

3/4" - 2" EVX Series



Features:

- 12-volt DC operated
- 24-volt available
- Open/closed indicator
- Open / Close verification available
- 3/4" - 1 1/4" ON/OFF 3/4 sec response, • 1 1/2" - 2" ON/OFF 1 1/2 second response
- 1 1/2" ON/OFF has 1 1/2 sec response
- Regulating has 4 sec response
- IP68 waterproof
- -20 to 150F (-29 to 65C) operating
- -67 to 221F (-55 to 105C) storage
- Actuator rated to 500,000 cycles
- Valve rated to 50,000 cycles leak-free

- 100G's shock rating
- Additional options available including PWM to CAN/ISO BUS to Bluetooth®* wireless technology.

Materials

- 316 stainless steel ball & stem
- Poly ball available
- Stainless steel hardware
- Fiberglass reinforced polypropylene
- PTFE seats
- FKM stem seals

On/Off

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open) 0VDC (Close)

4 Wire Regulating

- Red = +12V DC (Open)
- White = Ground (Open)
- Black = +12V DC (Close)
- Green = Ground (Close)



EVX125



EVX121

PART NO	INLET
EVX ON/OFF WELDED ELECTRIC VALVES	
EVX100	1" Full Port Electric Valve
EVX125	1-1/4" Standard Port Electric Valve
EVX150	1-1/2" Full Port Electric Valve
EVX200	2" Standard Port Electric Valve
EVX220	2" Full Port Electric Valve

PART NO	INLET
EVX ON/OFF BOLTED ELECTRIC VALVES	
EVX071	3/4" Full Port Electric Valve
EVX101	1" Full Port Electric Valve
EVX121	1 1/4" Standard Port Electric Valve
EVX151	1 1/2" Full Port Electric Valve
EVX201	2" Standard Port Electric Valve
EVX221	2" Full Port Electric Valve

PART NO	INLET
EVX REGULATING WELDED ELECTRIC VALVES	
EVXR100	1" Full Port Electric Valve
EVXR125	1 1/4" Standard Port Electric Valve
EVXR150	1 1/2" Full Port Electric Valve
EVXR200	2" Standard Port Electric Valve
EVXR220	2" Full Port Electric Valve

PART NO	INLET
EVX REGULATING BOLTED ELECTRIC VALVES	
EVXR071	3/4" Full Port Electric Valve
EVXR101	1" Full Port Electric Valve
EVXR121	1 1/4" Standard Port Electric
EVXR151	1 1/2" Full Port Electric Valve
EVXR201	2" Standard Port Electric Valve
EVXR221	2" Full Port Electric Valve

3" EVX Series & 3/4" - 2" Bottom & Side Load



Features:

- 12-volt DC operated
- 24-volt available
- Open/closed indicator
- Open / Close verification available
- 1" & 1¼" ON/OFF ¾ second response
- 1½" - 2" ON/OFF 1½" second response
- 3" ON/OFF 3 second response
- Regulating has 4 sec response
- IP68 waterproof
- -20 to 150F (-29 to 65C) operating
- -67 to 221F (-55 to 105C) storage
- Actuator rated to 500,000 cycles
- Valve rated to 50,000 cycles leak-free

- 100G's shock rating
- Additional options available including PWM to CAN/ISO BUS to Bluetooth®* wireless technology.

Materials

- 316 stainless steel ball & stem
- Poly ball available
- Stainless steel hardware
- Fiberglass reinforced polypropylene
- The 3" Valve is made of zinc alloy lower actuator housing
- PTFE seats
- FKM stem seals

On/Off

- Red = +12V DC
- Black = Ground
- White = +12VDC (Open) 0VDC (Close)

4 Wire Regulating

- Red = +12V DC (Open)
- White = Ground (Open)
- Black = +12V DC (Close)
- Green = Ground (Close)



EVX300



EVX100BL



PART NO	INLET
3" EVX ON/OFF ELECTRIC VALVES	
EVX300	3" Full Port Electric Valve

PART NO	INLET
3" EVX REGULATING ELECTRIC VALVES	
EVXR300	3" Full Port Electric Valve

