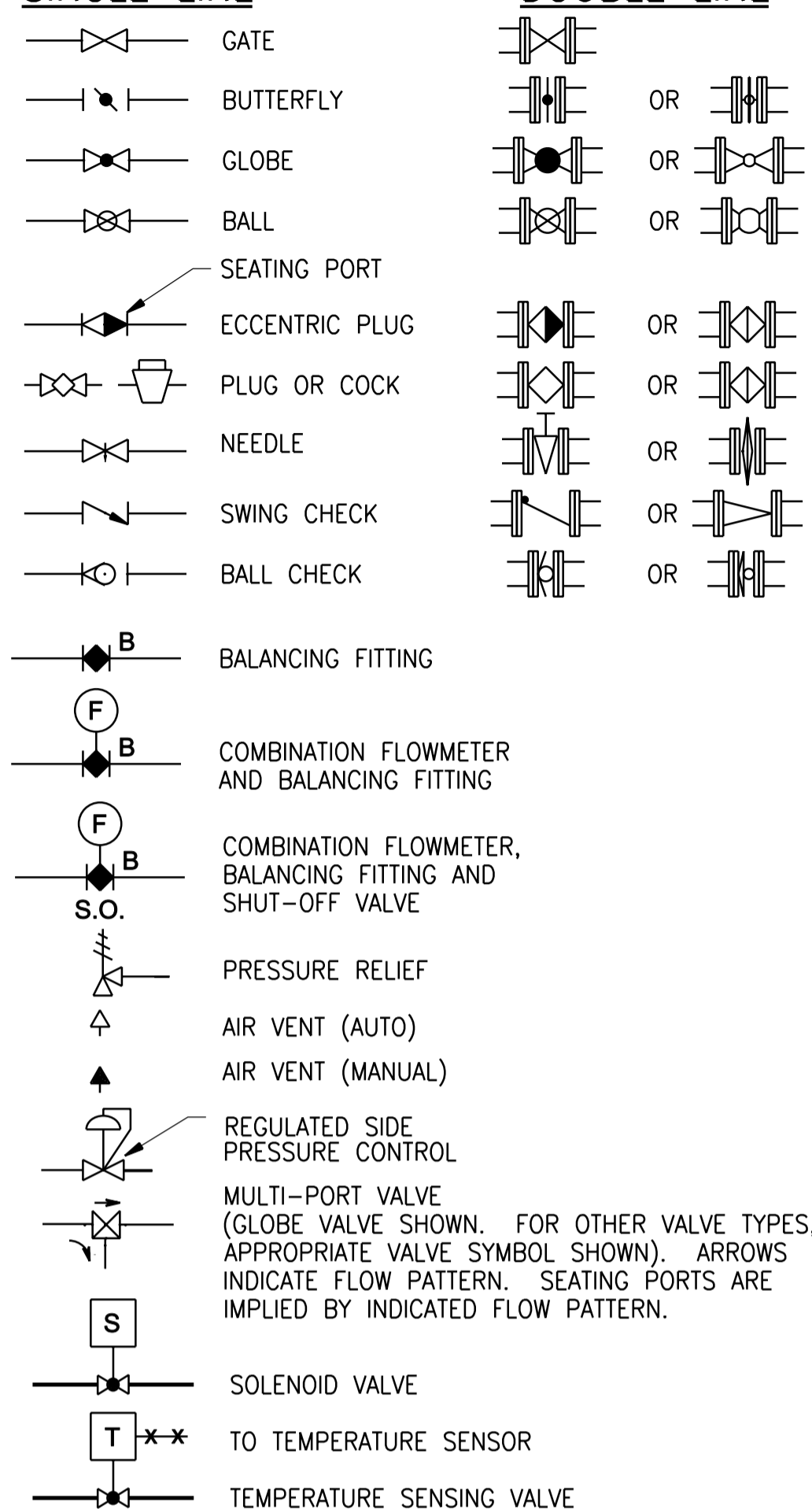
**HEATING, VENTILATING, AND AIR CONDITIONING PIPE AND FITTING SYMBOLS**

SEE PROCESS LEGEND SHEET

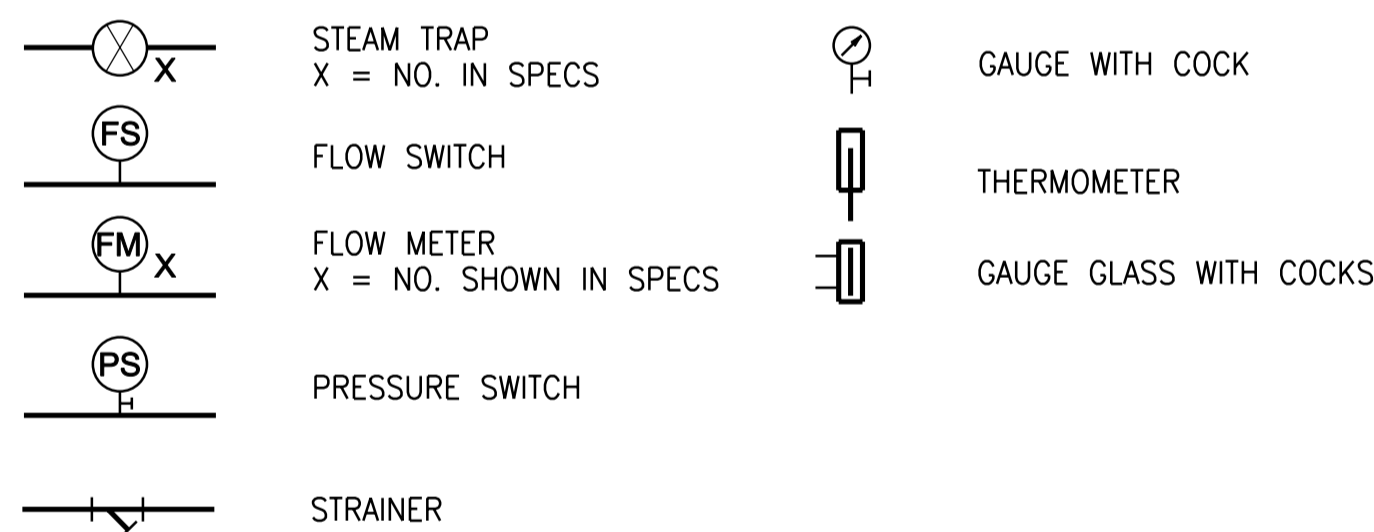
**HVAC ABBREVIATIONS**

ACU	AIR CONDITIONING UNIT
ACD	ACCESS DOOR
AHU	AIR HANDLING UNIT
BD	BUTTERFLY DAMPER BALANCING DAMPER
BDD	BACKDRAFT DAMPER
BLR	BOILER
BOD	BOTTOM OF DUCT
BOG	BOTTOM OF GRILLE
BOP	BOTTOM OF PLENUM
CA	COMBUSTION AIR
CF	CEILING FAN
CT	COOLING TOWER
CU	AIR-COOLED CONDENSING UNIT
DC	DOOR GRILLE
DN	DOWN
EA	EXHAUST AIR
EF	EXHAUST FAN
FC	FAIL IN CLOSED POSITION
FD	FIRE DAMPER
FO	FAIL IN OPEN POSITION
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FSD	COMBINATION FIRE AND SMOKE DAMPER
HE	HEAT EXCHANGER
HUM	HUMIDIFIER
MAU	MAKE-UP AIR UNIT
MD	MOTORIZED DAMPER
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OED	OPEN END DUCT
RA	RETURN AIR
R	REFRIGERANT PIPE
SA	SUPPLY AIR
SF	SUPPLY FAN
SD	SLOT DIFFUSER
TU	TERMINAL UNIT
UH	UNIT HEATER
VD	VOLUME DAMPER

