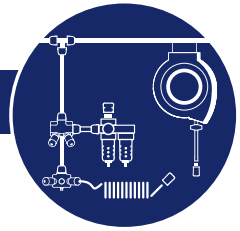
**TOPRING**
Compressed air solutions

# SELECTION GUIDE FOR FLEXIBLE HOSES • S70 TO S78





| | SERIES 71 MAXPRO | SERIES 71 AIRFLEX® Premium | SERIES 75 SUPERFLEX® | SERIES 77 TOPFLEX® | 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 / Neoprene | EPDM | Nitrile | Synthetic | | | | | | Ester | Ester |
| **Color** | Red | Red | Red | Black | Red | Orange | Blue | Yellow / Red / Blue | Clear | Orange | Yellow |
| **Flexibility (+20 °C)** | ✔✔✔ | ✔✔✔ | ✔✔✔ | ✔✔✔ | ✔✔✔✔ | ✔✔✔✔ | ✔✔✔ | ✔✔✔✔✔ | ✔✔✔ | ✔✔✔✔ | ✔✔✔✔ |
| **Cold Temperature Performance (-20 °C)** | ❄❄ | ❄❄❄ | ❄❄ | ❄❄ | ❄❄ | ❄❄❄❄ | ❄❄❄ | ❄❄❄❄❄ | ❄ | ❄❄❄❄ | ❄❄❄❄ |
| **Oil Resistance(Cover)** | ♦♦ | ♦♦ | ♦♦♦♦ | ♦♦♦♦ | ♦♦♦♦ | ♦♦ | ♦♦♦ | ♦♦ | ♦♦ | ♦♦♦ | ♦♦♦ |
| **Toughness** | +++ | ++++ | ++++ | +++++ | ++ | ++ | +++ | +++ | +++ | ++++ | ++++ |
| **Maximum Working Pressure** | **300 PSI** | **250 PSI** | **250 PSI** | **250 PSI** | **300 PSI** | **300 PSI** | **Up to 300 PSI** | **300 PSI** | **Up to 250 PSI** | **200 PSI** | **250 PSI** |
| **Sizes Available** | **3/8** | **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** | **1/4 - 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** | **1/4 - 3/8** | **1/4** |
| **Main Features** | • Economical<br>• Abrasion resistant<br>• Ozone resistant | • Abrasion resistant | • Lightweight<br>• High resistance to oils<br>• Non-conductive 1000 VDC | • Lightweight<br>• Good resistance to oil<br>• Spark resistance<br>• « LOCK-ON » fittings | • Economical<br>• Excellent flexibility<br>• Lightweight<br>• Oil resistant | • Flexible at low temperature<br>• Easy to handle<br>• Economical<br>• RoHS<br>• No silicone | • Excellent abrasion resistant<br>• Lightweight<br>• RoHS<br>• No silicone | • The most flexible at low temperature<br>• Extremely easy to handle<br>• Lightweight<br>• RoHS<br>• No silicone | • Crystal clear<br>• NSF-51 certified material<br>• Lightweight<br>• RoHS<br>• No silicone | • Very flexible and lightweight<br>• Excellent resistance to abrasion<br>• Reusable swivel fittings<br>• RoHS<br>• No silicone | • Very flexible and lightweight<br>• Excellent resistance to abrasion<br>• Reusable swivel fittings<br>• RoHS<br>• No silicone |
| **Fluids** | Air, water | Air, water | Air, water, oils, lubricating oils | Air, water, petroleum-base hydraulic oils, glycol | Air | Air | Air, water | Air, water | Air, water | Air | Air |
| **Applications** | • General industrial<br>• Construction<br>• Agriculture | • General industrial<br>• Construction<br>• Agriculture | • General industrial<br>• Automotive repair shops<br>• Paint shops | • General industrial<br>• Automotive repair shops | • Ideal for in-plant applications<br>• Excellent for air tools | • Construction<br>• General industrial | • In-plant and outdoor applications<br>• Excellent for air tools<br>• Excellent for paint spray systems | • Outdoor usage in extreme cold<br>• Construction<br>• General industrial | • Air and water lines<br>• Food and beverage lines | • Indoor and outdoor applications<br>• Construction<br>• General industrial | • Indoor and outdoor applications<br>• Construction |
| **Working Temperature** | -40 °C to 82 °C | -40 °C to 100 °C | -40 °C to 100 °C | -40 °C to 100 °C | -10 °C to 60 °C | -40 °C to 65 °C | -26 °C to 65 °C | -54 °C to 65 °C | -5 °C to 65 °C | -40 °C to 60 °C | -40 °C to 74 °C |

