NELSON

Solenoids

3-Way Solenoid Specifications

STANDARD SOLENOIDS

Model #	Mfg.	Part Numbers			Voltage[1]	In-rush Amps	Hold-ing Amps	Resis-tance (ohm)	Watts	Inlet Ori-fice	Electrical Connection	Max. Pres-sure	Common Usage	Recomm. Valve Size
		Kit	Coil + Base	Coil										
E11	GEM-SOL	8925-011	7510-011		12 VDC		0.83	14.3	10	1.6 mm	1/2" FNPT		Normally closed for sustaining applications	2", 3", 4"
E20-1	GEM-SOL	11253-002	11222-002	-	12-24 VDC Lat	-	-	5		1.6 mm	Window+		Window+ Controller w/E20 solenoid	4", 6", & 8"
E21	PARKER	8925-001	7510-001	7510-101	12 VDC	-	0.6	20	8	1.6 mm	1/2" FNPT	175 psi	For 12VDC controllers	-
E23	BACCARA	8925-035	7510-052	7510-152**	9/12 VDC Lat	-	-	4.2	3	1.2 mm	12" Leads	175 psi	Economical for TWIG systems	2" & 3"
E29	NETAFIM	8925-029	7510-029	NA	12-40 VDC Lat			4.2		2.0 mm	47" Leads	140 psi	TWIG, large valves and/or dirty water	4", 6", & 8"
E30	PARKER	8925-002	7510-002	7510-102	24 VDC	-	0.3	83	8	1.6 mm	1/2" FNPT	175 psi	For 24VDC controllers	-
E33-1	BACCARA	11253-001	11222-001	-	12-24 VDC Lat	-	-	23	3	1.2 mm	Window+		Window+ Controller with E33 solenoid	2" & 3"
E34	BACCARA	8925-037	7510-054	7510-154	24 VDC	0.125	0.125	119	3	1.2 mm	12" Leads	175 psi	Economical for 24VDC controllers	2" & 3"
E40	GEM-SOL	8925-043	7510-015	7510-115	24 VAC	0.15	0.15	diode	2.5	1.6 mm	Plug-In	175 psi	Long wire runs for 24VAC controllers	-
E41	PARKER	8925-003	7510-003	7510-103	24 VAC	1.1	0.65	7.8	8	1.6 mm	1/2" FNPT	175 psi	For 24VAC controllers	-
E43	BACCARA	8925-033	7510-050	7510-150	24 VAC	0.125	0.125	diode	3	1.2 mm	12" Leads	175 psi	Economical for 24VAC controllers	2" & 3"
E46	GEM-SOL	8925-044	7510-016	7510-116	24 VAC	0.8	0.43	9	5.5	1.6 mm	Plug-In	175 psi	For short wire runs	-
E50	PARKER	8925-004	7510-004	7510-104	120 VAC	0.2	0.1	184	8	1.6 mm	1/2" FNPT	175 psi	Typical for Valves at Pivot Point	-
E52	PARKER	8925-024	7510-033	7510-133*	120 VAC	0.7	0.3	27	17	3.2 mm	1/2" FNPT	175 psi	Pivot Point - faster response. Best for 8" valves	6" & 8"
E53	GEM-SOL	8925-045	7510-051	7510-151	110 VAC	0.15	0.11	230	5.5	1.6 mm	Plug-In	175 psi		-

NOTES:
1. "Lat" = Latch. The solenoid contains a magnet which holds the coil in the open/closed position, such that a constant current is not required, as in the case of non-latching solenoids.
2. If the solenoid contains a diode, the resistance reading obtained using a voltmeter will be inaccurate (extremely high). This is because a diode acts like a check valve that only opens when a sufficient amount of "pressure" (voltage) is present.
3. Inlet orifice affects the valve closing speed (i.e. smaller orifice results in slower closing speed).

* Replacement coils for "Solenoid Solutions" brand order 7510-137.

** Base only part 7510-252.

Solenoid Electrical Connection Type Examples

Wire Leads

1/2" FNPT (Conduit) Hub Connection "Plug-In"

1/2" FNPT (Conduit) w/ Wire Leads

Solenoid Port Designation

(See reverse side for configurations.)

Port Label:
The number or combination of letters that appears on the solenoid next to each port.

Port Description:
NO = normally open (typically "upstream pressure port')
NC = normally closed (typically "vented port")
COM = common (typically to "auto port" on valve)

Solenoids

PORT CONFIGURATIONS

(See reverse side for port labels/descriptions.)

E21
For 12VDC controllersom

Parker/Skinner
12 VDC

E23
Economical for TWIG systems

Baccara
9-12 VDC latch

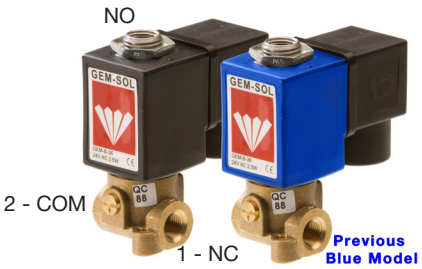
E30
For 24VDC controllers

Parker/Skinner
24 VDC

E34
Economical for 24VDC controllers

Baccara
24 VDC

E40
Long wire runs for 24VAC controllers

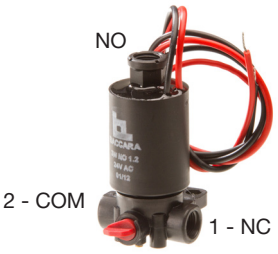


GEM-SOL
24 VAC

E41
For 24VAC controllers

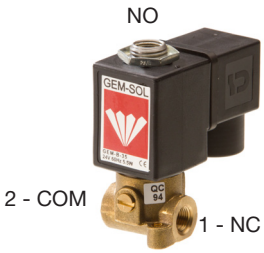
Parker/Skinner
24 VAC

E43
Economical for 24VAC controllers



Baccara
24 VAC

E46
Less susceptible to lightning than E40



GEM-SOL
24 VAC

E50
Typical for Valves at Pivot Point

Parker/Skinner
120 VAC

E52
Pivot Point - faster response

Parker/Skinner
120 VAC

E53

GEM-SOL
110 VAC

NELSON

Solenoids

3-Way Solenoid Specifications

These solenoids are special request only. Pricing is subject to change and may require longer lead times. Recommended to substitute for one of the available options (page 1).

