

Spiral Hoses

precision-made spiral hoses



Advanced Technology Products, has developed the latest technology in tubing, hose and pneumatic accessories. Our name says it all! We offer “advanced technology” and are the industry leader in ergonomically correct designs with added safety features to support assembly and automation applications worldwide.

ATP is the *“CHOICE”* For Spiral Hoses

Our spiral hose assemblies are superior because we use 100% virgin materials for improved performance; never “off spec” or regrind. ATP offers many choices in our spiral hose product line. We offer nylon spiral hose for applications requiring high chemical resistance or higher working pressures but the heart and soul of the product line is our polyurethane spiral hose assemblies. We begin with Shore A 98 durometer raw material. This slightly harder material gives our polyurethane spirals improved “memory” allowing the assemblies to retract faster and more completely than competitive hoses. The sagging and tangling is minimized and kinking is virtually eliminated. Our formulation provides a smoother bore for better air flow, better abrasion resistance and longer service life. ATP’s polyurethane spiral hose features a compact, space saving design and smooth 90° transitions from coil to straight tail length, providing more ergonomic benefit to the user.

Take a quick look at the next page and see the choices of spiral hoses that are available. No other company offers so many choices covering so many applications. All are application specific; from a single Techniblue™ spiral hose for your garage or home workshop to a high temperature, chemical transfer application to a demanding 24 hour assembly environment. ATP has what you need. Browse our catalog and make the right choice for your application.

We want you to choose ATP.

Look at what ATP has to offer:



Techniblue™ Spiral *P4*
Polyurethane spirals shipped within 48 hours of your order.



Technithane™ Spiral *P5*
Polyurethane spirals with working lengths that have become industry standards. Available in fractional and metric dimensions.



Strong™ Spiral *P7*
An ATP Exclusive. A special manufacturing process allows us to create spirals with a much smaller coil I.D. greatly increasing the memory of the assembly.



Strong Plus™ Spiral *P9*
Maximum ergonomic benefit, safety, and finished surface protection. Do we have the spiral for you? Find out for yourself why we call this the "Ultimate" spiral.



Armorthane™ Spiral *P11*
Features a specially-blended polyurethane material which gives our hoses better coil retention and longer service life than our competitor's hose.



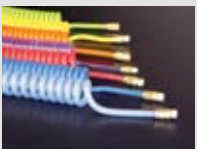
Nylon Spiral *P13*
Nylon spirals are recognized as an industry standard for applications which require higher working pressures and higher heat and/or chemical resistance than our polyurethane spirals.



Custom PTFE Spiral *P14*
Exceptional chemical resistance, temperature range - 450°F to + 500°F and higher working pressure for the most extreme environments.



Custom Weld Tubing Spiral *P14*
LE Series tubing is specially designed for use in and around welding equipment or other severe-service applications. Meets UL94VO anti-flaming requirements.



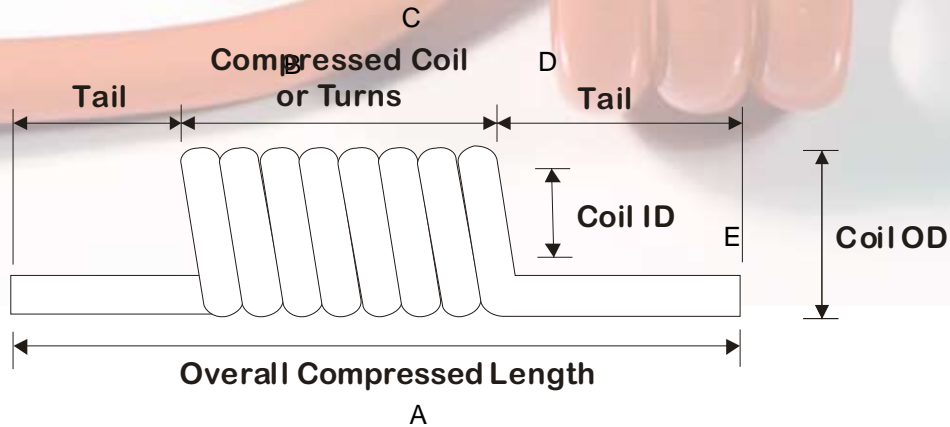
Custom Spiral *P15*
We have created our "Market Niche" by specializing in customized sizes, lengths, and colors to suit individual needs without requiring huge set-up charges or minimum runs.



Custom Technibond® Multi-Spiral *P16*
Any combination of ATP's fractional and metric size tubing in any color combination bonded together and coiled to make a spiral hose.

Whatever your needs, ATP can deliver. Call us with your requirements today at 937-349-4055 or visit us on the web at www.atp4pneumatics.com!

Spiral Hose Terminology:



Total Length

This will be the total length of the tubing before spiraling.

Overall Compressed Length

The compressed coil length plus tail length.

Working Length

Also known as service length. Defined by how far the spiral will stretch, including tails.

Working length in standard spirals is approximately 80% of the total length. In Strong™ spirals, working length is approximately 60% of the total length. We are able to quote spirals by working length if you know how far you need the spiral to stretch from point A to point B. We are also able to quote by the number of turns.

Tail Length

Tails are the straight length of hose on either end of the spiral assembly. Tail length dimensions are included in both total and service length dimensions. If necessary, we can quote compressed coils and add tail lengths to arrive at your requirements. Standard tail lengths are 4" & 20".

Coil I.D.

Our coil I.D. is determined by the size of the tubing being spiraled. This I.D. is small enough to allow the spiral to retract and prevent it from sagging while still providing optimum air flow without flattening the tubing.

Coil O.D.

Determined by both the coil I.D. and the tubing O.D. to be spiraled.

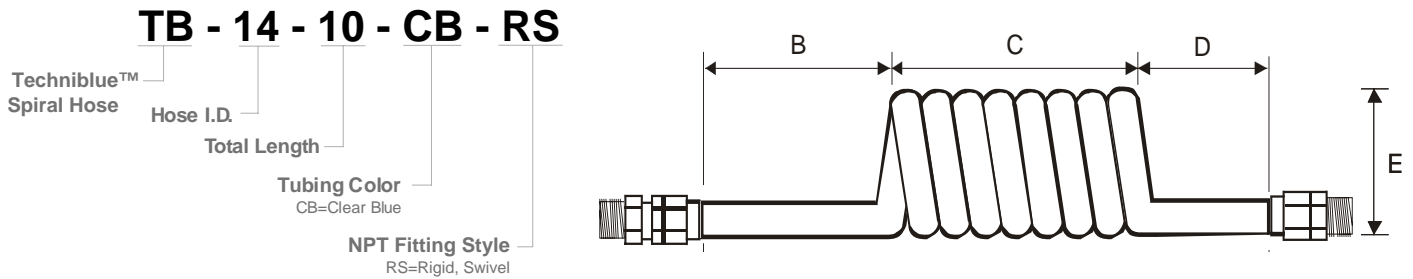
Techniblu™ Stock Spiral

- In stock and available to ship within 48 hours
- The clear blue color allows you to see impurities in your air system
- **Reusable, field repairable compression fittings**
- **Thread sealant supplied on all male fittings**



This is a special program on our most popular sizes/lengths of polyurethane clear blue spiral hoses. The Techniblu™ Spiral is an economical choice for your spiral hose needs. These spirals are lightweight and abrasion resistant. They maintain excellent memory while avoiding kinking when in use.