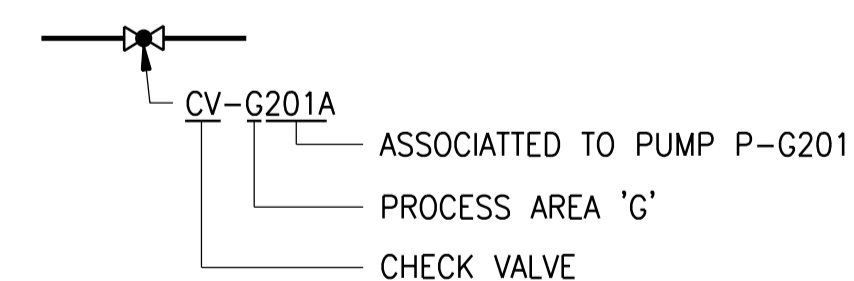
**VALVE SYMBOLS**



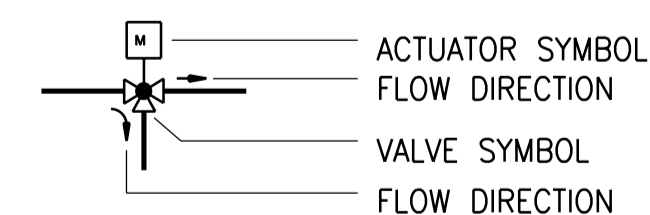
**MISCELLANEOUS PIPING SYMBOLS**



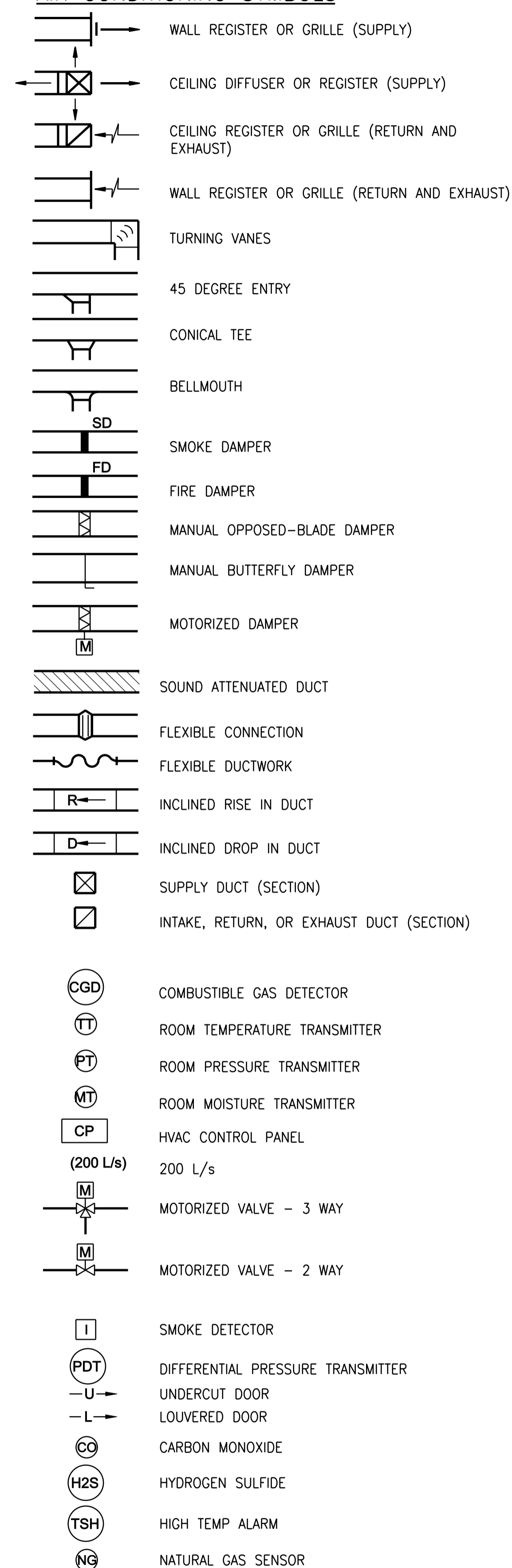
**VALVE DESIGNATIONS**



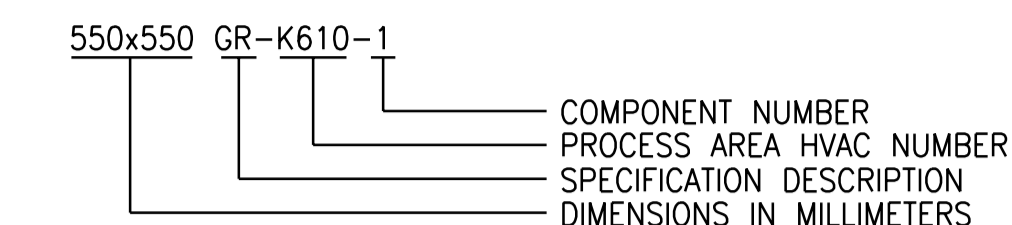
**CONTROL VALVES**



**HEATING, VENTILATING, AND AIR CONDITIONING SYMBOLS**



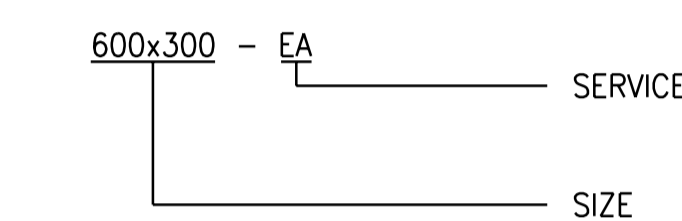
**SUPPLY, RETURN, EXHAUST, OR TRANSFER GRILLE/REGISTER IDENTIFICATION**



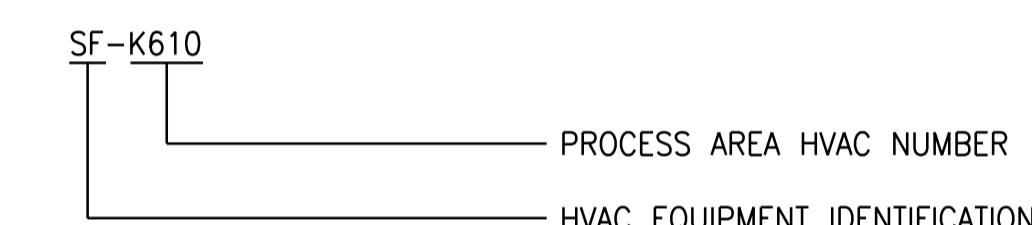
**SUPPLY DIFFUSER IDENTIFICATION**



**HVAC DUCT IDENTIFICATION**



**HVAC EQUIPMENT IDENTIFICATION**



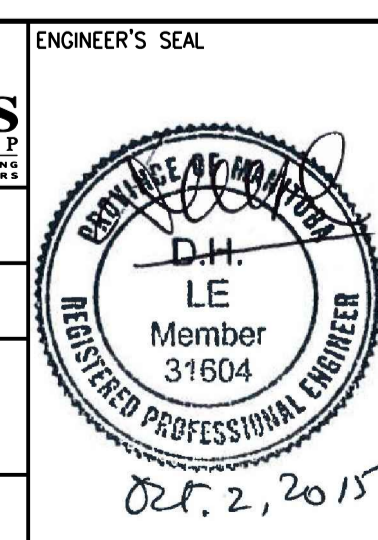
**HVAC GENERAL NOTES:**

- THIS IS A STANDARD LEGEND. THEREFORE SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE DRAWINGS.
- DUCT AND PIPING ELEVATIONS SHOWN ARE APPROXIMATE. FIELD VERIFY ELEVATIONS PRIOR TO INSTALLATION. EXCEPT WHERE DIMENSIONS ARE SPECIFICALLY INDICATED, MECHANICAL DRAWINGS ARE GENERALLY DIAGRAMMATIC AND SHALL NOT BE SCALED. SIZE AND LOCATION OF EQUIPMENT IS SHOWN TO SCALE WHERE POSSIBLE. DRAWINGS INDICATE THE REQUIRED SIZE AND ROUTES OF SYSTEM ELEMENTS. IT IS NOT INTENDED TO INDICATE ALL OFFSETS, RISERS, OR FITTINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL SYSTEM ELEMENTS IN A MANNER TO CONFORM TO BUILDING STRUCTURE AND TO AVOID OBSTRUCTIONS.
