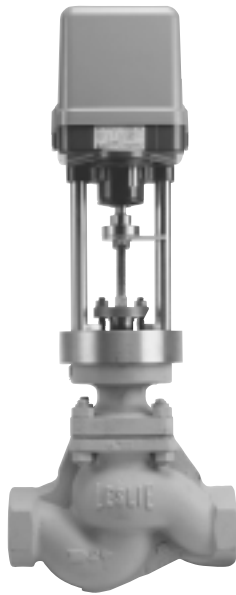


# DIGIDLO CONTROL VALVE

SIZES 1/2" – 4"

ANSI CLASS 125/250, 150/300



DIGIDLO CONTROL VALVE

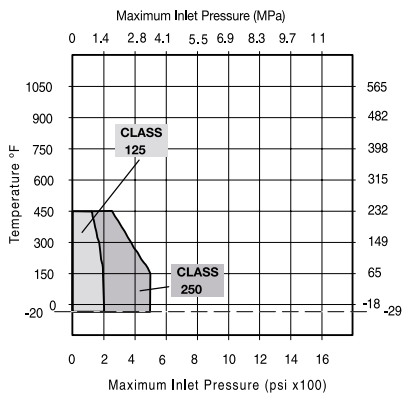
## APPLICATION DATA

- Modulating control and on/off applications for light industrial, institutional and high performance HVAC liquid and steam systems.

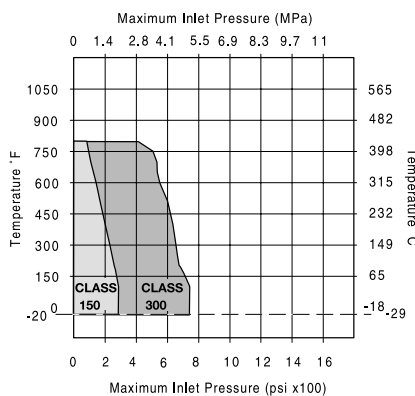
**APPLICABLE CODES** See Reference Section

- **Electric Actuator** for modulating control and on/off applications
- **Controller Accepts Analog Signals** 4-20 mA, 0-10 VDC or Profibus DP
- **IP 65 or IP 55 Rated Enclosure** protects components in dirty industrial environments
- **Manual Handwheel** permits easy manual operation when power is lost
- **High Thrust Motor** permits shutoff to 700 psi
- **Digital Actuator Control (DAC)** assures precise control, easy setup and high level of safety
- **Stall Proof Precision Motor** provides accurate positioning without burnout
- **Pushbutton Setup At Actuator** facilitates setting and maintenance
- **Cage Retained Seat** eliminates threaded internal parts
- **Top Entry** permits easy in line maintenance
- **Highest Cv's** of any comparable single seated valve
- **Two Point Stem Guide** minimizes trim wear and seat leakage

CAST IRON A126 CLASS B



CARBON STEEL A216WCB



## OPTIONS

- Soft Seats
- Threaded, Flanged, Butt-weld or Socket-weld Connections
- Reduced Port Trim

## CLASS IV SHUTOFF

Valve Size	Full Port Cv	Cv's-Reduced Trim								
		1/4" MT	1/4"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"
1/2"	4	.5	1.5							
3/4"	9	.5	1.5	4.1						
1"	15	.5	1.5	4.1	9.1					
1 1/2"	30				9.3	15.2				
2"	57					15.4	30.3			
2 1/2"	83						30.9	57.4		
3"	120						30.9	58		
4"	201							58.9	126	

VALVE SIZE	VALVE STROKE (IN)	MAXIMUM DELTA P (PSI)		
		ST5112-34	ST5113-07	ST5114-17
1/2"	3/4"	700	—	—
3/4"	3/4"	700	—	—
1"	3/4"	500	700	—
1 1/2"	3/4"	250	450	700
2"	1"	200	250	550
2 1/2"	1 1/4"	139	150	300
3"	1 1/2"	—	100	200
4"	2"	—	75	125



# DIGIDLO CONTROL VALVE

## SPECIFICATION

### BODY ASSEMBLY:

Style: Single seated, top entry bolted bonnet, globe style body, cage retained seat, unbalanced plug

### ANSI Body Ratings:

Cast Iron: Class 125 & 250  
(DIN ND16 & ND25)

Steel and alloys: Class 150 & 300  
(DIN ND 16 & ND40)

### BODY/BONNET MATERIALS:

Cast Iron, ASTM A126 Class B  
Carbon Steel, ASTM A216 Gr WCB  
316 stainless steel, ASTM A351 Gr CF8M

**Note:** See ANSI B16.1 (cast iron) or ANSI B16.34 (other materials) for pressure/temp. limits of body/bonnet assemblies.