SPECIAL ORDER

Model #	Manu-facturer	Part Numbers			Voltage[1]	In-rush Amps	Hold-ing Amps	Resis-tance (ohm)	Watts	Inlet Ori-fice	Electrical Connec-tion	Max. Pres-sure	Notes	Recom-mneded Valve Size
		Kit	Coil + Base	Coil										
E20	GEM-SOL	8925-012	7510-040	-	12-24 VDC Lat	-	-	5		1.6 mm	18" Leads	175 psi	For Window+ controller only	4", 6", & 8"
E22	PARKER	8925-021	7510-030	7510-130	12 VDC	-	1.2			3.2 mm	1/2" FNPT	175 psi		6" & 8"
E24	BACCARA/ MAD-TAKIN	8925-062	7510-072	7510-152	9/12 VDC Lat	-	-	4.2		5.6 mm	10" Leads	150 psi	E23 fast response for large valves	4", 6", & 8"
E25	SOLENOID SOLUTIONS	8925-020	7510-036	7510-136	12 VDC	1.42	1.42		17	3.2 mm	1/2" FNPT	150 psi	normally closed for sustaining applications	6" & 8"
E32	PARKER	8925-022	7510-031	7510-131	24 VDC	-	0.6			3.2 mm	1/2" FNPT	175 psi		6" & 8"
E33	BACCARA	8925-036	7510-053	7510-153	12-24 VDC Lat	-	-	23	3	1.2 mm	18" Leads	175 psi	For Windows+ controller only	2" & 3"
E42	PARKER	8925-023	7510-032	7510-132	24 VAC	3.6	1.8		16	3.2 mm	1/2" FNPT	175 psi	for large valves, 24VAC high current controllers	6" & 8"
E44	BACCARA	8925-070	7510-080	NA	24 VAC	-	0.015			1.6 mm	1/2" FNPT	200 psi		-
E45	BACCARA/ MAD-TAKIN	8925-060	7510-070	7510-150	24 VAC	0.125	0.125		3	5.6 mm	10" Leads	150 psi	E43 fast response for large valves	4", 6", & 8"
E60	PARKER	8925-005	7510-005	7510-105	240 VAC	0.1	0.07	750	8	1.6 mm	1/2" FNPT	175 psi		-
E61	GEM-SOL	8925-046	7510-017	7510-117	230 VAC	0.07	0.05		5.5	1.6 mm	Plug-In	175 psi		-
E62	Parker	8925-025	7510-034	7510-134	240 VAC	0.3	0.2			3.2 mm	1/2" FNPT	175 psi		6" & 8"
E70	Parker	8925-006	7510-006	7510-106	480 VAC	0.05	0.03			1.6 mm	1/2" FNPT	175 psi		-
E72	Parker	8925-026	7510-035	7510-135	480 VAC	0.2	0.08			3.2 mm	1/2" FNPT	175 psi		6" & 8"
E80	MAD-TAKIN	9335-001	9331-001	-	-						-		Hydraulic relay	-

*Substitutions represent the nearest similar "preferred" solenoid and are not guaranteed to be equal and/or direct replacement.

DETAILS

These solenoids are in the process of being discontinued. Recommended to substitute for one of the available options (page 1).

NOT AVAILABLE

Model #	Manufacturer	Part Numbers			Voltage[1]	In-rush Amps	Holding Amps	Resistance (ohm)	Watts	Inlet Orifice	Electrical Connection	Max. Pressure	Notes	Rec. Valve Size	Substitute*
		Kit	Coil + Base	Coil											
	EVOLUTIONARY CONC.		7859		24 VAC	0.385	0.2			1.2 mm	18" leads	90 psi	(normally closed)		
E26	BACCARA	8925-071	7510-081	NA	12 VDC	-	0.004			1.6 mm	1/2" FNPT	200 psi	Discontinued	-	
E27	BACCARA (GEM-SOL)	8925-047	7510-041	7510-141	12-24 VDC Lat	-	-	13.5	5.5	1.6 mm	Plug-In	175 psi		-	E23
E28	BERMAD	8925-013	7510-021	NA	12-50 VDC Pul	-	-	4.2		2.2 mm	10" Leads	150 psi		-	E29
E41.1	ASCO	8925-053	7510-060	7510-160	24VAC								Discontinued		E41
E50.1	ASCO	8925-054	7510-061	7510-161	120 VAC										E50
E82	PARKER	8925-027	7510-031	7510-131	24VDC		0.6			3.2 mm	1/2" FNPT	175psi	Discontinued		-

*Substitutions represent the nearest similar "preferred" solenoid and are not guaranteed to be equal and/or direct replacement.

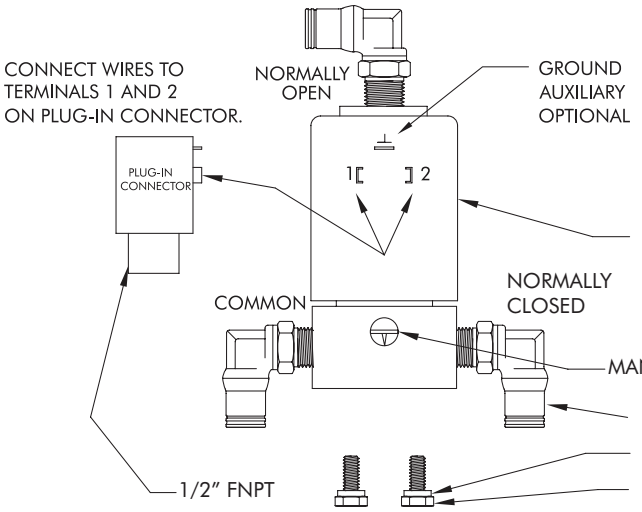
GEM-SOL KITS

SOLENOID KIT NUMBER	MODEL NUMBER	SOLENOID PART NO.	COIL PART NO.	VOLTAGE	WATT
8925-043	E40	7510-015	7510-115	24 VAC	2.5
8925-044	E46**	7510-016	7510-116	24 VAC	5.5
8925-045	E53	7510-051	7510-151	110 VAC	5.5
8925-046*	E61	7510-017	7510-117	230 VAC	5.5
8925-047*	E27	7510-041	7510-141	1.2-24 VDC latch	5.5