PART NO	INLET
EVX BOLTED BOTTOM LOAD ELECTRIC VALVES	
EVX075BL	¾" Full Port Bottom Load Electric Valve
EVX100BL	1" Full Port Bottom Load Electric Valve
EVX125BL	1¼" Full Port Side Load Electric Valve
EVX150BL	1½" Full Port Side Load Electric Valve
EVX200BL	2" Std. Port Bottom Load Electric Valve
EVX220BL	2" Full Port Bottom Load Electric Valve

PART NO	INLET
EVX BOLTED BOTTOM LOAD REGULATING ELECT. VALVES	
EVXR075BL	¾" Full Port Bottom Load Electric Valve
EVXR100BL	1" Full Port Bottom Load Electric Valve
EVXR125BL	1¼" Full Port Side Load Electric Valve
EVXR150BL	1½" Full Port Side Load Electric Valve
EVXR200BL	2" Std. Port Bottom Load Electric Valve
EVXR220BL	2" Full Port Bottom Load Electric Valve

PART NO	INLET
EVX BOLTED SIDE LOAD ELECTRIC VALVES	
EVX075SL	¾" Full Port Side Load Electric Valve
EVX100SL	1" Full Port Side Load Electric Valve
EVX125SL	1¼" Full Port Side Load Electric Valve
EVX150SL	1½" Full Port Side Load Electric Valve
EVX200SL	2" Std. Port Side Load Electric Valve
EVX220SL	2" Full Port Side Load Electric Valve

PART NO	INLET
EVX BOLTED SIDE LOAD REGULATING ELEC. VALVES	
EVXR075SL	¾" Full Port Side Load Electric Valve
EVXR100SL	1" Full Port Side Load Electric Valve
EVXR125SL	1¼" Full Port Side Load Electric Valve
EVXR150SL	1½" Full Port Side Load Electric Valve
EVXR200SL	2" Std. Port Side Load Electric Valve
EVXR220SL	2" Full Port Side Load Electric Valve

LEV Series Electric Push Lock Valves 1/4", 3/8", 1/2"



Features

- 12 Volt DC
- Stationary current draw: less than 0.04 amps.
- Rotating current draw: less than 0.40 amps.
- Stall current: 0.75 amps
- Response time: 1/3 sec open to close
- TFM seats
- EPDM seals
- Fiberglass reinforced polypropylene.
- Integrated mounting slot
- Standard 3 wire configuration.
- Max Pressure = 150 PSI @ 70 °F.



LEV038



LEV038PL

PART NO	INLET
LEV SERIES ELECTRIC PUSH LOCK VALVES	
LEV038	3/8" Full Port Electric Valve
LEV050	1/2" Electric Valve

PART NO	INLET
LEV SERIES ELECTRIC PUSH LOCK VALVES	
LEV038PL	3/8" Full Port Electric Valve W/Push Lock

Electric Valves 3/4" - 2" Threaded

Features:

- 316 stainless steel ball & stem. FKM (viton type) or EPDM O-rings.
- Fiberglass reinforced polypropylene glass reinforced PTFE seats.
- 12-volt DC operated, 150 PSI maximum pressure..
- Open/closed indicator.



EV125



EV200

PART NO	INLET
3/4"- 1-1/4" ON/OFF ELECTRIC VALVES	
EV075	3/4" Electric Valve
EV100FP	1" Full Port Electric Valve
EV125	1-1/4" Electric Valve

PART NO	INLET
1-1/2"- 2" ON/OFF ELECTRIC VALVES	
EV150	1-1/2" Electric Valve
EV200	2" Electric Valve

PART NO	INLET
2" FULL PORT ON/OFF ELECTRIC VALVES	
EV204FP	2" Full Port Electric Valve

Electric Valves 3/4" - 2" Threaded



PART NO	INLET
1" & 2" FULL PORT REGULATING ELECTRIC VALVES	
EVR100FP	1" Full Port Electric Valve
EVR204FP	2" Full Port Electric Valve



EVR204FP

3-Way Electric 3/4" - 3" Full Port Threaded

Features:

- 316 stainless steel ball & stem FKM (viton type) or EPDM O-rings.
- Fiberglass reinforced polypropylene glass reinforced PTFE seats.
- 24-volt available in most models.
- 12-volt DC operated., 150 P.S.I. maximum pressure @ 70°F.
- Open/closed indicator.

