

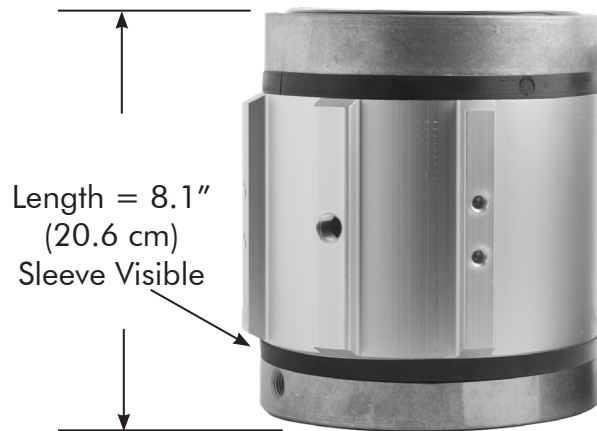
innovation in irrigation™

NELSON

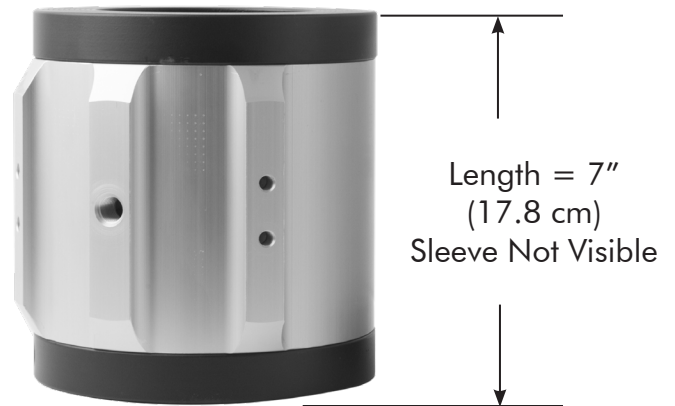
4" - 800 SERIES CONTROL VALVE NEW VS. OLD STYLE 4" VALVE

The "new" style 4" Valve was put into production in January 2011. The "old" style base valve (#9178-xxx) is style available to service installations where the "new" style 4" valve will not fit existing plumbing. "New" style parts are not interchangeable with "old" style valves. "Old" vs "new" style valves can be identified based on the following characteristics:

"NEW"



"OLD"



Sleeve is longer and has groove/lip to wrap around jacket.



Sleeve is shorter and does not have groove/lip.



Cage has groove for O-ring



Cage has ridges; does not use an O-ring

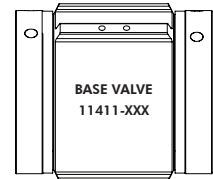


4" (A4) — PN 11412-XXX

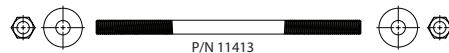
WAFER CONNECTION

VALVE WITH HARDWARE

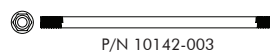
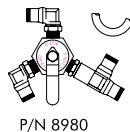
11412-XXX	Model No.	Base Valve 11411-XXX	Sleeve PSI Rating	Cage Material	Included Hardware						
					Stud Kit	11433 4x6" Flg. Adpt. Kit	8980 Manual Selector	8924 Mounting Bracket	8970-006 Elbow	6089 Plug Qty.	9800-100 Drains Qty.
-004	A4B4C1	-004	50	Cast Iron	-	-	✓	✓	✓	3	-
-005	A4B5C1	-004	50	Cast Iron	11413	-	✓	✓	✓	3	-
-009	A4B4C2	-009	200	Cast Iron	-	-	✓	✓	✓	3	-
-010	A4B5C2	-009	200	Cast Iron	11413	-	✓	✓	✓	3	-
-015	A4B4C3	-015	80	Cast Iron	-	-	✓	✓	✓	3	-
-019	A4B5C3	-015	80	Cast Iron	11413	-	✓	✓	✓	3	-
-020	A4B8C2	-009	200	Cast Iron	-	-	-	-	-	2	2
-021	A4B7C2	-009	200	Cast Iron	10142-003	-	-	-	-	2	2
-022	A4B8C3	-015	80	Cast Iron	-	-	-	-	-	2	2
-023	A4B7C3	-015	80	Cast Iron	10142-003	-	-	-	-	2	2
-024	A4B9C1	-019	50	Alum	-	-	✓	✓	✓	3	-
-025	A4B10C1	-019	50	Alum	11413	-	✓	✓	✓	3	-
-026	A4B9C2	-020	200	Alum	-	-	✓	✓	✓	3	-
-027	A4B10C2	-020	200	Alum	11413	-	✓	✓	✓	3	-
-028	A4B9C3	-021	80	Alum	-	-	✓	✓	✓	3	-
-029	A4B10C3	-021	80	Alum	11413	-	✓	✓	✓	3	-
-030	A4B12C2	-020	200	Alum	-	-	-	-	-	2	2
-031	A4B11C2	-020	200	Alum	10142-003	-	-	-	-	2	2
-032	A4B12C3	-021	80	Alum	-	-	-	-	-	2	2
-033	A4B11C3	-021	80	Alum	10142-003	-	-	-	-	2	2
-044	A4B17C2	-020	200	Alum	10142-003	-	✓	✓	✓	2	1 (discharge)
-045	A4B17C3	-021	80	Alum	10142-003	-	✓	✓	✓	2	1 (discharge)
-046	A4B18C2	-009	200	Cast Iron	10142-003	-	✓	✓	✓	2	1 (discharge)
-047	A4B18C3	-015	80	Cast Iron	10142-003	-	✓	✓	✓	2	1 (discharge)
-048	A4B19C2	-020	200	Alum	-	-	✓	✓	✓	2	1 (discharge)
-049	A4B19C3	-021	80	Alum	-	-	✓	✓	✓	2	1 (discharge)
-050	A4B20C2	-009	200	Cast Iron	-	-	✓	✓	✓	2	1 (discharge)
-051	A4B20C3	-015	80	Cast Iron	-	-	✓	✓	✓	2	1 (discharge)
-052	A4B21C1	-004	50	Cast Iron	-	✓	✓	✓	✓	3	-
-053	A4B21C3	-015	80	Cast Iron	-	✓	✓	✓	✓	3	-
-054	A4B21C2	-009	200	Cast Iron	-	✓	✓	✓	✓	3	-
-055	A4B22C1	-004	50	Cast Iron	8976	✓	✓	✓	✓	3	-
-056	A4B22C3	-015	80	Cast Iron	8976	✓	✓	✓	✓	3	-
-057	A4B22C2	-009	200	Cast Iron	8976	✓	✓	✓	✓	3	-
-058	A4B23C1	-019	50	Alum	-	✓	✓	✓	✓	3	-
-059	A4B23C3	-021	80	Alum	-	✓	✓	✓	✓	3	-
-060	A4B23C2	-020	200	Alum	-	✓	✓	✓	✓	3	-
-061	A4B24C1	-019	50	Alum	8976	✓	✓	✓	✓	3	-
-062	A4B24C3	-021	80	Alum	8976	✓	✓	✓	✓	3	-
-063	A4B24C2	-020	200	Alum	8976	✓	✓	✓	✓	3	-