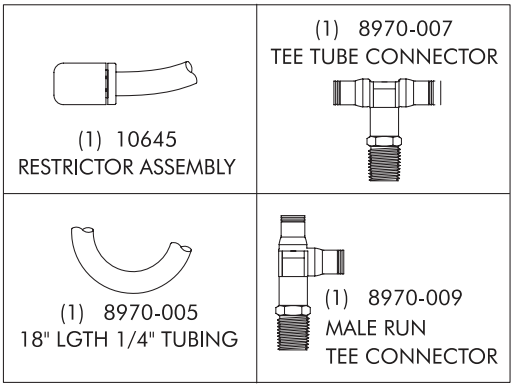
*Call Factory for availability.
**E46 LESS PRONE TO LIGHTNING DAMAGE THAN E40

DESCRIPTION:

THREE-WAY NORMALLY-OPEN SOLENOID VALVE.
WHEN THE SOLENOID IS NOT ENERGIZED
THE "COMMON" AND "NORMALLY OPEN"
PORT ARE CONNECTED.
WHEN THE SOLENOID IS ENERGIZED
THE "COMMON" AND "NORMALLY CLOSED"
PORT ARE CONNECTED.



(1) SOLENOID VALVE (SEE SUFFIX TABLE) 7510-XXX
MANUAL OVERRIDE (NORMAL POSITION)
(3) 8970-002 ELBOW TUBE CONNECTOR
(2) 8978 LOCK WASHER
(2) 9764 BOLT



MODEL # E40

GUIDE FOR MAXIMUM LENGTH OF WIRE RUN
NELSON 800 SERIES SOLENOID OPTION E40

COMMON WIRE AWG	POWER WIRE AWG 18	16	14	12	10	8	6
18	1203	1477	1724	1927	2801	2190	2266
16	1477	1912	2349	2740	3063	3307	3481
14	1724	2349	3044	3736	4362	4874	5263
12	1927	2740	3736	4836	5939	6931	7745
10	2081	3063	4362	5939	7692	9444	11022
8	2190	3307	4874	6931	9444	12230	15013
6	2266	3481	5263	7745	11022	15013	19437

ASSUMPTIONS MADE IN CALCULATIONS
MINIMUM CONTROLLER OUTPUT 24VAC
MINIMUM ALLOWABLE VOLTAGE AT SOLENOID IS 21.6 VAC
THE TABLE GIVES THE MAXIMUM DISTANCE IN FEET FROM THE CONTROLER TO THE VALVE
EVEN THOUGH CALCULATIONS FOR THIS TABLE INCLUDE TOTAL WIRE LENGTH FROM THE CONTROLLER TO THE VALVE AND RETURN.
COMMON AND POWER WIRE ARE ASSUMED TO BE THE SAME LENGTH AND ONE SOLENOID OPERATING.
THIS TABLE IS BASED UPON INRUSH CURRENT OF .15 AMPS & COPPER WIRE USED.
Resistance check to verfiy good solenoid coil on E40
meter **red** onto connector **2** and **black** onto connector **1** = α (open line)
meter **red** onto connector **1** and **black** onto connector **2** 0.98 mΩ

ELECTRICAL:

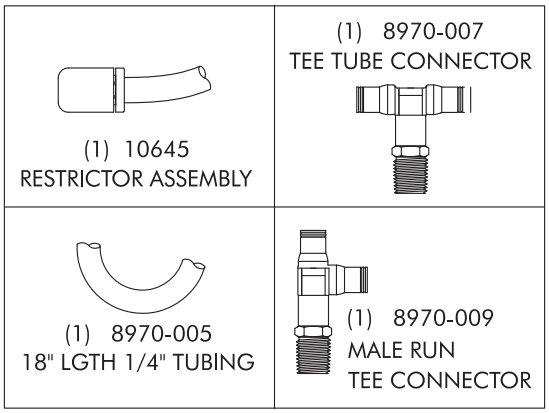
INPUT 21.6-26.4 VOLTS AC
INRUSH CURRENT .15 AMP
STEADY STATE CURRENT .15 AMP

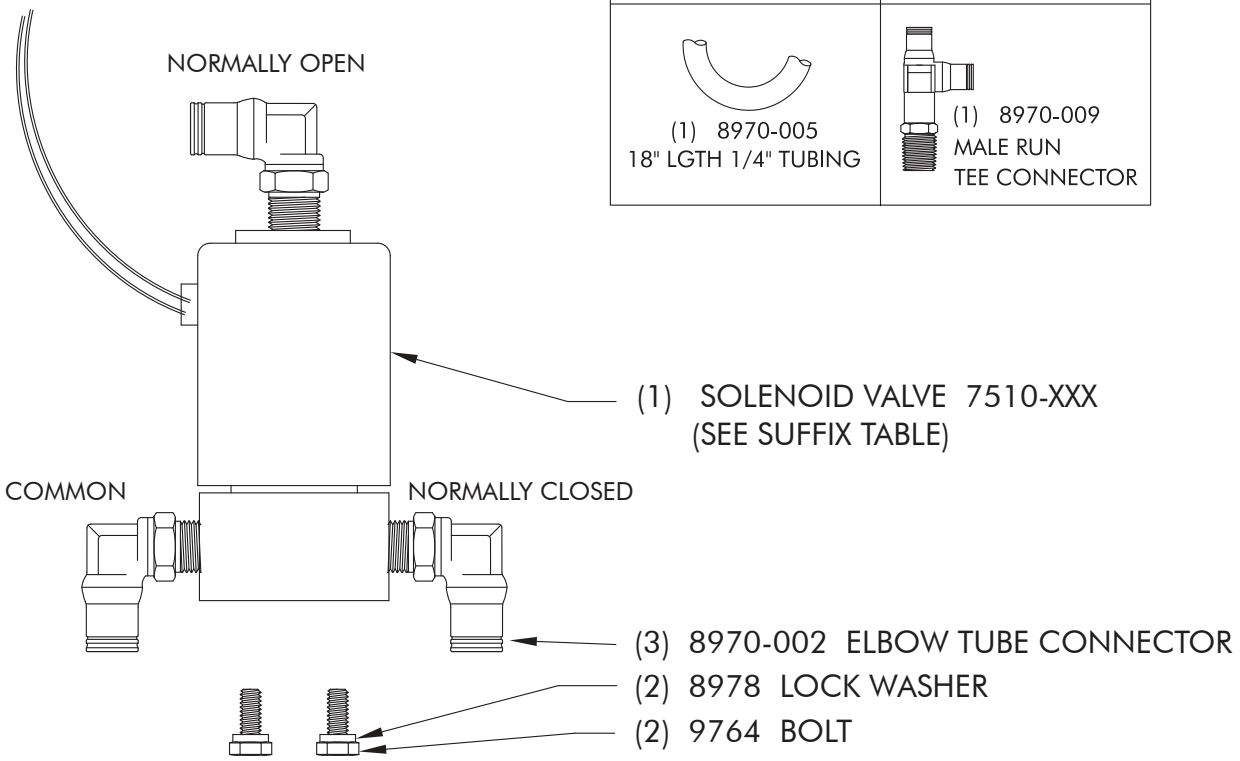
THIS LOW-WATTAGE SOLENOID ALLOWS LONGER WIRE RUNS.