PART NO	INLET
3/4"- 1-1/4" BOTTOM LOAD ON/OFF ELECTRIC VALVES	
EV075BL	3/4" Electric Valve
EV125BL	1-1/4" Electric Valve



BOTTOM LOAD: Directional flow right or left. Valve flow cannot be turned off.

PART NO	INLET
3/4"- 1-1/4" SIDE LOAD REGULATING ELECTRIC VALVES	
EV075SL	3/4" Electric Valve
EV100SL	1" Full Port Electric Valve



SIDE LOAD: Directional flow right or left. Valve flow cannot be turned off.

PART NO	INLET
1-1/2" - 2" BOTTOM LOAD ON/OFF ELECTRIC VALVES	
EV200BL	2" Electric Valve
EV204BLFP	2" Full Port Electric Valve

PART NO	INLET
1-1/2" - 2" SIDE LOAD REGULATING ELECTRIC VALVES	
EV150BL	1-1/2" Electric Valve
EV200BL	2" Electric Valve
EV204SLFP	2" Full Port Electric Valve

PART NO	INLET
3" FULL PORT ON/OFF ELECTRIC VALVES	
EV300FP	3" Full Port Electric Valve



Cast Iron & Aluminum Butterfly Valves



Features:

- NEMA 6P rated waterproof
- NEMA 7D rated ignition safe
- 2" to 5" valve sizes
- 316 stainless steel stem
- 316 stainless steel disk

EPDM seats, stainless steel disk and valve stem, 12 volt DC motor.
Maximum PSI: 150 psi at 70° F



PART NO	SIZE/CONTROL	Cycle Time
2 & 3" CAST IRON BUTTERFLY VALVES		
KZ59iY	2" On/Off	1.5 sec
KZ59iWR	2" Regulating	3.0 sec
KZ59iUR	2" Regulating	7.0 sec
KZ59K3	3" On/Off Control	3.0 sec
KZ59K7R	3" Regulating	7.0 sec
KZ59KAR	3" Regulating	10.0 sec

PART NO	SIZE/CONTROL	Cycle Time
4" & 5" ALUMINUM BUTTERFLY VALVES		
KZ59L3	4" On/Off	3.0 sec
KZ59L7R	4" Regulating	7.0 sec
KZ59LAR	4" Regulating	10.0 sec
KZ59M3	5" On/Off	3.0 sec
KZ59M7R	5" Regulating	7.0 sec
KZ59MAR	5" Regulating	10.0 sec

61 Series SS Ball Valves



Features:

- NEMA 6P rated waterproof
- NEMA 7D rated ignition safe
- 1/2" to 2" valve sizes
- NSF/ANSI 61 Certified
- Low-Lead Certified
- Approved for drinking water in all 50 states
- Meet Uniform Plumbing Code

PART NO	SIZE/CONTROL	Cycle Time
1/2" & 3/4" STAINLESS STEEL 3-PIECE, 2-WAY BALL VALVES		
61DG3-10D20-P01	1/2" On/Off	0.8 sec
61D33-10D20-P01	1/2" On/Off	0.8 sec
61EG3-10D20-P01	3/4" On/Off	0.8 sec
61E33-10D20-P01	3/4" On/Off	0.8 sec

PART NO	SIZE/CONTROL	Cycle Time
1", 1-1/2" & 2" STAINLESS STEEL 3-PIECE, 2-WAY BALL VALVES		
61FF2-10DW0-P01	1" On/Off	3.0 sec
61F22-10DW0-P01	1" On/Off	3.0 sec
61HF2-10DW0-P01	1 1/2" On/Off	3.0 sec
61H22-10DW0-P01	1 1/2" On/Off	3.0 sec
61iF2-10DW0-P01	2" On/Off	3.0 sec
61i22-10DW0-P01	2" On/Off	3.0 sec