NEW STYLE VALVE
STARTING JAN 2011

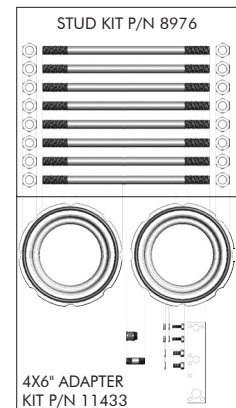
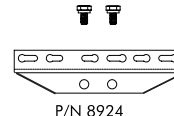
Discontinued

QTY: 3
P/N 6089

P/N 8970-008



P/N 8970-006



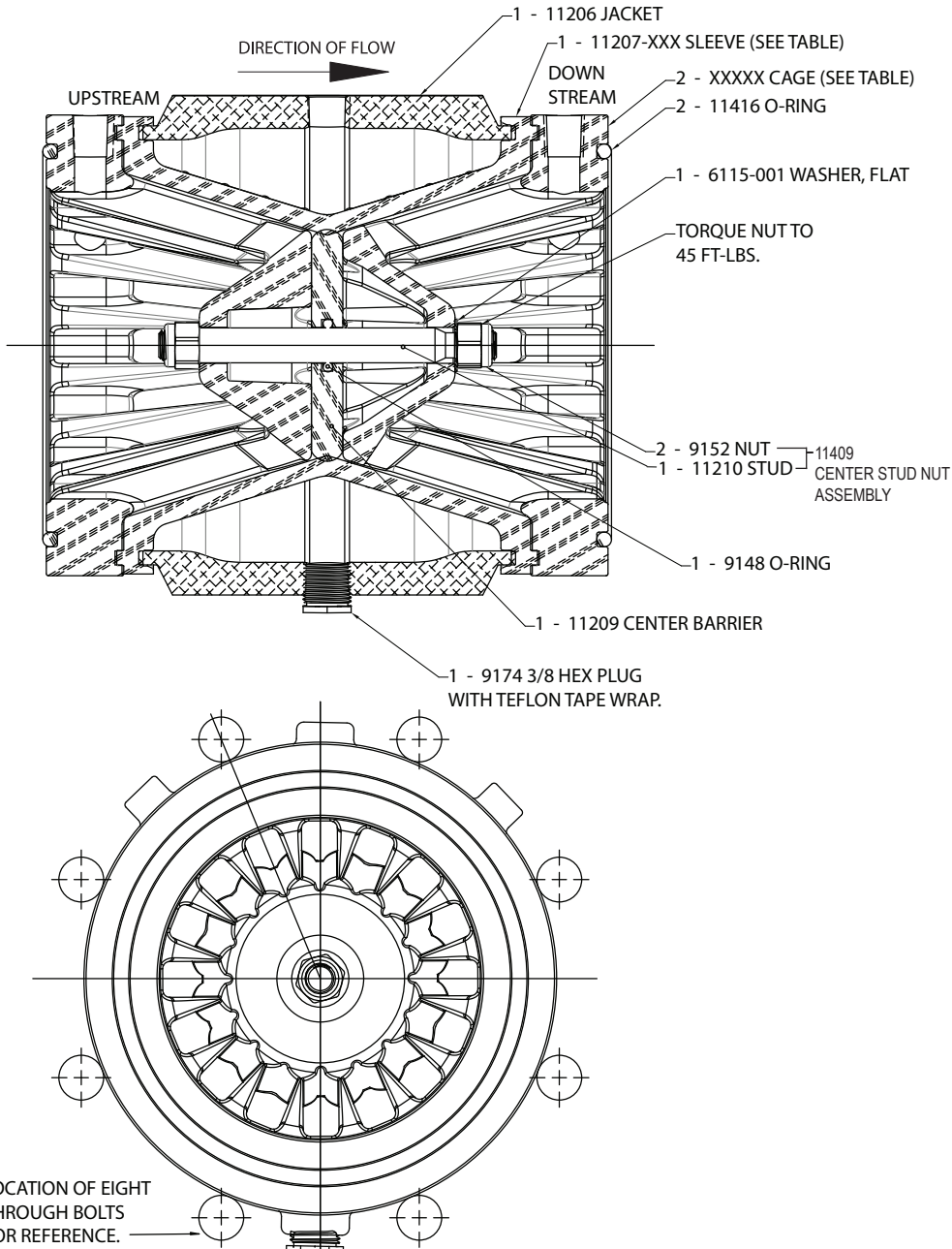
PN 11411-XXX - 4" BASE VALVE

ASSEMBLY NOTES:

1. CHECK FOR THE PRESENCE OF 9148 O-RING JUST BEFORE INSTALLING 11210 STUD.
2. AFTER INSTALLING ALL ACCESSORIES ON THE VALVE, CLEARANCE AROUND THE EXTERIOR IS REQUIRED FOR EIGHT THROUGH BOLTS AS SHOWN IN END VIEW.

SUFFIX NO.	CAGE	JACKET	SLEEVE P/N	VALVE PRESSURE RATING	
				PSI	BAR
-004	11445 (CI)	11206	11207-002	10-50	.7-3.5
-009	11445 (CI)	11206	11207-001	30-200	2-14
-015	11445 (CI)	11206	11207-003	18-80	1.5-5.5
-019	11208 (AL)	11206	11207-002	10-50	.7-3.5
-020	11208 (AL)	11206	11207-001	30-200	2-14
-021	11208 (AL)	11206	11207-003	18-80	1.5-5.5
-022 *	11445-001 (BRASS)	11206-002 (POWDER COATED)	11207-002	10-50	.7-3.5
-023 *	11445-001 (BRASS)	11206-002 (POWDER COATED)	11207 001	30 200	2-14
-024 *	11445-001 (BRASS)	11206-002 (POWDER COATED)	11207-003	18-80	1.5-5.5

*contact factory for availability



OLD STYLE 4" (A4) — PN 9178-XXX