GEM-SOL KIT

SOLENOID KIT NUMBER	MODEL NUMBER	SOLENOID VALVE PART NO.	VOLTAGE
8925-012	E20	7510-040	12-24 VDC LATCHING

DESCRIPTION:
THREE-WAY LATCHING SOLENOID VALVE.





PARKER/SKINNER KITS

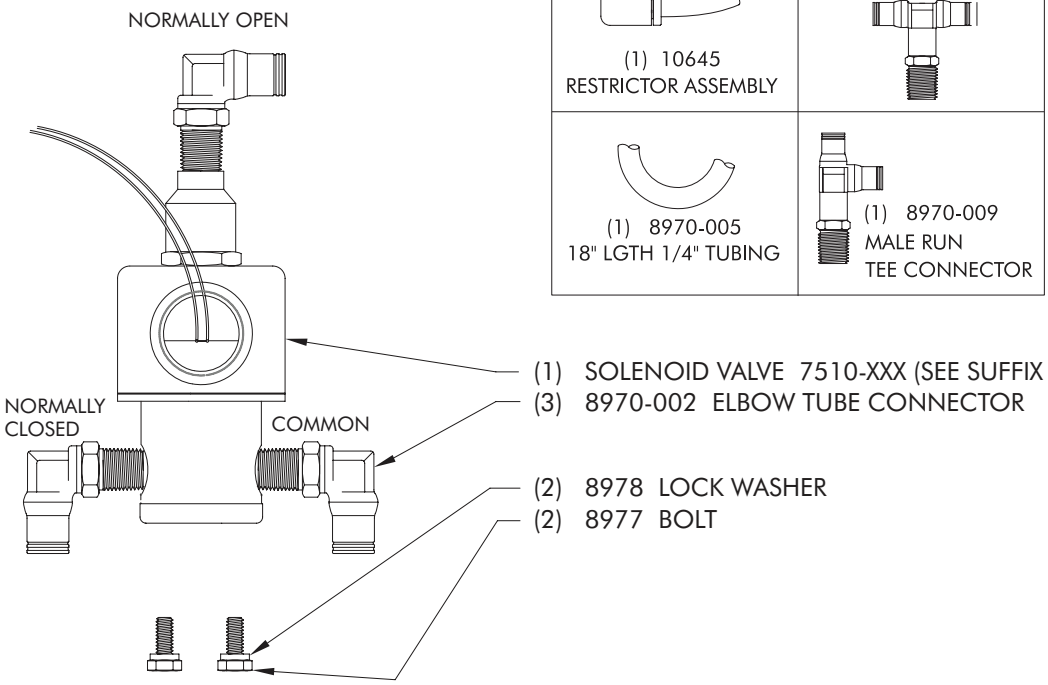
SOLENOID KIT NO.	MODEL NO.	SOLENOID PART NO.	COIL PART NO.	VOLTAGE
8925-001	E21	7510-001	7510-101	12 VDC
8925-002	E30	7510-002	7510-102	24 VDC
8925-003	E41	7510-003	7510-103	24 VAC**
8925-004	E50	7510-004	7510-104	120 VAC***
8925-005*	E60	7510-005	7510-105	240 VAC
8925-006*	E70	7510-006	7510-106	480 VAC

*Call Factory for availability.
**8 WATT
***0.2 INRUSH, 0.1 AMP HOLDING

DESCRIPTION:

THIS HIGH-WATTAGE, STRONG ACTUATING SOLENOID WORKS WELL IN MOST INSTALLATIONS.

THREE-WAY NORMALLY OPEN SOLENOID VALVE.
SOLENOID DE-ENERGIZED: "COMMON" AND "NORMALLY OPEN" PORT ARE CONNECTED.
SOLENOID ENERGIZED: "COMMON" AND "NORMALLY CLOSED" PORT ARE CONNECTED.



MODEL # E41

GUIDE FOR MAXIMUM LENGTH OF WIRE RUN
NELSON 800 SERIES SOLENOID OPTION E41

ELECTRICAL:

1.1 AMP INRUSH .65 AMP HOLDING
RECOMMENDED VOLTAGE RANGE
-15% +10% OF NOMINAL

COMMON WIRE AWG	POWER WIRE AWG 18	16	14	12	10	8	6
18	246	302	353	395	427	449	464
16	302	391	481	561	628	678	713
14	353	481	622	765	894	1000	1077
12	395	561	765	992	1221	1427	1589
10	427	628	894	1221	1589	1955	2273
8	449	678	1000	1427	1955	2541	3105
6	464	713	1077	1589	2273	3105	3991

ASSUMPTIONS MADE IN CALCULATIONS
MINIMUM CONTROLLER OUTPUT 24VAC
MINIMUM ALLOWABLE VOLTAGE AT SOLENOID IS 20.4 VAC
THE TABLE GIVES THE MAXIMUM DISTANCE IN FEET FROM THE CONTROLER TO THE VALVE EVEN THOUGH CALCULATIONS FOR THIS TABLE INCLUDE TOTAL WIRE LENGTH FROM THE CONTROLLER TO THE VALVE AND RETURN.
COMMON AND POWER WIRE ARE ASSUMED TO BE THE SAME LENGTH AND ONE SOLENOID OPERATING.
THIS TABLE IS BASED UPON INRUSH CURRENT OF 1.1 AMPS

