Swing Coupling by OETIKER®

OETIKER®

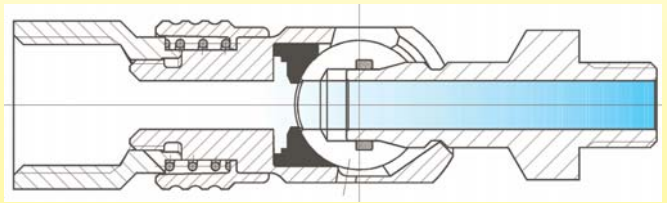
Connecting Technology

Compressed air is considered **industry's fourth utility**, but is seldom considered as a contributing cost of production. Instead, compressed air costs are typically blended into overhead and often thought of as “free.” Such ambiguity can hide cost savings that can positively impact your bottom-line and affect your ability to account for production costs.

Existing compressed air systems in the United States consume an estimated **90 billion kWh/year of electricity**. The energy being used to produce and treat compressed air can be substantial. Even the smallest compressed air system can be a relatively large source of energy consumption and cost.

Compressed air energy can cost **seven to ten times** more than electrical energy when it comes to doing mechanical or process related work. This valued form of energy is worth maximizing. An optimized system ensures that efficient and effective compressed air is available for the lowest possible cost with minimal environmental consequences.

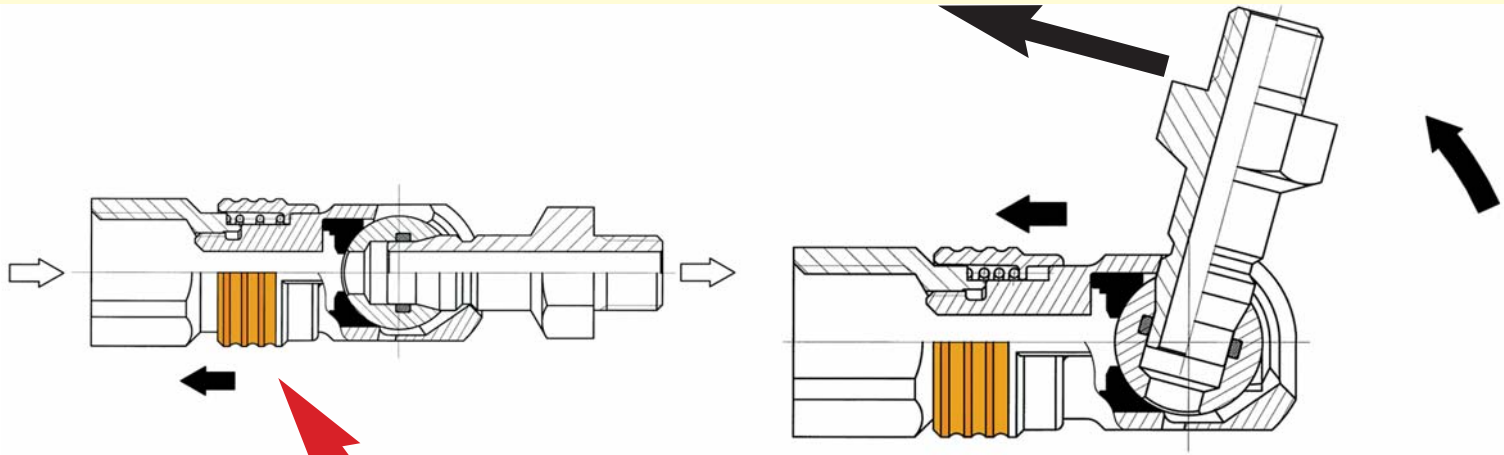
Swing Couplings by OETIKER



In addition to improved air flow, Swing Couplings by OETIKER offer a wide range of added benefits:

Safety!

2 stage safety coupler; cannot be accidentally disconnected!



#1 pull back sleeve

#2 swing plug

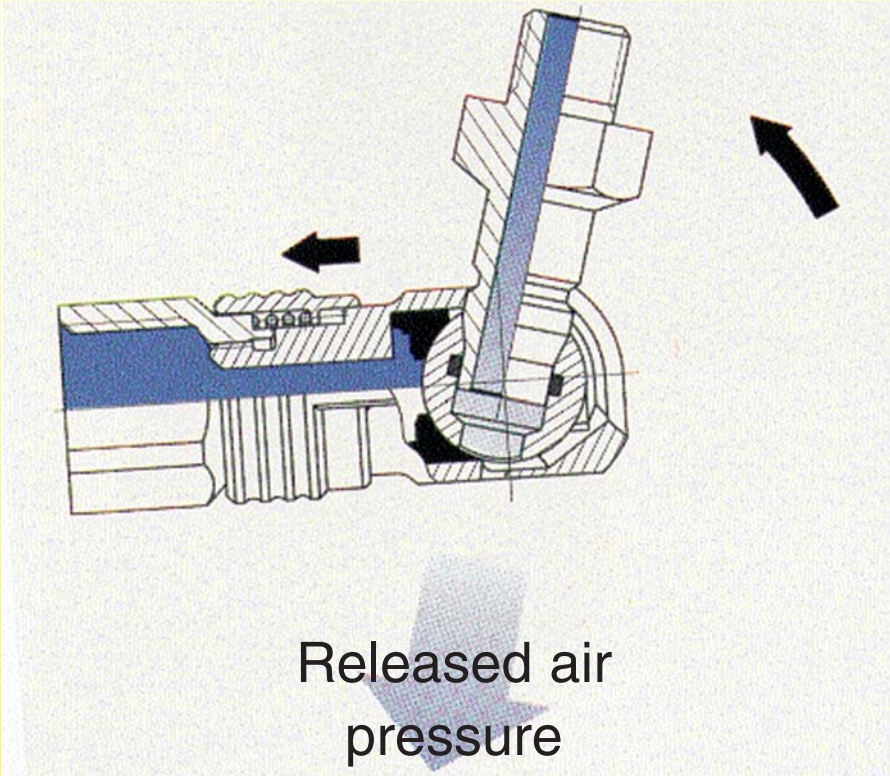
No accidental uncoupling, two actions must be fully performed to uncouple!

= Safety EVERY time!

No Whip!

Simultaneous venting upon disconnection

All downstream air is evacuated prior to disconnection, eliminating dangerous whiplash possibilities!



OETIKER

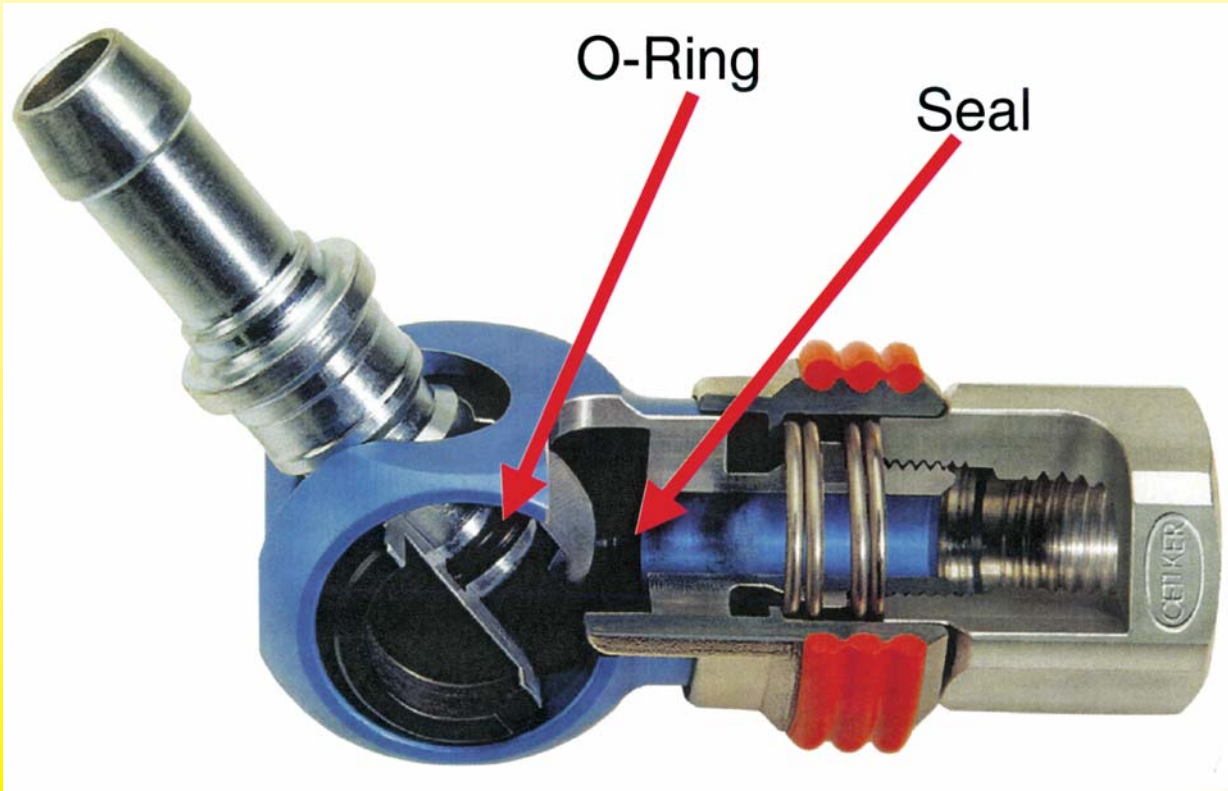
Easily connect/disconnect!

Operating Pressure up to 700 PSI
Vacuum up to 3hg

Zero pressure to ***connect*** and ***disconnect***
under pressure, up to 200 PSI! No force required!
No errors!

No Leaks

All Swing Couplings by Oetiker come with NBR (Nitrile elastomer) as standard seals!
Other materials are available upon request, such as EPDM, and FPM.

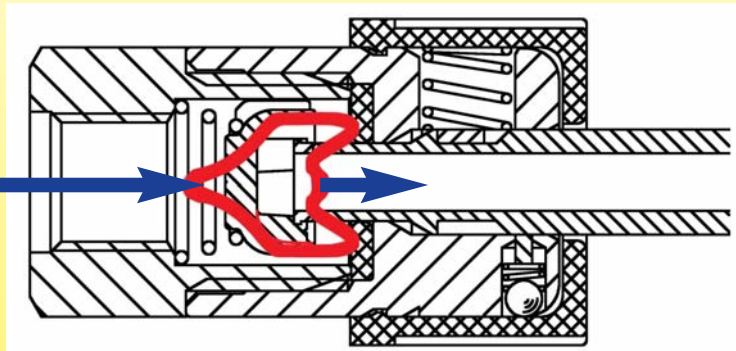


= Long leak free life!

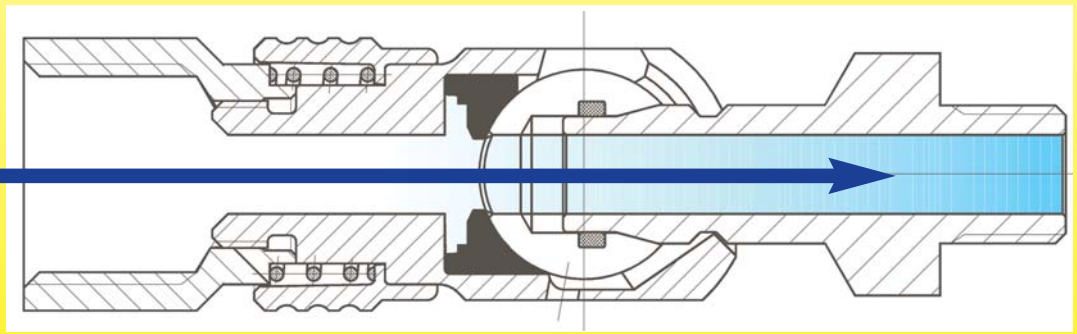
OETIKER

Unrestricted Full Flow!

No valve therefore no flow restrictions, tools operate at maximum performance. System operating PSI may be reduced.



Standard quick coupling: air must be diverted, causing resistance!



No diversion of airflow since there is no valve.

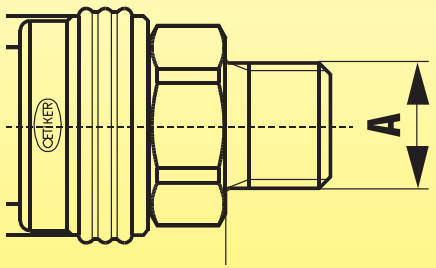
= Significant energy savings!

Common sizes:

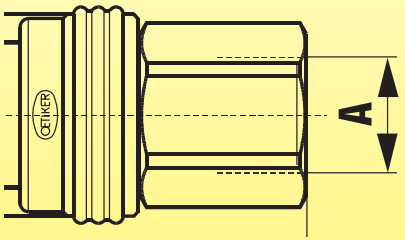
1/4", 3/8", and 1/2". Other sizes may be available upon request.