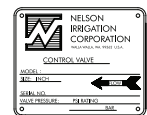
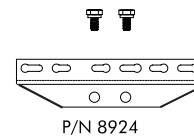
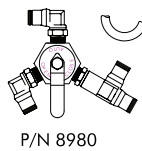
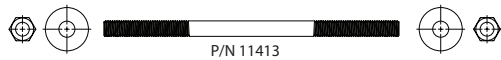
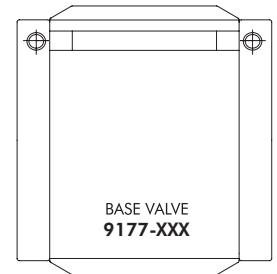
VALVE WITH HARDWARE

**MANUFACTURED
 PRIOR TO JAN 2011**

WAFER CONNECTION

9178-XXX	Model No.	Base Valve 9177-XXX	Sleeve PSI Rating	Cage Material	Included Hardware						
					Stud Kit	8980 Manual Selector	8924 Mounting Bracket	8970-006 Elbow	6089 Plug Qty. 3	9800 Drains Qty. 2	8970-008 Straight
-004	A4B4C1	-001	50	Cast Iron	-	✓	✓	✓	✓	-	-
-005	A4B5C1	-001	50	Cast Iron	11413	✓	✓	✓	✓	-	-
-009	A4B4C2	-002	200	Cast Iron	-	✓	✓	✓	✓	-	-
-010	A4B5C2	-002	200	Cast Iron	11413	✓	✓	✓	✓	-	-
-015	A4B4C3	-003	80	Cast Iron	-	✓	✓	✓	✓	-	-
-016	A4B5C3	-003	80	Cast Iron	11413	✓	✓	✓	✓	-	-
-017	A4B8C2	-002	200	Cast Iron	-	-	-	-	✓	9800	✓
-018	A4B7C2	-002	200	Cast Iron	10142-003	-	-	-	✓	9800	✓
-019	A4B8C3	-003	80	Cast Iron	-	-	-	-	✓	9800	✓
-020	A4B7C3	-003	80	Cast Iron	10142-003	-	-	-	✓	9800	✓
-104*	4" Service	-001	50	Cast Iron	-	-	-	-	✓	-	-
-109*	4" Service	-002	200	Cast Iron	-	-	-	-	✓	-	-
-115*	4" Service	-003	80	Cast Iron	-	-	-	-	✓	-	-

