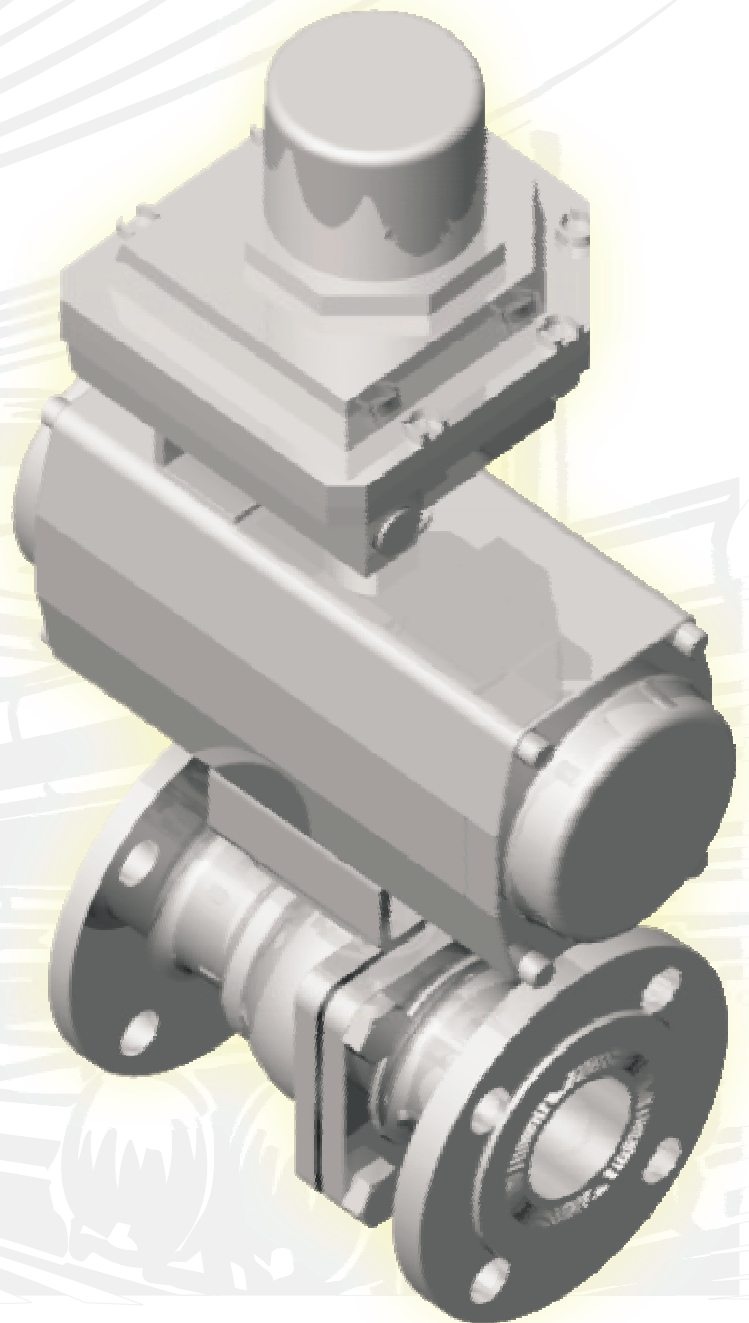




VALVE ACCESSORIES



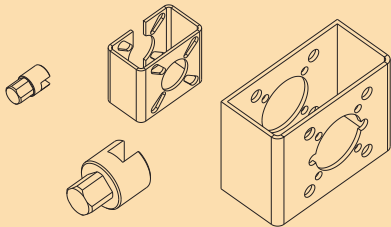
ULI OR UTO TED 1/4" - 12" (D 80-D 300)



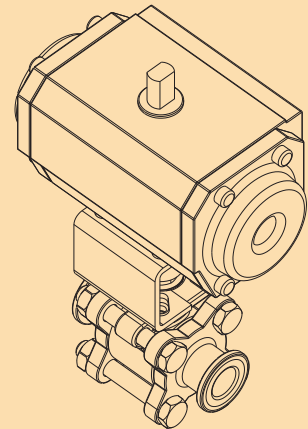
BALL VALVE ACCESSORIES

A. Bracket and Coupler Set for Valve Automation

Traditional way to automate our valve. The set comes with stainless steel bracket and coupler. Available for all sizes of our automatic series ball valves. For use with actuators conforming to ISO 5211 - DIN 3337 standards (90° and 45° adaptation).