67 Series Vented SS Ammonia Valves



PART NO	SIZE/CONTROL	Cycle Time
1/4"- 2" VENTED STAINLESS STEEL AMMONIA VALVES		
KZ67BM	1/4" On/Off	0.8 sec
KZ67BPR	1/4" Regulating	2.5 sec
KZ67BQR	1/4" Regulating	7.0 sec
KZ67DM	1/2" On/Off	0.8 sec
KZ67DPR	1/2" Regulating	2.5 sec
KZ67DQR	1/2" Regulating	7.0 sec
KZ67EY	3/4" On/Off	1.5 sec
KZ67EWR	3/4" Regulating	3.0 sec
KZ67EUR	3/4" Regulating	7.0 sec
KZ67FY	1" On/Off	1.5 sec
KZ67FWR	1" Regulating	3.0 sec
KZ67FUR	1" Regulating	7.0 sec
KZ67HY	1 1/2" On/Off	1.5 sec
KZ67HWR	1 1/2" Regulating	3.0 sec
KZ67HUR	1 1/2" Regulating	7.0 sec
KZ67iY	2" On/Off	1.5 sec
KZ67iWR	2" Regulating	3.0 sec
KZ67iUR	2" Regulating	7.0 sec

Features:

- NEMA 6P rated waterproof
- NEMA 7D rated ignition safe
- 1/4" to 2" valve sizes
- 316 stainless steel ball and stem



73 Series SS 3-Way Ball Valves

Features:

- NEMA 6P rated waterproof
- NEMA 7D rated ignition safe
- 3/8" to 2" valve sizes
- 316 stainless steel ball and stem

PART NO	SIZE/CONTROL	Cycle Time
3/8"- 2" STAINLESS STEEL 3-WAY BALL VALVES		
KZ73CM	3/8" On/Off	0.8 sec.
KZ73DM	1/2" On/Off	0.8 sec
KZ73EY	3/4" On/Off	1.5 sec
KZ73FY	1" On/Off	1.5 sec
KZ73H3	1 1/2" On/Off	3.0 sec
KZ73i3	2" On/Off	3.0 sec



78 Series Bronze 3-Way, Full Port Ball Valves

Features:

- NEMA 6P rated waterproof
- NEMA 7D rated ignition safe
- 1/2" to 2" valve sizes
- 316 stainless steel ball and stem



PART NO	SIZE/CONTROL	Cycle Time
1/2" - 2" BRONZE BALL VALVES		
KZ78DM	1/2" On/Off	0.8 sec
KZ78EY	3/4" On/Off	1.5 sec
KZ78FY	1" On/Off	1.5 sec
KZ78HY	1 1/2" On/Off	1.5 sec
KZ78iY	2" On/Off	1.5 sec

84 Series Bronze 2-Way, Full Port Ball Valves

Features:

- NEMA 6P rated waterproof
- NEMA 7D rated ignition safe
- 1/4" to 2" valve sizes
- 316 stainless steel ball and stem



PART NO	SIZE/CONTROL	Cycle Time
1/4" - 2" BRONZE BALL VALVES		
KZ84BM	1/4" On/Off	0.8 sec
KZ84BPR	1/4" Regulating	2.5 sec
KZ84BQR	1/4" Regulating	7.0 sec
KZ84CM	3/8" On/Off	0.8 sec
KZ84CPR	3/8" Regulating	2.5 sec
KZ84CQR	3/8" Regulating	7.0 sec
KZ84DM	1/2" On/Off	0.8 sec
KZ84DPR	1/2" Regulating	2.5 sec
KZ84DQR	1/2" Regulating	7.0 sec
KZ84EY	3/4" On/Off	1.5 sec
KZ84EWR	3/4" Regulating	3.0 sec
KZ84EUR	3/4" Regulating	7.0 sec
KZ84FY	1" On/Off	1.5 sec
KZ84FWR	1" Regulating	3.0 sec
KZ84FUR	1" Regulating	7.0 sec
KZ84HY	1 1/2" On/Off	1.5 sec
KZ84HWR	1 1/2" Regulating	3.0 sec
KZ84HUR	1 1/2" Regulating	7.0 sec
KZ84iY	2" On/Off	1.5 sec
KZ84iWR	2" Regulating	3.0 sec
KZ84iUR	2" Regulating	7.0 sec

88 Series SS 2-Way Ball Valves and 89 Series SS 3-Piece, 2-Way Ball Valves



Features:

- NEMA 6P rated waterproof
- NEMA 7D rated ignition safe



PART NO	SIZE/CONTROL	Cycle Time
1/4"- 1-1/2" STAINLESS STEEL 2-WAY BALL VALVES		
KZ88BM	1/4" On/Off	0.8 sec
KZ88BPR	1/4" Regulating	2.5 sec
KZ88BQR	1/4" Regulating	7.0 sec
KZ88CM	3/8" On/Off	0.8 sec
KZ88CPR	3/8" Regulating	2.5 sec
KZ88CQR	3/8" Regulating	7.0 sec
KZ88DM	1/2" On/Off	0.8 sec
KZ88DPR	1/2" Regulating	2.5 sec
KZ88DQR	1/2" Regulating	7.0 sec
KZ88EY	3/4" On/Off	1.5 sec
KZ88EWR	3/4" Regulating	3.0 sec
KZ88EUR	3/4" Regulating	7.0 sec
KZ88FY	1" On/Off	1.5 sec
KZ88FWR	1" Regulating	3.0 sec
KZ88FUR	1" Regulating	7.0 sec
KZ88HY	1 1/2" On/Off	1.5 sec
KZ88HWR	1 1/2" Regulating	3.0 sec
KZ88HUR	1 1/2" Regulating	7.0 sec

PART NO	SIZE/CONTROL	Cycle Time
1/2"- 3" STAINLESS STEEL 3-PIECE, 2-WAY BALL VALVES		
KZ89DM	1/2" On/Off	0.8 sec
KZ89DPR	1/2" Regulating	2.5 sec
KZ89DQR	1/2" Regulating	7.0 sec
KZ89EY	3/4" On/Off	1.5 sec
KZ89EWR	3/4" Regulating	3.0 sec
KZ89EUR	3/4" Regulating	7.0 sec
KZ89FY	1" On/Off	1.5 sec
KZ89FWR	1" Regulating	7.0 sec
KZ89FUR	1" Regulating	7.0 sec
KZ89GY	1 1/4" On/Off	1.5 sec
KZ89GWR	1 1/4" Regulating	3.0 sec
KZ89GUR	1 1/4" Regulating	7.0 sec
KZ89HY	1 1/2" On/Off	1.5 sec
KZ89HWR	1 1/2" Regulating	3.0 sec
KZ89HUR	1 1/2" Regulating	7.0 sec
KZ89i3	2" On/Off	3.0 sec
KZ89i7R	2" Regulating	7.0 sec
KZ89iAR	2" Regulating	10.0 sec
KZ89J3	2 1/2" On/Off	3.0 sec
KZ89J7R	2 1/2" Regulating	7.0 sec
KZ89JAR	2 1/2" Regulating	10.0 sec
KZ88K3	3" On/Off	3.0 sec
KZ88K7R	3" Regulating	7.0 sec
KZ88KAR	3" Regulating	10.0 sec

ELECTRIC VALVES

92 Series SS 3-Piece, 2-Way Ball Valves



Features:

- NEMA 6P rated waterproof
- NEMA 7D rated ignition safe
- 1" direct mount valve
- 316 stainless steel ball and stem



PART NO	SIZE/CONTROL	Cycle Time
1" STAINLESS STEEL 3-PIECE, 2-WAY DIRECT MOUNT BALL VALVES		
KZ92FM	1" On/Off	0.8 sec.
KZ92FPR	1" Regulating	2.5 sec
KZ92FQR	1" Regulating	7.0 sec

344 Series Electric Shutoff Valves



Features:

- 22 RPM, 0.7 second shutoff fully open to close.
- Flexible inlet/outlets provide simple plumbing.
- Available in 2-way or 3-way versions. 2-way valves allow complete shutoff while the 3-way valves divert flow to a bypass line when boom controls are shut off.
- Stainless steel stem with optional polypropylene or stainless steel ball.
- Maximum pressure rating is 300 psi (20 bar).
- The flow rate for the 344BEC 2-way valve is 32 GPM (121 l/min) flow rate with a 5 psi (0.34 bar) pressure drop, 45 GPM (170 l/min) at a 10 PSI (0.69 bar) pressure drop.
- The flow rate for the 344BEC 3-way valve is 24 GPM (91 l/min) with a 5 psi (0.34 bar) pressure drop, 34 GPM (129 l/min) at a 10 PSI (0.69 bar) pressure drop.
- Wetted parts are Nylon, Teflon®, polypropylene, stainless steel and Viton®.