*contact factory for availability

 Discontinued


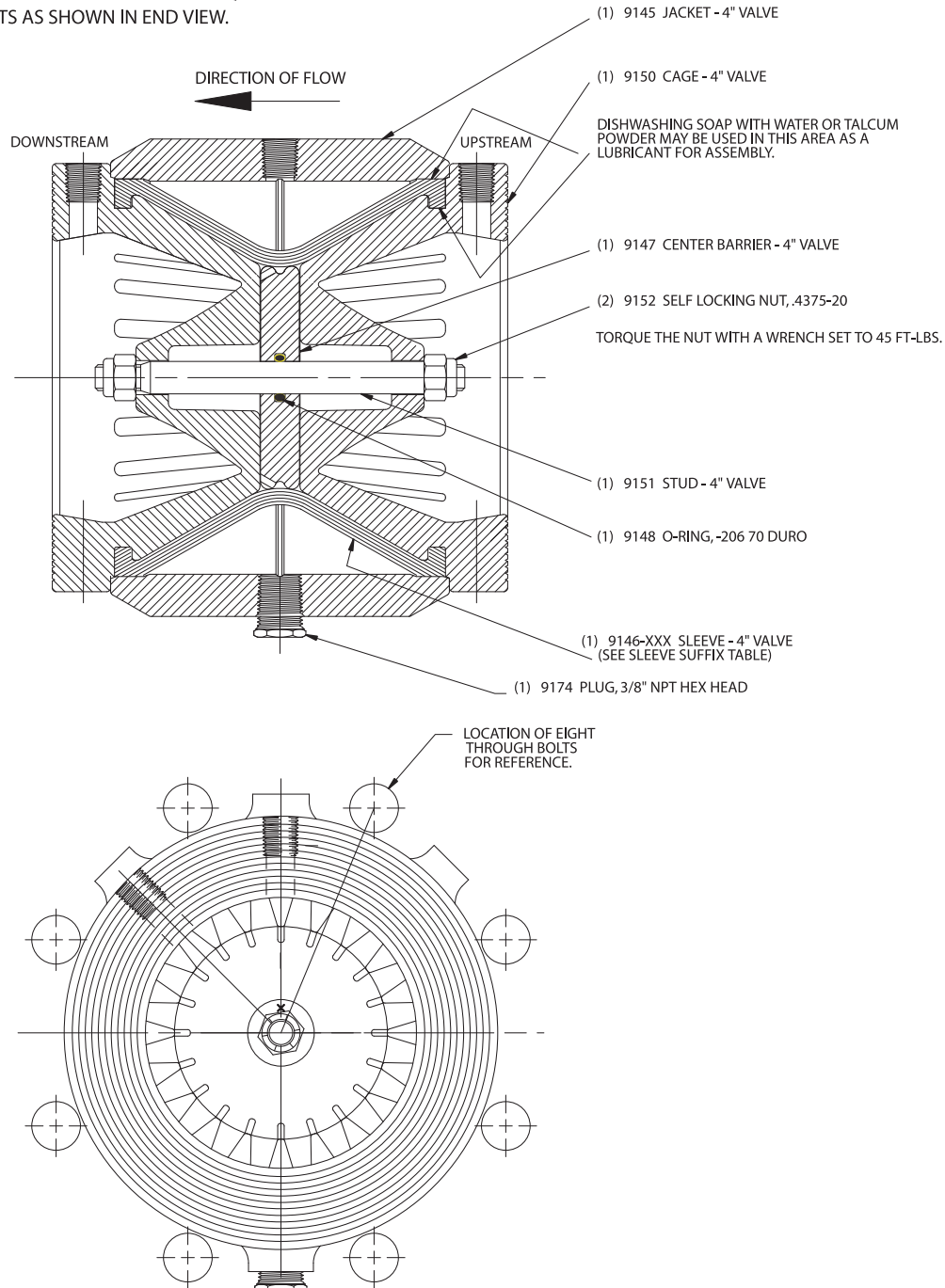
P/N 9950

**PN 9177-XXX
 OLD STYLE 4" BASE VALVE**
SLEEVE SUFFIX TABLE

SUFFIX NO.	SLEEVE P/N	VALVE PRESSURE RATING	
		PSI	BAR
-001	9146-002	10-50	.7-3.5
-002	9146-001	30-200	2-14
-003	9146-003	18-80	1.2-5.5

ASSEMBLY NOTES:

1. P/N 9147 CENTER BARRIER MUST BE INSTALLED WITH THE NOTCHES ON THE DOWNSTREAM END OF THE VALVE.
2. CHECK FOR THE PRESENCE OF 9148 O-RING JUST BEFORE INSTALLING 9151 STUD.
3. AFTER INSTALLING ALL ACCESSORIES ON THE VALVE, CLEARANCE AROUND THE EXTERIOR IS REQUIRED FOR EIGHT THROUGH BOLTS AS SHOWN IN END VIEW.



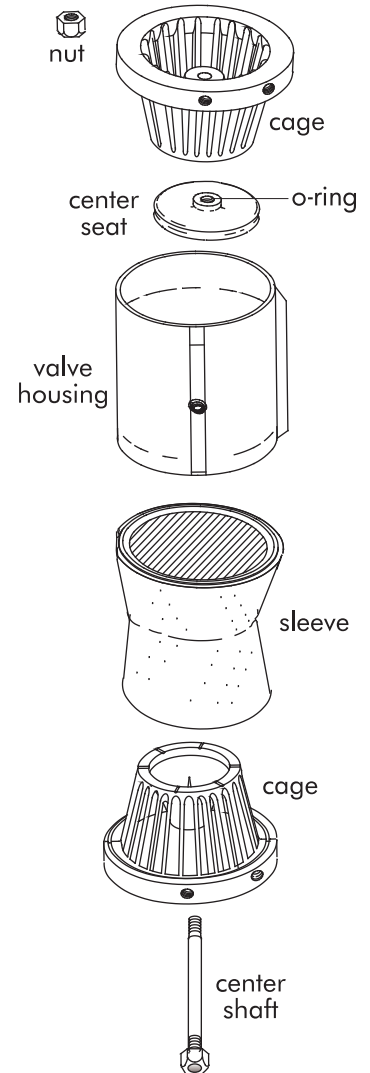
4" 800 SERIES VALVE SERVICE

TO DISASSEMBLE THE 4 INCH VALVE:

Take two large ratchets with 5/8" deep sockets; place one on each of the center shaft nuts. Remove the nut by twisting the ratchets in opposite directions. Once the nut is off, remove the center shaft. Pry apart one cage from the housing and sleeve. Leave the other cage in place attached to the sleeve because it will simplify assembly. Tap the center seat out from inside the sleeve. Reverse the center seat so that the slots are on the upstream edge.