**SIZES:** ½" - 4"

### END CONNECTIONS:

ANSI Class 125/150 Integral Flanged, 1" - 4"  
ANSI Class 250/300 Integral Flanged, 1" - 4"  
Threaded, NPT - ½" - 2":

Cast iron - ANSI Class 250 rated  
Steel & alloys - ANSI Class 300 rated  
Socketweld ends (Sch. 40) ½" - 2"  
Buttweld ends (Sch. 40) 2½" - 4"  
DIN Flanges: ND-16, ND-25,  
ND-40

### BONNET:

Through-bolted bonnet

### BODY/BONNET BOLTING:

ASTM A-193 GRB7 Studs  
ASTM A-194 GR2H Nuts

### STEM PACKING:

PTFE V-Rings, -40 to 460°F (-22 to 238°C)  
Braided PTFE/Graphite (Split-ring),  
-40 to 500°F (-22 to 260°C)  
Laminated Graphite, -320 to 800°  
(-195 to 426°C)

### PACKING STUDS, NUTS & FOLLOWER:

300 Series Stainless Steel

### GASKETS:

Body gasket: Spiral wound AISI Type 316L  
Seat/Body Gasket:  
DLO-2 - Filled PTFE, 460°F (238°C)  
DLOS-2 - Graphite filled Inconel\* 600  
750°F (399°C)

### TRIM SIZES:

Full, reduced port, Microtaper\*

### TRIM MATERIAL:

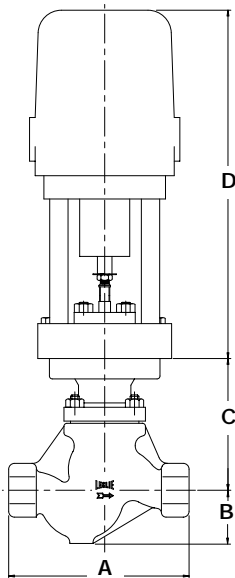
316SS; 316SS/Stellited

### FLOW CHARACTERISTICS:

Linear or equal percent - standard  
Modified linear - optional

### SHUTOFF CLASS:

Metal/metal seats - ANSI/ISA 70-2 Class IV,  
Class V optional to 750°F (399°C)  
Metal/PTFE seats - ANSI/ISA 70-2 Class VI,  
bubble-tight to 460°F (238°C)



### Linear Valve Specification Form

### DIGI ACTUATORS SPECIFICATIONS, DIMENSIONS inches (mm) AND WEIGHTS pounds (kg)

Model	Std. Stroke (in)	Max Thrust (lb/f)	Stroke Time (sec)	Sec./Inch	Rating	Power Supply	Power Consumption	Ambient Temp. Limits	D	Wgt.
ST5112-34	1.57	674	39	25	IP-65	24V(DC), 115V, 230V, 50/60 Hz	18VA	-68°F to 158°F	16 <sup>1</sup> / <sub>16</sub> (424)	12 (5.5)
ST5113-07	2.36	1348	38	16	IP-55	24V(DC), 115V, 230V, 50/60 Hz	72VA	-68°F to 140°F	21 <sup>1</sup> / <sub>16</sub> (541)	23 (10.5)
ST5114-17	3.14	2248	91	29	IP-55	24V(DC), 115V, 230V, 50/60 Hz	66VA	-68°F to 140°F	21 <sup>15</sup> / <sub>16</sub> (558)	23 (10.5)

### CAST IRON VALVE BODY ASS'Y DIMENSIONS<sup>†</sup> inches (mm) AND WEIGHTS pounds (kg)

SIZE	A		B	C	WEIGHT		
	THD,250	125			THD	125	250
½ (15)	7¾ (197)	—	2¾ (60)	5 <sup>1</sup> / <sub>16</sub> (145)	50 (23)	—	—
¾ (20)	7¾ (197)	—	2¾ (60)	5 <sup>1</sup> / <sub>16</sub> (145)	50 (23)	—	—
1 (25)	7¾ (197)	7¼ (184)	2¾ (57)	5 <sup>1</sup> / <sub>16</sub> (145)	50 (23)	65 (29)	75 (34)
1½ (40)	9¾ (235)	8¾ (222)	2¾ (60)	7¾ (187)	58 (26)	70 (32)	80 (36)
2 (50)	10½ (267)	10 (254)	3 (76)	7¾ (194)	65 (29)	90 (41)	95 (43)
2½ (65)	11½ (292)	10¾ (276)	3¾ (92)	8 (203)	— (50)	110 (50)	115 (52)
3 (80)	12½ (318)	11¾ (298)	3¾ (98)	8¾ (213)	— (59)	130 (59)	140 (64)
4 (100)	14½ (393)	13¾ (385)	5 (127)	10¾ (259)	— (104)	230 (104)	250 (113)