PARKER/SKINNER KITS

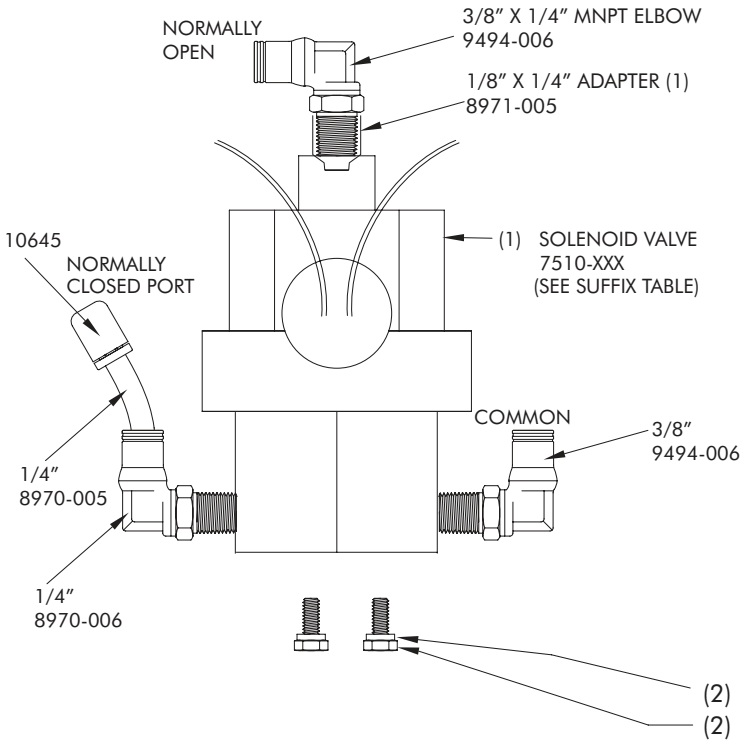
SOLENOID KIT NUMBER	MODEL NUMBER	SOLENOID PART NO.	COIL PART NO.	VOLTAGE
8925-021*	E22	7510-030	7510-130	12 VDC
8925-022*	E32	7510-031	7510-131	24 VDC
8925-023*	E42	7510-032	7510-132	24 VAC
8925-024	E52	7510-033	7510-133	120 VAC
8925-025*	E62	7510-034	7510-134	240 VAC
8925-026*	E72	7510-035	7510-135	480 VAC
8925-020*	E25	7510-036	7510-136	12 VDC

*Call Factory for availability.

DESCRIPTION: THIS LARGER ORIFICE SOLENOID IS RECOMMENDED ON 8" PRESSURE-REGULATING VALVES. NO ADDED VALUE ON SMALLER VALVES.

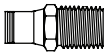
THREE-WAY NORMALLY OPEN SOLENOID VALVE.
SOLENOID DE-ENERGIZED: "COMMON" AND "NORMALLY OPEN" PORT ARE CONNECTED.
SOLENOID ENERGIZED: "COMMON" AND "NORMALLY CLOSED" PORT ARE CONNECTED.

THREE-WAY NORMALLY CLOSED SOLENOID VALVE. (SOLENOID SOLUTIONS)
SOLENOID DE-ENERGIZED: "COMMON" AND "NORMALLY OPEN" PORT ARE CONNECTED.
SOLENOID ENERGIZED: "COMMON" AND "NORMALLY CLOSED" PORT ARE CONNECTED.



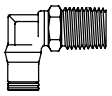
(2) 8971-005 1/8" MNPT X 1/4" FNPT ADAPTER

9494-008 3/8" X 1/4" MNPT STRAIGHT

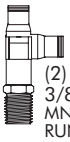


(1) 9494-007 3/8" X 1/4" MNPT TEE TUBE CONNECTOR

(1) 9494-006 3/8" X 1/4" MNPT ELBOW TUBE CONNECTOR



(1) 9494-005 24" LGTH 3/8" TUBING



(2) 9494-009 3/8" X 1/4" MNPT MALE RUN TEE CONNECTOR

MODEL # E42

GUIDE FOR MAXIMUM LENGTH OF WIRE RUN
NELSON 800 SERIES SOLENOID OPTION E42

ELECTRICAL: 3.6 AMP INRUSH, 1.8 AMP HOLDING

COMMON WIRE AWG	POWER WIRE AWG 18	16	14	12	10	8	6
18	75	92	108	121	130	137	142
16	92	120	147	172	192	207	218
14	108	147	190	234	273	305	329
12	121	172	234	303	373	436	485
10	130	192	273	373	485	597	694
8	137	207	305	436	597	776	949
6	142	218	329	485	694	949	1220

ASSUMPTIONS MADE IN CALCULATIONS:
MINIMUM CONTROLLER OUTPUT 24VAC. MINIMUM ALLOWABLE VOLTAGE AT SOLENOID IS 20.4 VAC. THE TABLE GIVES THE MAXIMUM DISTANCE IN FEET FROM THE CONTROLER TO THE VALVE EVEN THOUGH CALCULATIONS FOR THIS TABLE INCLUDE TOTAL WIRE LENGTH FROM THE CONTROLLER TO THE VALVE AND RETURN. COMMON AND POWER WIRE ARE ASSUMED TO BE THE SAME LENGTH AND ONE SOLENOID OPERATING. THIS TABLE IS BASED UPON INRUSH CURRENT OF 3.6 AMPS

Historically we have had two suppliers of E52 Solenoid: Parker/ Skinner and Solenoid Solutions. It was determined that the Solenoid Solutions version does not work with 50hz power, and the coils between the two brands are not interchangable. The Parker/ Skinner solenoid works in both 50 and 60hz power. The Solenoid Solutions version is discontinued. All new orders for E52 solenoids will be fulfilled with the Parker/Skinner version. When ordering replacement E52 coils you must specify the brand of solenoid you have. All replacement coils ordered with P/N 7510-133 will be fulfilled with Parker/Skinner ONLY. The E52 solenoid is the preferred 120VAC solenoid for 6" and 8" valves.