Techniblu™ spirals are manufactured from Shore A 98 durometer polyurethane tubing. The port side tail is 4" with a brass male NPT rigid fitting. The tool side tail is 20" with a brass male NPT swivel fitting.



	part number	hose I.D.	hose O.D.	working length (feet)	total length (feet)	total turns	dim. A (inches)	dim. B (inches)	dim. C (inches)	dim. D (inches)	dim. E (inches)
1/4 fitting	TB-14-10-RS	1/4	3/8	8	10	19	31.125	20	7.125	4	2.002
	TB-14-15-RS	1/4	3/8	12	15	31	35.625	20	11.625	4	2.002
	TB-14-20-RS	1/4	3/8	16	20	42	39.750	20	15.750	4	2.002
	TB-14-25-RS	1/4	3/8	20	25	54	44.250	20	20.250	4	2.002
3/8 fitting	TB-2164-10-RS	21/64	1/2	8	10	14	31.000	20	7.000	4	2.681
	TB-2164-15-RS	21/64	1/2	12	15	23	35.500	20	11.500	4	2.681
	TB-2164-20-RS	21/64	1/2	16	20	32	40.000	20	16.000	4	2.681
	TB-2164-25-RS	21/64	1/2	20	25	40	44.000	20	20.000	4	2.681
	TB-38-10-RS	3/8	9/16	8	10	12	31.000	20	7.000	4	3.750
	TB-38-15-RS	3/8	9/16	12	15	19	36.000	20	12.000	4	3.750
	TB-38-20-RS	3/8	9/16	16	20	26	40.000	20	16.000	4	3.750
	TB-38-25-RS	3/8	9/16	20	25	34	45.000	20	21.000	4	3.750
1/2 fitting	TB-12-15-RS	1/2	3/4	12	15	13	33.750	20	9.750	4	4.500
	TB-12-20-RS	1/2	3/4	16	20	19	36.000	20	12.000	4	4.500
	TB-12-25-RS	1/2	3/4	20	25	24	42.000	20	18.000	4	4.500

Specifications:

Working Pressure: 140 PSI; (8 Bar); 8kgf/Cm2 at 68F°(20C°)

Burst Pressure: 428 PSI; (30 Bar); 30kgf/Cm2 at 68F°(20C°)

Working Temperature Range: -68°F(-55°C) to +140°F(+60°C)

Technithane™ Spiral

- Multiple color, length and fitting options available
- Industry-standard sizing
- Reusable, field repairable compression fittings
- Thread sealant supplied on all male fittings

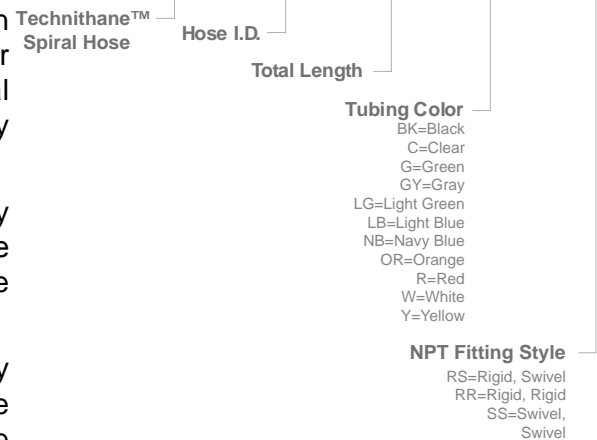


The Technithane™ spiral hose was developed as an alternative to nylon spirals and remains flexible from -68°F to +140°F. Like the Techniblue™ spiral, Technithane™ spirals are also lightweight and abrasion resistant. They maintain excellent memory while avoiding kinking when in use. Our ether-based polyurethane is air, water, oil and chemical resistant and resists wear 5 to 10 times better than ordinary rubber hose.

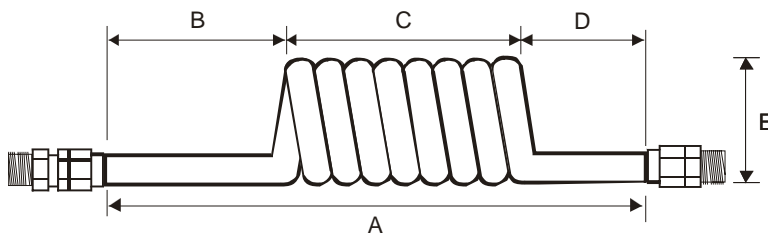
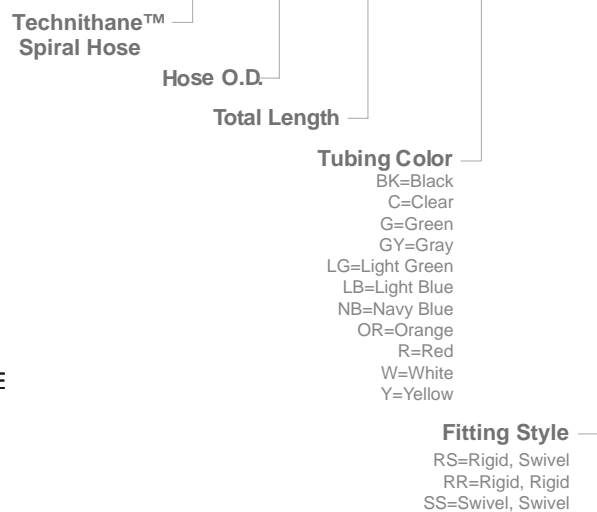
By selecting dimensions that have become an industry standard, ATP has taken the guesswork out of selecting the spiral that is right for you. All you need to do is select the color, length and fittings.

You can expect your working length to be approximately 80% of the total length. For fractional spirals the port side tail is 4" and the tool side tail is 20". For metric spirals the port side tail is 100mm and the tool side tail is 500mm.

