

## LXT<sup>®</sup> Schedule 80 Pipe and Fittings



**Non-Contaminating PVC Material**  
**Exceptionally Smooth Surface Characteristics**  
**Low TOC & Chemical Extraction**  
**Fast Particle Rinse Up**

Spears<sup>®</sup> Low Extractable PVC provides a superior, cost effective alternative to conventional high purity piping system materials while providing ease of installation without jeopardizing water quality. Specially developed for ultra-pure water systems in semiconductor, electronics, university research laboratories, hospital dialysis, industrial laboratories, Federal and state police forensic laboratories and biotechnology applications, Spears<sup>®</sup> Low Extractable PVC material has been subjected to independent laboratory leach studies during both static and dynamic exposure to 18.2 meg-ohm deionized water. Tests have shown relatively low TOC, Anion/Cation and trace metal contamination levels in comparison to conventional high purity piping system materials including PVDF and Natural Polypropylenes.

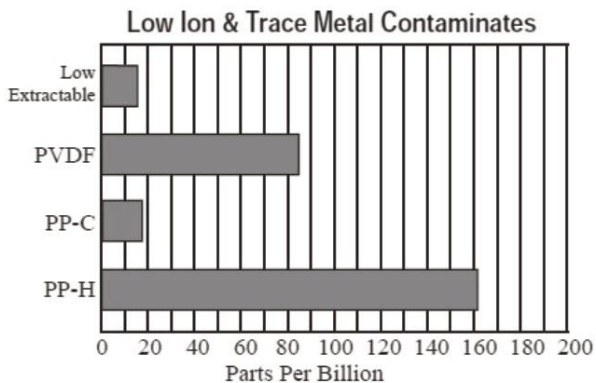
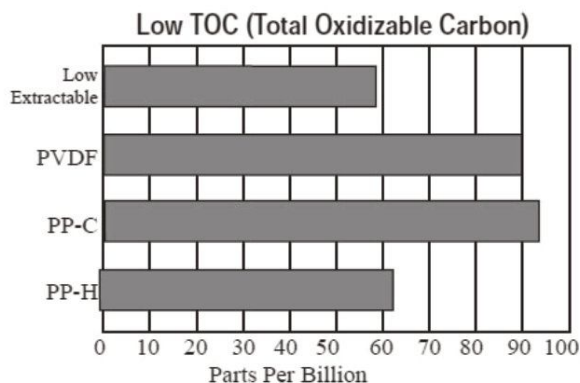
### Advantages:

- Complete line of pipe, fittings and valves IPS Sizes 1/2" – 6" diameters
- Strong Schedule 80 dimensions for pressure service
- Advanced Low-Extractable™ material significantly reduces leachable contamination compared to conventional PVC and other piping materials.
- Exceptionally smooth interior walls reduce particle contaminants
- Fast, reliable installation with simple, inexpensive joining methods
- Proprietary one-step fast setting joining method reduces TOC contamination and rinses up quickly
- Good chemical/corrosion resistance, high-impact strength, low thermal conductivity
- Bagged, sealed and boxed on-line for use in high-purity environments
- High Quality
- Low Maintenance
- Cost Effective



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PURE WATER, INSTITUTIONAL & LAB PIPING SYSTEMS



Material test graphic comparisons from 7-day static leach analysis at ambient temperature, 18.2 meg-ohm ultra pure water on Low Extractable, PVDF, PP Copolymer and PP Homopolymer pipe samples by ICP Mass Spectroscopy. Ion & Trace Metal contaminates reflect cumulative totals.

# LXT<sup>®</sup> Schedule 80 Piping System

2 PURE WATER, INSTITUTIONAL & LAB PIPING SYSTEMS

## Material:

Spears<sup>®</sup> Low-Extractable™ Piping is produced from an innovative PVC compound that has been specifically formulated to reduce leachable contamination when exposed to ultra-pure water environments. Minor ingredients necessary for processing have been scrupulously selected to address their potential for contamination, and are then carefully blended in precise ratios. This results in a much cleaner material than conventional PVC compounds, and compares favorably to alternate materials typically used for UPW piping applications. This has been validated with extensive static and dynamic leach studies during exposure to 18.2 megohm ultra-pure water conducted by a reputable third party.