Also available in these common configurations:

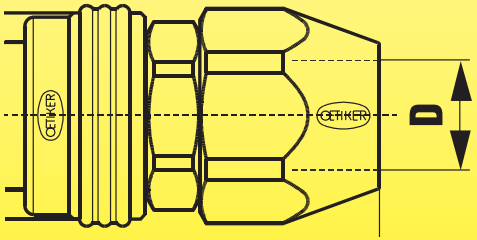
Male Thread



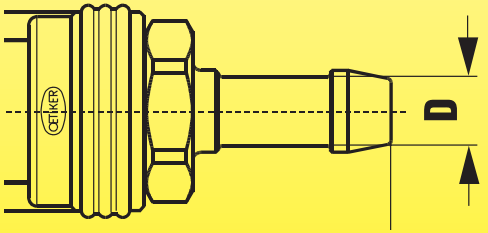
Female Thread



Compression

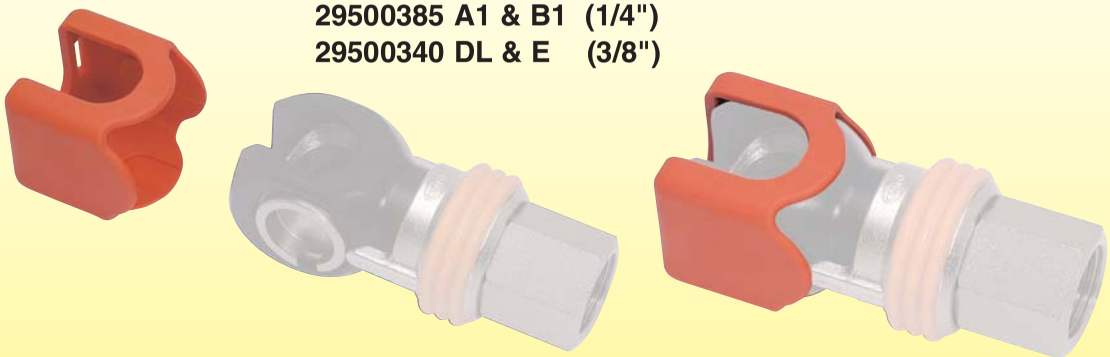


Hose Barb



Accessories:

29500385 A1 & B1 (1/4")
29500340 DL & E (3/8")



Scratch Cover

29500381 A1 & B1 (1/4")
29500195 DL & E (3/8")

Dust Cap

29500480 (1/4")
29500481 (3/8")
29500482 (1/2")

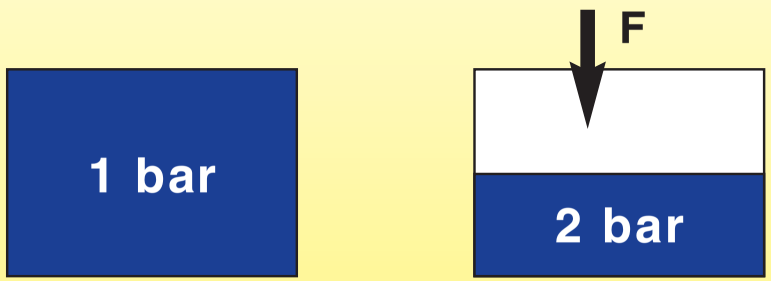
Protective Sleeve

Air

- For us humans air is vital, and we incessantly need it to breathe. As per definition air is a colorless, non-odorous and a tasteless gas compound consisting of nitrogen (78%), oxygen (21%), and inert (noble) gases (1%).
- The atmosphere around earth has a depth of about 60 miles.
- Its pressure on earth is called atmospheric pressure and, depending on weather and geo-graphical positions, amounts to 1 bar (14.5 psi) = 10N/cm^2.
- If air is compressed, it can be a safe and convenient medium in operation, use for transmitting and accumulating energy.
- But what is compressed air?

Compressed Air

– When a gas such as air is compressed, its volume becomes smaller. The free molecules (oxygen and nitrogen) are compressed in a smaller space => higher pressure.



– If the volume is reduced to its half, pressure will double.

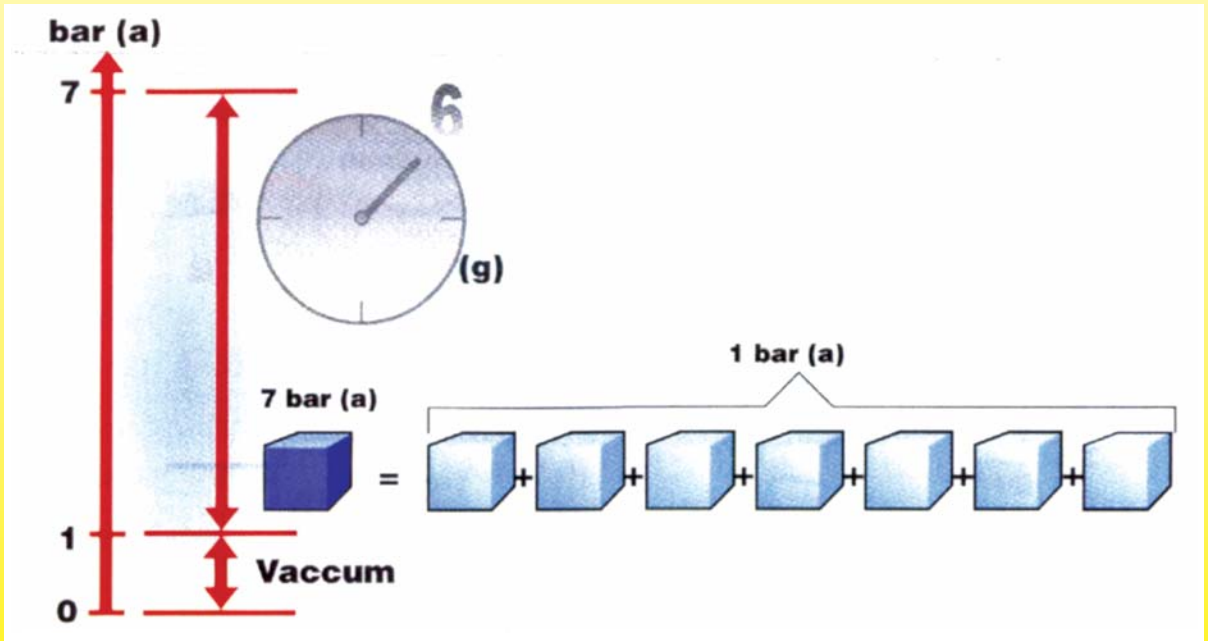
  • This results in a greater pressure than atmospheric pressure. This overpressure is called compressed air!

Pressure

- The atmospheric pressure on sea level amounts to 1.013 bar (14.7 PSI), a pressure of air which is also called absolute pressure.
- In the SI system each pressure specification refers to the sea level, that is to say to the absolute pressure [P], unless pressure is explicitly specified as overpressure [Pe].
- Contrary to gaseous medium, liquid (fluid) medium cannot be compressed.

Overpressure P*e (excedens)*

- It is very important to distinguish between **a** = absolute pressure (14.7 PSI) and **G** = manometer pressure. The manometer pressure is defined as the absolute pressure in a system minus the absolute pressure outside the system, and is typically used to measure the pressure in an air distributing system.



Pressure Units

Overpressure		Depression	
bar (Newton per square cm)	Psi (Pound per square inch)	mbar	inHg (inch of mercury)
100	1450		
10	145		
1.013	14.69	1013	29.91
1	14.5	1000	29.53
0.1		100	2.953
0.01		10	0.295
0.001		1	0.029

Vacuum / Depression

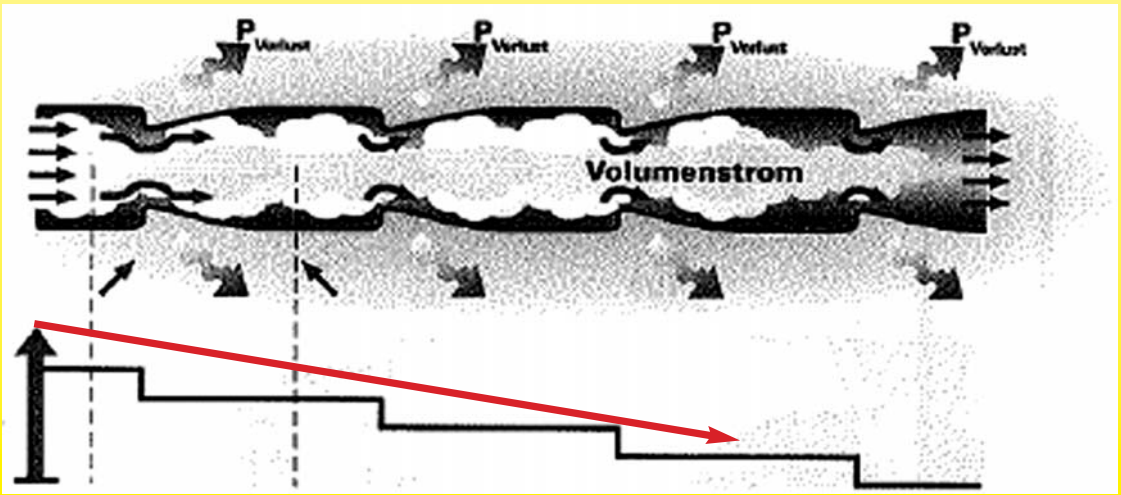
– The depression represents the constant negative difference of pressure from the operating pressure to the atmospheric one.

bar	mbar	
1.013	1013	Atmosphere
0.9	900	
0.8	800	
0.6	600	Suckers for handling materials
0.5	500	
0.4	400	
0.1	100	Standard for SC & SV couplings
0.01	10	SV coupling VAC version
0.005	5	
0.001	1	

Pressure Drop

- Pressure drop is a term used to characterize the reduction in air pressure from the compressor discharge to the actual point of use. Pressure drop occurs as the compressed air travels through the treatment and distribution system. A properly designed system should have a pressure loss of much less than 10% of the compressor's discharge pressure, measured from the receiver tank output to the point of use.
- Excessive pressure drop will result in poor system performance and excessive energy consumption. Flow restrictions of any type in a system require higher operating pressures than are needed, resulting in higher energy consumption. Minimizing differentials in all parts of the system is an important part of efficient operation.

Compressor



Drop

Sample Application:

Manufacturing Plants

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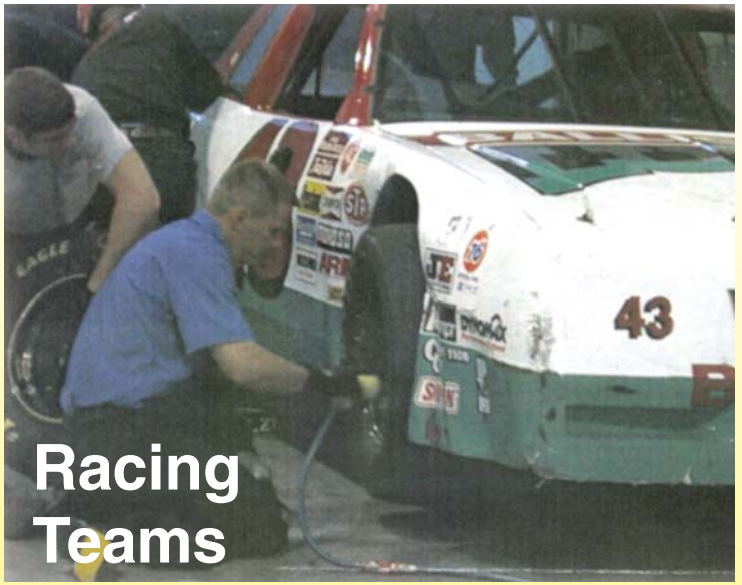
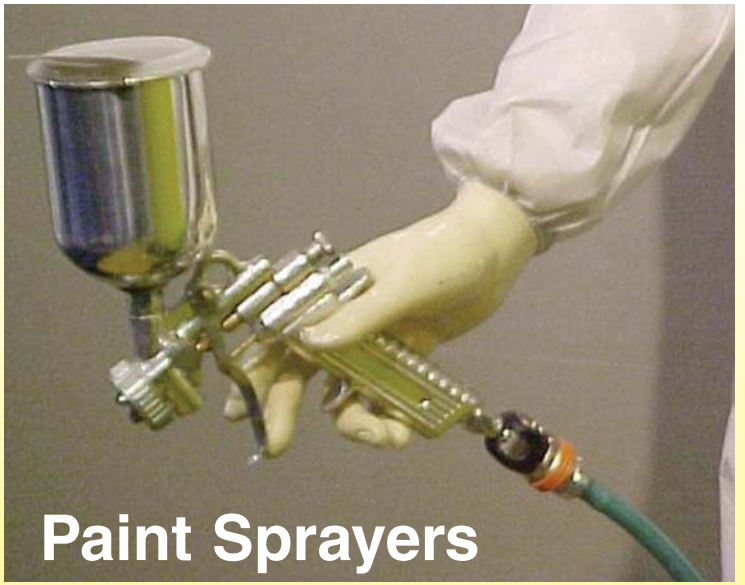

Racing
Teams


Paint Sprayers


Construction


Automotive Maint.
& Repair

ŒTIKER

Additional Oetiker Coupler Products

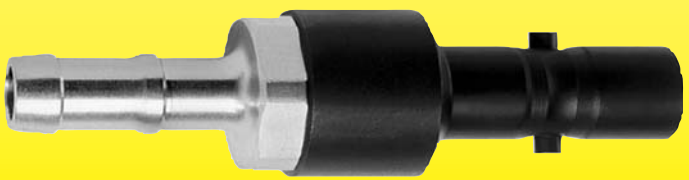
Talk to your Oetiker Rep for details and availability

SV 2-stage Heavy Duty Coupler

Extremely durable, use for heavy duty applications/ harsh environments.