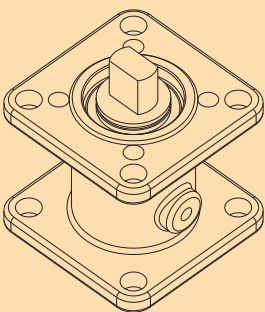


Available for all series with
built-in ISO 5211 mounting
pad

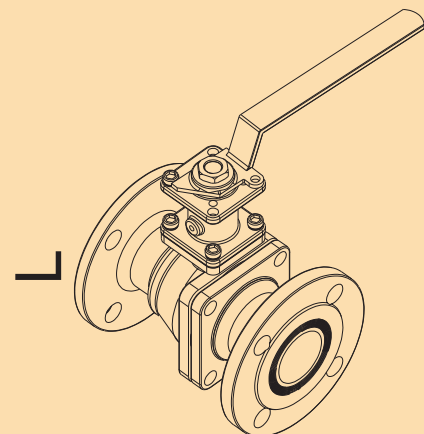


B. Stem Extension / Insulation for Manually Operated Valves

The single unit effectively serves as an insulator and stem extension. The fully supported guiding stem eliminates side loading.

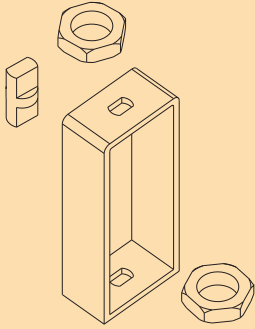


Available for all series
under 8" with built-in
ISO 5211 mounting
pad

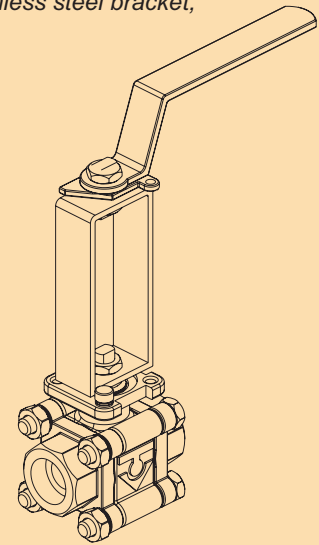


C. Economical Stem Extension for Manually Operated Valves

An economical way to extend the operating handle for insulation. Comes with a sturdy stainless steel bracket, a handle adapter and two hexagon nuts.

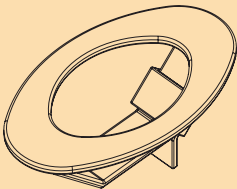


Available for all series under 5" with built-in ISO 5211 mounting pad

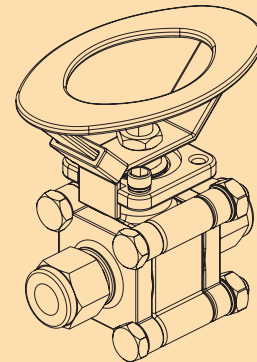


D. Optional Oval Handle

Stainless steel oval handle with top surface coated by vinyl. Surface coating available in various colors.