TT - 516 - 10 - BK - RS



TT - 8 - 2.5 - BK - RS



Specifications:

- Working Pressure:** 140 PSI; (8 Bar); 8kgf/Cm2 at 68F°(20C°)
- Burst Pressure:** 428 PSI; (30 Bar); 30kgf/Cm2 at 68F°(20C°)
- Working Temperature Range:** -68°F(-55°C) to +140°F(+60°C)

Technithane™ Spiral

	part number	hose I.D.	hose O.D.	working length (feet)	Total length (feet)	total turns	dim. A (inches)	dim. B (inches)	dim. C (inches)	dim. D (inches)	dim. E (inches)
1/4 fitting	TT-316-10-_-_-	3/16	5/16	8	10	19	31.125	20	7.250	4	1.625
	TT-316-15-_-_-	3/16	5/16	12	15	31	35.875	20	11.875	4	1.625
	TT-316-20-_-_-	3/16	5/16	16	20	42	40.250	20	16.250	4	1.625
	TT-316-25-_-_-	3/16	5/16	20	25	54	45.000	20	21.000	4	1.625
	TT-14-10-_-_-	1/4	3/8	8	10	14	31.125	20	7.125	4	2.002
	TT-14-15-_-_-	1/4	3/8	12	15	23	35.625	20	11.625	4	2.002
	TT-14-20-_-_-	1/4	3/8	16	20	32	39.750	20	15.750	4	2.002
	TT-14-25-_-_-	1/4	3/8	20	25	40	44.250	20	20.250	4	2.002
3/8 fitting	TT-2164-10-_-_-	21/64	1/2	8	10	12	31.000	20	7.000	4	2.681
	TT-2164-15-_-_-	21/64	1/2	12	15	19	35.500	20	11.500	4	2.681
	TT-2164-20-_-_-	21/64	1/2	16	20	26	40.000	20	16.000	4	2.681
	TT-2164-25-_-_-	21/64	1/2	20	25	34	44.000	20	20.000	4	2.681
1/2 fitting	TT-1332-10-_-_-	13/32	5/8	8	10	9	29.000	20	5.000	4	4.254
	TT-1332-15-_-_-	13/32	5/8	10	15	13	32.750	20	8.750	4	4.254
	TT-1332-20-_-_-	13/32	5/8	15	20	19	35.875	20	11.875	4	4.254
	TT-1332-25-_-_-	13/32	5/8	20	25	24	39.000	20	15.000	4	4.254

	part number	hose I.D.	hose O.D.	working length (mm)	total length (m)	total turns	dim. A (mm)	dim. B (mm)	dim. C (mm)	dim. D (mm)	dim. E (mm)
BSPT fittings available	TT-8-2.5-_-_-	5	8	2,000	2.5	18	780	500	180	100	42
	TT-8-5-_-_-	5	8	4,000	5.0	42	1,000	500	400	100	42
	TT-8-7.5-_-_-	5	8	6,000	7.5	66	1,230	500	630	100	42
	TT-8-10-_-_-	5	8	8,000	10	90	1,400	500	800	100	42
	TT-10-2.5-_-_-	6.5	10	2,000	2.5	15	785	500	185	100	52
	TT-10-5-_-_-	6.5	10	4,000	5.0	34	1,000	500	400	100	52
	TT-10-7.5-_-_-	6.5	10	6,000	7.5	53	1,235	500	635	100	52
	TT-10-10-_-_-	6.5	10	8,000	10	72	1,400	500	800	100	52
	TT-12-2.5-_-_-	8	12	2,000	2.5	11	780	500	180	100	65
	TT-12-5-_-_-	8	12	4,000	5.0	26	1,000	500	390	100	65
	TT-12-7.5-_-_-	8	12	6,000	7.5	41	1,190	500	590	100	65
	TT-12-10-_-_-	8	12	8,000	10	56	1,380	500	780	100	65
	TT-16-2.5-_-_-	11	16	2,000	2.5	7	720	500	120	100	108
	TT-16-5-_-_-	11	16	4,000	5.0	16	840	500	240	100	108
	TT-16-7.5-_-_-	11	16	6,000	7.5	24	1,000	500	400	100	108
	TT-16-10-_-_-	11	16	8,000	10	33	1,170	500	570	100	108

Custom colors are available, minimum quantities may apply.

STRONG™ Spiral

- Smallest outside coil diameter in the industry
- Best coil memory of any spiral in the industry
- **Tangle resistant and kink proof**
- **Smooth bore for full flow**



The Strong™ Spiral Series was developed to address two of the most common problems inherent in spiral hoses used in automotive, appliance, and furniture assembly line applications – the tangling and kinking of the spiral when used repeatedly at or beyond its recommended service length.

A special manufacturing process allows ATP to make a much smaller coil diameter, without flattening the tubing which would reduce air flow. This smaller coil diameter directly improves coil memory – even in the most demanding environment. The degree of sag is minimal and consistent therefore kinking is virtually eliminated. These features give this spiral a much longer service life than any other spiral on the market.

Manufactured with Shore A 98 durometer polyurethane strong tubing, Strong™ spirals yield a working length of approximately 60% of the total length. The port side tail is 4” and the tool side tail is 20”. ATP only uses our durable, heavy-duty brass compression fittings, which are available in both rigid and swivel style on this spiral.

ST - 316 - 10 - OR - RS

Strong™ Spiral

Hose I.D.

Total Length

Tubing Color

OR=Orange

Y=Yellow

LG=Light Green

NB=Navy Blue

NPT Fitting Style

RS=Rigid, Swivel

RR=Rigid, Rigid

SS=Swivel, Swivel



Nylon spiral (left),
Technithane™ spiral (middle)
Strong™ spiral (right)

Small diameter of coil maximizes coil memory

ST - 8 - 2 - OR - RS

Strong™ Spiral

Hose O.D.