OLD - Solenoid Solutions 7510-137 Replacement Coil

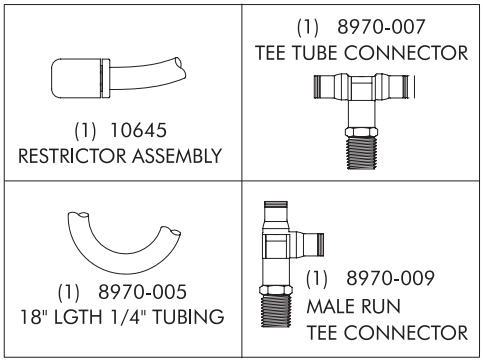
NEW - Parker/Skinner 7510-133 Replacement Coil

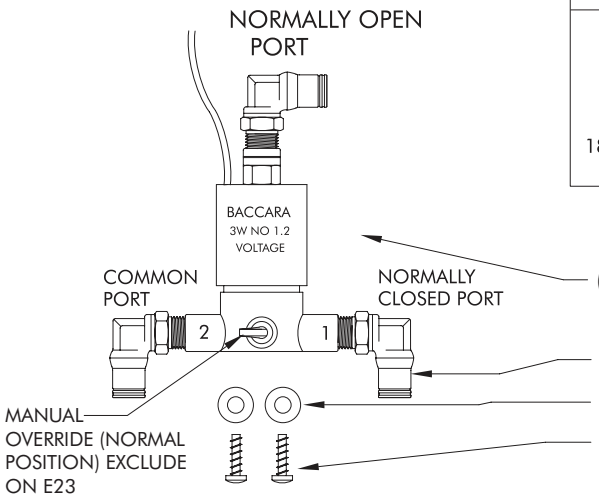
BACCARA KITS

SOLENOID KIT NUMBER	MODEL NUMBER	SOLENOID PART NO.	COIL PART NO.	VOLTAGE
8925-033	E43	7510-050	7510-150	24 VAC
8925-035	E23	7510-052	7510-152	9/12 VDC LATCH
8925-036*	E33	7510-053	7510-153	12-24 VDC LATCH
8925-037	E34	7510-054	7510-154	24 VDC

*Call Factory for availability.

DESCRIPTION:
THIS SOLENOID IS RECOMMENDED FOR USE ON 2" & 3" VALVES ONLY BECAUSE OF ITS SMALL ORIFICE.





(1) SOLENOID VALVE 7510-XXX (SEE SUFFIX TABLE)

(3) 8970-002 ELBOW TUBE CONNECTOR

(2) 8411 WASHER, PLAIN, SPECIAL

(2) 9510 SCREW, #6-10 X .50" PAN HEAD THREAD FORMING

MODEL # E43

GUIDE FOR MAXIMUM LENGTH OF WIRE RUN
NELSON 800 SERIES SOLENOID OPTION E43

ELECTRICAL:

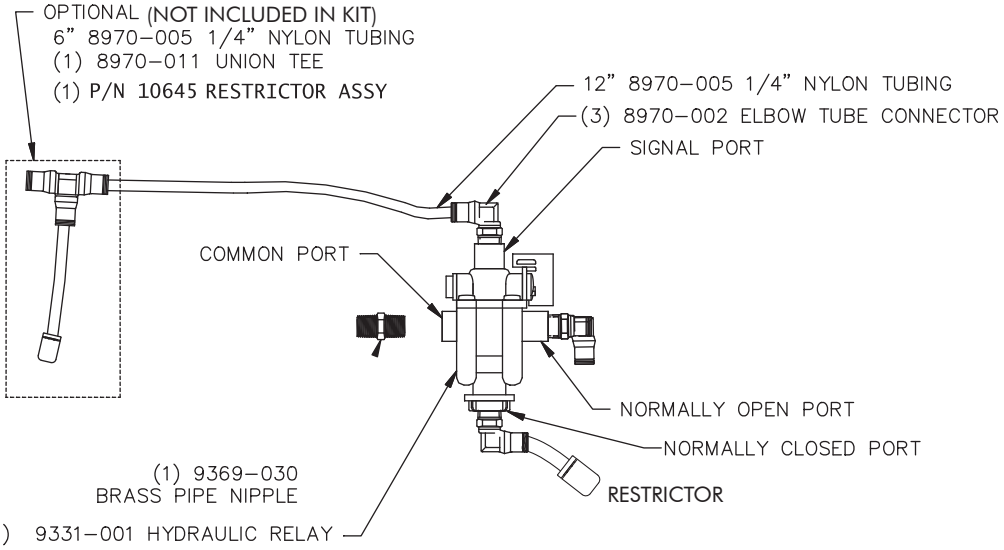
INPUT 21.6-26.4 VOLTS AC
INRUSH CURRENT .125 AMP
STEADY STATE CURRENT .125 AMP

COMMON WIRE AWG	POWER WIRE AWG 18	16	14	12	10	8	6
18	1444	1772	2069	2312	2497	2629	2719
16	1772	2294	2818	3288	3675	3968	4178
14	2069	2818	3652	4483	5234	5849	6316
12	2312	3288	4483	5804	7126	8318	9294
10	2497	3675	5234	7126	9230	11333	13226
8	2629	3968	5849	8318	11333	14676	18016
6	2719	4178	6316	9294	13226	18016	23324

ASSUMPTIONS MADE IN CALCULATIONS
MINIMUM CONTROLLER OUTPUT 24VAC
MINIMUM ALLOWABLE VOLTAGE AT SOLENOID IS 21.6 VAC
THE TABLE GIVES THE MAXIMUM DISTANCE IN FEET FROM THE CONTROLLER TO THE VALVE EVEN THOUGH CALCULATIONS FOR THIS TABLE INCLUDE TOTAL WIRE LENGTH FROM THE CONTROLLER TO THE VALVE AND RETURN.
COMMON AND POWER WIRE ARE ASSUMED TO BE THE SAME LENGTH AND ONE SOLENOID OPERATING.
THIS TABLE IS BASED UPON INRUSH CURRENT OF 0.125 AMPS & COPPER WIRE USED.
Resistance check to verify good solenoid coil on E43
Meter **red** connected to solenoid **red** wire = 1.5-2.0 mΩ
Meter **black** connected to solenoid **red** wire = α (open line)

E80 HYDRAULIC REMOTE* P/N 9335-001

*Call Factory for details.