Extremely long service life.

Available plug with check valve



SV 2-stage Heavy Duty Coupler Sample applications

SV 2-stage Non-Interchangeable Coupler

For use in any situation to eliminate dangerous cross contamination of various media lines (see examples on following page).

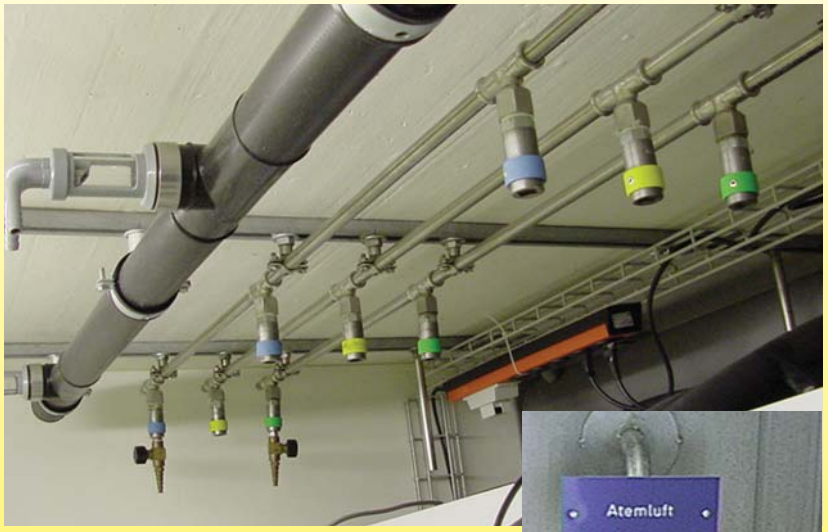
Types of Keyed plugs with color coding

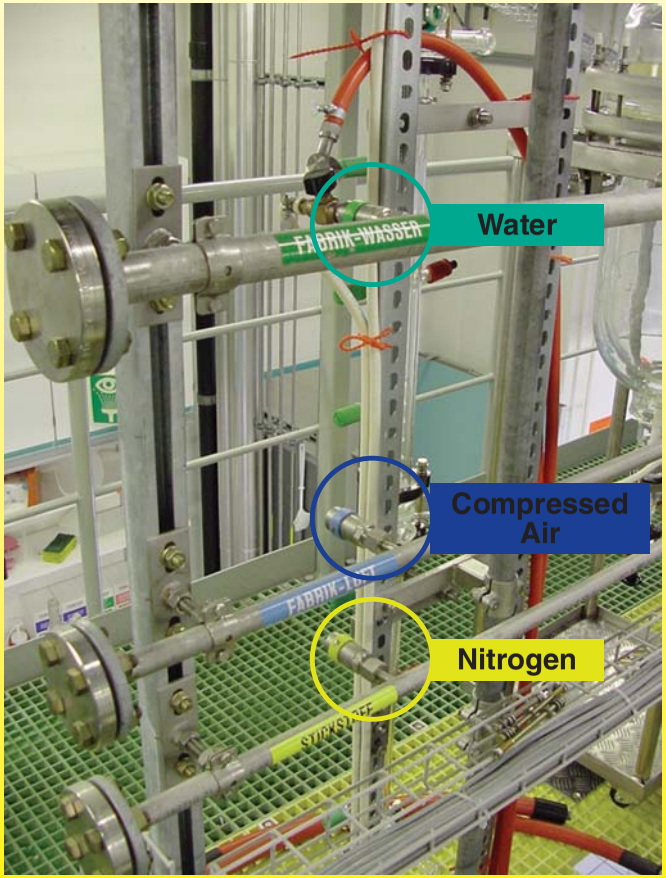
Plug with check valve

SV 2-stage Non-Interchangeable Coupler

Sample applications:

Medical / Chemical / Pharmaceutical Transfer Lines





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Compression Coupling

Advantages:

- ✓ Reusable
- ✓ Requires no special tools
- ✓ Allows use of bulk hose purchases
- ✓ Considerable cost savings $$
- ✓ No clamps needed

Shown above – Item #20500661
Hose not included

In accordance with ISO 4414, EN983
ISO 6150-B-15, AFNOR: B-15 NF E 49-053
US: MIL-C 4109

"Three Simple Steps"

1.
Insert hose into compression fitting

2.
Thread coupler into compression fitting.

3.
Tighten

Compatible with 3/8" Standard Industrial Interchange.

NPT 1/4"	Male Plug –	Item #25500236
NPT 1/4"	Female Plug –	Item #25500237
NPT 3/8"	Male Plug –	Item #25500044
NPT 3/8"	Female Plug –	Item #25500049

Contact your Oetiker Account Manager today!

3305 Wilson Street, POB 217, Marlette, MI 48453-0217 *Phone: (989) 635-3621* *Fax: (989) 635-2157*
203 Dufferin Street South, Alliston, ON L9R 1W7 *Phone: (705) 435-4394* *Fax: (705) 435-3155*

OETIKER

USA Phone: (989) 635-3621 Fax: (989) 635-2157
Canada Phone: (705) 435-4394 Fax: (705) 435-3155

Swing Coupling

Features/Benefits:

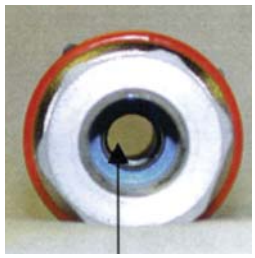
- ✓ **Light Weight – less than half the weight of equal steel coupling**
- ✓ **Made of aluminum**
- ✓ **Full Flow – negligible loss of pressure**
- ✓ **Safe quick connection-disconnections under pressure**
- ✓ **Viton Seals**
- ✓ **Simultaneous venting reduces the dangerous whiplash effect**

Note: Application for light duty only. Not intended for impact tool.

Special plug required.

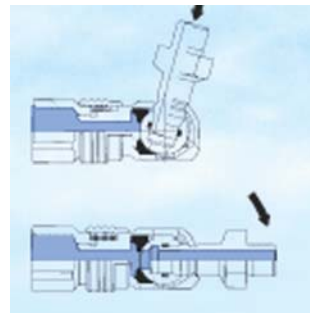
Item Numbers

20500645	SC-DL 1/4V w 1/4NPT F. PL	(20500642 & 25500061)
20500646	SC-DL 3/8V w 1/4NPT F. PL	(20500643 & 25500061)
20500647	SC-DL 1/4V w 1/4NPT M. PL	(20500642 & 25500058)
20500648	SC-DL 3/8V w 1/4NPT M. PL	(20500643 & 25500058)
25500058	SC-DL 1/4" NPT M. Plug	
25500061	SC-DL 1/4" NPT F. Plug	

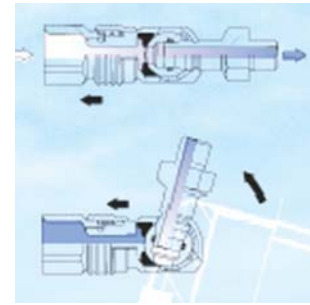


Full Flow

Connect



Disconnect

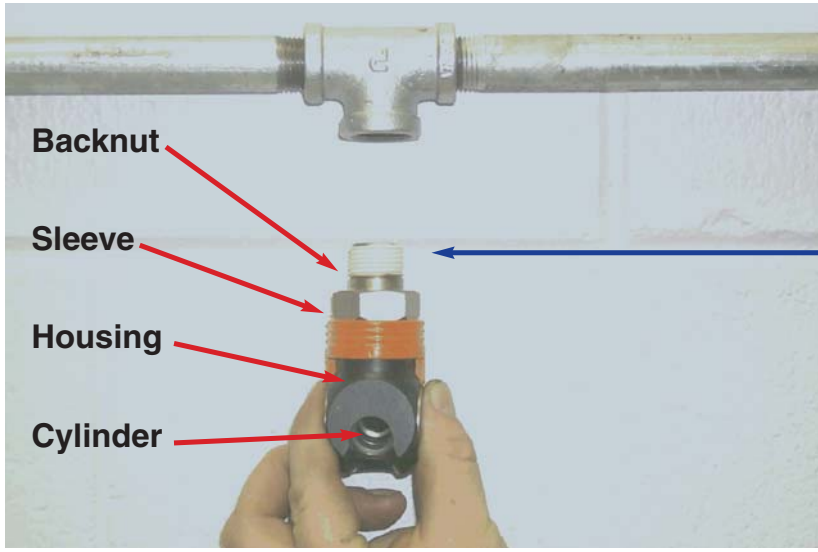


OETIKER®

Connecting Technology

OETIKER Swing Couplings

Installation Instructions



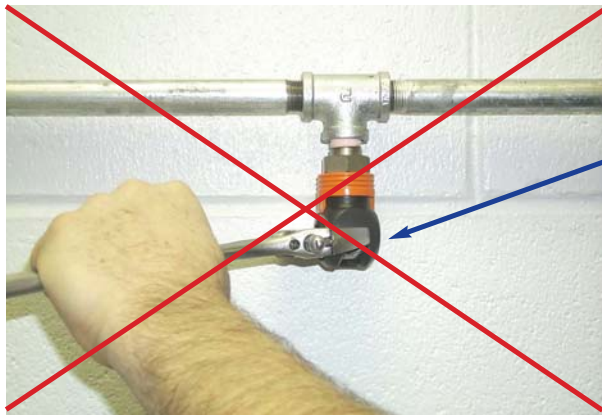
Oetiker Swing Coupling ready to be installed.

Sealant applied to NPT thread.

Assemble connection hand tight.

Tighten the connection by using the appropriate wrench on the hexagonal surface.(Backnut)

Ensure vent hole is pointed to the wall.



Do **not** install, remove or position the coupling using a wrench on the housing - **always** apply wrench to the backnut!

Do **not** apply any tools at the sleeve during or after installation of coupling!

For operating instructions please consult the OETIKER Swing Couplings Catalogue.

OETIKER Swing Couplings Whip Hose

Installation Examples

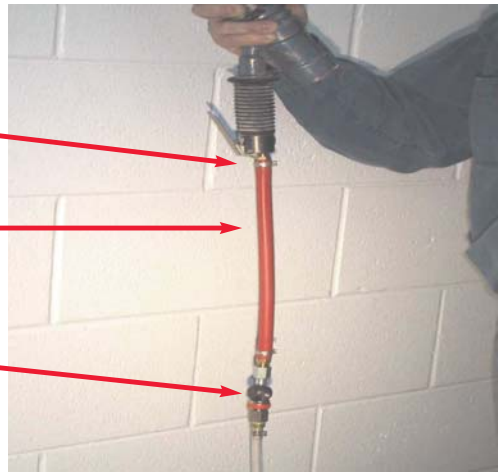
ISO 6150 – 7.1
Installation with vibrating tools

It is recommended that a minimum length of 300 mm of flexible hose for compressed air be inserted between a vibrating tool and the quick-action coupling.

Hose barb connection

Whip hose minimum 300 mm long

Oetiker Swing Coupling



Notes

The Air Distribution Subsystem

The air distribution subsystem, which connects the major components, is one of the most important parts of the compressed air system. It is made up of main trunk lines, hoses and valves, drops to specific usage points, pressure regulators and lubricators, additional filters and traps, and supplementary air treatment equipment. It is throughout this subsystem that most leaks occur, energy is lost, and maintenance is required. Equipment should be chosen to avoid excessive pressure drops and leakage. In addition, consideration of appropriate sizing of equipment and layout will provide for proper air supply, good tool performance, and optimal production. The complete drying, filtration, and distribution system should be sized and arranged so that the total pressure drop from the air compressor to the points of use is much less than 10% of the compressor discharge pressure.

The efficiency of the entire system can be enhanced by the proper selection, application, installation, and maintenance of each component.

Pressure Drop

Pressure drop is a term used to characterize the reduction in air pressure from the compressor discharge to the actual point of use. Pressure drop occurs as the compressed air travels through the treatment and distribution system. A properly designed system should have a pressure loss of much less than 10% of the compressor's discharge pressure, measured from the receiver tank output to the point of use.

Excessive pressure drop will result in poor system performance and excessive energy consumption. Flow restrictions of any type in a system require higher operating pressures than are needed, resulting in higher energy consumption. Minimizing differentials in all parts of the system is an important part of efficient operation. Pressure drop upstream of the compressor signal requires higher compression pressures to achieve the control settings on the compressor. The most typical problem areas include the aftercooler, lubricant separators, and check valves. This particular pressure rise resulting from resistance to flow can involve increasing the drive energy on the compressor by 1% of the connected power for each 2 psi of differential.

An air compressor capacity control pressure signal normally is located at the discharge of the compressor package. When the signal location is moved downstream of the compressed air dryers and filters, to achieve a common signal for all compressors, some dangers must be recognized and precautionary measures taken. The control range pressure setting must be reduced to allow for actual and potentially increasing pressure drop across the dryers and filters. Provision also must be made to prevent exceeding the maximum allowable discharge pressure and drive motor amps of each compressor in the system.