Spears<sup>®</sup> Low-Extractable™ material meets the toxicological requirements of NSF International Standard 61 as being safe for use in potable water applications, and also complies with the provisions of Title 21 of the United States FDA Code of Federal Regulations as being safe for use in food contact applications.

## Processing:

Processing conditions for converting this material into component form are as critical as the selection of the material itself to ensure that the physical properties of the finished product are optimized. Correct processing techniques ensure proper dispersion and fusion of the compound, resulting in a homogenous melt with uniform properties. Great care is also taken during this process using proprietary techniques to address surface finish characteristics. Optimizing processing conditions and providing smooth internal surfaces greatly reduce the potential for extractable and particle contaminant. Spears<sup>®</sup> Low-Extractable™ pipe is cut square, purged to remove shavings, sealed in polybags and boxed on-line at time of manufacture to minimize contamination.



## Joining:

Spears<sup>®</sup> Low-Extractable™ system utilizes a one-step solvent-cementing process specifically formulated for use with this product. Unlike conventional PVC solvent cements, this product contains fewer contaminants and cures quickly, reducing the potential for TOC contamination.

Joining is accomplished quickly and efficiently utilizing inexpensive tools, thereby greatly reducing labor and installation costs.

## Physical Properties:

Although the extractable contaminants of this Spears<sup>®</sup> system are much lower than those of conventional PVC piping, the physical properties are very similar. As a result, these products exhibit the well-known physical characteristics and other benefits of conventional PVC piping, such as good chemical and corrosion resistance, low thermal conductivity, high strength-to-weight ratio, good impact resistance, and ease of installation.

MM	NOMINAL PIPE SIZE (IN)	PART NUMBER	CARTON QTY FEET	OUTSIDE DIAMETER	INSIDE DIAMETER	MIN. WALL THICKNESS	WEIGHT PER 100 FEET	PRESSURE RATING AT 73.4°F
12	1/2 x 15 ft	LXT-005	330	0.840	0.528	0.147	0.202	420
20	3/4 x 15 ft	LXT-007	330	1.050	0.724	0.154	0.273	340
25	1 x 15 ft	LXT-010	270	1.315	0.935	0.179	0.402	320
32	1 1/4 x 15 ft	LXT-012	210	1.660	1.256	0.191	0.554	260
40	1 1/2 x 15 ft	LXT-015	165	1.900	1.476	0.200	0.673	240
50	2 x 15 ft	LXT-020	120	2.375	1.913	0.218	0.932	200
75	3 x 15 ft	LXT-030	75	3.500	2.864	0.300	1.903	190
100	4 x 15 ft	LXT-040	30	4.500	3.786	0.337	2.782	160
150	6 x 15 ft	LXT-060	15	6.625	5.709	0.432	5.313	140

## Notes:

- PSI water, non-shock @ 73.4°F(23°C) with Solvent Welded Connections.
- All pipe is double bagged and boxed on-line for high purity environments.
- Spears LXT<sup>®</sup> piping is produced to Schedule 80 dimensions in strict accordance with ASTM D1785, and exhibits a Type II pressure rating.
- Spears LXT<sup>®</sup> fittings are produced to Schedule 80 dimensions per ASTM D2467.
- Spears LXT<sup>®</sup> is joined using the one step solvent cement (part # 07LXT200). The pint size comes complete with a dauber which is suitable for pipe size 1/2" to 3". For pipe sizes 4" thru 6" use a roller equal in size to 1/2 the pipe diameter.
- 7.5 ft lengths available upon request.

## LXT<sup>®</sup> Schedule 80 Fittings

### TRUE UNION 2000 IND. BALL VALVE

	NOMINAL PIPE SIZE	EPDM O-RING PART NUMBER	FKM O-RING PART NUMBER
WITH HANDLE LOCKOUT & SAFE T-BLOCK™ DESIGN	1/2	1829-005BL	1839-005BL
	3/4	1829-007BL	1839-007BL
	1	1829-010BL	1839-010BL
	1 1/4	1829-012BL	1839-012BL
	1 1/2	1829-015BL	1839-015BL
	2	1829-020BL	1839-020BL
	3	1822-030BL	1832-030BL
	4	1822-040BL	1832-040BL



INCLUDES PLUGGED END WITH ADDITIONAL SOCKET AND THREADED END CONNECTORS.