Inlet/Outlet REQUIRED CONNECTIONS
the inlet/outlet fittings are ordered separately



- 3, 4: When ordering 3/4" (3) or 1" (4) threaded NPT or BSPT inlet/outlet type valve connections, the inlets and outlets will be completed during the ordering process.
- F: When ordering F (flange) type valve connections, the inlet/outlet fittings are ordered separately. Two 50 series clamps and flange fittings are required for 2-way valves and three each for 3-way valves.
- Q: When ordering QC (Quick Connect) hose barb type valve fittings, the inlet/outlet connections are ordered separately. Two 45529 QC fittings are required for 2-way valves and three each for 3-way valves.

PART NO	OUTLET FITTINGS	CYCLE TIME
2- WAY ELECTRIC SHUTOFF VALVES		
344BEC-23S	3/4" Pipe Thread	7.0 sec
344BEC-24S	1" Pipe Thread	7.0 sec
344BEC-2QS	Quick Connect	7.0 sec
344BEC-2FS	50 Series Flange	7.0 sec

PART NO	OUTLET FITTINGS	CYCLE TIME
3-WAY ELECTRIC SHUTOFF VALVES		
344BEC-33S	3/4" Pipe Thread	7.0 sec
344BEC-34S	1" Pipe Thread	7.0 sec
344BEC-3QS	Quick Connect	7.0 sec
344BEC-3FS	50 Series Flange	7.0 sec

346 Series Electric Shutoff Valves



Features:

- 25 RPM, 0.6 second shutoff fully open to close.
- Available in 2-way or 3-way versions. 2-way valves allow complete shutoff while the 3-way valves divert flow to a bypass line when boom controls are shut off.
- The flow rate for the 346BEC 2-way valve is 100 GPM (379 l/min) w/ 5 psi (0.34 bar) pressure drop, 141 GPM (534 l/min) w/10 PSI (0.69 bar) pressure drop.
- The flow rate for the 346BEC 3-way valve is 64 GPM (242 l/min) w/a 5 psi (0.34 bar) pressure drop, 91 GPM (344 l/min) w/10 PSI (0.69 bar) pressure drop.
- Polypropylene ball with stainless steel stem.
- Maximum pressure rating of 150 psi (10 bar).
- Available with 11/49, 11/29 NPT or BSPT (F) threads or 50 series flange fittings.
- Wetted parts made of corrosion-resistant materials, glass-reinforced polypropylene, Teflon®, stainless steel and Viton®.



Inlet/Outlet REQUIRED CONNECTIONS
the inlet/outlet fittings are ordered separately



#5



#6



#F/F75

- 5, 6: When ordering 11/49 (5) or 11/29 (6) threaded NPT or BSPT inlet/outlet type valve connections, the valve will be completed during the ordering process.
- F: When ordering F or F75 (flange) type valve connections, the inlet/outlet fittings are ordered separately. Two clamps and flange fittings are required for 2-way valves and three each for 3-way valves.

PART NO	OUTLET FITTINGS	CYCLE TIME
2-WAY ELECTRIC SHUTOFF VALVES		
346BEC-25S	1-1/4" Pipe Thread	6.0 sec
346BEC-26S	1-1/2" Pipe Thread	6.0 sec
346BEC-2FS	50 Series Flange	6.0 sec
346BEC-2F75S	75 Series Flange	6.0 sec

PART NO	OUTLET FITTINGS	CYCLE TIME
3-WAY ELECTRIC SHUTOFF VALVES		
346BEC-35S	1-1/4" Pipe Thread	6.0 sec
346BEC-36S	1-1/2" Pipe Thread	6.0 sec
346BEC-3FS	50 Series Flange	6.0 sec
346BEC-3F75S	75 Series Flange	6.0 sec

356 Series Electric Shutoff Valves

Features:

- 25 RPM, 0.6 second shutoff fully open to close.
- Flow rate is 100 GPM (379 l/min) w/a 5 psi (0.34 bar) pressure drop, 141 GPM (534 l/min) with a 10 PSI (0.69 bar) pressure drop.
- Maximum pressure rating of 150 psi (10 bar).
- Wetted parts are polypropylene, stainless steel, carbon-filled Teflon®, Viton® and Rytan®.
- 50 series flange fittings reduce leaks and allow various inlet/outlet connections.



Two 50 series clamps and flange fittings are required.

PART NO	OUTLET FITTINGS	CYCLE TIME
2-WAY ELECTRIC SHUTOFF VALVES		
356BEC	50 Series Flange	6.0 sec