TOPRING
Compressed air solutions

SELECTION GUIDE FOR FLEXIBLE AIR HOSES • S70 TO S78

To ensure maximum performance and service:

- Select the right hose type for the job, based on the environment, conditions and the way in which the hose is to be used
- Choose hose diameter size based on the tool consumption and length (see the chart on previous page)
- Keep the hose as short as possible for the application
- Use a hose reel where possible so that the hose will not harm anyone












	SERIES 71 MAXPRO	SERIES 71 AIRFLEX Premium	SERIES 75 SUPERFLEX	SERIES 77 TOPFLEX	SERIES 77 TOPFLEX (MSHA)	SERIES 70 FLEXhybrid	SERIES 70 ECOFLEX	SERIES 72 THERMOFLEX	SERIES 72 EASYflex PREMIUM	SERIES 73 NYFLEX	SERIES 74 FLEXAIR	SERIES 78 TOPMAX
Material	RUBBER					TECHNOPOLYMER				PVC	POLYURETHANE	
	NR / SBR / EPDM	EPDM	Nitrile	Nitrile	Nitrile						Ester	Ester
Colour	Red	Red	Red	Black	Grey	Red	Orange / Blue	Blue	Yellow / Red / Blue	Clear	White / Orange	Yellow
Flexibility (+20°C)	✔ ✔ ✔	✔ ✔ ✔	✔ ✔ ✔	✔ ✔ ✔	✔ ✔ ✔	✔ ✔ ✔ ✔	✔ ✔ ✔ ✔	✔ ✔ ✔	✔ ✔ ✔ ✔ ✔	✔ ✔ ✔	✔ ✔ ✔ ✔	✔ ✔ ✔ ✔
Cold Temperature Performance (-20°C)	❄ ❄	❄ ❄ ❄	❄ ❄	❄ ❄	❄ ❄	❄ ❄	❄ ❄ ❄ ❄	❄ ❄ ❄	❄ ❄ ❄ ❄ ❄	❄	❄ ❄ ❄ ❄	❄ ❄ ❄ ❄
Oil Resistance(Cover)	♦ ♦	♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦ ♦ ♦	♦ ♦	♦ ♦ ♦	♦ ♦	♦ ♦	♦ ♦ ♦	♦ ♦ ♦
Toughness	+ + +	+ + + +	+ + + +	+ + + + +	+ + + + +	+ +	+ +	+ + +	+ + +	+ + +	+ + + +	+ + + +
Maximum Working Pressure	300 PSI	300 PSI	300 PSI	250 PSI	300 PSI	300 PSI	300 PSI	Up to 300 PSI	300 PSI	Up to 250 PSI	200 PSI	250 PSI
Sizes Available	3/8 - 1/2	1/4 - 3/8 - 1/2	5/16 - 3/8 1/2 - 3/4 - 1	1/4 - 3/8 - 1/2	1/4 - 3/8 - 1/2	1/4 - 3/8 - 1/2	1/4 - 3/8	1/4 - 3/8 1/2 - 3/4	1/4 - 3/8 - 1/2	1/4 - 3/8 - 1/2 5/8 - 3/4 - 1 1-1/4 - 1-1/2 - 2	1/4	1/4
Main Features	• Economical • Abrasion resistant • Ozone resistant	• Abrasion resistant	• Lightweight • High resistance to oils • Non-conductive 1000 volts D.C.	• Resistant to sparks and hot chips • Oils resistant • Non-conductive 1000 volts D.C. • "LOCK-ON" hose barb fittings • Very lightweight	• Flame, sparks and hot chip resistant (MSHA Approved) • Abrasion and oils resistant • Non-conductive 1000 volts D.C. • "LOCK-ON" hose barb fittings • Very lightweight	• Economical • Excellent flexibility • Lightweight • Oil resistant	• Flexible at low temperature • Easy to handle • Economical • No silicone	• Excellent abrasion resistant • Lightweight • No silicone	• The most flexible at low temperature • Extremely easy to handle • Lightweight • No silicone	• Crystal clear • NSF-51 and CFIA certified material • Lightweight • No silicone	• Very flexible and lightweight • Excellent resistance to abrasion • Reusable swivel fittings • No silicone	• Very flexible and lightweight • Excellent resistance to abrasion • Reusable swivel fittings • No silicone
Fluids	• Air, water	• Air, water	• Air, water, oils, lubricating oils	• Air, water, petroleum-based hydraulic oils, glycol	• Air, water, petroleum-based hydraulic oils, glycol	• Air, water	• Air, water	• Air, water	• Air, water	• Air, water	• Air	• Air
Applications	• General industrial • Construction • Agriculture	• General industrial • Construction • Agriculture	• General industrial • Automotive repair shops • Paint shops	• General industrial • Automotive repair shops	• General industrial • Automotive repair shops	• Ideal for in-plant applications • Excellent for air tools	• Construction • General industrial	• In-plant and outdoor applications • Excellent for air tools • Excellent for paint spray systems	• Outdoor usage in extreme cold • Construction • General industrial	• General industrial • For glue lines and lubrication lines • Packaging machines	• Indoor and outdoor applications • Construction • General industrial	• Indoor and outdoor applications • Construction
Working Temperature	-40 to 88 °C	-40 to 99 °C	-29 to 99 °C	-29 to 99 °C	-40 to 99 °C	-10 to 60 °C	-40 to 65 °C	-26 to 65 °C	-54 to 65 °C	-5 to 65 °C	-40 to 60 °C	-40 to 74 °C