### TRUE UNION 2000 IND. BALL VALVE

	NOMINAL PIPE SIZE	EPDM (TEE X SOCKET/SPIGOT) PART NUMBER	FKM (TEE X SOCKET/FIPT) PART NUMBER
T-STYLE	1/2	182901-005BL	183901-005BL
	3/4	182901-007BL	183901-007BL
	1	182901-010BL	183901-010BL
	1-1/4	182901-012BL	
	1-1/2	182901-015BL	183901-015BL
	2	182901-020BL	183901-020BL
	3/4X1/2	182901-101BL	183901-101BL
	1X1/2	182901-130BL	183901-130BL
	1X3/4	182901-131BL	183901-131BL
	1-1/4X1/2	182901-166BL	183901-166BL
	1-1/4X3/4	182901-167BL	183901-167BL
	1-1/4X1	182901-168BL	183901-168BL
	1-1/2X1/2	182901-209BL	183901-209BL
	1-1/2X3/4	182901-210BL	183901-210BL
	1-1/2X1	182901-211BL	183901-211BL
	2X1/2	182901-247BL	183901-247BL
	2X3/4	182901-248BL	183901-248BL
	2X1	182901-249BL	183901-249BL
	2X1-1/2	182901-251BL	183901-251BL
	3X1/2	182901-333BL	183901-333BL
	3X1	182901-335BL	183901-335BL
	3X1-1/2	182901-337BL	183901-337BL
	3X2	182901-338BL	183901-338BL
	4X1	182901-417BL	183901-417BL
	4X1-1/2	182901-419BL	183901-419BL
	4X2	182901-420BL	183901-420BL
	6X2	182901-528BL	183901-528BL
	8X2	182901-578BL	183901-578BL



INCLUDES PLUGGED END WITH ADDITIONAL SOCKET AND THREADED END CONNECTORS.

### TRUE UNION 2000 IND. BALL CHECK VALVE



NOMINAL PIPE SIZE	EPDM O-RINGS PART NUMBER	FKM O-RINGS PART NUMBER
1/2	4529-005BL	4539-005BL
3/4	4529-007BL	4539-007BL
1	4529-010BL	4539-010BL
1-1/4	4529-012BL	4539-012BL
1-1/2	4529-015BL	4539-015BL
2	4529-020BL	4539-020BL
3	4522-030BL	4532-030BL
4	4522-040BL	4532-040BL

### DIAPHRAGM VALVE

	NOMINAL PIPE SIZE	PART NUMBER
EPDM O-RING SEALS	1/2	2729T-005BL
EPDM BACKED PTFE DIAPHRAGM	3/4	2729T-007BL
	1	2729T-010BL
	1-1/4	2729T-012BL
	1-1/2	2729T-015BL
	2	2729T-020BL



NOTE: BOTH SOCKET AND THREADED END CONNECTORS ARE PROVIDED WITH VALVE SIZES 1/2" - 2" DIAPHRAGM VALVES. VALVES CARRY A MAXIMUM PRESSURE RATING OF 150 PSI FOR WATER, NON-SHOCK, @ 73°F (23°C).

### T-STYLE "ZERO DEAD LEG" DIAPHRAGM VALVE

	NOMINAL PIPE SIZE	PART NUMBER
MAINLINE TEE X SPIGOT	1/2	2797TZD-005BL
EPDM BACKED PTFE DIAPHRAGM	3/4	2797TZD-007BL
	1X1	2797TZD-010BL
	1-1/2	2797TZD-015BL
	2X2	2797TZD-020BL
	1X1/2	2797TZD-130BL
	1X3/4	2797TZD-131BL
	1-1/2X1/2	2797TZD-209BL
	1-1/2X3/4	2797TZD-210BL
	2X1/2	2797TZD-247BL
	2X1	2797TZD-249BL
	2X1-1/2	2797TZD-251BL



### NEEDLE VALVE ANGLE PATTERN

NOMINAL PIPE SIZE	FIPT ENDS PART NUMBER	SOCKET ENDS PART NUMBER
1/4	5691-002BL	5692-002BL
3/8	5691-003BL	5692-003BL
1/2	5691-005BLSR*	5692-005BL



REPLACEABLE PTFE STEM SEAL - NO ELASTOMER OR LUBRICANTS USED. NEEDLE VALVES CARRY A MAXIMUM INTERNAL PRESSURE RATING OF 235 PSI AT 73°F (23°C).