Total Length

Tubing Color

OR=Orange

Y=Yellow

LG=Light Green

NB=Navy Blue

Fitting Style

RS=Rigid, Swivel

RR=Rigid, Rigid

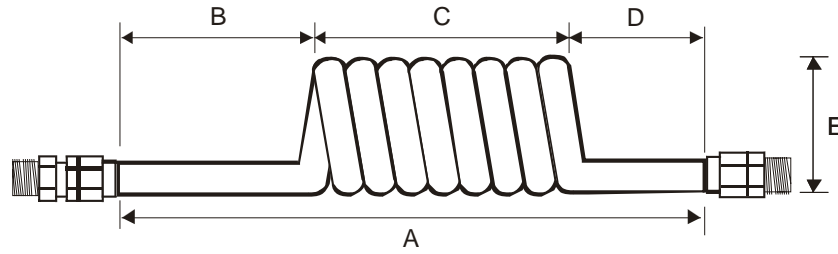
SS=Swivel, Swivel

Specifications:

Working Pressure: 140 PSI; (8 Bar); 8kgf/Cm2 at 68F°(20C°)

Burst Pressure: 428 PSI; (30 Bar); 30kgf/Cm2 at 68F°(20C°)

Working Temperature Range: -68°F(-55°C) to +140°F(+60°C)

	part number	hose I.D.	hose O.D.	working length (feet)	total turns	dim. A (inches)	dim. B (inches)	dim. C (inches)	dim. D (inches)	dim. E (inches)
1/4 fitting	ST-316-10-_-_-	3/16	5/16	8	46	40	20	16	4	1.255
	ST-316-15-_-_-	3/16	5/16	12	77	51	20	27	4	1.255
	ST-316-20-_-_-	3/16	5/16	16	107	59.5	20	37.5	4	1.255
	ST-316-25-_-_-	3/16	5/16	20	138	72	20	48	4	1.255
	ST-14-10-_-_-	1/4	3/8	8	38	40	20	16	4	1.624
	ST-14-15-_-_-	1/4	3/8	12	64	50	20	26	4	1.624
	ST-14-20-_-_-	1/4	3/8	16	90	61	20	37	4	1.624
	ST-14-25-_-_-	1/4	3/8	20	115	71	20	47	4	1.624
3/8 fitting	ST-2164-10-_-_-	21/64	1/2	8	29	40.5	20	16.5	4	2.125
	ST-2164-15-_-_-	21/64	1/2	12	48	51	20	27	4	2.125
	ST-2164-20-_-_-	21/64	1/2	16	67	62	20	38	4	2.125
	ST-2164-25-_-_-	21/64	1/2	20	86	73	20	49	4	2.125
1/2 fitting	ST-1332-10-_-_-	13/32	5/8	8	23	38	20	14	4	3.25
	ST-1332-15-_-_-	13/32	5/8	12	38	47	20	23	4	3.25
	ST-1332-20-_-_-	13/32	5/8	16	54	57	20	33	4	3.25
	ST-1332-25-_-_-	13/32	5/8	20	69	65	20	41	4	3.25

13/32" ID is not available in orange.

	part number	hose I.D.	hose O.D.	working length (mm)	total turns	dim. A (mm)	dim. B (mm)	dim. C (mm)	dim. D (mm)	dim. E (mm)
BSPT fittings available	ST-8-2-_-_-	5	8	1,400	19	760	500	160	100	32
	ST-8-4-_-_-	5	8	2,550	31	990	500	390	100	32
	ST-8-6-_-_-	5	8	3,850	42	1,250	500	650	100	32
	ST-8-8-_-_-	5	8	5,150	54	1,510	500	910	100	32
	ST-10-4-_-_-	6.5	10	2,350	14	950	500	350	100	42
	ST-10-6-_-_-	6.5	10	3,350	23	1,150	500	550	100	42
	ST-10-8-_-_-	6.5	10	4,450	32	1,390	500	790	100	42
	ST-12-4-_-_-	8	12	2,400	40	950	500	360	100	55
	ST-12-6-_-_-	8	12	3,300	12	1,140	500	540	100	55
	ST-12-8-_-_-	8	12	4,450	19	1,370	500	770	100	55
	ST-16-4-_-_-	11	16	2,100	26	900	500	300	100	83
	ST-16-6-_-_-	11	16	2,800	34	1,040	500	440	100	83
	ST-16-8-_-_-	11	16	3,600	13	1,200	500	600	100	83

Custom colors are available, minimum quantities may apply.

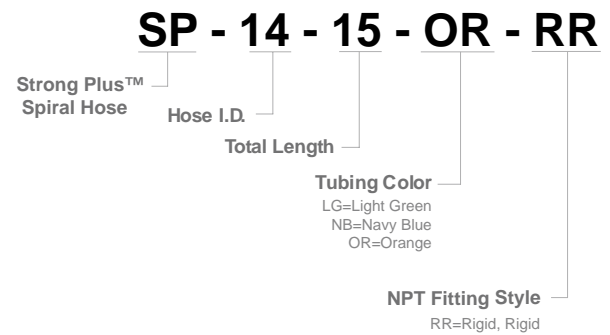
STRONG-PLUS™ Spiral

- Strong spiral with added soft ergonomic hose
- Smallest outside coil diameter in the industry
- Best coil memory of any spiral in the industry
- Smooth bore for full flow
- Tangle resistant and kink proof



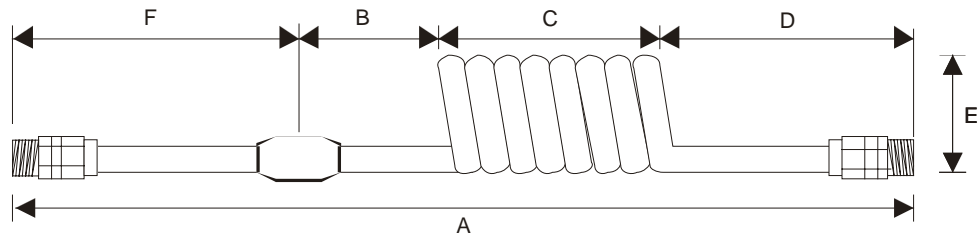
The Strong Plus™ Spiral Series was developed for use in and around painted or finished surfaces. The “PLUS” is an added 5 foot tail making this spiral the ultimate spiral for assembly line applications. This extra-long tail is made of Shore A 60 durometer “SH” series soft-braided hose, which is ultra-lightweight and extremely flexible. Increased operator comfort is an advantage of including this soft braided tail.

Manufactured with Shore A 98 durometer polyurethane strong tubing, Strong™ spirals will yield a working length of approximately 60% of the total length. ATP uses our durable, heavy-duty two-piece brass male rigid compression fittings. A union fitting with a non-marring polyurethane protective cover is used to join the Strong™ and “PLUS” sections of the spiral. Add an Oetiker® Swing Coupler, a Free Angle® Swivel fitting or choose from our other accessories to create your ultimate spiral.