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HOW TO CHOOSE A FLEXIBLE HOSE ?

TOPRING offers several types of hose. The following questions help to select the right air hose.

- What is the required length of hose?
- What should be the inside diameter of the hose?
- What is the working pressure of the tool or equipment?
- What manufacturing material is best suited?
- Need for flexibility and ergonomics?

Each hose type has its distinct advantages and disadvantages; it simply has to be adapted to the needs of the user.

POINTS TO CONSIDER TO CHOOSE THE PROPER AIR HOSE

Length

The greater the distance between the tool and the air compressor, the greater the loss of air pressure. The use of the air tool and the movement required to use it must be considered. For example, a long hose should be chosen to easily paint a vehicle in a large bodyshop, while a short hose will be more suitable for a fixed work station with few movements.

The objective is to choose a length of hose to find a balance between the maximum manoeuvrability of the air tool and a minimal loss of pressure.

Inside diameter

Hoses are measured by their inside diameter (I.D.). The larger the inside diameter, the greater the amount of air transported (SCFM). Although the outside diameter of hoses varies considerably depending on the quality of the hose and the material used, the most common internal sizes are 1/4, 3/8 and 1/2 I.D.

The inside diameter of the hose must be chosen according to its length and the air consumption of the air tool. Tools such as nailers and staplers can very well be used with a 1/4 diameter hose as the flow rate to operate them is low. Hoses with larger I.D. will be required if the tools are operated at a high flow rate (eg impact tools).

It should be noted, however, that the I.D. will affect the overall weight of the hose, as each additional foot will accumulate over the distance.

Maximum working pressure

The maximum working pressure of the hose must be greater than the working pressure of the tool or equipment.

Hose material

The material used to make the hose will drastically affect its flexibility, weight, performance and durability. If the hose material is not suitable for the working environment in which it is used, it will deteriorate rapidly. Here are some signs of a hose poorly suited hose to the environment or application:

- Cracking and breakage causing air leakage
- Premature aging
- Absorption of dirt
- Connection fault
- Cold weather hardening
- Softening due to heat
- Swelling and bursting

The fluids in contact with the hose must be compatible with its material (air, water, acids, oils, steam, etc.). In some environments this may be a critical element (eg food manufacturing, petroleum products, etc.)

Flexibility and ergonomics

Some materials are more flexible than others. If using a tool requiring great dexterity of the user, it is preferable to choose a light hose (e.g. THERMOFLEX).

If the workspace is restricted, a self-storing hose stretching easily when additional length is required and resuming its shape after use is a better option.

Most **TOPRING** hoses are available with a hose reel. This is a practical solution to prevent them from being dragged on the ground (and avoid accidents).