Pressure drop in the distribution system and in hoses and flexible connections at points of use results in lower operating pressure at the points of use. If the point of use operating pressure has to be increased, try reducing the pressure drops in the system before adding capacity or increasing the system pressure. Increasing the compressor discharge pressure or adding compressor capacity results in significant increases in energy consumption.

Elevating system pressure increases unregulated uses such as leaks, open blowing and production applications without regulators or with wide open regulators. The added demand at elevated pressure is termed "artificial demand", and substantially increases energy consumption. Instead of increasing the compressor discharge pressure or adding additional compressor capacity, alternative solutions should be sought, such as reduced pressure drop, strategic compressed air storage, and demand/intermediate controls. Equipment should be specified and operated at the lowest efficient operating pressure.

What Causes Pressure Drop?

Any type of **obstruction**, restriction or roughness in the system will cause resistance to air flow and cause pressure drop. In the distribution system, the highest pressure drops usually are found at the points of use, including in undersized or leaking hoses, tubes, disconnects, filters, regulators and lubricators (FRLs). On the supply side of the system, air/lubricant separators, aftercoolers, moisture separators, dryers and filters are the main items causing significant pressure drops.

The maximum pressure drop from the supply side to the points of use will occur when the compressed air flow rate and temperature are highest. System components should be selected based upon these conditions and the manufacturer of each component should be requested to supply pressure drop information under these conditions. When selecting filters, remember that they will get dirty. Dirt loading characteristics are also important selection criteria. Large end-users that purchase substantial quantities of components should work with their suppliers to ensure that products meet the desired specifications for differential pressure and other characteristics.

The distribution piping system often is diagnosed as having a high-pressure drop because a point of use pressure regulator cannot sustain the required down-stream pressure. If such a regulator is set at 85 psig and the regulator and/or the upstream filter has a pressure drop of 20 psi, the system upstream of the filter and regulator would have to maintain at least 105 psig. The 20 psi pressure drop may be blamed on the system piping rather than on the components at fault. The correct diagnosis requires pressure measurements at different points in the system to identify the component(s) causing the high pressure drop. In this case, the filter/regulator size needs to be increased, not the piping.

Minimizing Pressure Drop

Minimizing pressure drop requires a systems approach in design and maintenance of the system. Air treatment components, such as aftercoolers, moisture separators, dryers, and filters, should be selected with the lowest possible pressure drop at specified maximum operating conditions. When installed, the recommended maintenance procedures should be followed and documented. Additional ways to minimize pressure drop are as follows:

- Properly design the distribution system.
- Operate and maintain air filtering and drying equipment to reduce the effects of moisture, such as pipe corrosion.
- Select aftercoolers, separators, dryers and filters having the least possible pressure drop for the rated conditions.
- Reduce the distance the air travels through the distribution system.
- Specify pressure regulators, lubricators, hoses, and connections having the best performance characteristics at the lowest pressure differential.

Source: http://www.knowpressure.org/

Some Facts:

The horsepower required for a stationary single-stage electric compressor is approximately 28% that of its capacity, expressed in cfm (sea level at 125 psig). Source: Lyman Scheel

A water-cooled after-cooler will require approximately 3 USGPM per 100 cfm of air compressed to 100 psig. Source: Ingersoll-Rand

At 100 psi, a 6-inch diameter airline will carry 3,000 cfm one mile with a loss of approximately 12 psi. Source: Franklin Matthias

At 100 psi, a 4-inch diameter airline will carry 1,000 cfm one mile with a loss of approximately 12 psi. Source: Franklin Matthias

A line leak or cracked valve with an opening equivalent to 1/8-inch (3 mm) diameter will leak 25 cfm (42m3/min.) at 100 psig (7 bars). Source: Lanny Pasternack

In a well-managed system, the air leaks should not exceed 15% of productive consumption. Source: Lanny Pasternack

Except in South Africa, pneumatic drills are usually designed to operate at 90 psig (6.2 bars). Their drilling speed will be reduced by 30% at 70 psig (4.8 bars). Source: Christopher Bise

A line oiler reduces the air pressure by 5 psi. Source: Ingersoll-Rand

Point of use components – Rate of flow considerations at the point of use is much more important than in sizing distribution piping. When end users complain of low pressure the first thing blamed is the piping because "the user is at the other end of the system" or "the piping system has been expanded haphazardly over the years" (or whatever the excuse), the real problem is almost never the piping. The real source of problems described as "low pressure" usually resides in the choice of installed point of use components.

Compressed air is not typically viewed as a cost of production—but it is anything but “free.” The generation of compressed air requires a huge amount of energy—and a piecemeal approach to building a compressed air system serves to worsen the problem through leaks, mismatched supply/demand, and inappropriate uses. The result is unreliability, energy waste, reduced productivity, and higher operating costs.

Paying attention to the compressed air system can lead to a number of benefits. Compressed air is a utility that is generated in-house. That means that you have more control over it than any other utility. By learning more about efficient use of compressed air systems, you can improve efficiency, reduce costs, and increase productivity and reliability. This can lead to improved competitiveness, less downtime, and greater return on investment.

Notes

Compressed Air System Economics

Delivering compressed air to a manufacturing facility is an expensive operation. Delivery requires costly equipment that consumes significant amounts of electricity and needs frequent maintenance. In spite of this, many facilities have no idea how much their compressed air systems cost on an annual basis, or how much money they could save by improving the performance of these systems

Electricity costs are by far the largest expense of owning and operating a compressed air system. The initial cost for a 100-hp compressor is $30,000–-$50,000, depending on the type of compressor and manufacturer, while annual electricity charges for the same system can reach $50,000. Added to this are annual maintenance costs, which can be 10% or more of the initial cost of the system.

This Fact Sheet presents a simple calculation to estimate annual electricity costs, and a more accurate calculation requiring electrical measurements.

Calculating Electricity Costs

Full-load Operation. Even if an air compressor is not separately metered, estimating annual electricity cost is simple.

A Simple Calculation. The following data is needed for a quick calculation of electricity costs for a compressor operating at full-load:

- Compressor motor nameplate rating (bhp),
- Motor nameplate efficiency (or an estimate of efficiency),
- Annual hours of operation (hrs/year), and
- Cost of electricity ($/kWh)

Annual electricity costs can be calculated by performing the following:

Simple Calculation (100-hp Compressor)

Annual Electricity Costs =
(Motor full-load brake horsepower) x (0.746 kWhp) x (1/0.90) x (Annual Hours of Operation) x (Electricity Cost in $/kWh)

For example:

- Motor full-load bhp = 100 hp
- Annual hours of operation = 8,760 hours (3-shift, continuous operation)
- Cost of electricity = $0.05/kWh

Annual electricity costs =
(100 hp) x (0.746 hp/kW) x (1/0.9) x (8,760 hours) x ($0.05/kWh)
= $36,305

This equation assumes the electric motor driving the compressor is 90% efficient (the 90 in the 1/0.90 factor) -- a reasonable estimate for a modern system larger than 50 hp. Newer energy-efficient motors may have even higher efficiencies, especially since the Energy Policy Act minimum motor efficiency levels went into effect in late 1997. If the system uses an older motor that has been rewound several times, or has a smaller motor, 80% efficiency (or the motor nameplate efficiency rating) should be used. For a more accurate assessment, add the horsepower ratings for the parasitic loads from any auxiliary motors to the compressor motor rating.

It should be noted that the common practice in the industry is to apply motors having a 15% continuous service factor and to use about two-thirds of this

service factor. This means that a motor having a nominal nameplate rating of 100 hp may, in fact, be loaded to 110 bhp at compressor full capacity and pressure. This may not be expressed in the manufacturer=s sales literature, however, so engineering data sheets for the specific air compressor should be consulted.If the motor is running into the service factor, the higher horsepower estimate should be used instead of the nameplate horsepower rating.

A Calculation with Measurements. A more accurate way to determine electricity consumption and costs involves taking electrical measurements of both full-load amps and volts. Motor full-load bhp and efficiency are not required for this calculation, although full-load power factor, which can be obtained from motor manufacturers, is. The calculation takes full-load amps, converts to full-load kW, and then multiplies by hours of operation and electricity costs. A calculation is shown in the next text box.

More Detailed Calculation (100-hp Compressor)

Annual Electricity Costs =
((Full-load amps) x (volts) x (1.732) x (power factor))/1000 x
(Annual Hours of Operation) x (Electricity Cost in $/kWh)

For example:

- Full-load amps = 115 amps
- Voltage = 460 volts
- Full-load power factor = 0.85
- Annual hours of operation = 8,760 hours (3-shift, continuous operation)
- Cost of electricity = $0.05/kWh

Annual electricity costs =
((115 amps) x (460 volts) x (1.732) x (0.85)/1000) x
(8,760 hours) x ($0.05/kWh)
= $34,111

Pressure and Electricity Cost

High pressure air is more expensive to produce and deliver than low pressure air. For a system operating at around 100 psig, a rule of thumb is that every 2 psi in operating pressure requires an additional 1% in operating energy costs. In the system described in the first example shown, running the system at 110 psig instead of 100 psig would increase the energy costs by 5%, or $1,800 per year.

Savings From Performance Improvements

Due to the relatively low initial cost of the compressor when compared to lifetime electricity expenses, users should utilize life-cycle cost analysis when making decisions about compressed air systems. In addition, a highly efficient compressed air system is not merely a system with an energy-efficient motor or efficient compressor design. Overall system efficiency is the key to maximum cost savings. Too often users are only concerned with initial cost and accept the lowest bid on a compressed air system, ignoring system efficiency.

Thorough analysis and design will be required to obtain an efficient system. Many compressed air system users neglect these areas, thinking they are saving money, but end up spending much more in energy and maintenance costs.

A system that has undergone numerous modifications and has only been maintained enough to keep it running can frequently achieve energy savings of 20-50% or more. For the 100-hp system described previously, this represents annual savings of $7,000-$18,000. Larger systems will have correspondingly greater energy savings.

Too many decisions regarding compressed air systems are made on a first-cost basis, or with an "if it ain't broke, don't fix it" attitude. To achieve optimum compressed air system economics, compressed air system users should select equipment based on life-cycle economics, properly size components, turn off unneeded compressors, use appropriate control and storage strategies, and operate and maintain the equipment for peak performance.

Controlling System Pressure

Many plant air compressors operate with a full load discharge pressure of 100 psig and an unload discharge pressure of 110 psig or higher. Many types of machinery and tools can operate efficiently with an air supply at the point of use of 80 psig or lower. If the air compressor discharge pressure can be reduced, significant savings can be achieved. Check with the compressor manufacturer for performance specifications at different discharge pressures.

Demand controls require sufficient pressure drop from the primary air receiver into which the compressor discharges, but the plant header pressure can be controlled to a much narrower pressure range, shielding the compressor from severe load swings. Reducing and controlling the system pressure downstream of the primary receiver can result in a reduction in energy consumption of up to 10% or more, even though the compressors discharge pressure has not been changed.

Reducing system pressure also can have a cascading effect in improving overall system performance, reducing leakage rates, and helping with capacity and other problems. Reduced pressure also reduces stress on components and operating equipment. However, a reduced system operating pressure may require modifications to other components, including pressure regulators, filters, and the size and location of compressed air storage.

Lowering average system pressure requires caution since large changes in demand can cause the pressure at points of use to fall below minimum requirements, which can cause equipment to function improperly. These problems can be avoided with careful matching of system components, controls, and compressed air storage capacity and location.

For applications using significant amounts of compressed air, it is recommended that equipment be specified to operate at lower pressure levels. The added cost of components, such as larger air cylinders, usually will be recouped quickly from resulting energy savings. Production engineers often specify end-use equipment to operate at an average system pressure. This results in higher system operating costs. Firstly, the point of use installation components such as hoses, pressure regulators, and filters will be installed between the system pressure and the end-use equipment pressure. Secondly, filters will get dirty and leaks will occur. Both result in lower end-use pressure. This should be anticipated in specifying the available end-use pressure.

If an individual application requires a higher pressure, instead of raising the operating pressure of the whole system it may be best to replace or modify this application. It may be possible to have a cylinder bore increased, gear ratios may be changed, mechanical advantage improved, or a larger air motor may be used. The cost of the improvements probably will be insignificant compared with the energy reduction achieved from operating the system at the lower pressure.

It is also important to check if manufacturers are including pressure drops in filters, pressure regulators, and hoses in their pressure requirements for end-use equipment, or if the pressure requirements as stated are for after those components. A typical pressure differential for a filter, pressure regulator, and hose is 7 psid, but it could be much higher in poorly designed and maintained systems.

When demand pressure has been successfully reduced and controlled, attention then should be turned to the compressor control set points to obtain more efficient operation, and also to possible unloading or shutting off a compressor to further reduce energy consumption.