Specifications:

Working Pressure: 140 PSI; (8 Bar); 8kgf/Cm2 at 68F°(20C°)
Burst Pressure: 428 PSI; (30 Bar); 30kgf/Cm2 at 68F°(20C°)
Working Temperature Range: -68°F(-55°C) to +140°F(+60°C)

	part number	hose I.D.	hose O.D.	working length (feet)	total turns	dim. A (inches)	dim. B (inches)	dim. C (inches)	dim. D (inches)	dim. E (inches)	dim. F (inches)
1/4 fitting	SP-14-10-_-RR	1/4	3/8	8	15	74	4	6	4	1.624	60
	SP-14-15-_-RR	1/4	3/8	12	41	83.5	4	15.5	4	1.624	60
	SP-14-20-_-RR	1/4	3/8	16	66	93	4	25	4	1.624	60
	SP-14-25-_-RR	1/4	3/8	20	92	103	4	35	4	1.624	60
3/8 fitting	SP-2164-10-_-RR	21/64	1/2	8	11	74	4	6	4	2.126	60
	SP-2164-15-_-RR	21/64	1/2	12	30	83	4	15	4	2.126	60
	SP-2164-20-_-RR	21/64	1/2	16	50	93	4	25	4	2.126	60
	SP-2164-25-_-RR	21/64	1/2	20	69	102.5	4	34.5	4	2.126	60
1/2 fitting	SP-1332-10-_-RR	13/32	5/8	8	9	74	4	6	4	3.250	60
	SP-1332-15-_-RR	13/32	5/8	12	24	83	4	15	4	3.250	60
	SP-1332-20-_-RR	13/32	5/8	16	40	93	4	25	4	3.250	60
	SP-1332-25-_-RR	13/32	5/8	20	55	102.5	4	34.5	4	3.250	60

Colors Available:

1/4" IDs: Orange and Light Green

21/64" IDs: Orange, Light Green, and Navy Blue

13/32" IDs: Light Green and Navy Blue

	part number	hose I.D.	hose O.D.	working length (mm)	total turns	dim. A (mm)	dim. B (mm)	dim. C (mm)	dim. D (mm)	dim. E (mm)	dim. F (mm)
BSPT fittings available	SP-10-2-_-RR	6.5	10	2,200	20	1,400	100	200	100	40	100
	SP-10-4-_-RR	6.5	10	3,200	40	1,600	100	400	100	40	100
	SP-10-6-_-RR	6.5	10	4,200	60	1,800	100	600	100	40	100
	SP-10-8-_-RR	6.5	10	5,200	80	2,000	100	800	100	40	100
	SP-12-2-_-RR	8	12	2,400	20	1,440	100	240	100	50	100
	SP-12-4-_-RR	8	12	3,600	40	1,680	100	480	100	50	100
	SP-12-6-_-RR	8	12	4,800	60	1,920	100	720	100	50	100
	SP-12-8-_-RR	8	12	6,000	80	2,160	100	960	100	50	100

Color Available: Light Green

Custom colors are available, minimum quantities will apply.

Armorthane™ Spiral

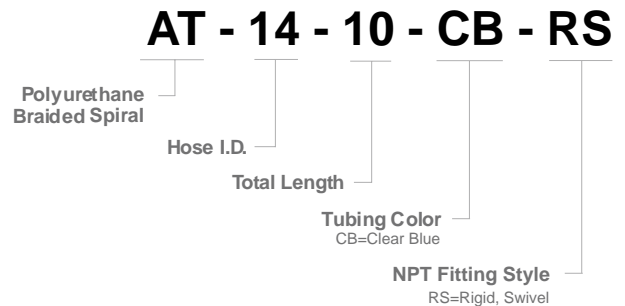
- **Increased working pressure (310 PSI)**
- Sturdy nylon braided reinforcement
- Abrasion resistant
- UV Stabilized



The Armorthane™ spiral hose features a specially blended clear blue polyurethane material that gives our hoses better coil retention and a longer service life. A sturdy braid of nylon reinforcement between the inner tube and cover allows for higher working pressure than a non-reinforced hose. Armorthane™ spirals are heat, cold and oil resistant making them an excellent choice for lubrication system applications. Contamination of air systems caused by rubber hose break-down can be significantly reduced with this spiral selection.

Internal capillaries can be added for air tool lubrication. External tubing and/or wire can be bonded to the hose for torque control monitoring systems. Contact an ATP representative to help meet your specific requirements.

Armorthane™ spirals are manufactured with Shore A 98 durometer inner tube and Shore A 85 outer cover. The port side tail is 4" with a brass male NPT rigid compression fitting. The tool side tail is 20" with a brass male NPT compression swivel fitting.



Bonded with Tubing

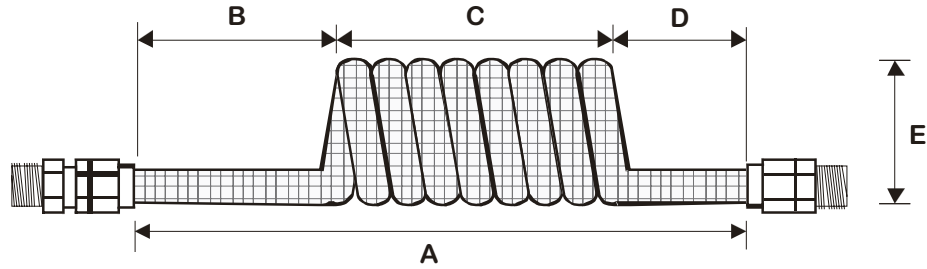


Bonded with Wire

Applications

- Assembly Lines
- Lubrication Systems
- Pneumatic Tools
- Painting Systems
- Pneumatic Piping
 - Construction
 - Robotics
- Appliance Manufacturing
 - Agriculture
- Furniture Manufacturing

Armorthane™ Spiral



	part number	hose I.D.	hose O.D.	working length (feet)	total length (feet)	total turns	dim. A (inches)	dim. B (inches)	dim. C (inches)	dim. D (inches)	dim. E (inches)
1/4 fitting	AT-14-10-CB-RS	1/4	3/8	8	10	30	35.25	20	11.25	4	1.625
	AT-14-15-CB-RS	1/4	3/8	12	15	46	41.25	20	17.25	4	1.625
	AT-14-20-CB-RS	1/4	3/8	16	20	63	47.75	20	23.75	4	1.625
	AT-14-25-CB-RS	1/4	3/8	20	25	82	54.75	20	30.75	4	1.625
	AT-14-30-CB-RS	1/4	3/8	24	30	98	60.75	20	36.75	4	1.625
3/8 fitting	AT-38-15-CB-RS	3/8	9/16	12	15	32	42.00	20	18.00	4	2.375
	AT-38-20-CB-RS	3/8	9/16	16	20	45	49.50	20	25.50	4	2.375
	AT-38-25-CB-RS	3/8	9/16	20	25	58	56.75	20	32.75	4	2.375
	AT-38-30-CB-RS	3/8	9/16	24	30	69	63.00	20	39.00	4	2.375
	AT-38-35-CB-RS	3/8	9/16	28	35	83	70.75	20	46.75	4	2.375
1/2 fitting	AT-12-15-CB-RS	1/2	3/4	12	15	22	40.50	20	16.50	4	4.50
	AT-12-20-CB-RS	1/2	3/4	16	20	30	46.50	20	22.50	4	4.50
	AT-12-25-CB-RS	1/2	3/4	20	25	39	53.25	20	29.25	4	4.50
	AT-12-30-CB-RS	1/2	3/4	24	30	46	58.50	20	34.50	4	4.50

Custom colors and fitting options are available, minimum quantities will apply.