### CARBON STEEL VALVE BODY ASS'Y DIMENSIONS<sup>†</sup> inches (mm) AND WEIGHTS pounds (kg)

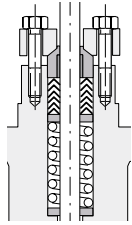
SIZE	A		B	C	WEIGHT		
	THD,300	150			THD	150	300
1 (25)	7¾ (197)	7¾ (184)	2¾ (57)	5 <sup>1</sup> / <sub>16</sub> (145)	50 (23)	65 (29)	75 (34)
1½ (40)	9¾ (235)	8¾ (222)	2¾ (60)	7¾ (187)	58 (26)	70 (32)	80 (36)
2 (50)	10½ (267)	10 (254)	3 (76)	7¾ (194)	65 (29)	90 (41)	95 (43)
2½ (65)	11½ (292)	10¾ (276)	3¾ (98)	8 (203)	— (50)	110 (50)	115 (52)
3 (80)	12½ (318)	11¾ (298)	3¾ (98)	8¾ (213)	— (59)	130 (59)	140 (64)
4 (100)	14½ (393)	13¾ (385)	4¾ (121)	10¾ (259)	— (104)	230 (104)	250 (113)

† Threaded Carbon Steel available in 1", 1-1/2" and 2" only.  
Flanged (150 and 300#) Carbon Steel available in 1" to 4" only.

† Threaded Cast Iron available in 1/2" to 2" only.  
Flanged (125 and 250#) Cast Iron available in 1" to 4" only.

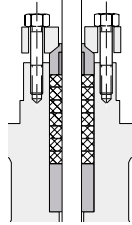


# PACKING CONFIGURATIONS



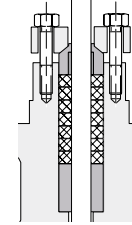
## PTFE - V-RING

PTFE V-ring packing provides the most maintenance free stem seal. The V-ring packing is both pressure and spring energized to automatically compensate for packing wear. Maximum service temperature is 460°F (238°C). V-rings can be inverted for vacuum service.



## PTFE/GRAPHITE

Split rings allow packing replacement without removal of actuator. Graphite impregnated PTFE provides 500°F (260°C) service temperature, better memory and sealing than pure PTFE rings, lowered stem hysteresis, and is ideal for fluids that contain suspended particles.



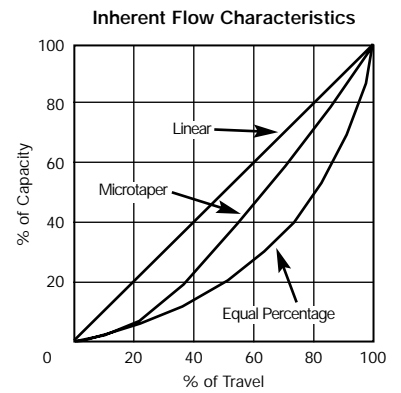
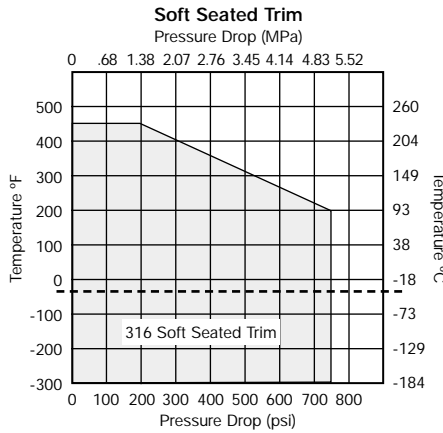
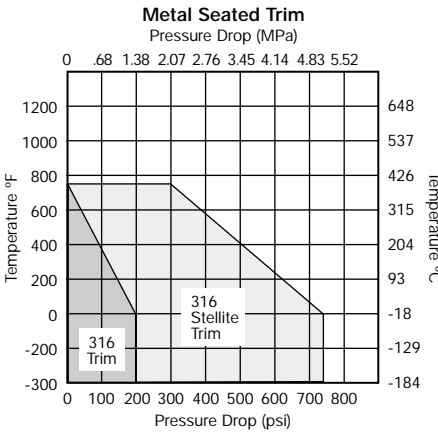
## HIGH TEMPERATURE LAMINATED GRAPHITE

Precision die-cut laminated graphite rings provide a reliable, tight stem seal to operating temperatures of 800+°F (426°C).