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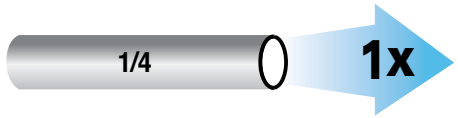
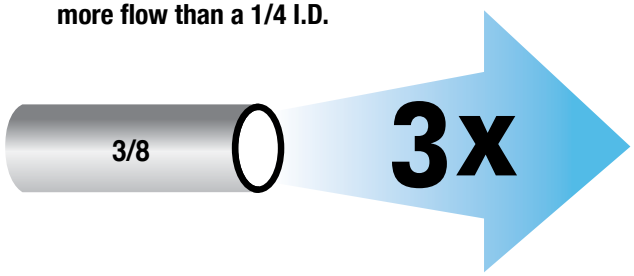
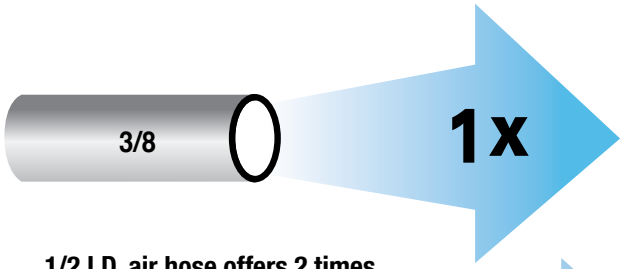
GENERAL RULES

1. Select the actual length required for each hose
2. Each unnecessary hose foot increases pressure losses and costs
3. Use short, straight hoses as much as possible
4. Choose hose diameters as large as possible. Hoses with an internal diameter that is too small or too large will cause unnecessary pressure losses, require an increase in compressed air pressure and thus increase operating costs
5. One end of the hose should have a swivel connection fitting to avoid twisting during use
6. Hoses are specified by inside diameter. The hose barb installed inside the hose further reduces the diameter of the air passage, which adds to the pressure drop
7. It is recommended to select a hose larger than the inlet to minimize pressure loss (example : for a 1/4 (F) NPT inlet, the hose should have an internal diameter of at least 3/8)

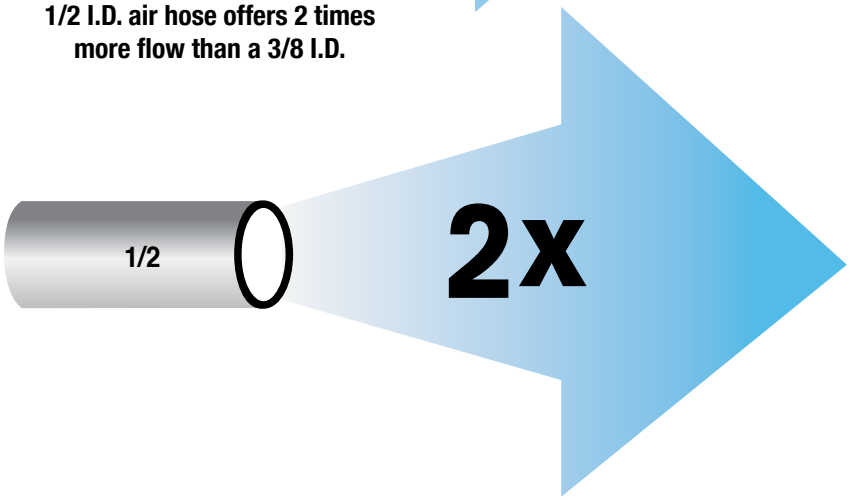


3/8 I.D. air hose offers 3 times more flow than a 1/4 I.D.





1/2 I.D. air hose offers 2 times more flow than a 3/8 I.D.



TECH TIP

For a safer and more convenient method of handling and storing flexible hoses, the use of a hose reel where possible is recommended.

Hose reels can be attached to the ceiling, wall, floor or under the work table. The tools are easy to access thanks to the adjustable length of the hoses. Users lose less time in untangling. In addition to being an ergonomic solution, having fewer hoses dragging on the ground reduces the risk of stumbling to users. Hose reels also reduce the risk of tools falling on the ground and increase their service life.

CAUTION

When a pressurized hose is ruptured, the hose blows compressed air in an uncontrollable manner. Like a whip, it can damage production or cause serious injuries to users. Prevent dangerous hose whips by adding a **HOSEGUARD®** safety valve on the air hose.