\* - SR FIPT

### NEEDLE VALVE GLOBE PATTERN



NOMINAL PIPE SIZE	FIPT ENDS PART NUMBER	SOCKET ENDS PART NUMBER
1/4	5591-002BL	5592-002BL
3/8	5591-003BL	5592-003BL
1/2	5591-005BLSR*	5592-005BL

REPLACEABLE PTFE STEM SEAL - NO ELASTOMER OR LUBRICANTS USED. NEEDLE VALVES CARRY A MAXIMUM INTERNAL PRESSURE RATING OF 235 PSI AT 73°F (23°C).

\* - SR FIPT

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PURE WATER, INSTITUTIONAL & LAB PIPING SYSTEMS

## GAUGE GUARD DIAPHRAGM



NOMINAL PIPE SIZE	FKM PART NUMBER	PTFE PART NUMBER	EPDM PART NUMBER
NO GAUGE	G0003*	G0004*	G0002*
0-15 PSI	G0153*	G0154*	G0152*
0-30 PSI	G0303*	G0304*	G0302*
0-60 PSI	G0603*	G0604*	G0602*
0-100 PSI	G1003*	G1004*	G1002*
0-160 PSI	G1603*	G1604*	G1602*
0-200 PSI	G2003*	G2004*	G2002*
0-300 PSI	G3003*	G3004*	G3002*
0-30 IN-HG	G30V3*	G30V4*	G30V2*

\* - For 1/4" inlet connection replace with -002BL  
For 1/2" inlet connection replace with -005BL

"NO GAUGE" DESIGNATES GAUGE GUARD ONLY, UNFILLED. OTHER UNITS ARE PRE-FILLED AND FACTORY ASSEMBLED WITH GAUGE SPECIFIED IN SIZE COLUMN. GAUGE GUARDS CARRY A MAXIMUM PRESSURE RATING TO 235 PSI @ 73°F (23°C) AND FULL VACUUM @ SERVICE ON VACUUM GAUGES. ALL INLET CONNECTIONS ARE SPEARS PATENTED SPECIAL REINFORCED (SR) FEMALE PLASTIC NPT THREAD.

## TEE

SOCKET X SOCKET X SOCKET



NOMINAL PIPE SIZE	PART NUMBER
1/2	801-005BL
3/4	801-007BL
1	801-010BL
1 1/4	801-012BL
1 1/2	801-015BL
2	801-020BL
3	801-030BL
4	801-040BL
6	801-060BL

## REDUCING TEE

SOCKET X SOCKET X SOCKET



NOMINAL PIPE SIZE	PART NUMBER
1x1x3/4	801-131BL
1-1/2x1-1/2x1	801-211BL
2x2x1	801-249BL
2x2x1-1/2	801-251BL
3x3x2	801-338BL
4x4x3	801-422BL
6x6x3	801-530BL
6x6x4	801-532BL

## 90° ELBOW

SOCKET X SOCKET



NOMINAL PIPE SIZE	PART NUMBER
1/2	806-005BL
3/4	806-007BL
1	806-010BL
1 1/4	806-012BL
1 1/2	806-015BL
2	806-020BL
3	806-030BL
4	806-040BL
6	806-060BL

## 90° SWEEP ELBOW

SOCKET X SOCKET



NOMINAL PIPE SIZE	PART NUMBER
1/2	806-005SBL
3/4	806-007SBL
1	806-010SBL
1-1/4	806-012SBL
1-1/2	806-015SBL
2	806-020SBL

## 45° ELBOW

SOCKET X SOCKET



NOMINAL PIPE SIZE	PART NUMBER
1/2	817-005BL
3/4	817-007BL
1	817-010BL
1-1/4	817-012BL
1-1/2	817-015BL
2	817-020BL
3	817-030BL
4	817-040BL
6	817-060BL

## COUPLING

SOCKET X SOCKET



NOMINAL PIPE SIZE	PART NUMBER
1/2	829-005BL
3/4	829-007BL
1	829-010BL
1-1/4	829-012BL
1-1/2	829-015BL
2	829-020BL
3	829-030BL
4	829-040BL
6	829-060BL