Specifications:

Working Pressure: 310 PSI; (21.37 Bar); 22kgf/Cm² at 68°F(20°C)

Burst Pressure: 930 PSI; (63 Bar); 64kgf/Cm² at 68°F(20°C)

Working Temperature Range: -40°F(-40°C) to +120°F(+49°C)

Nylon Spiral

- Higher working pressure than typical polyurethane spirals
- Higher temperature rating and more chemical resistance than typical polyurethane spirals
- Lightweight
- Economical

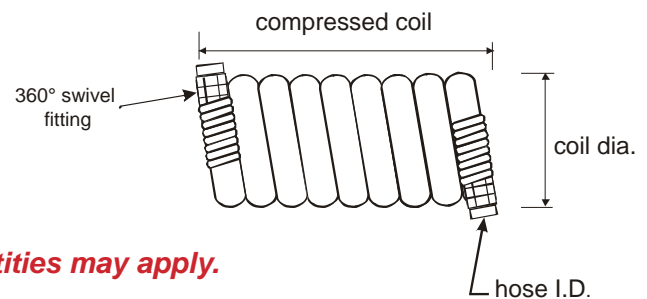
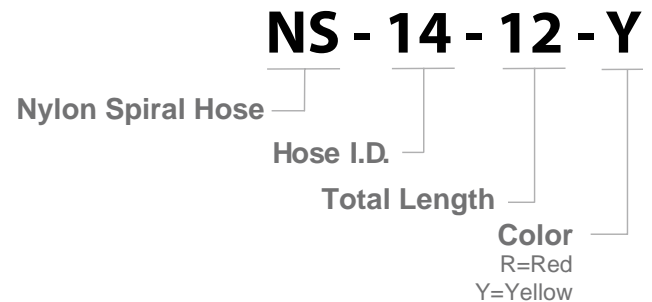


Nylon spirals are a good choice for the industrial environment. Nylon tubing is recognized as an industry standard for applications that require higher working pressures and higher heat and/or chemical resistance than polyurethane tubing can supply. However, nylon spirals are not a good choice for applications that require great memory or ergonomic tail lengths. Our nylon is extruded from heavy-duty nylon and has a very low moisture absorption rate compared to other nylon materials. By absorbing less moisture nylon spirals will remain flexible, which in turn extends its service life.

Unlike straight hose that lays on the floor, nylon spirals will retract to allow operators freedom of movement and a clear work area free from clutter.

Manufactured from Nylon 12, our spirals include spring guards and a brass male NPT swivel compression fitting on each end.

	part number	hose I.D.	coil O.D.	working length (feet)	total length (feet)	compressed coil length (inches)
1/4 fitting	NS-14-12-__	1/4	3	10	12	6
	NS-14-25-__	1/4	3	18	25	12
	NS-14-50-__	1/4	3	44	50	22
	NS-38-12-__	3/8	5 1/2	10	12	5
	NS-38-25-__	3/8	5 1/2	18	25	10
	NS-38-50-__	3/8	5 1/2	44	50	20
3/8 fitting	NS-38-12-__	3/8	5 1/2	10	12	5
	NS-38-25-__	3/8	5 1/2	18	25	10
	NS-38-50-__	3/8	5 1/2	44	50	20
1/2 fitting	NS-12-12-__	1/2	8	10	12	5
	NS-12-25-__	1/2	8	18	25	9
	NS-12-50-__	1/2	8	44	50	18



Custom sizes and colors are available, minimum quantities may apply.

Specifications:

Working Pressure: 200 PSI; (13.5 Bar); 13.5kgf/Cm2 at 68F°(20°C)

Burst Pressure: 1000 PSI; (69 Bar); 69kgf/Cm2 at 68F°(20°C)

Working Temperature Range: -60°F to +200°F (-52°C to +93°C)

Custom PTFE Spiral

- Very broad working temperature
- Lowest coefficient of friction
- Very good chemical resistance
- Great dielectric properties



PTFE spirals have been used in applications from medical to industrial and many other extreme applications along the way. These spirals have all of the features list above plus FDA approved raw material, chemical inertness, flame resistance and it is very easy to clean. Call us today with your specific requirement.

Specifications:

Working Pressure: 160-385 PSI (depending on the hose size)
Burst Pressure: 428 PSI; (30 Bar); 30kgf/Cm2 at 68F°(20C°)
Working Temperature Range: -454°F(-270°C) to +500°F(+260°C)

Applications:

- Aerospace & Aviation
 - Electronic
- Chemical Processing
 - Automotive
 - Medical
- Industrial & Mechanical
 - Pharmaceutical

Custom Weld Spiral

- Weld spatter resistant
- **Outer jacket meetsUL94VO flame resistant specification**
- Excellent bend radius
- **Rated for full vacuum (28”Hg)**



Weld tubing spirals are designed for use in and around welding equipment and severe service. LE tubing has excellent hydrolysis properties making it suitable for use in water piping, pneumatic piping and vacuum applications.

ATP currently offers a full line of weld spirals in metric sizes. Fractional sizes are also available on a limited basis.

Manufactured with Shore A 98 durometer polyurethane inner core and an outer jacket of an olefin provides a flame-resistant cover. The cover can be easily stripped off the inner core to allow use with standard Technifit™ push-to-connect fittings.

Specifications:

Working Pressure: 140 PSI; (8 Bar); 8kgf/Cm2 at 68F°(20C°)
Burst Pressure: 428 PSI; (30 Bar); 30kgf/Cm2 at 68F°(20C°)
Working Temperature Range: -68°F(-55°C) to +140°F(+60°C)

Applications:

- Robot Welding
 - Spot Welding
- Severe Service
- Supply/Return Line
 - Coolant Lines

Custom Spiral

Custom spirals can be made from any of standard material and tubing sizes. We can create complete assemblies with fittings, couplers and covers, plugs, and Free Angle® swivel fittings. Internal lube lines and external capillary lines are also available specifically for air tool applications. ATP has recommended tooling available for each size tubing available to allow for maximum performance. Custom spiraling can be performed on various tooling sizes per your requirements allowing for various coil ID's and OD's.