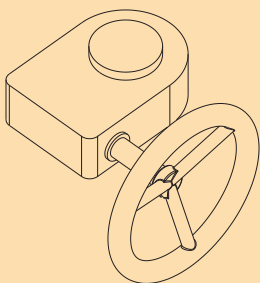


Available for all series under 1¼" FP



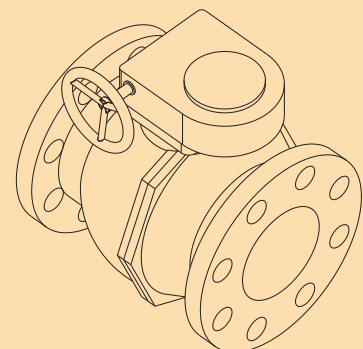
E. Manual Gear Operator With Handwheel

Specified for larger size ball valves to provide an easy operation or to increase cycle time of valve operation in order to prevent pipe line hammer. No bracket and coupler required! Just bolt the unit to TV's ball valve.



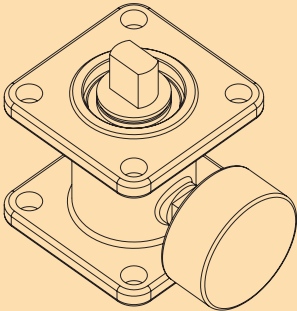
Max. Output torque

WG-1 9000 in-lb/1015Nm
WG-2 21000 in-lb/2370 Nm

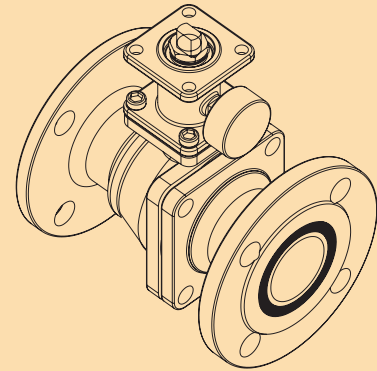


F. Emission Leakage Control Unit

Effectively monitors the valve stem for leakage. Constructed of stainless steel 316 with four to six pieces of chevron packing and two sets of belleville washers. Monitoring gage (not included) detects stem leakage for early valve service.



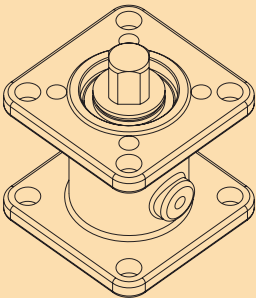
Available for
Available for all series
under 8" with built-in
ISO 5211 mounting
pad



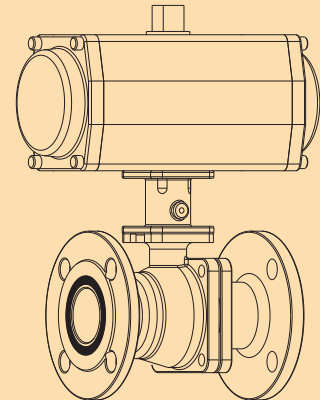
Patent # 116675

G. Mounting Adapter / Stem Extension for Valve Automation

Most ideal way to automate our valve. Automate valve with a single unit that serves dual purpose as a mounting adapter and a stem extension. The fully supported guiding stem eliminates side loading. For use with actuators conforming to ISO 5211 - DIN 3337 (90° and 45° adaptation) standards.



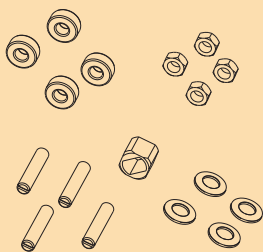
Available for all series
under 8" with built-in
ISO 5211 mounting
pad



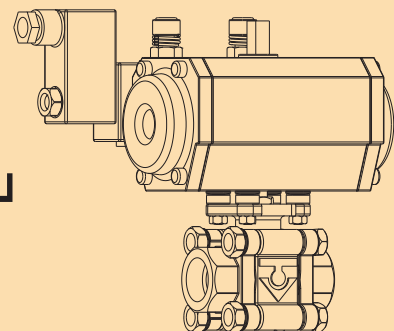
Patent # 129493

H. Mounting Kit for Valve Automation

An economical way to automate valves. The kit comes with 4 studs, 4 spacers, 4 belleville washers, 4 hexagon nuts, and 1 actuator adapter. Everything you need to mount the actuator directly on the valve. For use with actuators conforming to DIN 3337 (45° adaptation) standard and ball valve ISO pad with thru holes.