TO ASSEMBLE:

1. Press the housing down and make sure that the bottom end of the sleeve is seated all the way down into the cage. Make sure that some sleeve extends up above the top edge of the valve housing.
2. Insert the center shaft through the center hole on the first cage. Set this cage, sleeve and valve housing on a table with the end facing up; the shaft with the nut end down and the other end sticking up through the center of the cage.
3. Replace the center seat into the valve (slots upstream) guiding it onto the center shaft (before doing this lubricate the o-ring with liquid dish soap so that the shaft does not push the o-ring out of the center seat). Press the center seat down until it sits on top of the first cage.
4. Align the two end holes on the cage as shown on the drawing. Align one end hole with the mounting bracket; align the other end hole with the manual selector on the valve housing.
5. Soap the top lip of the sleeve. Place the second cage onto the top end (center down) making sure the center shaft goes into the hole. Align the two ports as before. Press the cages together making sure the lips of the sleeve fits into the intended grooves. Hint: Assembly of the valves can be made easier by a sharp tap on the top of the cage using a rubber mallet to drive the cage onto the sleeve. Also air pressure applied to the sleeve chamber will hold the sleeve in position.
6. Replace the internal nut. Make sure the nylon lock ring engages the threads of the shaft. If the nut does not have the nylon lock ring then use Loctite #271 on the threads of the nut to help prevent the nut from coming loose during operation of the valve. Torque wrench the nut to 70 foot-pounds for the 4" valve.
7. Reconnect any control tube into the correct fittings and return the valve to service.

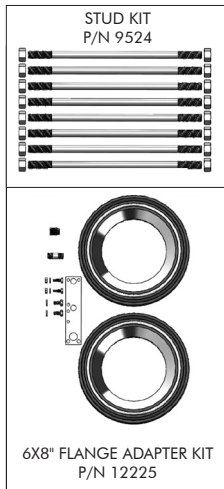
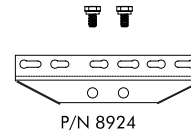
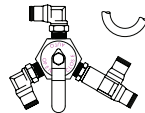
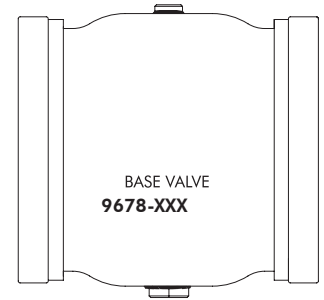


6" (A6) — PN 9679-XXX

VALVE WITH HARDWARE

WAFER CONNECTION

9679-XXX	Model No.	Base Valve 9678-xxx	Sleeve PSI Rating	Cage Material	Included Hardware					
					Stud Kit	12225 6x8" Flange Adapter Kit	8980 Manual Selector	8924 Mounting Bracket	8970-006 Elbow	6089 Plug Qty 3
-004	A6B4C1	-001	50	Cast Iron	-	-	✓	✓	✓	✓
-005	A6B5C1	-001	50	Cast Iron	8976	-	✓	✓	✓	✓
-009	A6B4C2	-002	200	Cast Iron	-	-	✓	✓	✓	✓
-010	A6B5C2	-002	200	Cast Iron	8976	-	✓	✓	✓	✓
-011	A6B4C3	-003	80	Cast Iron	-	-	✓	✓	✓	✓
-012	A6B5C3	-003	80	Cast Iron	8976	-	✓	✓	✓	✓
-013	A6B21C1	-001	50	Cast Iron	-	✓	✓	✓	✓	✓
-014	A6B21C3	-003	80	Cast Iron	9524	✓	✓	✓	✓	✓
-015	A6B21C2	-002	200	Cast Iron	-	✓	✓	✓	✓	✓
-016	A6B22C1	-001	50	Cast Iron	9524	✓	✓	✓	✓	✓
-017	A6B22C3	-003	80	Cast Iron	-	✓	✓	✓	✓	✓
-018	A6B22C2	-002	200	Cast Iron	9524	✓	✓	✓	✓	✓