- THE CONTRACTOR SHALL PROVIDE OFFSETS IN THE PIPING AND DUCT RUNS WHERE REQUIRED TO CLEAR EXISTING AND NEW DUCT, STRUCTURE AND OTHER PIPING SYSTEMS.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF LOUVERS AND ROOF OPENINGS.
- COORDINATE FINAL LOCATIONS OF FLOOR AND HUB DRAINS THAT RECEIVE CONDENSATE DRAINAGE FROM HVAC EQUIPMENT.
- TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR EQUIPMENT FURNISHED.
- ARRANGE EQUIPMENT INTO THE AVAILABLE SPACE IN A MANNER TO MAKE ALL WORKING PARTS ACCESSIBLE FOR MAINTENANCE AND SERVICE.
- REFER TO DRAWING(S) 1-0102-MDTL-A005 TO A007 FOR STANDARD DETAILS OF HVAC SYSTEM EXCEPT AS NOTED.
- REFER TO DRAWING(S) 1-0102-PPID-A001 AND 1-0102-DDTL-A008 FOR HVAC EQUIPMENT IDENTIFICATIONS AND PIPING IDENTIFICATIONS.



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**CH2MHILL.**  
SNC-LAVALIN  
KCS GROUP CONSULTING ENGINEERS



ENGINEER'S SEAL

THE CITY OF WINNIPEG  
Winnipeg WATER AND WASTE DEPARTMENT

SOUTH END WATER POLLUTION CONTROL CENTRE  
SEWPPC UPGRADING/EXPANSION PROJECT  
MECHANICAL  
LEGEND AND GENERAL NOTES (1)

CITY DRAWING NUMBER: 1-0102-MDTL-A001 | SHEET: 001 | REV: 02 | SIZE: A1