Available For
Series 30M - 2"
Series 33M - 1/2" to 2"
Series 70x - 1/2" to 3"
Series 80x - 1/2" to 3"
Series 90x - 1/2" to 2"



A. Bracket and Coupler Set for Valve Automation

Actuator model applies to our in-house pneumatic rack and pinion actuator. For sizing of bracket and coupler using a different actuator, please consult our factory. Top ISO 5211 and bottom ISO 5211 applies to brackets (Figure 2). Top ISO 5211 indicates the standard dimensions on the bracket that interfaces the actuator, and the bottom ISO 5211 indicates the standard dimensions on the bracket that interfaces with the valve. Dimension "C" as shown in Figure 3 is the square dimension of the coupler that interfaces with the actuator.

*Specify "C" in 45° or 90° when ordering. For sizes other than listed, please specify also.

Bracket Model	Coupler Model	Valve Size		Actuator Model	Top ISO 5211			Bottom ISO 5211			*C (mm)		
		Full	Reduced										
AME190C	A931163	1/2"	3/4"	AP-050	F03	F04	F05	F03	F04	F05	11		
	A931463			AP-063							14		
	A931763	AP-075, AP-085	17										
	A931108	1"	1 1/4"	AP-050							11		
	A931408	AP-063	14										
AME190H	A931708	1 1/4"	1 1/2"	AP-075, AP-085	F04	F05	F07	F04	F05	F07	17		
	A931495	1 1/2"	2"	AP-063							14		
	A931795			AP-075, AP-085							17		
	A932295	2"	2 1/2"	AP-100							22		
	A932795			AP-125							27		
AME190K	*A931717C	2 1/2"	3"	AP-075, AP-085	F07	F10	X	F07	F10	X	17		
	*A932217B			AP-100							22		
	*A932717C	AP-125, AP-160	27										
	A933617	4"	4"	AP-200							F10	F14	X
AME190M	A932717M	5"	N/A	AP-125, AP-160	F07	F10	X	F7	F10	X	27		
AME190M	A933617M			AP-200	F10	F14	X	F10	X	X	36		
AME190Q	A934617M			AT70	F16	X	X	F10	X	X	46		
AME190M	A932723N			6"	N/A	AP-125, AP-160	F10	F14	X	F12	X	X	27
	A933623N					AP-200	F10	F14	X	F12	X	X	36
AME190Q	A934623N	AT70	F16			X	X	F12	X	X	46		
AME190M	A9327230	8"	N/A			AP-125, AP-160	F10	F14	X	F12	X	X	27
	A9336230					AP-200	F10	F14	X	F12	X	X	36
AME190Q	A9346230			AT70	F16	X	X	F12	X	X	46		
AME190P	A933630P			10"	N/A	AP-200	F14	X	X	F14	X	X	36
AME190P	A934630P			12"	N/A	AT70	F16	X	X	F14	X	X	46

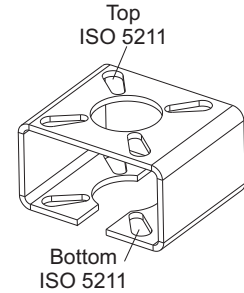


Figure 2: Bracket

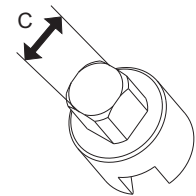


Figure 3: Coupler

* For 70 series 2 1/2" ~ 3" coupler to be replaced with A931715C, A932215B & A932715C

B. Stem Extension / Insulation for Manual Operation

Bottom pad interfaces with top mounting surface of the valve. E is the dimension of the slot that fits into the valve handle (Figure 6).