OETIKER

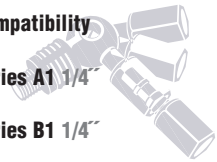
Swing Couplings SC

OETIKER®

Connecting Technology

OETIKER Connecting Technology
Swing Couplings SC

Contents



The OETIKER Group Worldwide

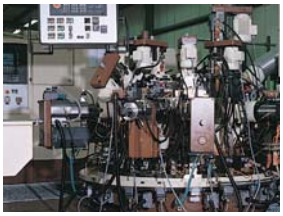
The primary objective of the OETIKER Group is to supply customers with safe and reliable products.
For over 50 years, OETIKER has revolutionized clamping of hoses, pipes and other objects with a great variety of clamps and rings for a wide range of materials. – All of it complemented by a full choice of quick action and swing couplings. The OETIKER Group was founded in Switzerland in 1943 and is now multinational with a worldwide network of companies which together offer their customers comprehensive planning, construction, design and service support.
OETIKER companies are strategically placed throughout the world to produce and supply connecting products. Manufacturing is standardized across all OETIKER production companies. OETIKER products are sold both by companies within the OETIKER Group and via a selected distributor network.
The OETIKER name is a protected trademark which stands for quality, innovation and continuous improvement, both literally and in the spirit intended by the founder of the company, Hans Oetiker. Numerous connecting technology patents are directly related to the OETIKER name.

OETIKER Quality Standards

All companies within the OETIKER Group are certified under – ISO/TS 16949 for production, research, development and sales. OETIKER companies already comply with the newly formulated environmental guidelines detailed in ISO 14001 which involve the careful use of resources, the use of recyclable materials and minimal use of chemical additives.
In order to ensure optimum quality throughout the world, all OETIKER companies use the latest in production and inspection equipment.

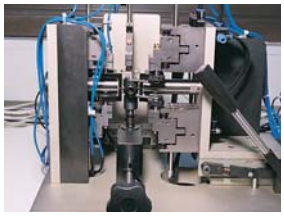
Research and Development...

...Experience, Know-how…



…Efficient Manufacturing Plants…

…Testing



Swing Couplings SC

The OETIKER SC Series: User friendly, economical, safe

Safely swing to connect. With full flow. No force required or loss of pressure in the system.
Just a turn and the air vent ensures that the hose is ventilated – thus rendering it harmless.
OETIKER swing couplings SC are available in nominal sizes 1/4″ to 1/2″ and in different models. They are compatible with most popular plug systems. The many different types and models and a wide choice of seals and lubricants mean that OETIKER couplings are suitable for numerous applications throughout industry.
Durability, reliability, simple and safe handling are features of all OETIKER swing couplings. OETIKER swing couplings fulfill all the requirements of current quality standards and have also been awarded a type examination certificate from the Swiss Accident Insurance Institute SUVA.

1/4″
Series A1
Series B1

3/8″
Series D
Series E

1/2″
Series H

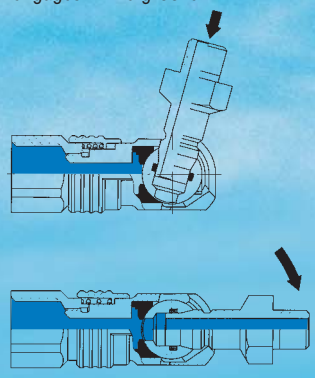
SC Swing to Connect

Simple and quick connection with no force or loss of pressure in the system: Operation of OETIKER swing coupling SC

Features

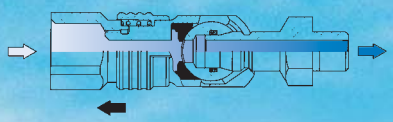
- In accordance with safety standard ISO 4414, EN 983
- Pressure always automatically off during the coupling process
- Full flow, negligible loss of pressure
- Simple operation, no force required
- Compact design
- NBR standard seal
- Silicone free standard lubrication
- Eco-design
- Det Norske Veritas
  Type approval no. P-10819
- CE

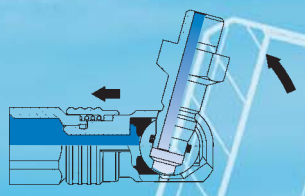
Connection
Push suitable plug into coupling and swing approximately 90º until the orange ring engages in the groove.



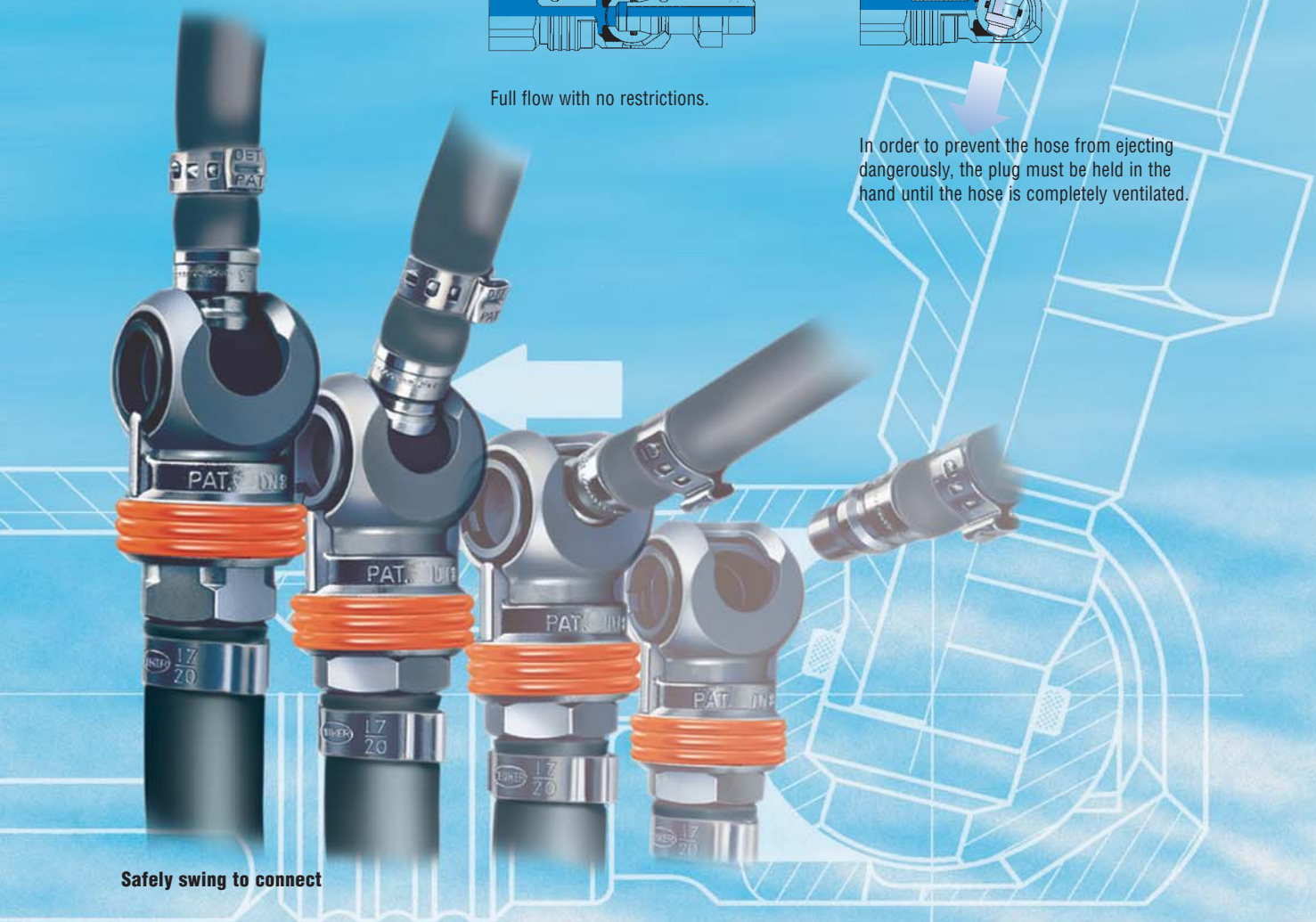
Full flow with no restrictions.

Disconnection
Pull back orange ring and swing plug to stop. Remove plug from coupling.





In order to prevent the hose from ejecting dangerously, the plug must be held in the hand until the hose is completely ventilated.

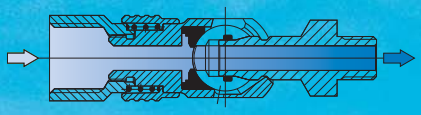


Safely swing to connect

SC Full Flow

More efficient, low energy consumption and safe: Use of the valveless OETIKER swing coupling SC

The new generation of OETIKER couplings, the valveless SC coupling model - result of innovative development and many years of experience – full flow guaranteed in every case.
When using compressed air operated equipment, for instance, in conjunction with OETIKER swing couplings SC, the result will always be a method of operation which is more efficient with low energy consumption, thus making it very economical.



Full flow
with negligible loss of pressure

Cross Section Model SC

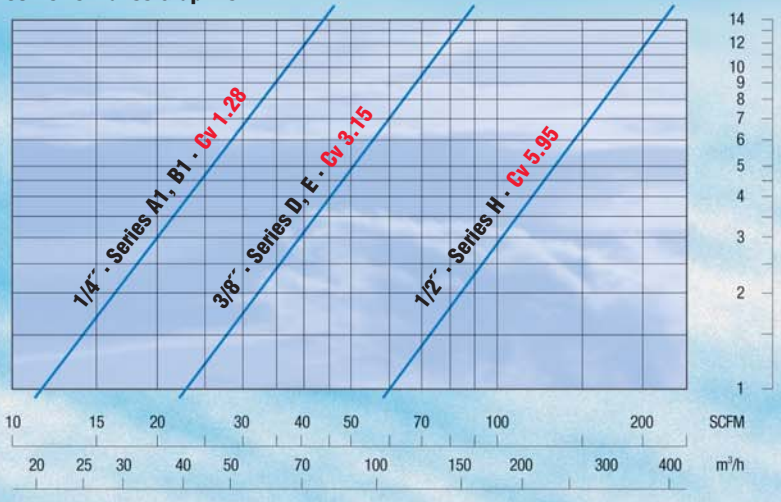
Application

Throughput media
Compressed air, gases, liquids and media with low to medium viscosity due to free flow with no restrictions. Easy to clean.

Pressure
Operating pressure up to 700 psi – connection and disconnection up to 200 psi – also suitable for technical vacuums (up to approximately 3 inHg).

Temperature
Standard model from -4º to +212ºF (-20° to +100°C). Higher temperatures possible depending upon media with the use of special FPM or EPDM seals (see page 15).

SC Performance Graph for Air



Flow rate at 68°F (20ºC), operating pressure 100 psi (6 bar)

SC Compatibility

Full compatibility with most popular plug systems: Guide for determining the most suitable OETIKER swing coupling SC

Plug form 1:1

Nominal Bore	SC Series	Standards	Compatible with*		Information Page
6 mm	Series **A1**	Plug in accordance with:	Aeroquip	FD41	8
1/4″		ISO 4414	Amflo	C37, C38	
			Aro	210	
			Cejn	300	
			Dixon	DCP 37, DCP 38	
			DynaQuip	DM-2	
			Fairview	QD-F35	
			Foster	210	
			Legris	14, 22	
			Parker	50	
			Prevost	A.. 06	
			Tomco	100	
			SNAP-Tite	37	

Nominal Bore	SC Series	Standards	Compatible with*		Information Page
6 mm	Series **B1**	Plug in accordance with:	Aeroquip	FD40, FD43 1/4″	9
1/4″		ISO 4414	Amflo	C20, C21	
		US: MIL-C-4109	Aro	MS, H-F 1/4″	
		ISO 6150-B-12	Cejn	310	
		AFNOR: B-12 NF E 49-053	Dixon	DC 20, DC 21	
			DynaQuip	D, DM, DC 1/4″	
			Fairview	QD-F37	
			Foster	3000	
			Hansen	30-SVS, 1000, 3000	
			Legris	23, 24	
			Milton	H Series	
			Parker	E-z, 20, 30, HF 1/4″	
			Prevost	I.. 06	
			Tomco	180	
			SNAP-Tite	37	

Nominal Bore	SC Series	Standards	Compatible with*		Information Page
8 mm	Series **D**	Plug in accordance with:	Cejn	315	10
3/8″		ISO 4414	Nitto	20, 30, 40	
			Rectus	13	

SC Compatibility

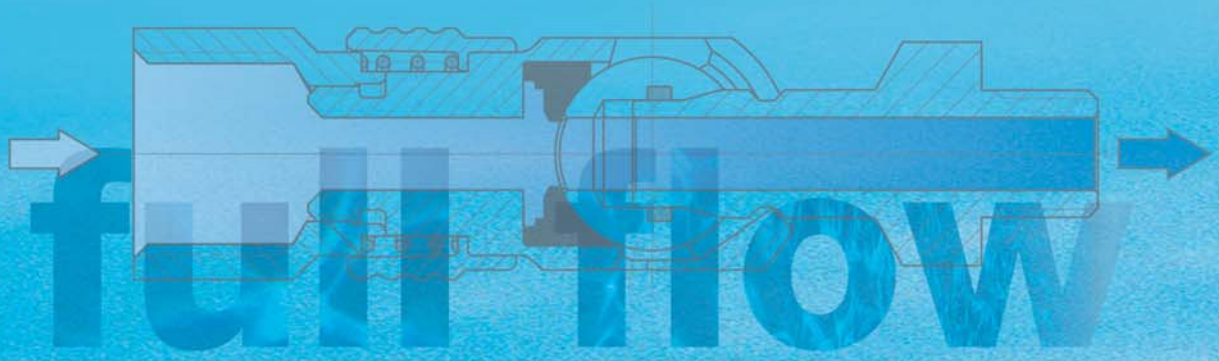
Full compatibility with most popular plug systems: Guide for determining the most suitable OETIKER swing coupling SC