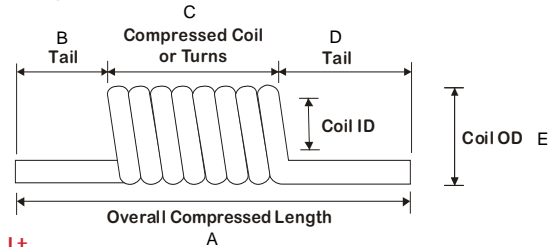
Please contact an ATP representative whenever your application requires components beyond our standards set forth in this catalog. Often even the most complex applications can be met through our custom options.

Dimensions are calculated by a mathematical formula. Actual dimensions may vary slightly. If a certain dimension is critical to your specific application, please advise us at the time of quotation so we may calculate correctly.

We will make every effort to ensure the specifications of the spiral you order are accurate prior to production. However, due to their very special nature, custom spiral orders may not be cancelled once production begins. Custom spirals are only eligible for return in the event of an error on the part of ATP.

There are **5** items necessary for an accurate quote on your custom spiral:

- 1) **I.D. and O.D. of tubing**
- 2) **Either total length or working length**
- 3) **Tail lengths**
- 4) **Fitting requirements**
- 5) **Tubing material**



Copy This Form & Fax It

In order for us to quote you properly, simply make a copy of this form, fill in your specifications and fax it to **937-349-4155**. A drawing will be issued for your approval before production begins. Due to the very special nature of this product, no cancellations can be accepted once production begins.

Tubing I.D. :	<input type="text"/>	Tubing O.D. :	<input type="text"/>
Working Length:	<input type="text"/>	Total Length:	<input type="text"/>
Dim. B (Tail):	<input type="text"/>	Dim. D (Tail):	<input type="text"/>
Fitting 1:	<input type="text"/>	Fitting 2:	<input type="text"/>
Accessory 1:	<input type="text"/>	Accessory 2:	<input type="text"/>
Accessory 3:	<input type="text"/>	Accessory 4:	<input type="text"/>
			Tubing Material:
			<input type="text"/>
			Tubing Color:
			<input type="text"/>



Contact Information

Contact _____ E-Mail _____

Company Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

Custom Technibond® Multi-Spiral

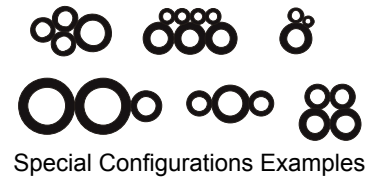
Any combination of ATP's polyurethane fractional and metric size tubing in any color combination can be bonded together and manufactured into a spiral hose. ATP does not charge set-up or tooling fees and there is no minimum order quantity. Pricing is quantity sensitive—the more you order, the more you save.



The maximum amount of tubes ATP can bond depends largely on the tubing OD. ATP has bonded up to 28 tubes in a spiraled, stacked configuration. We offer as standard, a five-conductor, 22-gauge wire. Special wiring is available. Call us to discuss your requirements.

There are three basic types of configurations which work best in the bonding process: Ribbon, Stacked & Pyramid. The spiral tubing is available in all three. Spiral configurations work best when given a wider base on which to build. When using tubes of many different diameters, some configurations will work better than others. Once you have chosen a basic grouping style, ATP will help you configure the tubes in the best manner to ensure optimal performance.

If a special configuration and/or color arrangement is critical to your application, contact us first so we may discuss the many options available.



Copy This Form & Fax It

In order for us to quote you properly, simply make a copy of this form, fill in your specifications and fax it to 937-349-4155. A drawing will be issued for your approval before production begins. Due to the very special nature of this product, no cancellations can be accepted once production begins.

Tube	1	2	3	4	5	6	7	8	9	10
OD										
Color										

Configuration: Ribbon Stacked Pyramid Special—Please Contact Me

Add Electric: ATP Standard Wire Special—Please Specify _____

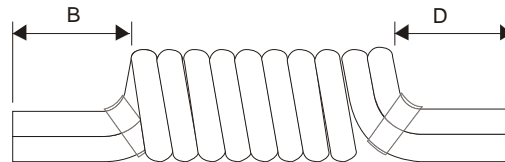
Working Length:

Tail Dimension B:

Tail Dimension D:

Fittings Required:

Quantity:



Contact Information

Contact _____ E-Mail _____

Company Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Fax _____

Chemical Resistance

	Polyurethane	Nylon 12	Polyethylene	PVC	PTFE • FEP	Weld Tubing Cover
Acids						
Acetic, 3n	B	E	A	A	A	A
Boric, 4%	B	A	A	A	A	A
Chromic, 3n	D	E	A	A	A	—
Citronic, 3n	B	—	A	A	A	—
Formic, 3n	D	A	A	A	A	A
HC1, 3n	A	E	A	A	A	—
Lactic, 3n	C	B	A	A	A	A
Nitric, 3n	D	E	A	A	A	B
Phosphoric, 3n	D	D	A	A	A	A
Sulfuric, <20%	A	B	A	A	A	A
Sulfuric, >20%	B	C	B	A	A	A
Alkalines						
Ammonia, 3n	A	A	—	A	A	A
Potassium Hydroxide, 3n	A	—	A	A	A	A
Sodium Hydroxide, <20%	A	A	A	A	A	A
Sodium Hydroxide, >20%	C	A	—	A	A	A
Aqueous Solution						
Aluminum Chloride, 10%	B	—	A	A	A	A
Ammonium Chloride, 10%	B	A	A	A	A	A
Bleaching Agent, 40%	A	E	—	—	A	A
Bleaching Agent, 100%	B	E	—	—	A	—
Calcium Chloride, 40%	B	A	A	—	A	—
Caustic Soda, 10%	A	A	—	—	A	—
Ferric Chloride, 10%	B	—	A	A	A	A
Hydrogen Peroxide, 3%	A	A	A	A	A	A
Magnesium Chloride, 30%	B	—	A	A	A	—
Potassium Chloride, 40%	B	A	A	—	A	—
Potassium Dichromate, 10%	B	C	A	—	A	—
Potassium Permanganate, 5%	D	D	A	—	A	—
Sea Water	A	A	A	A	A	—
Sodium Bisulfate, 10%	B	A	A	—	A	—
Sodium Chloride, 10%	B	B	A	—	A	—
Sodium Hypochlorite, PH 13	A	B	A	—	A	A
Fuels						
ASTM Fuel A	A	—	—	B	A	—
ASTM Fuel B	C	—	—	C	A	—
ASTM Fuel C	C	—	—	—	A	—
Diesel Fuel	B	A	—	B	A	D
Gasohol (10-15% Methanol)	D	—	—	—	A	—
High-test (Super) Gasoline	D	A	—	—	A	—
Kerosene	A	V	—	B	A	D
Oils						
ASTM Oil #1	A	—	—	B	A	—
ASTM Oil #2	A	—	—	—	A	—
ASTM Oil #3	A	—	—	B	A	—
Brake Fluid (ATE or ATS)	D	A	—	—	A	—
Gear Box Oil (SAE 90)	A	—	—	—	A	—
Hydraulic Fluid	B	—	—	—	A	—
Hydraulic/Water Emulsion	B	—	—	—	A	—
Mineral Oil	A	A	C	A	A	—
Motor Oil	A	A	B	—	A	—
Paraffin Oil	A	A	—	A	A	—
Power Steering Fluid	B	—	—	—	A	—
Skydrol® 500 Oil	D	—	—	—	A	B