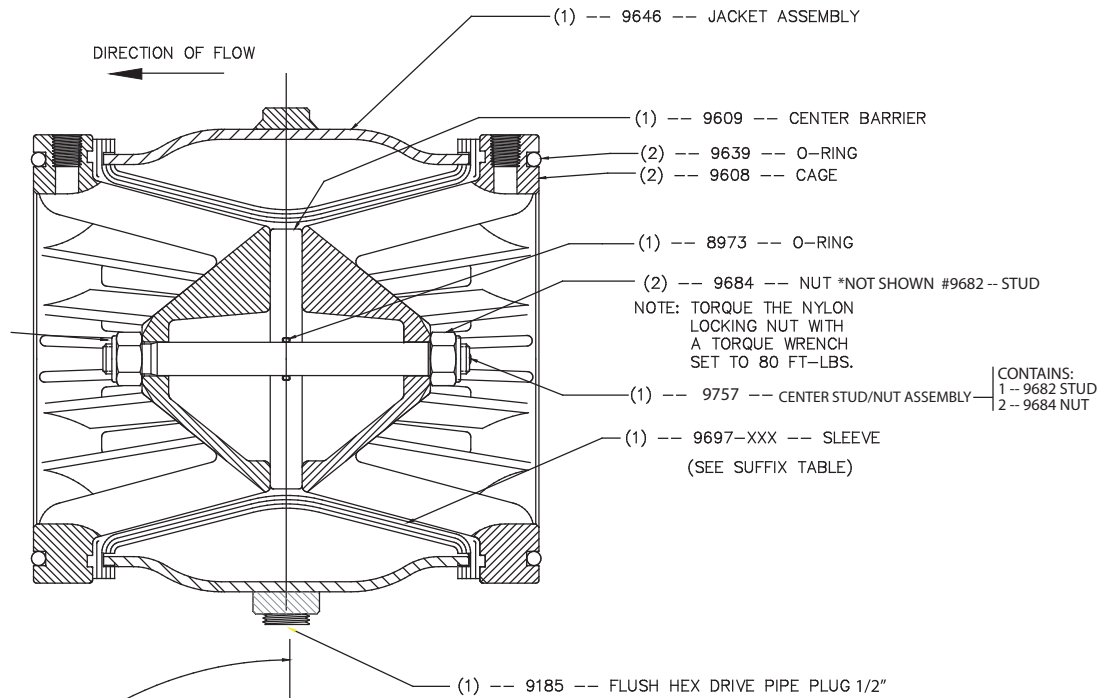


ASSEMBLY NOTES:

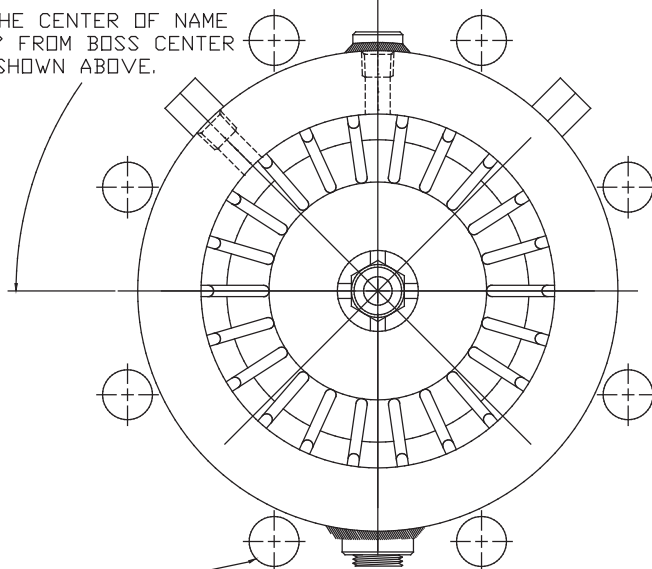
- CHECK FOR THE PRESENCE OF 8973 O-RING JUST BEFORE INSTALLING 9682 STUD.
- AFTER INSTALLING ALL ACCESSORIES ON THE VALVE, CLEARANCE AROUND THE EXTERIOR IS REQUIRED FOR EIGHT THROUGH BOLTS AS SHOWN IN VIEW A-A.

PN 9678-XXX 6" BASE VALVE
 SLEEVE SUFFIX TABLE

SUFFIX NO.	SLEEVE P/N	VALVE PRESSURE RATING	
		PSI	BAR
-001	9697-002	10-50	.7-3.5
-002	9697-001	30-200	2.1-14
-003	9697-003	18-80	1.2-5.5

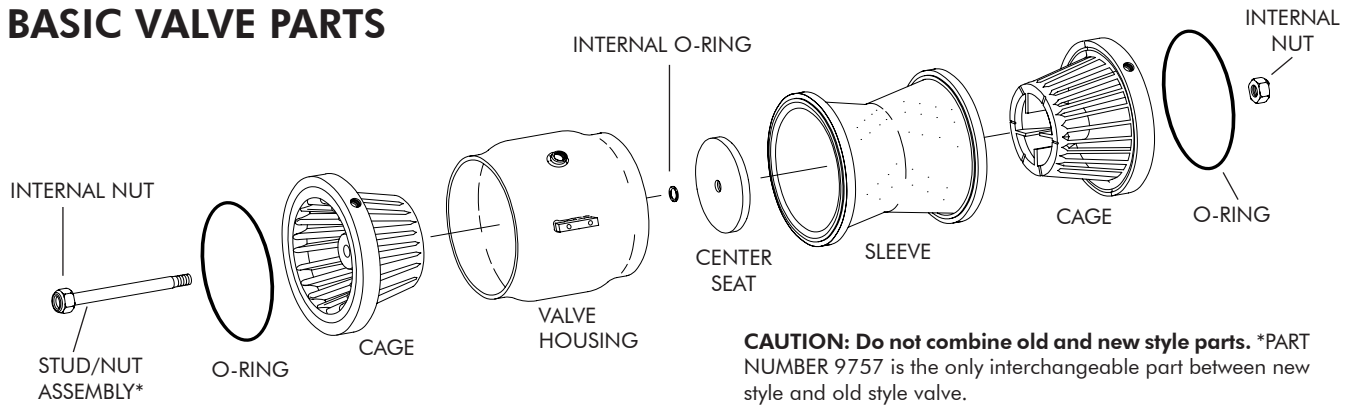


ATTACH THE CENTER OF NAME PLATE 90° FROM BOSS CENTER LINE AS SHOWN ABOVE.