Plug form 1:1

Nominal Bore	SC Series	Standards	Compatible with*		Information Page
8 mm	Series **E**	Plug in accordance with:	Aeroquip	FD40, FD43 3/8″	11
3/8″		ISO 4414	Amflo	C26, C25	
		US: MIL-C-4109	Aro	MS, H-F 3/8″	
		ISO 6150-B -15	Cejn	430	
		AFNOR: B-15 NF E 49-053	Dixon	DCP 26, DCP 25	
			DynaQuip	D, DM, DC, DP 3/8″	
			Fairview	QD-F37	
			Foster	4000	
			Hansen	40-SVS, 400, 4000	
			Legris	30	
			Parker	EZ, 20, 30, HF, PB 3/8″	
			Prevost	I.. 08	
			Tomco	T4000, T400	
			SNAP-Tite	37	

Nominal Bore	SC Series	Standards	Compatible with*		Information Page
11 mm	Series **H**	Plug in accordance with:	Aeroquip	FD40, FD43 1/2″	12
1/2″		ISO 4414	Amflo	C10, C9, CP18, CP17	
		US: MIL-C-4109	Aro	H-F, F-B 1/2″	
		ISO 6150-B-17	Cejn	550	
		AFNOR: B-17 NF E 49-053	Dixon	DC 10, DC 9	
			DynaQuip	D, DM, DC, DP 1/2″	
			Fairview	QD-F37	
			Foster	5000	
			Hansen	50-SVS, 500, 5000	
			Parker	EZ, 20, 30, PB 1/2″	
			Prevost	IRM 11	
			Tomco	T5000, T500	

* The list is not conclusive. Names and references are, in some instances, registered trademarks of other manufacturers.



1/4″

Swing Coupling SC Series A1

Actual size

Features

- In accordance with safety standard ISO 4414, EN 983
- Full flow, negligible loss of pressure
- Simple operation, no force required
- Compact design
- Det Norske Veritas Type approval no. P-10819
- CE

Temperature Range

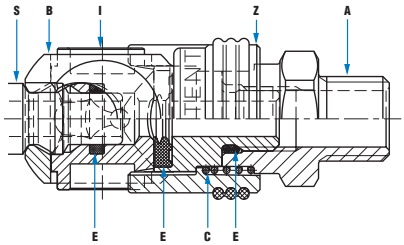
-4° to +212°F (-20º to +100ºC)

Operating Pressure

3 inHg to 700 psi, connection/ disconnection to maximum 200 psi

Materials, Seals, Lubricants

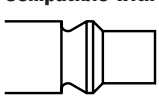
Guide to selection and ordering (see page 15).



Material Code

A = Steel, nickel plated / aluminium
B = Steel, black abrasion resistant finish
C = Stainless steel
E = Nitrile elastomer (NBR)
I = Surface hardened steel, nickel plated
S = Surface hardened steel, zinc plated
Z = Zinc diecast, nickel plated, orange plastic coating
Silicone-free standard lubrication

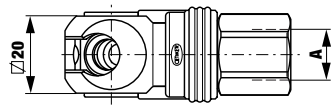
Compatible with



See page 6.

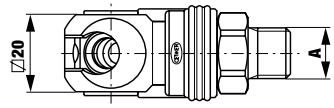
Swing coupling

with female thread



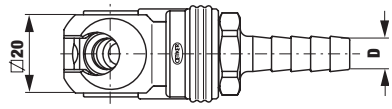
A	Part No.
NPT1/4″	205 00 291
NPT3/8″	205 00 292
NPT1/2″	205 00 293

with male thread



NPT1/4″	205 00 297
NPT3/8″	205 00 298
NPT1/2″	205 00 299

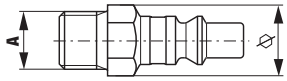
with hose barb



D	Part No.
HB 1/4″	205 00 395
HB 5/16″	205 00 396
HB 3/8″	205 00 397
HB 1/2″	205 00 398

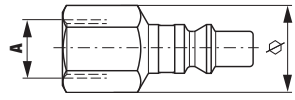
Plug

with male thread



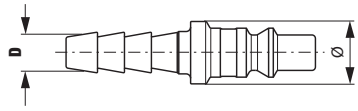
A	Part No.
NPT1/4″	255 00 003
NPT3/8″	255 00 066

with female thread



NPT1/4″	255 00 007
NPT 3/8″	255 00 068

with hose barb



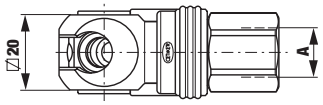
D	Part No.
HB 1/4″	255 00 240
HB 5/16″	255 00 241
HB 3/8″	255 00 242

Actual size

1/4″ Swing Coupling SC Series B1

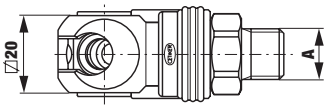
Swing coupling

with female thread



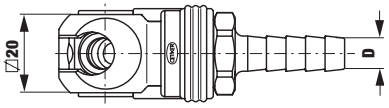
A	Part No.
NPT1/4″	205 00 311
NPT3/8″	205 00 312
NPT1/2″	205 00 313

with male thread



A	Part No.
NPT1/4″	205 00 317
NPT3/8″	205 00 318
NPT1/2″	205 00 319

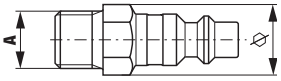
with hose barb



D	Part No.
HB 1/4″	205 00 399
HB 5/16″	205 00 400
HB 3/8″	205 00 401
HB 1/2″	205 00 402

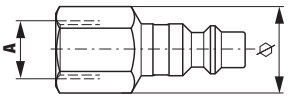
Plug

with male thread



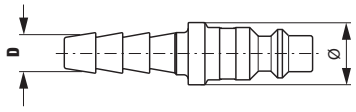
A	Part No.
NPT1/4″	255 00 014
NPT3/8″	255 00 069

with female thread



A	Part No.
NPT1/4″	255 00 018
NPT3/8″	255 00 274

with hose barb



D	Part No.
HB 1/4″	255 00 243
HB 5/16″	255 00 244
HB 3/8″	255 00 245

Features

- In accordance with safety standard ISO 4414, EN 983
- Model in accordance with ISO 6150-B-12, AFNOR: B-12 NF E 49-053 and US: MIL-C-4109
- Full flow, negligible loss of pressure
- Simple operation, no force required
- Compact design
- Det Norske Veritas Type approval no. P-10819
- CE

Temperature Range

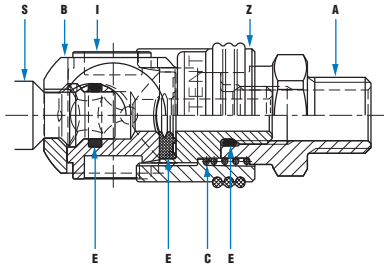
-4° to +212°F (-20º to +100ºC)

Operating Pressure

3 inHg to 700 psi, connection/ disconnection to maximum 200 psi

Materials, Seals, Lubricants

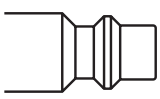
Guide to selection and ordering (see page 15).



Material Code

A = Steel, nickel plated / aluminium
B = Steel, black abrasion resistant finish
C = Stainless steel
E = Nitrile elastomer (NBR)
I = Surface hardened steel, nickel plated
S = Surface hardened steel, zinc plated
Z = Zinc diecast, nickel plated, orange plastic coating
Silicone-free standard lubrication

Compatible with



See page 6.

3/8″
Swing Coupling SC Series D

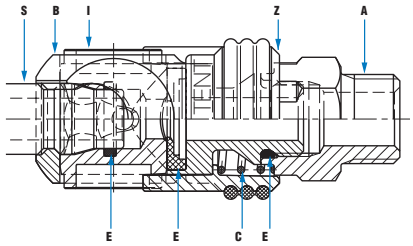
Actual size

Features
- In accordance with safety standard ISO 4414, EN 983
- Full flow, negligible loss of pressure
- Simple operation, no force required
- Compact design
- Det Norske Veritas Type approval no. P-10819
- CE

Temperature Range
-4° to +212°F (-20º to +100ºC)

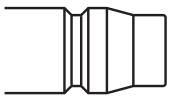
Operating Pressure
3 inHg to 700 psi, connection/ disconnection to maximum 200 psi

Materials, Seals, Lubricants
Guide to selection and ordering (see page 15).



Material Code
A = Steel, nickel plated / aluminium
B = Steel, black abrasion resistant finish
C = Stainless steel
E = Nitrile elastomer (NBR)
I = Surface hardened steel, nickel plated
S = Surface hardened steel, zinc plated
Z = Zinc diecast, nickel plated, orange plastic coating
Silicone-free standard lubrication

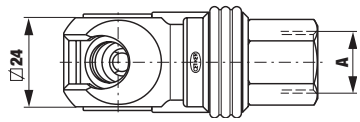
Compatible with



See page 6.

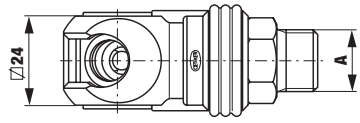
Swing coupling

with female thread



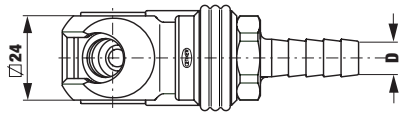
A	Part No.
NPT1/4″	205 00 034
NPT3/8″	205 00 035
NPT1/2″	205 00 036

with male thread



A	Part No.
NPT1/4″	205 00 426
NPT3/8″	205 00 037
NPT1/2″	205 00 038

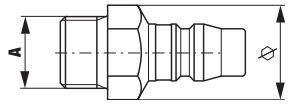
with hose barb



D	Part No.
HB 5/16″	205 00 410
HB 3/8″	205 00 411
HB 1/2″	205 00 412

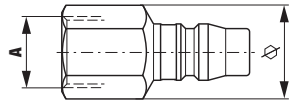
Plug

with male thread



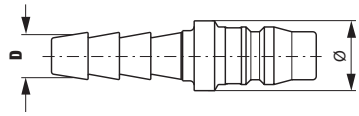
A	Part No.
NPT1/4″	255 00 058
NPT3/8″	255 00 059
NPT1/2″	255 00 060

with female thread



A	Part No.
NPT1/4″	255 00 061
NPT 3/8″	255 00 062
NPT1/2″	255 00 063

with hose barb



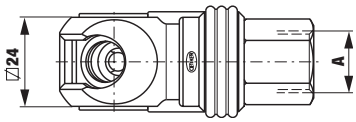
D	Part No.
HB 5/16″	255 00 249
HB 3/8″	255 00 250
HB 1/2″	255 00 251

Actual size

3/8″ Swing Coupling SC Series E

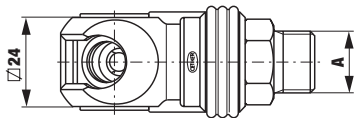
Swing coupling

with female thread



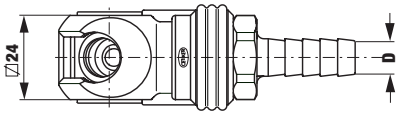
A	Part No.
NPT1/4″	205 00 052
NPT3/8″	205 00 026
NPT1/2″	205 00 027

with male thread



A	Part No.
NPT1/4″	205 00 214
NPT3/8″	205 00 030
NPT1/2″	205 00 031

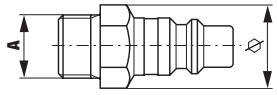
with hose barb



D	Part No.
HB 5/16″	205 00 416
HB 3/8″	205 00 417
HB 1/2″	205 00 418

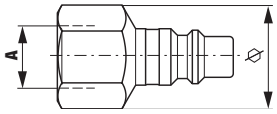
Plug

with male thread



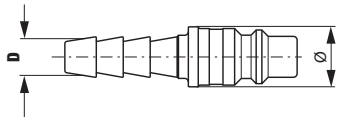
A	Part No.
NPT1/4″	255 00 236
NPT3/8″	255 00 044
NPT1/2″	255 00 045

with female thread



A	Part No.
NPT1/4″	255 00 237
NPT3/8″	255 00 049
NPT1/2″	255 00 050

with hose barb



D	Part No.
HB 5/16″	255 00 252
HB 3/8″	255 00 253
HB 1/2″	255 00 254
HB 5/8″	255 00 255

Features

- In accordance with safety standard ISO 4414, EN 983
- Model in accordance with ISO 6150-B-15, AFNOR: B-15 NF E 49-053 and US: MIL-C-4109
- Full flow, negligible loss of pressure
- Simple operation, no force required
- Compact design
- Det Norske Veritas Type approval no. P-10819
- CE

Temperature Range

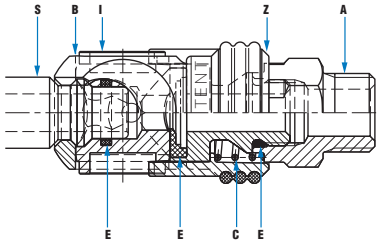
-4° to +212°F (-20º to +100ºC)

Operating Pressure

3 inHg to 700 psi, connection/ disconnection to maximum 200 psi

Materials, Seals, Lubricants

Guide to selection and ordering (see page 15).