## REDUCER COUPLING

SOCKET X SOCKET



NOMINAL PIPE SIZE	PART NUMBER
3/4x1/2	829-101BL
1x3/4	829-131BL
1-1/4x1	829-168BL
1-1/2x1	829-211BL
1-1/2x1-1/4	829-212BL
2x1	829-249BL
2x1-1/2	829-251BL
3x2	829-338BL
4x2	829-420BL
4x3	829-422BL
6x4	829-532BL

## GRIPLOC™ TRANSITION COUPLING

SOCKET X GRIPLOC™ COMPRESSION  
WARNING: DO NOT INSERT FINGERS  
EPDM GASKET



NOMINAL PIPE SIZE	PART NUMBER
1/2	P092-005BL
3/4	P092-007BL
1	P092-010BL
1-1/4	P092-012BL
1-1/2	P092-015BL
2	P092-020BL

# LXT<sup>®</sup> Schedule 80 Fittings

2 PURE WATER, INSTITUTIONAL & LAB PIPING SYSTEMS

## SPECIAL REINFORCED FEMALE ADAPTER



NOMINAL PIPE SIZE	PART NUMBER
1/2	835-005SRBL
3/4	835-007SRBL
1	835-010SRBL
1-1/4	835-012SRBL
1-1/2	835-015SRBL
2	835-020SRBL
3	835-030SRBL
4	835-040SRBL

## SPECIAL REINFORCED REDUCING SPIGOT FEMALE ADAPTER



NOMINAL PIPE SIZE	PART NUMBER
1/2X1/4	878-072SRBL
3/4X1/4	878-098SRBL
1X1/4	878-128SRBL

## MALE ADAPTER



NOMINAL PIPE SIZE	PART NUMBER
1/2	836-005BL
3/4	836-007BL
1	836-010BL
1-1/4	836-012BL
1-1/2	836-015BL
2	836-020BL
3	836-030BL
4	836-040BL

## REDUCER BUSHING FLUSH STYLE



NOMINAL PIPE SIZE	SPIGOT X SOCKET PART NUMBER	SPIGOT X FPT PART NUMBER
1/2x1/4		838-072BL
1/2x3/8		838-073BL
3/4x1/4		838-098BL
3/4x1/2	837-101BL	838-101BL
1x3/8		838-129BL
1x1/2	837-130BL	838-130BL
1x3/4	837-131BL	838-131BL
1-1/4x1/2	837-166BL	
1-1/4x1	837-168BL	
1-1/2x3/4	837-210BL	838-210BL
1-1/2x1	837-211BL	838-211BL
1-1/2x1-1/4	837-212BL	
2x1	837-249BL	
2x1-1/2	837-251BL	
3x2	837-338BL	
4x3	837-422BL	
6x4	837-532BL	

## CAP



NOMINAL PIPE SIZE	PART NUMBER
1/2	847-005BL
3/4	847-007BL
1	847-010BL
1 1/4	847-012BL
1 1/2	847-015BL
2	847-020BL
3	847-030BL
4	847-040BL
6	847-060BL

## UNION



NOMINAL PIPE SIZE	EPDM O-RINGS PART NUMBER	FKM O-RINGS PART NUMBER
1/2	897-005BL	857-005BL
3/4	897-007BL	857-007BL
1	897-010BL	857-010BL
1-1/4	897-012BL	857-012BL
1-1/2	897-015BL	857-015BL
2	897-020BL	857-020BL
3	8097-030BL	8057-030BL
4	8097-040BL	8057-040BL

235 PSI MAXIMUM INTERNAL PRESSURE RATING @ 73°F (23°C)

## FLANGE SOCKET VAN STONE STYLE



NOMINAL PIPE SIZE	PART NUMBER
1/2	854-005BL
3/4	854-007BL
1	854-010BL
1 1/4	854-012BL
1 1/2	854-015BL
2	854-020BL
3	854-030BL
4	854-040BL
6	854-060BL

RATED @ 150 PSI WORKING PRESSURE @ 73°F (23°C)

## PVC NEW STYLE STANDARD TANK ADAPTER



NOMINAL PIPE SIZE	EPDM GASKETS PART NUMBER	FKM GASKETS PART NUMBER
1/2	8170E-005BL	8170V-005BL
3/4	8170E-007BL	8170V-007BL
1	8170E-010BL	8170V-010BL
1-1/4	8170E-012BL	8170V-012BL
1-1/2	8170E-015BL	8170V-015BL
2	8170E-020BL	8170V-020BL
3	8170E-030BL	8170V-030BL
4	8170E-040BL	8170V-040BL

