

**HARSH ENVIRONMENTS DEMAND
HIGH PERFORMANCE**

Built on decades of field-proven technology, the Bray Series 92/93 Extreme Temperature actuator trim delivers industry leading performance in high temperature applications. Specialized components are designed for extreme heat applications where others may fail.

The Bray Extreme Temperature actuator surpasses industry standards for safety and performance in a variety of applications:

- > Steam Service
- > High Temperature Refining
- > Transit Tunnel Dampers
- > Any process or application in elevated high temperature environments.

FEATURES AND BENEFITS

SUPERIOR PERFORMANCE

- > Continuous actuator service up to 350°F (176°C)
- > Exposure time of 4 hours at 482°F (250°C) during an emergency event
- > Pipeline media up to 1,100°F (593°C)

FLEXIBLE DESIGN

- > Double Acting or Spring Return
- > Multiple mounting configurations

ISO 5211 MOUNTING DIMENSIONS

- > Double-D or Star Drive Interface

DIRECT MOUNT

- > Smaller package envelope
- > Less hysteresis
- > Minimal mounting cost
- > Reduces side loading and wear



OPERATING CONDITIONS

Pressure Range	40 - 140 psi (2.8 - 10 bar)
Media	Dry Compressed Air/Inert Gas*
Temperature Range	High 0°F to 482°F (-18°C to 250°C)
Series 92 Double Acting Series 93 Spring Return	Available in 90° Rotation

COMPLIANCES

Torque Base	Mounting Dimensions as per ISO 5211: 2001(E)
Accessories	Shaft Driven Accessories Mounting per NAMUR-VDE
Ingress Protection	IP66/IP67M per IEC 60529

SERIES 92 ACTUATOR TORQUE DATA

(lb-in) (Nm) Air Operated, Torque Output

Size	Air Supply Pressure PSIG (Bar)				
	40 (3)	60 (4)	80 (6)	100 (7)	120 (8)
119	1,060 (120)	1,614 (182)	2,163 (244)	2,707 (306)	3,258 (368)
128	1,432 (162)	2,144 (242)	2,860 (323)	3,622 (409)	4,346 (491)
160	2,806 (317)	4,214 (476)	5,620 (635)	7,018 (793)	8,424 (952)
210	5,880 (664)	8,875 (1001)	11,647 (1316)	14,502 (1639)	17,337 (1959)

SERIES 93 ACTUATOR TORQUE DATA LB-IN (NM) AIR OPERATED
With Spring Return, Torque Output

Size	Springs per Piston	Air Supply Pressure PSIG (Bar)										Spring	
		40 (3)		60 (4)		80 (6)		100 (7)		120 (8)		Spring Start	Spring End
		Start	End	Start	End	Start	End	Start	End	Start	End		
119	2	772 (87)	468 (53)	1320 (149)	1,559 (115)	1,857 (210)	1,559 (176)	2,415 (273)	1,905 (215)	2,958 (334)	2,451 (277)	580 (66)	297 (34)
	3	582 (66)	119 (13)	1130 (128)	1,224 (76)	1,679 (190)	1,224 (138)	2,224 (251)	1,763 (199)	2,773 (313)	2,315 (262)	890 (101)	465 (53)
	4			967 (109)	896 (40)	1,519 (172)	896 (101)	2,064 (233)	1,443 (163)	2,613 (295)	1,989 (225)	1,197 (135)	629 (71)
	5					1,346 (152)	564 (64)	1,884 (213)	1,099 (124)	2,421 (274)	1,634 (185)	1,511 (171)	799 (90)
	6					1,176 (133)	243 (27)	1,726 (195)	784 (89)	2,277 (257)	1,326 (150)	1,824 (206)	965 (109)
128	2	1,026 (116)	706 (80)	1,754 (198)	2,145 (162)	2,496 (282)	2,145 (242)	3,230 (365)	2,885 (326)	3,966 (448)	3,604 (407)	713 (81)	401 (45)
	3	796 (90)	330 (37)	1,533 (173)	1,777 (119)	2,255 (255)	1,777 (201)	2,990 (338)	2,500 (282)	3,719 (420)	3,224 (364)	1,091 (123)	638 (72)
	4			1,296 (146)	1,379 (75)	2,028 (229)	1,379 (156)	2,770 (313)	2,105 (238)	3,505 (396)	2,821 (319)	1,462 (165)	850 (96)
	5					1,787 (202)	1,005 (114)	2,525 (285)	1,743 (197)	3,262 (369)	2,481 (280)	1,825 (206)	1,064 (120)
	6					1,562 (176)	625 (71)	2,301 (260)	1,335 (151)	3,039 (343)	2,044 (231)	2,192 (248)	1,295 (146)
160	2	1,927 (218)	1,199 (135)	3,418 (386)	4,138 (303)	4,862 (549)	4,138 (468)	6,324 (715)	5,605 (633)	7,791 (880)	7,075 (799)	1,596 (180)	905 (102)
	3	1,482 (167)	380 (43)	2,958 (334)	3,297 (211)	4,396 (497)	3,297 (373)	5,858 (662)	4,763 (538)	7,315 (826)	6,203 (701)	2,366 (267)	1,315 (149)
	4			2,482 (280)	2,456 (113)	3,937 (445)	2,456 (277)	5,383 (608)	3,900 (441)	6,835 (772)	5,352 (605)	3,166 (358)	1,759 (199)
	5			1,925 (217)	1,567 (16)	3,410 (385)	1,567 (177)	4,856 (549)	3,041 (344)	6,328 (715)	4,515 (510)	3,968 (448)	2,253 (255)
	6					2,927 (331)	712 (80)	4,372 (494)	2,180 (246)	5,816 (657)	3,647 (412)	4,793 (542)	2,651 (300)
210	2	4406.4 (498)	3,086 (349)	7,486 (846)	9,103 (686)	10,464 (1182)	9,103 (1029)	13,510 (1526)	12,105 (1368)	16,538 (1869)	15,113 (1708)	2,722 (307)	1,546 (175)
	3	3604.8 (407)	1,632 (184)	6,600 (746)	7,637 (522)	9,583 (1083)	7,637 (863)	12,574 (1421)	10,634 (1201)	15,564 (1758)	13,636 (1541)	4,157 (470)	2,302 (260)
	4			5,854 (661)	6,281 (371)	8,873 (1002)	6,281 (710)	11,892 (1344)	9,281 (1049)	14,911 (1685)	12,281 (1388)	5,580 (630)	3,067 (347)
	5			4,961 (560)	4,788 (199)	8,069 (912)	4,788 (541)	11,141 (1259)	7,644 (864)	14,237 (1609)	10,612 (1199)	6,859 (775)	3,886 (439)
	6					7,099 (802)	3,152 (356)	10,154 (1147)	6,156 (696)	13,210 (1493)	9,160 (1035)	8,422 (952)	4,751 (537)