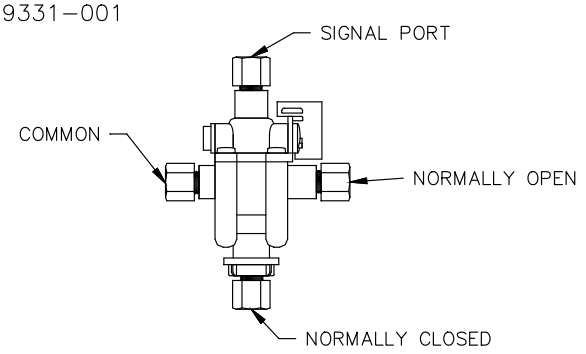


NORMAL POSITION:
"NORMALLY OPEN PORT" IS CONNECTED TO "COMMON PORT"

ACTUATED POSITION (PRESSURE ON SIGNAL PORT):
DIAPHRAM IS PUSHED BLOCKING THE "NORMALLY OPEN PORT"
AND CONNECTS THE "COMMON PORT" WITH THE "NORMALLY CLOSED PORT".

HYDRAULIC RELAYS P/N 9331-XXX

9331–001



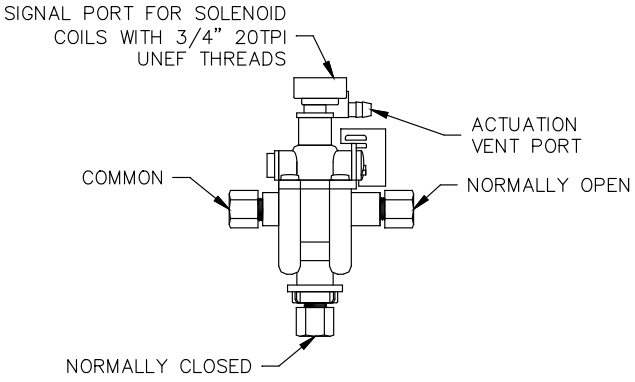
APPROVED VENDOR
MAD–TAKIN HYDRAULICS
MODEL: GALIT 3–WAY PILOT VALVE
HYDRAULIC ACTUATED
ALL PORTS 1/8 NPT

NOP FLOWRATE	NCP FLOWRATE
2.75	2.75

NORMAL POSITION:
"NORMALLY OPEN" IS CONNECTED TO "COMMON" PORT

ACTUATED POSITION (PRESSURE ON SIGNAL PORT):
DIAPHRAM IS PUSHED BLOCKING THE "NORMALLY OPEN" PORT AND CONNECTS THE "COMMON" PORT WITH THE "NORMALLY CLOSED" PORT.

9331–003



APPROVED VENDOR
MAD–TAKIN HYDRAULICS
MODEL: GALIT 3–WAY PILOT VALVE
SOLENOID ACTUATED
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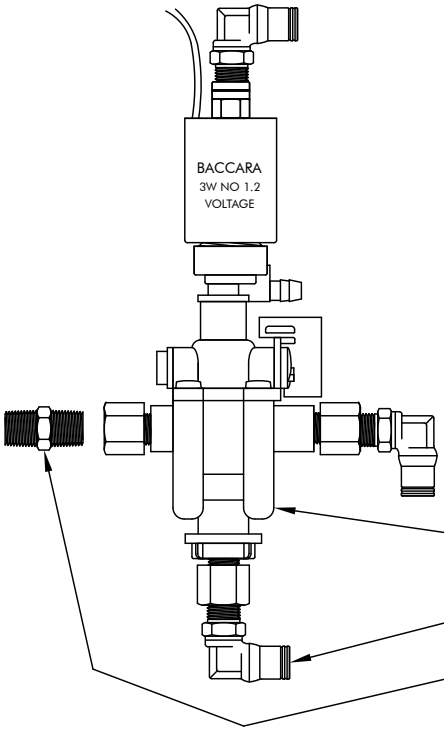
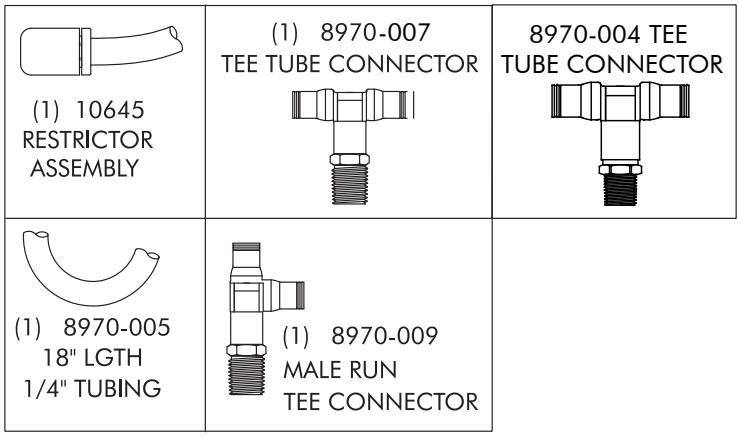
DIAPHRAM IS PUSHED BLOCKING THE "NORMALLY OPEN" PORT AND CONNECTS THE "COMMON" PORT WITH THE "NORMALLY CLOSED" PORT.

SOLENOID ACTUATED HYDRAULIC RELAY

SUFFIX NUMBER	HYDRAULIC RELAY	MODEL NUMBER	SOLENOID PART NO.	COIL PART NO.	VOLTAGE
8925-060	9331-003	E45	7510-070	7510-150	24 VAC
8925-062	9331-003	E24	7510-072	7510-152	9/12 VDC LATCH

DESCRIPTION:
A SOLENOID ACTUATED 3-WAY PILOT VALVE. LARGE INTERNAL WATER PASSAGES ALLOW HIGHER FLOWRATES TO PASS THROUGH IT. RECOMMENDED FOR USE ON 4", 6" & 8" VALVES.