# DIGIDLO TRIM SELECTION

Table 1	Maximum Service Temp.	Plug†	Seat Ring	Stem	Cage	Guide Bushings	ANSI/ISA 70-2 Shutoff
Standard Trim	450/750°F <sup>††††</sup> (232/398°C) <sup>††††</sup>	AISI Type 316 SS	AISI Type <sup>††</sup> 316 SS	AISI Type 316 SS	ASTM A351 CF8M SS	Nitronic 60	IV,V <sup>†††</sup>
High Temp. Trim	750°F (398°C)	AISI Type 316 SS Stellite	AISI Type 316 SS Stellite	AISI Type 316 SS	ASTM A351 CF8M SS	Nitronic 60	IV,V <sup>†††</sup>
Soft Seated Trim	460°F (238°C)	AISI Type 316 SS	AISI Type 316 SS w/PTFE Insert	AISI Type 316 SS	ASTM A351 CF8M SS	Nitronic 60	VI

† Microtaper plugs are solid stellite alloy. †† Stellite seat optional. ††† On application. †††† Maximum is 450°F when used with Cast Iron bodies.



LINEAR CONTOURED



EQUAL PERCENTAGE



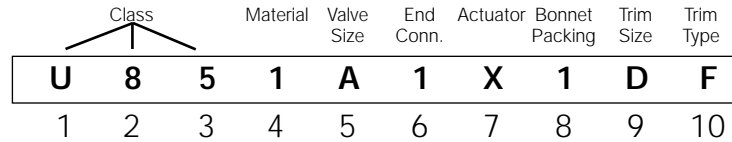
MICROTAPER®

## RANGEABILITIES

Trim Type	Ratio
¼" MT (Microtaper®)	55:1
¼"-½"	25:1
¾"-2"	35:1
2½"-3"	40:1
4"	50:1



# DIGIDLO ORDER CODE



<b>Class</b> - Position 1, 2 & 3 U85
<b>Material</b> - Position 4 1 = Iron 3 = Carbon Steel 4 = SST
<b>Valve Size</b> - Position 5 A = ½ B = ¾ C = 1 E = 1½ F = 2 G = 2½ H = 3 J = 4
<b>End Connection</b> - Position 6 1 = Threaded 2 = Flanged 125/150 3 = Flanged 250/300 4 = SWE Sch. 40 (steel only) 5 = BWE Sch. 40 (steel only) 6 = ND16 (steel only) 7 = ND40 8 = SWE Sch. 80 (steel only) 9 = BWE Sch. 80 (steel only) 0 = Other (Specify)
<b>Actuator</b> - Position 7 X = w/o Actuator or Special For DigiDLO Specify ST5112-34 ST5113-07 or ST5114-17

<b>Bonnet &amp; Packing</b> - Position 8 1 = Std. Bonnet, Braided Teflon® Graphite Pkg. 2 = Std. Bonnet, Teflon® Pkg. 3 = Std. Bonnet, Laminated Graphite Pkg. 4 = Std. Bonnet, Double Teflon® Pkg.
<b>Trim Size</b> - Position 9 B = ¼ D = ½ G = ¾ J = 1 L = 1½ M = 2 N = 2½ P = 3 R = 4
<b>Trim Type</b> - Position 10 B †† = Micro-Taper F = Equal % 316 SS G = Equal % 316 SS/TFE H = Equal % 316 SS/Stellite J = Linear 316 SS K = Linear 316 SS/TFE L = Linear 316 SS/Stellite

†† Microtaper is available in 1/4" Stellite only Code BB. Resilient seat DLOA, DLOAS available with full size trim.

**DigiDLO:** Specify X for Actuator (Position 7). Specify Actuator, Mounting Kit and each Option as a separate line item.

## DIGI MOUNTING KITS

Model	Valve Size	Prod. Ref. No.
ST5112-34	1/2 to 1-1/2	U009005096
	2 to 4	U009005097
ST5113-07	1/2 to 1-1/2	U009005096
	2 to 4	U009005097
ST5114-17	1/2 to 1-1/2	U009005096
	2 to 4	U009005097

## TRIM AVAILABILITY CHART

TRIM DIA	CV	STROKE	BODY SIZE (IN)							
			½	¾	1	1½	2	2½	3	4
¼MT	0.5	¾	●	●	●	—	—	—	—	—
¼	1.5	¾	●	●	●	—	—	—	—	—
½	4	¾	●	●	●	—	—	—	—	—
¾	9	¾	—	●	●	●	—	—	—	—
1	15	¾	—	—	●	*	●	—	—	—
1½	30	¾	—	—	—	●	*	●	●	—
2	57	1	—	—	—	—	●	*	*	●
2½	83	1¼	—	—	—	—	—	●	—	—
3	120	1½	—	—	—	—	—	—	●	—
4	201	2	—	—	—	—	—	—	—	●

## DIGI ACTUATOR OPTIONS

Model	Prod. Ref. No.
Heater, 12 volt	E68717
Heater, 115 volt	E68718
Heater, 230 volt	E68719
Limit Switch Set†	E68720
Field Bus	*

† One set included with Actuator.