	Polyurethane	Nylon 12	Polyethylene	PVC	PTFE • FEP	Weld Tubing Cover
Greases						
Calcium Grease	A	—	—	—	A	—
Sodium Grease	A	—	—	—	A	—
Teflon® Grease	A	—	—	—	A	—
Miscellaneous						
Diocyl Phthalate (DOP)	A	—	C	C	A	—
Ethylene Chloride	B	C	D	—	A	D
Ethylene Glycol/Water 50/50	B	—	—	A	A	A
Household Cleaner	B	—	—	—	A	—
Naptha	A	—	A	B	A	D
Silage (Silo) Juice	B	—	—	—	A	—
Natural Perspiration	A	—	—	—	A	—
Tincture of Iodine	D	—	—	—	A	—
Tricresyl Phosphate	D	—	—	C	A	—
Solvents						
Acetone	D	A	D	C	A	B
Aniline	D	B	B	B	A	—
Benzene	D	A	D	C	A	D
Benzyl Alcohol	E	—	—	—	A	B
Butane	B	A	—	—	A	B
Butyl Acetate	D	A	B	C	A	—
Butyl Alcohol	D	A	A	—	A	—
Carbon Tetra chloride	D	A	D	C	A	D
Chlorobenzene	D	C	D	C	A	D
Chloroform	D	C	D	C	A	D
Cyclohexane	C	A	—	A	A	D
Ethanol	C	—	B	—	A	B
Ether	C	A	—	—	A	B
Ethyl Acetate	D	A	C	C	A	A
Freon 11, 12, 22	C	—	—	—	A	D
Glycerine & Glycol	A	A	B	A	A	A
Heptane	B	A	D	B	A	—
Hexane	B	A	—	B	A	—
Isopropyl Alcohol	C	A	—	—	A	—
Methanol	C	—	B	—	A	A
Methyl Acetate	D	—	—	C	A	—
Methyl Ethyl Ketone	C	A	—	C	A	—
Methyl Glycol	D	—	—	—	A	—
Methylene Chloride	D	E	D	C	A	—
N-Methyl Pyrrolidone	E	—	—	—	A	—
Perchloroethylene	D	—	—	C	A	—
Petroleum	B	A	—	—	A	—
Pyridine	E	A	—	—	A	B
Tetra chloroethylene	D	—	—	C	A	—
Tetra hydrofuran	D	B	D	C	A	B
Toluene	D	A	D	C	A	D
Trichloroethylene	D	C	D	C	A	D
Turpentine (Pine Oil)	B	A	C	B	A	B
Xylene	D	A	—	C	A	D

Teflon® is a registered trademark of the Dupont Corporation.

Skydrol® is a registered trademark of Monsanto Company.

A Excellent (0-3%)
 B Good (4-15%)
 C Fair (16-30%)
 D Poor (>30%)
 E Dissolves

WARNING:
 This table is a general guide based on our testing. Although every effort was made to ensure its accuracy, we cannot guarantee your results due to variables in temperature and application. Therefore, no warranty is expressed or implied, and the user assumes all risk and liability.



At ATP, we have developed the latest technology in tubing, hoses and pneumatic accessories. In keeping with current market demands, our products offer ergonomics and safety advancements to help support assembly and automation applications.



Weld Tubing

Polyurethane tubing covered with a flame-resistant layer. Meets UL94V0 rating. Designed for robotic welding and other severe-service applications. Can be bonded & spiraled.



Technifit™ Push-To-Connect Fitting

All are made to extremely tight tolerances and work with ATP tubing to eliminate leaks. Our variety of fittings represents a large selection of the most common models, sizes and materials. Additional models and sizes - including stainless materials and Viton® seals are available as special order.



Technibond®

Thermally-bonded, polyurethane tube groupings available in straight and spiral configurations. Wire can be added to carry electric. Custom configurations welcome with no minimum quantities.



ARMOR-AIR™ Contractor Air Hose

Lightweight, flexible and much more abrasion-resistant than traditional rubber air hoses. A must-have for contractors, and anyone who owns an air compressor. Available with varying hardness and many colors. Reinforced with nylon for greater working pressures. Standard & custom assemblies and spirals.



Free Angle® Swivel Fitting.

The rubber boot has been replaced by an exclusive steel cover giving it a much longer service life. Our two rotation points make this superior to the imitators. The ergonomic, patented 360° circular rotation and 45° angled rotation makes this fitting indispensable for air tool and assembly applications.



Hose & Cable Balancers

Durable cases and high-quality internal components make up our balancers. Ideal for workstation ergonomics.



Oetiker® Clamps

The Oetiker® Clamp creates a spring effect when the hose material expands or contracts in response to thermal or mechanical influences such as temperature, vibration, etc. Single ear, double ear and stepless in both carbon steel and stainless steel.



Tubing - Polyurethane, Polyethylene, Nylon, PTFE, PVC

Only the highest-quality materials go into manufacturing our tubing. Over 50 stock sizes and 12 stock colors in both fractional and metric dimensions. Different Compounds and hardness are available upon request.



Oetiker® Swing Couplers

ATP carries and recommends Oetiker® Swing Couplings for use with our Free Angle Swivel Fittings. Full flow with safety vent feature. The ultimate pairing where safety and ergonomics are concerned.



TechniGripp®

The world's first hydraulic push-to-connect fitting. Does not require use of a crimper to make medium pressure hydraulic hose lines. Allows on-site fabrication to eliminate costly down time. Compatible with SAE100R7 hose specifications.

Viton is a registered trademark of the E.L. DuPont Co.



Catalog # 12/06

LIMITED WARRANTY

Advanced Technology Products expressly excludes all warranties, guarantees and representations, expressed or implied, including but not limited to warranties of merchantability, material, workmanship, design and suitability for a specified or intended purpose. Products shall be free from defects in material and workmanship for a period of one (1) year after shipment. If the product purchased is defective in any way during the one (1) year period, please contact ATP for an RGA number to return the product. No unauthorized returns will be accepted. Ship product prepaid to ATP for a full evaluation. If the product is found to be defective, ATP will repair or replace the product at no charge to the customer at ATP's sole discretion.

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