Material Code

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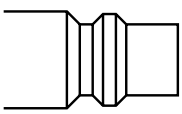
C = Stainless steel
E = Nitrile elastomer (NBR)
I = Surface hardened steel, nickel plated
S = Surface hardened steel, zinc plated
Z = Zinc diecast, nickel plated, orange plastic coating
Silicone-free standard lubrication

Compatible with



See page 7.

1/2˝

Swing Coupling SC Series H

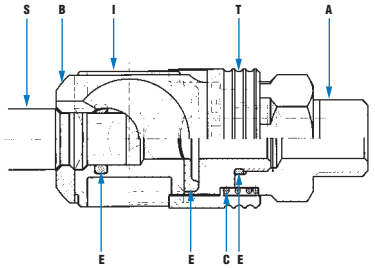
75% of actual size

Features
- In accordance with safety standard ISO 4414, EN 983
- Model in accordance with ISO 6150-B-17, AFNOR: B-17 NF E 49-053 and US: MIL-C-4109
- Full flow, negligible loss of pressure
- Simple operation, no force required
- Compact design
- Det Norske Veritas Type approval no. P-10819
- CE

Temperature Range
-4° to +212°F (-20º to +100ºC)

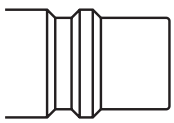
Operating Pressure
3 inHg to 700 psi, connection/ disconnection to maximum 200 psi

Materials, Seals, Lubricants
Guide to selection and ordering (see page 15).



Material Code
A = Steel, nickel plated / aluminium
B = Steel, black abrasion resistant finish
C = Stainless steel
E = Nitrile elastomer (NBR)
I = Surface hardened steel, nickel plated
S = Surface hardened steel, zinc plated
T = Steel, nickel plated, orange coated
Silicone-free standard lubrication

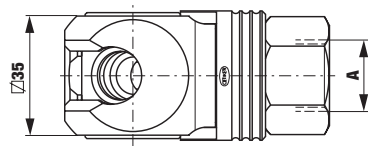
Compatible with



See page 7.

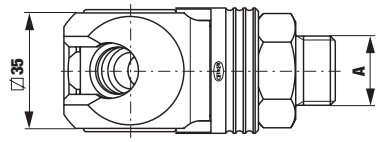
Swing coupling

with female thread



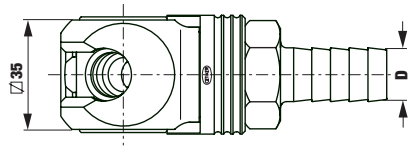
A	Part No.
NPT3/8˝	205 00 109
NPT1/2˝	205 00 110
NPT3/4˝	205 00 111

with male thread



NPT3/8˝	205 00 112
NPT1/2˝	205 00 113
NPT3/4˝	205 00 114

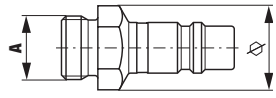
with hose barb



D	Part No.
HB 1/2˝	205 00 653

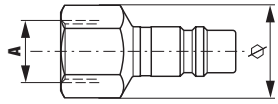
Plug

with male thread



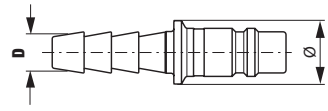
A	Part No.
NPT3/8˝	255 00 277
NPT1/2˝	255 00 278

with female thread



NPT3/8˝	255 00 279
NPT1/2˝	255 00 280

with hose barb



D	Part No.
HB 3/8˝	255 00 265
HB 1/2˝	255 00 266
HB 5/8˝	255 00 267

Covers, Protectors for OETIKER Swing Couplings SC

Suitable for hose	Part No.
1/4″ Series A1, B1	295 00 480
3/8″ Series D, E	295 00 481
1/2″ Series H	295 00 482

Protective Cover for OETIKER Swing Couplings SC

Slides over airline coupling installation. Provides complete protective coverage of coupling and adaptor.

Material
Vinyl

Suitable for series	Part No.
A1, B1	295 00 385
D, E	295 00 340

Covers for OETIKER Swing Couplings SC

The plastic cover is attached over the housing of the OETIKER swing coupling SC to protect the work piece, e.g. for work on car body parts, furniture, etc.

Material
Break-resistant polyamide, orange.

Suitable for series	Part No.
A1, B1	295 00 381
D, E	295 00 195

Protectors for OETIKER Swing Couplings SC

The plastic protector is attached over the OETIKER swing coupling SC as shown to protect the coupling from dust and dirt when not used.

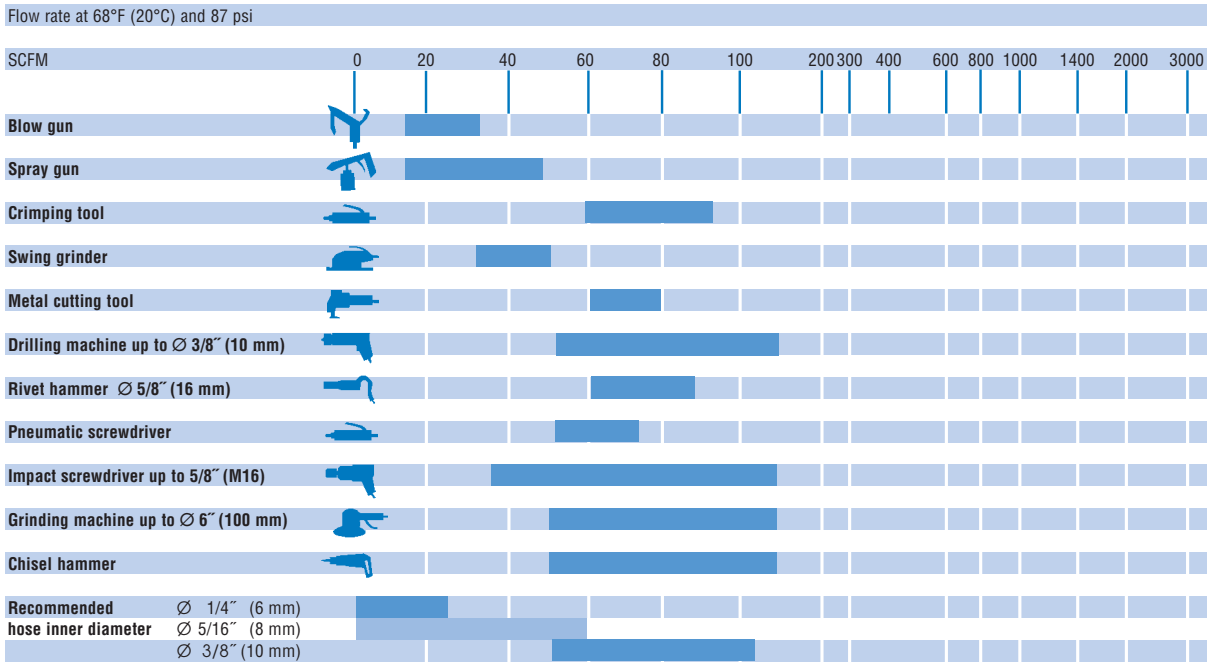
Material
Break-resistant polyamide, yellow.

Air Consumption of Pneumatic Hand Tools

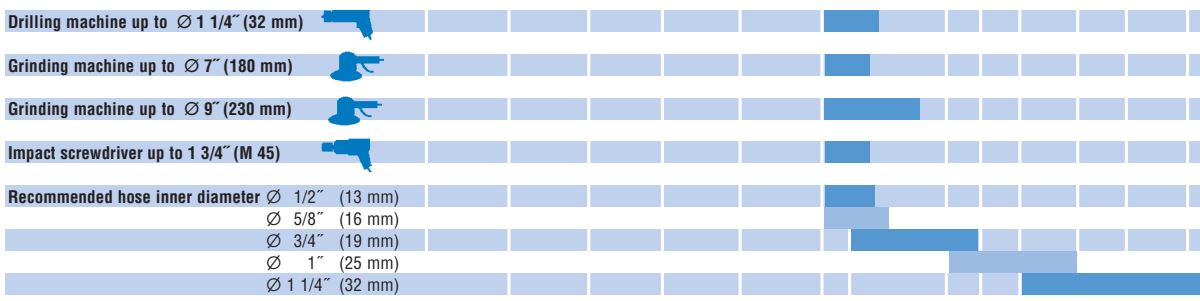
Excellent Seal
Even small leaks can lead to big losses and they can also cause serious accidents.

It has been shown that in the case of compressed air, leaking couplings account for an energy loss of 8 - 15%.

Applications for OETIKER Couplings Series A1, B1 1/4˝ D, E 3/8˝



Applications for OETIKER Couplings Series H 1/2˝



SC Materials, Seals, Lubricants

Guide to Selection and Ordering

Materials

OETIKER swing couplings are manufactured from high quality materials. Additional special surface treatments guarantee greater durability with less wear and tear and high resistance to corrosion.
The orange coating denotes safety – the plastic sleeve gives increased grip and helps to protect the work piece from possible damage. The cross section and material codes give details of the composition of each individual part.
In the case of air, gas and oil – as long as they are not mixed with any additives – OETIKER couplings made from standard materials will be suitable.
These details are not binding. Where there is any doubt, trials must be carried out.

Selection and Handling
Incorrect handling or the wrong choice of swing couplings or accessories can result in damage to property and/or personal injury. The maximum operating pressure for each model as specified by the manufacturer must not be exceeded. The throughput medium is a critical factor in the choice of seal and coupling material. External mechanical impact and/or vibration will have an adverse effect on the durability of couplings and accessories and should therefore be avoided or, where this is not possible, limited.
OETIKER recommends that couplings and accessories should be checked periodically for excessive wear and leaks.
OETIKER Customer Service Department will be happy to give you further details about the use of OETIKER couplings.
For more detailed information, please follow the Operating Instructions.

Seals

The following quality seals are available for OETIKER couplings. Various seals can be used depending upon the throughput media. All details are not binding. Before use, please contact OETIKER for information about the concentration, mixture or temperature of media. If there is any doubt, trials should be carried out. All legislation relating to foodstuffs must be observed.

Standard Type

Type N
Nitrile elastomer (NBR)
Resistant to ageing, high mechanical strength, resistant to oil and fuel.
Temperature from -4ºF to +212ºF (-20ºC to +100ºC).

Optional Seals

Type V
Fluorine elastomer (FPM)
Very good resistance at high temperatures (except for hot water and steam).
Good resistance to many chemicals, ozone, weather. Temperature from -4ºF to +554ºF (-15ºC to +200ºC).

Type P
Ethylene propylene elastomer (EPDM)
Very good resistance against hot water and steam, resistant to ageing and weather, not resistant to mineral oils and grease.
Temperature from -40ºF to +302ºF (-40ºC to +150ºC).

Lubricants

All OETIKER couplings are greased with the standard high quality silicone-free lubricant.

Note about Safety
ISO 6150 §7.1 recommends that a hose of at least 300 mm in length is used between the coupling and a vibrating tool. Please also read the operating instructions which are supplied with the coupling.

Note about Ordering
If, instead of the standard version, an optional seal is required, please specify this when ordering.

Notes

OETIKER

Swing Coupling by Oetiker®

Go with the Flow!

OETIKER Swing Couplings offer unrestricted full flow with safe, quick connection or disconnection under pressure. The ergonomic design provides superior sealing, ease of operation and long service life.

For compressed air supply lines to pneumatic tools and automation equipment as well as those carrying low viscosity fluids and gases.

OETIKER Swing Couplings perform best when used with precision-made OETIKER plugs — though, couplings are interchangeable with most plug systems.

sizes: 1/8" (3 mm) to 3/4" (19 mm)

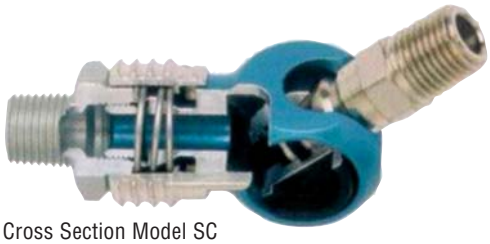
Use OETIKER Clamps to secure OETIKER Couplings to hose.

OETIKER
2-Ear Clamp

OETIKER®

Connecting Technology

Safely connected and disconnected under pressure



Cross Section Model SC

Quality Features
OETIKER Swing Couplings are manufactured from select grades of ferrous and non-ferrous materials. Special surface treatment on housings and cylinders guarantee durability with little wear and high corrosion resistance.

Maximum pressure rating of 25 bar/360 psi up to approx. 100 mbar vacuum. Do not exceed pressure limitations of the hose and/or operated device.

Standard models from -20° to +100°C (-4° to 212°F). Higher temperatures possible according to media with the use of special FPM, EPDM or FFKM seals.