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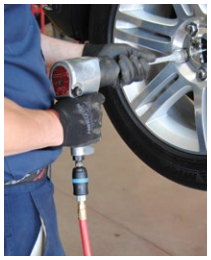
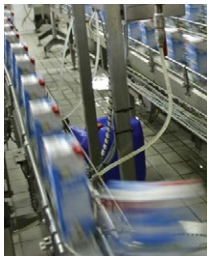
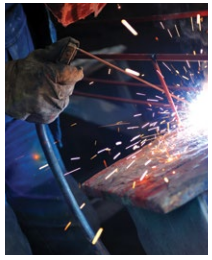
REFERENCE TABLE • INTERIOR DIAMETER REQUIRED BY PNEUMATIC TOOL TYPES

To choose the proper hose internal diameter, it is important to know the consumption of the tool used (flow SCFM).

Use of a smaller than recommended hose size will result in a serious reduction of tool performance.




Hose I.D. in	SCFM available at 100 PSI					
	25'	35'	50'	75'	100'	150'
1/4	≤ 7	≤ 6	≤ 5	≤ 4	≤ 3	≤ 3
5/16	≤ 13	≤ 10	≤ 9	≤ 7	≤ 6	≤ 5
3/8	≤ 20	≤ 17	≤ 14	≤ 12	≤ 10	≤ 8
1/2	≤ 43	≤ 36	≤ 30	≤ 25	≤ 22	≤ 17
3/4	≤ 125	≤ 105	≤ 88	≤ 72	≤ 62	≤ 50
1	≤ 265	≤ 224	≤ 188	≤ 153	≤ 133	≤ 108

DATA BASED ON:
- Continuous consumption at 100 PSIG
- Average consumption (actual consumption may vary)
- New self-storing hoses and exempt of contaminants (water, rust, dust)
- A maximum of 5 PSIG pressure drops







TOOLS TYPE	FLOW SCFM	FLEXIBLE HOSE LENGTH (ft)					
		25'	35'	50'	75'	100'	150'
NAILERS/STAPLERS							
Nailer/Stapler (18 Gauge)	2.5	1/4	1/4	1/4	1/4	1/4	1/4
Stapler (22-18 Gauge)	3.5	1/4	1/4	1/4	1/4	1/4	1/4
Finishing nailer	3.5	1/4	1/4	1/4	1/4	1/4	1/4
Roofing nailer	6.0	3/8	3/8	3/8	3/8	3/8	1/2
Framing nailer	11.0	3/8	3/8	3/8	3/8	3/8	1/2
Industrial Nailer	25.0	3/8	1/2	1/2	1/2	1/2	1/2
IMPACT TOOLS							
Miniature 1/4" ratchet	12.5	3/8	3/8	3/8	1/2	1/2	1/2
1/4" impact gun	14.0	3/8	3/8	3/8	1/2	1/2	1/2
3/8" ratchet	19.2	3/8	1/2	1/2	1/2	1/2	3/4
Zip gun	21.9	1/2	1/2	1/2	1/2	3/4	3/4
1/2" impact gun	28.6	1/2	1/2	1/2	3/4	3/4	3/4
3/4" impact gun	34.7	1/2	1/2	3/4	3/4	3/4	3/4
1" impact gun	87.5	3/4	3/4	3/4	1	1	1
POLISHING TOOLS							
Orbital polisher	16.6	3/8	3/8	1/2	1/2	1/2	1/2
Oscillating sander	23.0	1/2	1/2	1/2	1/2	3/4	3/4
SANDERS							
Sander	9.6	5/16	5/16	3/8	3/8	3/8	1/2
4-1/2" angle grinder	18.4	3/8	1/2	1/2	1/2	1/2	3/4
10 mm belt sander	18.9	3/8	1/2	1/2	1/2	1/2	3/4
7" angle sander	29.6	1/2	1/2	1/2	3/4	3/4	3/4
DRILLS							
3/8" air drill	17.3	3/8	1/2	1/2	1/2	1/2	1/2
3/8" reversible air drill	23.8	1/2	1/2	1/2	1/2	3/4	3/4
1/2" reversible air drill	26.4	1/2	1/2	1/2	3/4	3/4	3/4
OTHER TOOLS							
Riveter	4.0	1/4	1/4	1/4	1/4	5/16	5/16
Grease gun	8.0	5/16	5/16	5/16	3/8	3/8	3/8
Caulking gun	0.1	1/4	1/4	1/4	1/4	1/4	1/4
HVLP paint gun	9.5	5/16	5/16	3/8	3/8	3/8	1/2
Screw driver	9.6	5/16	5/16	3/8	3/8	3/8	1/2
Gravity fed sand blaster	12.0	3/8	3/8	3/8	1/2	1/2	1/2