150 PSI MAXIMUM INTERNAL WORKING PRESSURE RATING @ 73°F (23°C)




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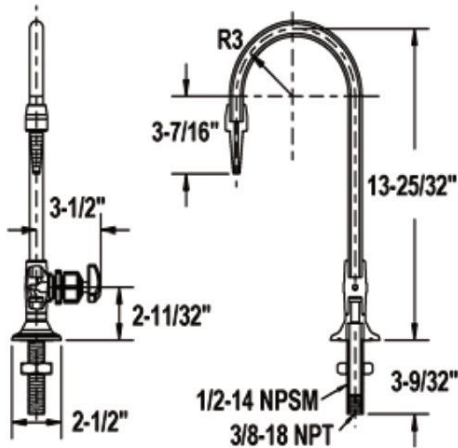
## WRENCH SETS

	NOMINAL PIPE SIZE	PART NUMBER
	1/2	TAW-005
	3/4	TAW-007
	1	TAW-010
	1-1/4	TAW-012
	1-1/2	TAW-015
	2	TAW-020
	3	TAW-030
	4	TAW-040

**NOTE: FOR INDIVIDUAL BODY WRENCH ADD 1 AFTER TAW, FOR INDIVIDUAL NUT WRENCH ADD 2 AFTER TAW. (TAW1-005 ETC.)**

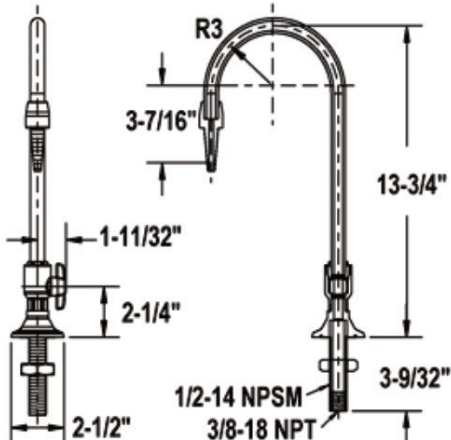
## GOOSENECK UNITS - DECK MOUNT LAB FIXTURE

	DETAILS	PART NUMBER
WITH NEEDLE VALVE	LE, PTFE SEAL	LF1000-BLN
BASE, GOOSENECK & SERRATED TIP WITH NEEDLE VALVE-METERED FLOW		



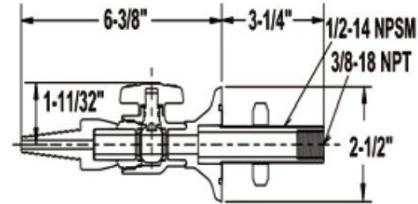
## GOOSENECK UNITS - DECK MOUNT LAB FIXTURE

	DETAILS	PART NUMBER
WITH BALL VALVE	LE, EPDM SEAL	LF1002-BL
	LE, FKM SEAL	LF1003-BL
BASE, GOOSENECK & SERRATED TIP WITH BALL VALVE-DIRECT FLOW		



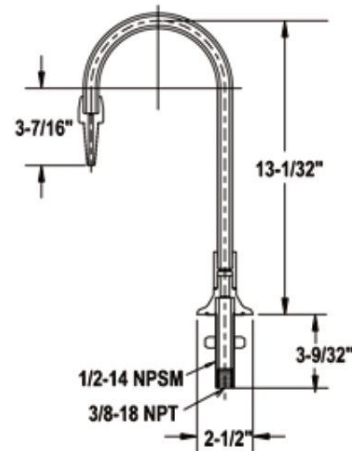
## TURRET UNITS - PANEL MOUNT LAB FIXTURE

	DETAILS	PART NUMBER
WITH BALL VALVE	LE, EPDM SEAL	LF3002-BL
	LE, FKM SEAL	LF3003-BL
TURRET BASE & SERRATED TIP WITH BALL VALVE-DIRECT FLOW		