**See pages 270 to 280 in the catalogue for complete details on each flexible hose**

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# SELECTION GUIDE FOR FLEXIBLE HOSES • S70 TO S78

## 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 (or 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).

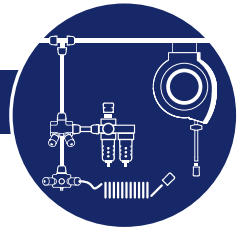






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# SELECTION GUIDE FOR FLEXIBLE HOSES • S70 TO S78

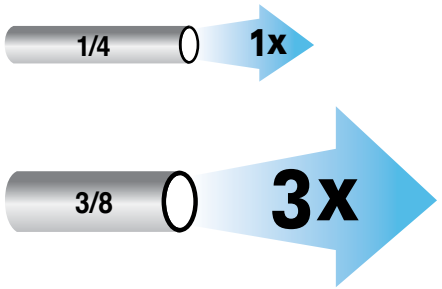


| Hose I.D. in | SCFM available at 100 PSI | | | | | |
|---|---|---|---|---|---|---|
| | 25' | 35' | 50' | 75' | 100' | 150' |
| 1/4 | ≤ 7 | ≤ 6 | ≤ 5 | ≤ 4 | ≤ 3 | ≤ 3 |
| 5/16 | ≤ 13 | ≤ 10 | ≤ 9 | ≤ 7 | ≤ 6 | ≤ 5 |
| 3/8 | ≤ 20 | ≤ 17 | ≤ 14 | ≤ 12 | ≤ 10 | ≤ 8 |
| 1/2 | ≤ 43 | ≤ 36 | ≤ 30 | ≤ 25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

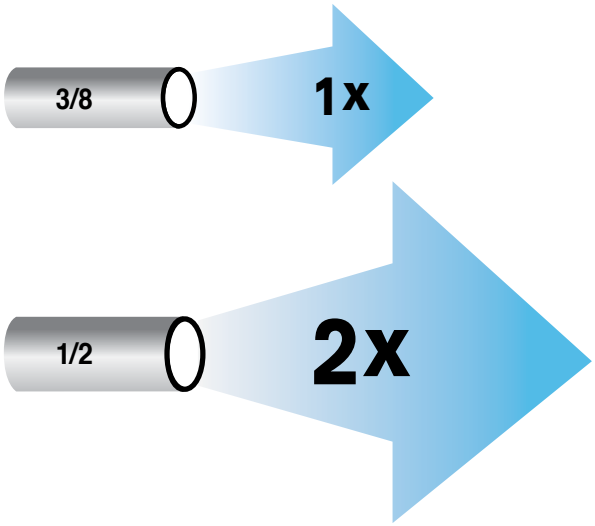
NOTE:

- Continuous consumption at 100 PSIG
- Average consumption (actual consumption may vary)
- Data for new air hoses and exempt of contaminants (water, rust, dust)
- Information based on 5 PSIG pressure drop

**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.**




## 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)

## WARNING

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.
See details on page 251 in the catalogue



SAFETY

## TECH TIP

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

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.
See pages 282 to 305 in the catalogue for complete selection of hose reels.



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| TOOL TYPE | FLOW SCFM | HOSE LENGTH | | | | | |
|---|---|---|---|---|---|---|---|
| | | 25' | 35' | 50' | 75' | 100' | 150' |
| **NAILERS/STAPLERS** | | | | | | | |
| 18 gauge nailer/stapler | 0.02 SCF/cycle | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 22-18 gauge stapler | 0.03 SCF/cycle | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| Finishing nailer | 0.03 SCF/cycle | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| Roofing nailer | 0.05 SCF/cycle | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| Framing nailer | 0.09 SCF/cycle | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| **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 |
| 10mm 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 | 0.08 SCF/cycle | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| Grease gun | 0.8 SCF/cycle | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 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 |