Manual Adapter	Bottom Pad	E (mm)	Full Port	Reduced Port
ASE03	F03	5.0	1/4", 3/8"	1/2"
ASE04	F04	6.3	1/2", 3/4"	3/4", 1"
ASE05	F05	8.0	1", 1 1/4"	1 1/4", 1 1/2"
ASE07	F07	9.5	1 1/2", 2"	2", 2 1/2"
ASE10	F10	17.0	2 1/2", 3", 4", 5"	3", 4", 6"
ASE12	F12	23.0	6", 8"	N/A

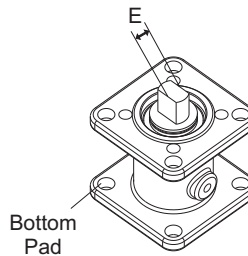


Figure 6: Stem Extension for Manual Operation

C. 4"(100mm) Economical Stem Extension for Manual Operation

Model No.	Full Port	Reduced Port
AESE1	1/2" & 3/4"	3/4" & 1"
AESE2	1" & 1 1/4"	1 1/4" & 1 1/2"
AESE3	1 1/2" & 2"	2 & 2 1/2"
AESE4	2 1/2" & 3"	3" & 4"

D. Optional Oval Handle

Handle sleeve available in black, blue, green, orange, red, white or other custom colors. Please specify when ordering.

Model No.	Full Port	Reduced Port
AHOV1	1/4" & 3/8"	1/2"
AHOV2	1/2" & 3/4"	3/4" & 1"
AHOV3	1" & 1 1/4"	1 1/4" & 1 1/2"

E. Manual Gear Operator

Model No.	Series 90	Series 30M
WG1	5" to 10"	4" to 6"
WG2	10" & UP	N/A

F. Emission Leakage Control Unit

Model No.	Full Port	Reduced Port
AELC4	1/2" & 3/4"	3/4" & 1"
AELC5	1" & 1 1/4"	1 1/4" & 1 1/2"
AELC7	1 1/2" & 2"	2 & 2 1/2"
AELC10	2 1/2" & 3"	N/A
AELC10X	2 1/2", 3", 4", 5"	3", 4", 6"
AELC12	6" & 8"	N/A

Details see catalog # ELC-9907-1.0

G. Mounting Adapter / Stem Extension for Valve Automation

Bottom pad is the standard ISO 5211 dimension that interfaces with the top of valve surface, and top pad is the standard ISO 5211 dimension that interfaces with bottom of actuator. The Dimension D is the square dimension that couples with the square recess on the bottom of the actuator. Square adaptation available in DIN 3337 (45° adaptation) standard as shown in Figure 4, and in ISO 5211 (90° adaptation) standard as shown in Figure 5.

Mounting Adapter	Square Adaptation	*D (mm)	Bottom Pad	Top Pad	Full Port	Reduced Port
AMA0309S	ISO 5211	9	F03	F03	1/4", 3/8"	1/2"
AMA0309D	DIN 3337					
AMA0411S	ISO 5211	11	F04	F04	1/2", 3/4"	3/4", 1"
AMA0411D	DIN 3337					
AMA0409S	ISO 5211	9	F04, F05	F03, F04	1/2", 3/4"	3/4", 1"
AMA0409D	DIN 3337					
AMA0511S	ISO 5211	11	F04, F05	F03, F04	1", 1 1/4"	1 1/4", 1 1/2"
AMA0511D	DIN 3337					
AMA0414S	ISO 5211	14	F04	F05	1/2", 3/4"	3/4", 1"
AMA0414D	DIN 3337					
AMA0514S	ISO 5211	14	F05	F05, F07	1", 1 1/4"	1 1/4", 1 1/2"
AMA0514D	DIN 3337					
AMA0517S	ISO 5211	17	F05	F05, F07	1", 1 1/4"	1 1/4", 1 1/2"
AMA0517D	DIN 3337					
AMA0714S	ISO 5211	14	F07	F05, F07	1 1/2", 2"	2", 2 1/2"
AMA0714D	DIN 3337					
AMA0717S	ISO 5211	17	F07	F05, F07	1 1/2", 2"	2", 2 1/2"
AMA0717D	DIN 3337					
AMA0722S	ISO 5211	22	F10	F07, F10, F12	1 1/2", 2"	2", 2 1/2"
AMA0722D	DIN 3337					
AMA1017S	ISO 5211	17	F10	F07, F10, F12	2 1/2", 3" 4", 5"	3", 4", 6"
AMA1017D	DIN 3337					
AMA1022S	ISO 5211	22	F10	F07, F10, F12	2 1/2", 3" 4", 5"	3", 4", 6"
AMA1022D	DIN 3337					
AMA1027S	ISO 5211	27	F10	F07, F10, F12	2 1/2", 3" 4", 5"	3", 4", 6"
AMA1027D	DIN 3337					
AMA1222S	ISO 5211	22	F12	F10 or F12 or F14	6", 8"	N/A
AMA1222D	DIN 3337					
AMA1227S	ISO 5211	27	F12	F10 or F12 or F14	6", 8"	N/A
AMA1227D	DIN 3337					
AMA1236S	ISO 5211	36	F12	F10 or F12 or F14	6", 8"	N/A
AMA1236D	DIN 3337					