(1) HYDRAULIC RELAY (SEE SUFFIX TABLE)

(3) 8970-002 ELBOW TUBE CONNECTOR

(1) 9369-030 BRASS PIPE NIPPLE 1/8"

MODEL # E45

GUIDE FOR MAXIMUM LENGTH OF WIRE RUN
NELSON 800 SERIES SOLENOID OPTION E45

ELECTRICAL:
INPUT 21.6-26.4 VOLTS AC
INRUSH CURRENT .125 AMP
STEADY STATE CURRENT .125 AMP

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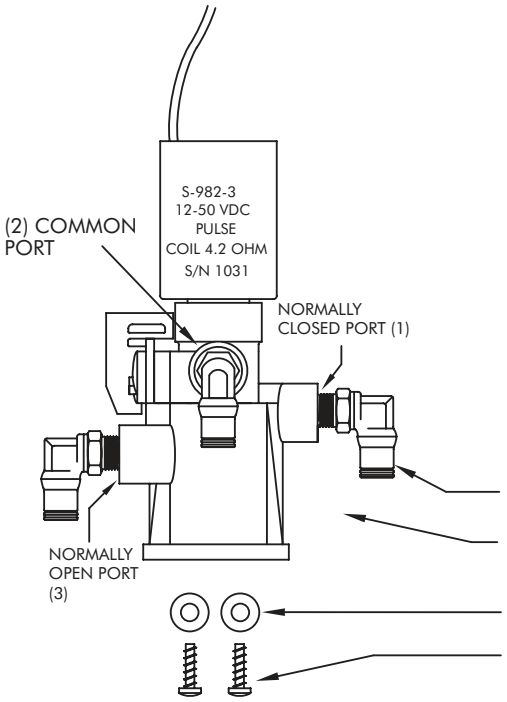
ASSUMPTIONS MADE IN CALCULATIONS
MINIMUM CONTROLLER OUTPUT 24VAC
MINIMUM ALLOWABLE VOLTAGE AT SOLENOID IS 21.6 VAC
THE TABLE GIVES THE MAXIMUM DISTANCE IN FEET FROM THE CONTROLLER TO THE VALVE EVEN THOUGH CALCULATIONS FOR THIS TABLE INCLUDE TOTAL WIRE LENGTH FROM THE CONTROLLER TO THE VALVE AND RETURN.
COMMON AND POWER WIRE ARE ASSUMED TO BE THE SAME LENGTH AND ONE SOLENOID OPERATING.
THIS TABLE IS BASED UPON INRUSH CURRENT OF 0.125 AMPS & COPPER WIRE USED.

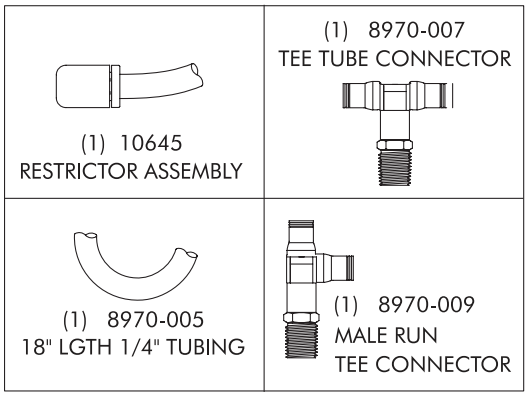
OTHER DC LATCHING SOLENOID KITS (E28) (DISCONTINUED)

SUFFIX NUMBER	MODEL NUMBER	SOLENOID PART NO.	COIL PART NO.	VOLTAGE
8925-013	E28	7510-021	N/A	12-50 VDC PULSE

ELECTRICAL:
PULSE WIDTH: 20-100MS
COIL RESISTANCE: 4.2 OHMS

DESCRIPTION:
THREE-WAY DRY COIL MAGNETIC LATCH
SOLENOID WITH HYDRAULIC BASE





(3) 8970-002 ELBOW TUBE CONNECTOR

(1) SOLENOID VALVE SEE SUFFIX NUMBER TABLE

(2) 8411 WASHER, PLAIN, SPECIAL

(2) 7890 SCREW, #8-10 X .625" PAN HEAD THREAD FORMING

VALVE NORMALLY OPEN LOGIC

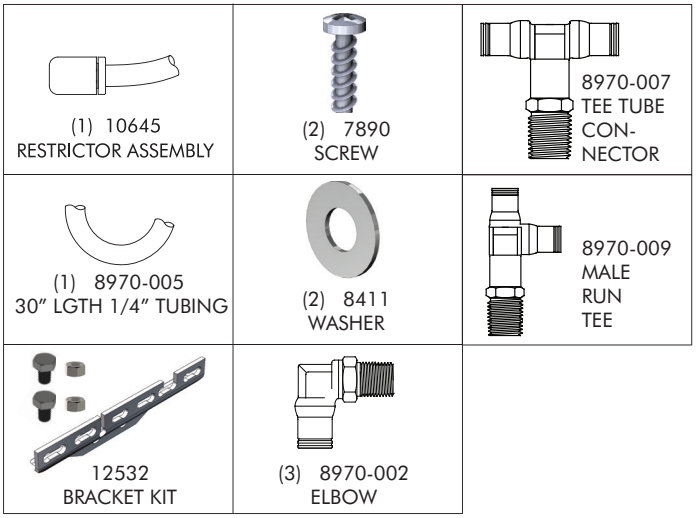
UPSTREAM PRESSURE APPLIED TO "NORMALLY CLOSED" PORT
SOLENOID DE-ENERGIZED: "NORMALLY OPEN" AND "COMMON" PORTS ARE CONNECTED
SOLENOID ENERGIZED: "COMMON" AND "NORMALLY CLOSED" PORTS ARE CONNECTED

VALVE NORMALLY CLOSED LOGIC

UPSTREAM PRESSURE APPLIED TO "NORMALLY OPEN" PORT
SOLENOID DE-ENERGIZED: "NORMALLY OPEN" AND "COMMON" PORTS ARE CONNECTED
SOLENOID ENERGIZED: "COMMON" AND "NORMALLY CLOSED" PORTS ARE CONNECTED

OTHER DC LATCHING SOLENOID KITS (E29)

KIT NUMBER	MODEL NUMBER	SOLENOID PART NO.	COIL PART NO.	VOLTAGE
8925-029	E29	7510-029	N/A	12-40 VDC Latch



VALVE CLOSED:
UPSTREAM PRESSURE (PORT A) IS APPLIED TO THE CONTROL CHAMBER (PORT COM)

VALVE OPEN:
CONTROL CHAMBER (PORT COM) IS VENTED TO ATMOSPHERE (PORT B)