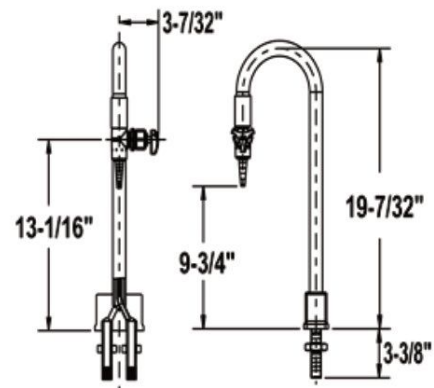
## REMOTE VALVE UNITS - DECK MOUNT GOOSENECK

	DETAILS	PART NUMBER
NO VALVE	LE	LF100-BL
BASE, GOOSENECK & SERRATED TIP - FOR USE WITH REMOTE VALVE		



## GOOSENECK RECIRCULATING UNITS - DECK MOUNT LAB FIXTURE

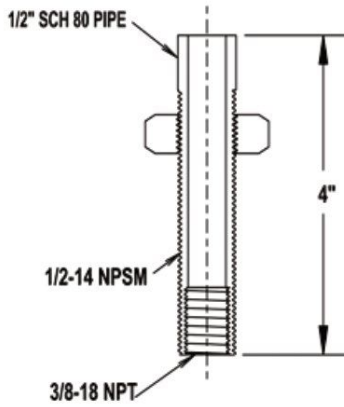
	DETAILS	PART NUMBER
WITH NEEDLE VALVE	LE, PTFE SEAL	LFR1000-BLN
BASE, GOOSENECK & SERRATED TIP WITH NEEDLE VALVE-METERED FLOW		



## ACCESSORY/REPLACEMENT FIXTURE CONNECTION NIPPLE

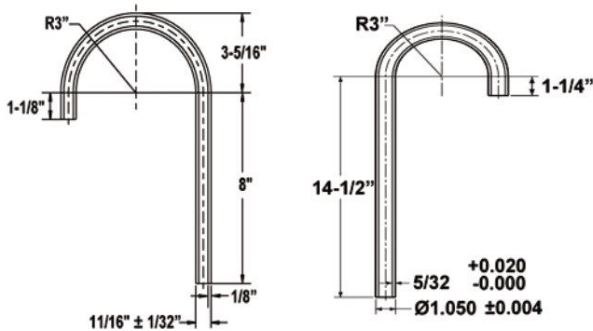
DETAILS	PART NUMBER
LE	LF500-BL

WITH LOCKNUT (INCLUDED ON ALL  
FIXTURES LISTED ABOVE)



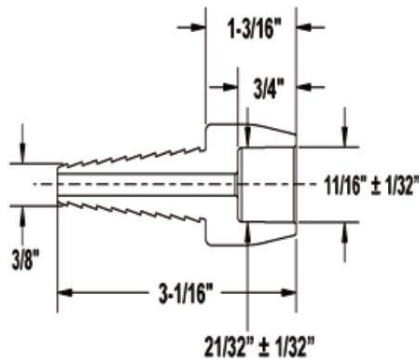
## ACCESSORY/REPLACEMENT GOOSENECK (3/8")

DETAILS	PART NUMBER
LF	LFGN-BL
LE	LFRGN-BL



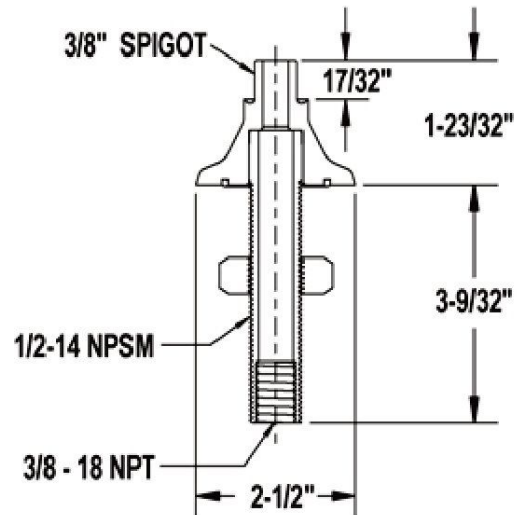
## ACCESSORY/REPLACEMENT STRAIGHT SERRATED TIP ONLY

DETAILS	PART NUMBER
LE	LF400-BL



## ACCESSORY/REPLACEMENT BASE ONLY

DECK MOUNT	DETAILS	PART NUMBER
	LE	LFB-BL



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