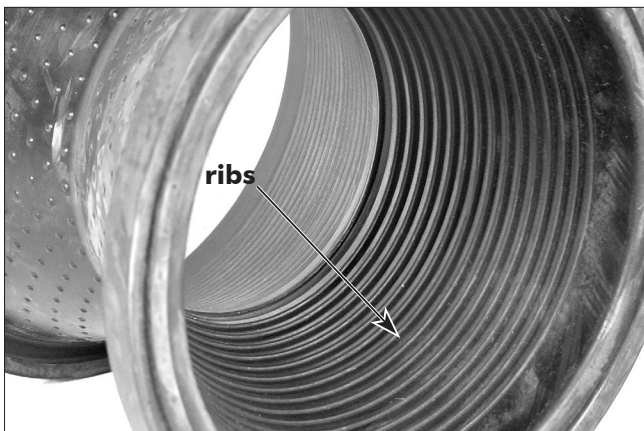
LOCATION OF EIGHT THROUGH BOLTS FOR REFERENCE.

BASIC VALVE PARTS



The purpose of this document is to identify the difference between old and new style components of the 6" - 800 Series Control Valve.

OLD STYLE (1988-1995) COMPONENTS OF 6" VALVE



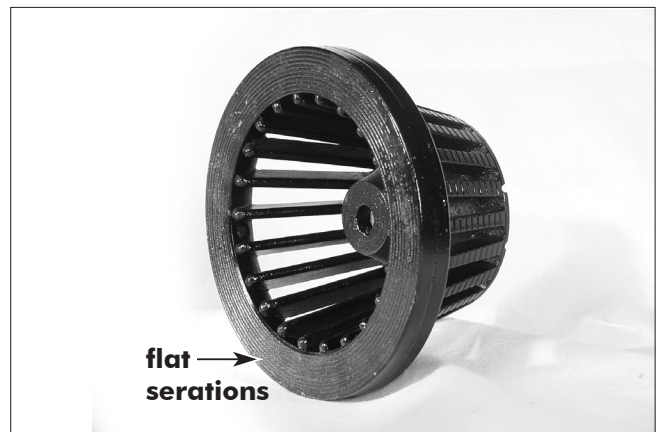
Old Style 6" Sleeve with ribs.

6" sleeve part number reference
(historical number prior to the
1996 major design revision)

sleeve part number	Valve Pressure psi	Valve Pressure bar
8961-001	30-200	2.1-14
8961-002	10-50	0.7-3.5

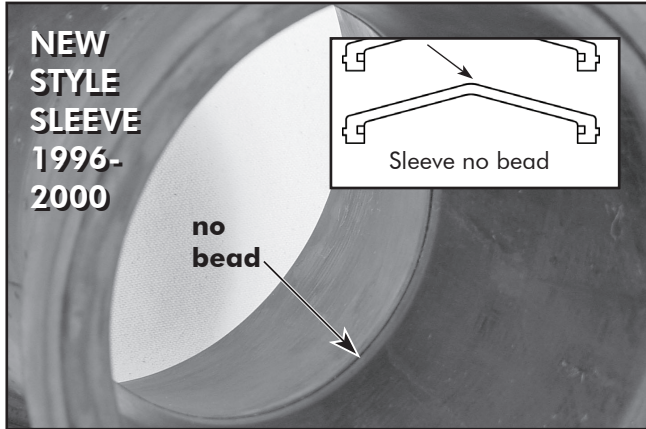


Old Style Center Seat - Brass

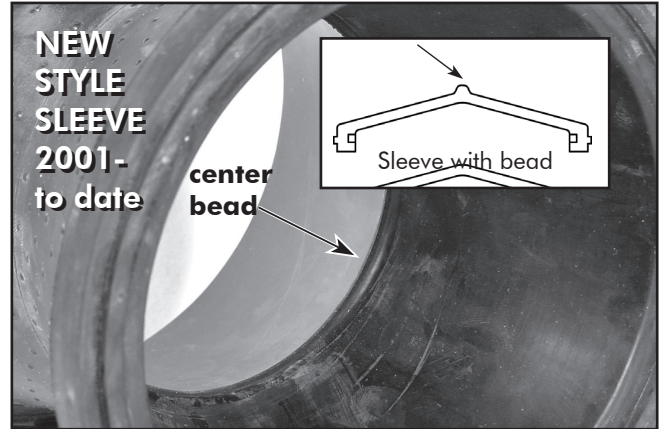


Old Style 6" Cage has flat serrations.

NEW STYLE (1996-TO DATE) COMPONENTS OF 6" VALVE



New Style 6" Sleeve no bead (no ribs).



New Style 6" Sleeve with center bead (no ribs).

EVOLUTION OF THE CENTER SEAT —1996 TO DATE



Center Seat - Plastic



Center Seat - Brass



Center Seat - Brass



Center Seat - Plastic

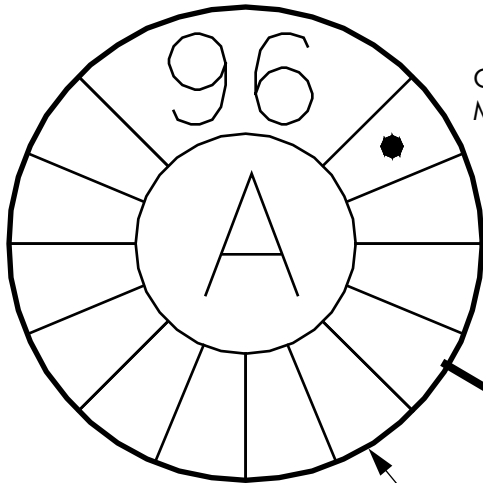
NEW STYLE CAGE —1996 TO DATE



New Style 6" Sawtooth Cage has o-ring groove.

