FLOWMATIC® Express

Connection & Regulation kit for HVAC terminal units

149A series

Submittal Data 03800 NA — Issue Date 03/2024

Application

The compact pre-assembled kit connects variable air volume (VAV) reheat boxes, fan-coils, chilled beams or ceiling-mounted terminal units with the main hydronic distribution system. It provides flow control, balancing, bypass, filtering and isolation functions for maintenance of the terminal unit and flushing of the system. The integral venturi with PT ports allows the kit to be sized to match the terminal unit design flow rate. A preformed insulation jacket is included. This kit comes complete with a pressure independent control valve (PICV) with manual operating knob, three-way shutoff valves, intergrated bypass, and filtering cartridge. It also includes a 3/8" all-thread adapter nut which allows the kit to be suspended from ceiling strut using field-supplied 3/8" all-thread rod. Optional on/off or proportional actuators add automatic control for connection to a BAS or thermostat.

Typical Specification

Furnish and install on the plans and described herein, a FLOWMATIC® Express Coil Kit as provided by Caleffi. Each coil kit must be designed with DZR corrosion-resistant cast brass body and PICV body and bonnet, peroxide-cured EPDM valve plug and differential pressure regulator diaphragm and PSSG40 control shutter, stainless steel AISI 303 control stem, piston and strainer mesh, and stainless steel AISI 302 springs. Strainer screen mesh 800 µm. 360 psi max. working pressure rating and 248°F max. working temperature. Provide with optional 24 V AC/DC supply actuators: 0 to 10 volt proportional fail-in-place, code 145013; 0 to 10 volt proportional, fail safe closed or open, code 145018; on/off thermo-electric normally closed, code 656504; 0 to 10 volt proportional thermo-electric, normally closed, code 656524, separately sourced. Each coil kit shall be a Caleffi FLOWMATIC Express 149A series or approved equal. (See product instructions for specific installation information.)

Technical specifications

Materials

Body :	DZR corrsion-resistant brass CW602N
Strainer mesh:	stainless steel AISI 304
Shut-off valves knobs:	PA6G30

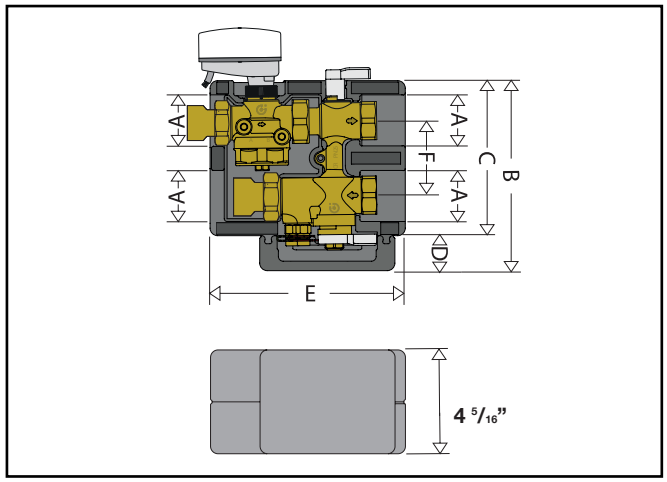
PICV

Body and bonnet:	DZR corrsion-resistant brass CW602N
Control stem and piston:	stainless steel AISI 303
Control shutter:	PPSG40
Seat:	
- (G40, G90):	DZR corrosion-resistant CW602N
- (1G8, 3G5, 5G3):	PTFE
- (7G9, 13G, 16G):	stainless steel AISI 303
Valve plug and differential pressure regulator diaphragm:	peroxide-cured EPDM
Springs:	stainless steel AISI 302
Seals:	peroxide-cured EPDM
Pre-adjustment indicator:	PA6G30
Knob:	PA6

Performance:

Medium:	water, glycol solutions
Max. percentage of glycol:	50%
Max. working pressure:	360 psi (25 bar)
Max. differential pressure with actuators:	58 psi (4 bar)
Working temperature range:	14 – 248 °F (-10 – 120 °C)
Ambient temperature range:	32 – 120 °F (0 – 50 °C)
Nominal Δp operating range:	3.6 - 58 psi (0.2 - 4 bar)
Flow rate regulation range:	0.1 to 16 gpm (0.4 to 0.6 lpm)
Accuracy:	± 5% of set point
Leakage:	0.01% (class V)
Strainer mesh size:	800 µm

Dimensions



Code	Connect-ions	A	B	C	D	E	F
149400A G40	½" NPTF	2 1/8"	7 15/16"	6 ½"	1 ½"	8 1/8"	3.15" (80 mm)
149400A G90							
149400A 1G8							
149400A 3G5							
149500A G90	¾" NPTF						
149500A 1G8							
149500A 3G5							
149500A 5G3							
149600A 7G9	1" NPTF						
149600A 13G							
149600A 16G							

Connections:

System side:	½", ¾", 1" integral NPT female
Terminal unit side:	½", ¾", 1" NPT female union

Insulation:

Material:	PPE
Density:	30 kg/m^3
Thermal conductivity:	
at 50 °F (10 °C):	0.257 BTU · in/hr · ft^2 · °F (0.037 W/m · K)
Reaction to fire (UL94):	HBF class

Approvals:

Compliant with the requirements of standard UL 2043 for plenum installations without insulation jacket.

Job name _____ Size _____

Job location _____ Quantity _____

Engineer _____ Approval _____

Mechanical contractor _____ Service _____

Contractor's P.O. No. _____ Tag No. _____

Representative _____ Notes _____

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