*"D" dimension can be ordered per customer's requirement

H. Mounting Kit for Valve Automation (square adaptation at 45°)

ISO 5211 dimension refers to standard mounting dimension on the valve. Actuator model applies to our in-house pneumatic rack and pinion actuator. For other type of actuators, please consult our factory. Adapter dimension "A" is the square dimension on the adaptor as shown in Figure 1.

*Not recommend actuator with spline drive.

Kit Number	Valve Size		ISO 5211 Dimension	Actuator Model	Adapter Dimension A (mm)
	Full Port	Reduced			
AMK1	1/2" & 3/4"	3/4" & 1"	F04	AP050	11
AMK2	1" & 1 1/4"	1 1/4" & 1 1/2"	F05	AP063	14
AMK3	1" & 1 1/4"	1 1/4" & 1 1/2"	F05	AP075, AP085	17
AMK4	1 1/2" & 2"	2" & 2 1/2"	F07	AP075, AP085	17
AMK5	1 1/2" & 2"	2" & 2 1/2"	F07	AP100	22
AMK6	2 1/2" & 3"	N/A	F10	AP100	22

Note: AMK6 is not available for Series 80 full port

*For overall dimension, please see engineering data.

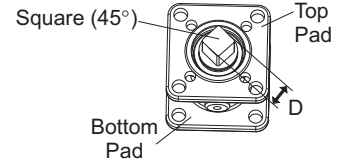
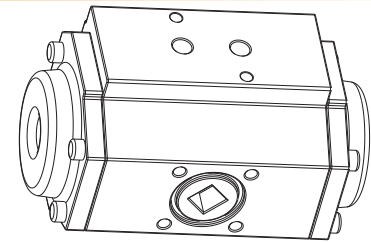


Figure 4: DIN 3337 Standard Square Adaptation at 45°

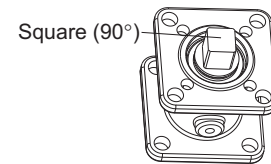
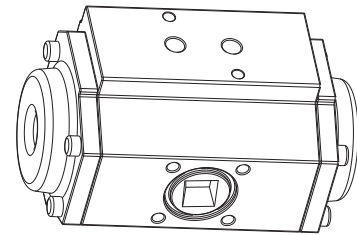


Figure 5: ISO 5211 Standard Square Adaptation at 90°

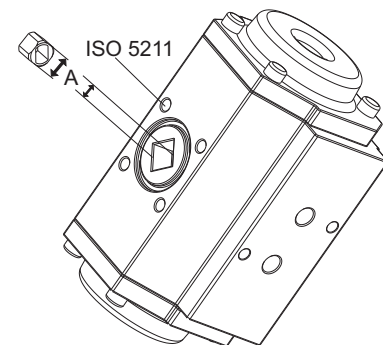


Figure 1: Pneumatic Piston Type Actuator

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