800 SERIES SLEEVE CODES

EXAMPLE: A NELSON 6" HIGH PRESSURE SLEEVE MARKED AS SHOWN BELOW ON LEFT SHOULD BE REPLACED WITH A SLEEVE MARKED AS SHOWN BELOW ON RIGHT.

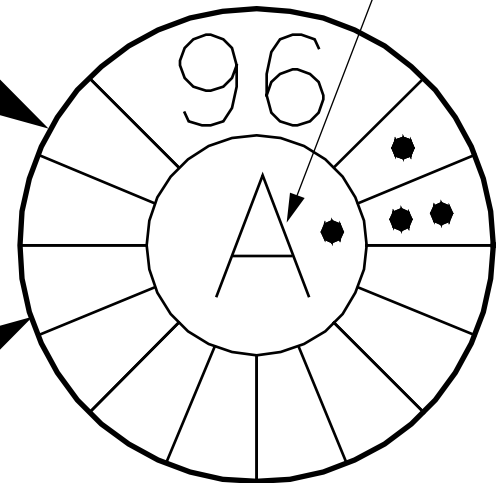
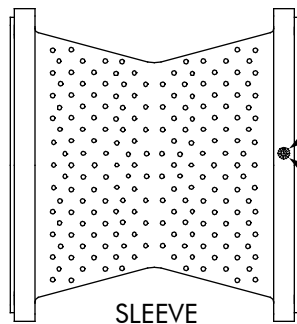


CODE MARK INDICATING
MANUFACTURE IN YEAR 1997

VALVE SLEEVE CODES

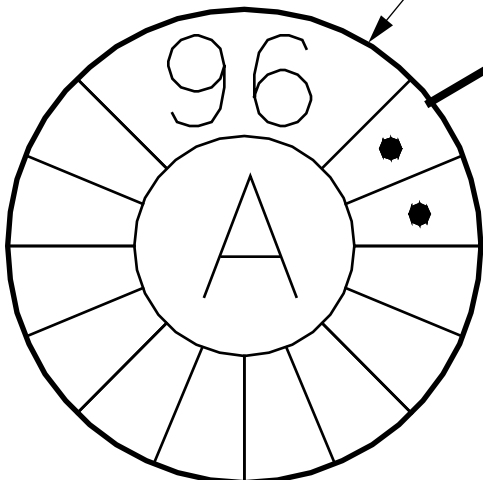
- A=200 PSI Pressure Rating
- B=50 PSI Pressure Rating
- C=80 PSI Pressure Rating

REPLACEMENT



CODE MARK INDICATING
MANUFACTURE AFTER 8/24/98

REPLACEMENT



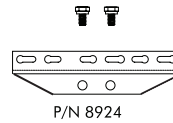
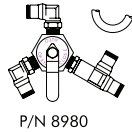
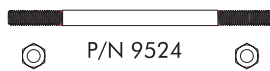
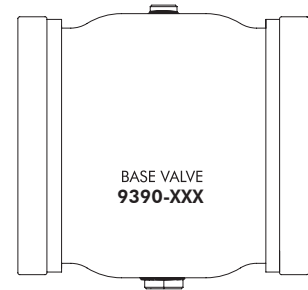
CODE MARK INDICATING
MANUFACTURE IN YEAR 1998

8" (A8) — PN 9523-XXX

VALVE WITH HARDWARE

WAFER CONNECTION

9523-XXX	Model No.	Base Valve 9390-xxx	Sleeve PSI Rating	Cage Material	Included Hardware				
					Stud Kit	8980 Manual Selector	8924 Mounting Bracket	8970-006 Elbow	6089 Plug Qty 3
-004	A6B4C1	-001	50	Cast Iron	-	✓	✓	✓	✓
-005	A6B5C1	-001	50	Cast Iron	9524	✓	✓	✓	✓
-009	A6B4C2	-002	200	Cast Iron	-	✓	✓	✓	✓
-010	A6B5C2	-002	200	Cast Iron	9524	✓	✓	✓	✓
-011	A6B4C3	-003	80	Cast Iron	-	✓	✓	✓	✓
-012	A6B5C3	-003	80	Cast Iron	9524	✓	✓	✓	✓



PN 9390-XXX 8" BASE VALVE
ASSEMBLY NOTES:

1. CHECK FOR THE PRESENCE OF 8973 O-RING JUST BEFORE INSTALLING 9683 STUD.
2. AFTER INSTALLING ALL ACCESSORIES ON THE VALVE, CLEARANCE AROUND THE EXTERIOR IS REQUIRED FOR EIGHT THROUGH BOLTS AS SHOWN.

SLEEVE SUFFIX TABLE

SUFFIX NO.	SLEEVE P/N	VALVE PRESSURE RATING	
		PSI	BAR
-001	9393-002	10-50	.7-3.4
-002	9393-001	30-200	2.1-13.8
-003	9393-003	18-80	1.2-5.5