OETIKER Swing Couplings are fitted with nitrile elastomer seals NBR (standard). Other seals are optional. Extra precaution must be taken with gaseous applications.

Every coupling is leakage tested – suitable for vacuum.

High quality lubricant is standard.
Special lubricants on request.

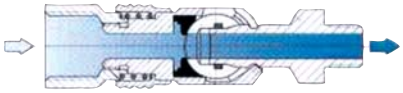
Safety Features
Simultaneous venting, the need to hold the hose end with the plug to be removed from the coupling during disconnecting reduces whiplash effect.

The orange colouring on the release sleeve signifies **safety**. The plastic coating affords increased grip and can also prevent damage to workpieces.

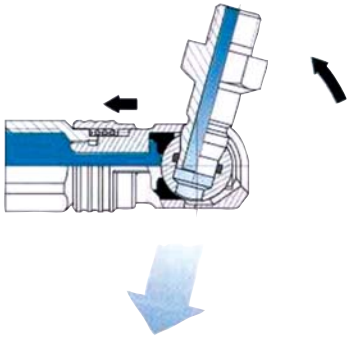
In accordance with ISO 6150,
safety standard: ISO 4414, MILC 4109

Notes
If barbed stems are used, barb stem size has to match inside diameter of the hose. Fittings/plugs must be secured to the hose with a hose clamp, preferably an OETIKER Clamp.

For chemical resistance to aggressive media, the coupling and seal components must be tested prior to use.



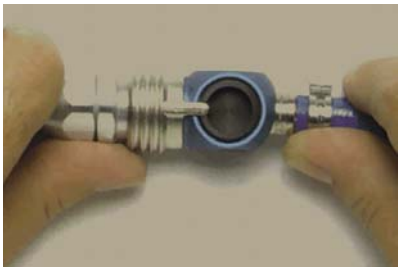
**unrestricted flow –
minimal loss of pressure**



Disconnect
retract release sleeve, swing plug into angled position and remove.

connect
- insert plug into coupling in angled position

swing
- swing plug with hose attached to straight position



full flow

08900630 /03/02 AWT TAPPE + PARTNER / PRINTED IN USA

new

OETIKER

Quick Action Couplings SV

2-Stage Non-Interchangeable

Danger of wrong line connections is eliminated as only adaptor with identical key fits

OETIKER®

Connecting Technology

Ask for further detailed information on the OETIKER Quick Action Couplings product range.

OETIKER
SV 2-Stage Non-Interchangeable

Danger of wrong line connections is eliminated

Features
- In accordance with safety standard ISO 4414, EN 983
- Safety feature: 2-stage disconnection
- Danger of wrong line connections is eliminated as only adaptor with identical key fits.
- Simple operation
- SGWA certificate

Application
Chemical and pharmaceutic industry, construction of technological installations, laboratory and medical technology, refinery, industry in general with risk of wrong line connections.

Media
Gases and liquids with low viscosity.

Operating Pressure
Up to 50 bar, (dis-) connection up to 15 bar. Also suitable for technical vacuum up to ca. 100 mbar.

Temperature Range
Standard version from -15°C up to +200°C. Dependent on the media higher temperatures are possible using special seals.

Materials
Coupling and Adaptor with check valve: W-No. 1.0737, chemically nickel-plated or stainless steel W-No. 1.4435.
Adaptor: Stainless steel W-No. 1.4435.

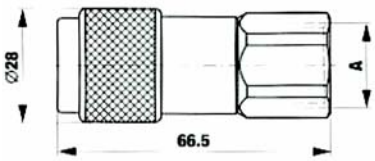
Seals
Seal: FPM
Special Seals: NBR, MVQ, EPDM, FFKM

Lubricant
Coupling: High pressure lubricant for use with gaseous or liquid oxygen.
Adaptor and Adaptor with check valve: Oil- and grease-free.

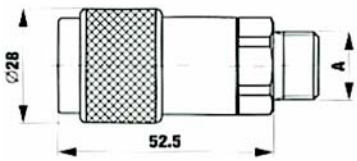
Special Executions
Other lubricants, colour coding, and connections available on request.

Quick Action Coupling

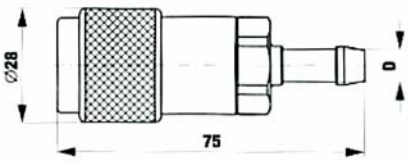
with female thread G 1/4, 3/8, 1/2



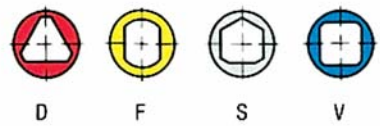
with male thread G 1/4, 3/8



with hose stem LW 6, 8, 10

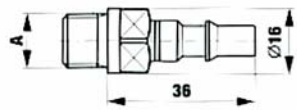


Keys (colour coding)

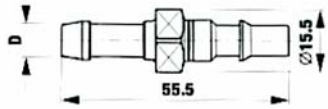


Adaptor

with male thread G 1/8, 1/4

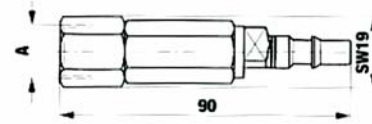


with hose stem LW 6, 8, 10

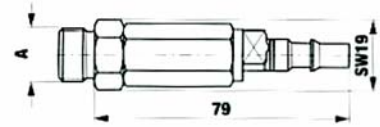


Adaptor with check valve

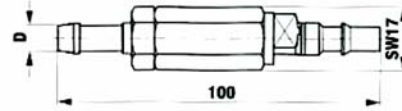
with female thread G 1/4, 3/8



with male thread G 1/4, 3/8



with hose stem LW 6, 8, 10



Internet: www.oetiker.com

OETIKER has been developing connecting technology for over 50 years. OETIKER products are manufactured by its own companies in line with ISO/TS 16949 and sold worldwide by subsidiary companies or agents in over 40 countries. Numerous patents are proof of continuous innovation.

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OETIKER®
Connecting Technology

08901244 /10.02 / AWT TAPPE + PARTNER

INDUSTRIAL QUICK COUPLER Cross Reference

NORTHWEST HYDRO LINE	HANSEN	AMFLO	DIXON	ARO	TOMCO	MILTON	FOSTER	PARKER	OETIKER	
B200X4X2F	800	C20-21	DC2021	23102-1	M183	707	2803	B23A	N/A	
B200X4X4F	1000	C20B	DC20	23102-200	M184	715	3003	B23	205 00 311	STEEL
B200X4X6F	1200	C20-23	DC2023	23102-3	M185	718	3202	B23E	205 00 312	STEEL
B200X6X4F	400	C26-22	DC2622	23103-3	T400	1833	4004	25C	205 00 052	
B200X6X6F	420	C26	DC26	23103-300	T420	1835	4204	25	205 00 026	
B200X6X6F"B"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B25	205 00 026	STEEL
B200X6X8F	440	C26-24	DC2624	23103-4	T440	N/A	4404	25F	205 00 027	
B200X8X6F	500	C10-23	DC1023	23104-3	T500	1813	5005	17E	205 00 109	
B200X8X8F	520	C10	DC10	23104-400	T520	1815	5205	17	205 00 110	
B200X8X8F"B"	N/A	C10B	N/A	N/A	N/A	N/A	N/A	B17	205 00 110	STEEL
B200X8X12F	540	C10-26	DC1026	23104-5	T540	N/A	5405	17G	205 00 111	
B200X4X2M	900	C21-01	DC2101	23102-11	M180	708	2903	B22A	N/A	
B200X4X4M	1100	C21B	DC21	23102-212	M181	716	3103	B22	205 00 317	STEEL
B200X4X6M	1300	C21-03	DC2103	23102-213	M182	719	3303	B22E	205 00 318	STEEL
B200X6X4M	410	C25-02	DC2502	23103-12	T410	N/A	4104	24C	205 00 214	
B200X6X6M	430	C2	DC25	23103-313	T430	1836	4304	24	205 00 030	
B200X6X6M"B"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	B24	205 00 030	STEEL
B200X6X8M	450	C25-04	DC2504	23103-14	T450	N/A	4504	24F	205 00 031	
B200X8X6M	510	C9-03	DC903	23104-13	T510	1814	5105	16E	205 00 112	
B200X8X8M	530	C9	DC9	23104-14	T530	1816	5305	16	205 00 113	
B200X8X8M"B"	N/A	C9B	N/A	N/A	N/A	N/A	N/A	B16	205 00 113	STEEL
B200X8X12M	550	C9-06	DC906	23104-15	T550	N/A	5505	16G	205 00 114	
B200X4X4HB	1600	C20-42	DC2042	23102-22	M186	717	3603	B20-3B	205 00 399	STEEL
B200X4X5HB	1800	C20-43	DC2043	23102-23	M188	N/A	3653	B20-4B	205 00 400	STEEL
B200X4X6HB	1700	C20-44	DC2044	23102-24	M187	717-6	3703	B20-5B	205 00 401	STEEL
B200X6X4HB	4004	C26-42	DC2642	23103-22	T460	N/A	4604	N/A	N/A	
B200X6X6HB	4006	C26-44	DC2644	23103-324	T480	1836-6	4804	24-5B	205 00 417	
B200X6X8HB	4008	C26-45	DC2645	23103-25	T490	N/A	4904	24-6B	205 00 418	
B200X8X6HB	570	C10-44	DC1044	23104-24	T570	N/A	5705	16-5B	N/A	
B200X8X8HB	580	C10-45	DC1045	23104-25	T580	N/A	5805	16-6B	N/A	
B200X8X12HB	590	C10-46	DC1046	23104-26	T590	N/A	5905	16-7B	N/A	
B200X4X4PO	1600P	C20-42L	N/A	23102-27	M189	1717-4	1513	B20-3BP	N/A	
B200X4X6PO	1700P	C20-44L	N/A	23102-28	M190	1717-6	1713	B20-5BP	N/A	
B200X6X4PO	N/A	C26-42L	N/A	23103-27	N/A	N/A	N/A	N/A	N/A	
B200X6X6PO	N/A	C26-44L	N/A	23103-28	N/A	1796-6	1714	24-5BP	N/A	
B200X8X6PO	N/A	N/A	N/A	23104-28	N/A	N/A	1715	16-5BP	N/A	
B200X8X8PO	N/A	N/A	N/A	23104-29	N/A	N/A	1815	16-6BP	N/A	

OETIKER®

INDUSTRIAL PLUG Cross Reference

NORTHWEST HYDRO LINE	HANSEN	AMFLO	DIXON	ARO	TOMCO	MILTON	FOSTER	PARKER	OETIKER	
P400X4X2F	13	CP20-21	DCP2021	23902-100	1803	729	13-3	H1C	N/A	
P400X4X4F	11	CP20	DCP20	23902-200	1805	728	11-3	H3C	255 00 018	
P400X4X4F"B"	11B	CP20B	N/A	N/A	1805B	N/A	11-3B	BH3C	255 00 018	STEEL
P400X4X6F	15	CP20-23	DCP2023	23902-3	1807	732	15-3	H3C-E	255 00 274	
P400X6X4F	41	CP26-22	DCP2622	23903-200	T41	1840	41-4	H1E	255 00 237	
P400X6X6F	43	CP26	DCP26	23903-300	T43	1838	43-4	H3E	255 00 049	
P400X6X6F"B"	B43	N/A	N/A	N/A	N/A	N/A	N/A	BH3E	255 00 049	STEEL
P400X6X8F	45	CP26-24	DCP2624	23903-4	T45	N/A	45-4	H3E-F	255 00 050	
P400X8X6F	53	CP18-23	DCP1823	23904-3	T53	1860	53-5	H1F	255 00 279	
P400X8X8F	55	CP18	DCP18	23904-400	T55	1858	55-5	H3F	255 00 280	
P400X8X8F"B"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BH3F	255 00 280	STEEL
P400X8X12F	57	CP18-26	DCP1826	23904-5	T57	N/A	57-5	H3F-G	255 00 281	
P400X12X8F	N/A	CP70-24	DCP7024	N/A	N/A	N/A	65-6	H3G-F	AVAILABLE	
P400X12X12F	N/A	CP70-26	DCP7026	N/A	N/A	N/A	67-6	H3G	AVAILABLE	
P400X12X16F	N/A	CP70-28	DCP7028	N/A	N/A	N/A	69-6	H3G-J	AVAILABLE	
P400X4X2M	12	CP21-01	DCP2101	23902-110	1802	726	12-3	HOC	N/A	
P400X4X4M	10	CP21	DCP21	23902-210	1804	727	10-3	H2C	255 00 014	
P400X4X4M"B"	B10	CP21B	N/A	N/A	1804B	N/A	10-3B	BH2C	255 00 014	STEEL
P400X4X6M	14	CP21-03	DCP2103	23902-310	1806	733	14-3	H2C-E	255 00 069	
P400X6X2M	38	N/A	N/A	N/A	T38	N/A	38-4	HOOE	N/A	
P400X6X4M	40	CP25-02	DCP2502	23903-210	T40	1839	40-4	HOE	255 00 236	
P400X6X6M	42	CP25	DCP25	23903-310	T42	1837	42-4	H2E	255 00 044	
P400X6X6M"B"	B42	N/A	N/A	N/A	N/A	N/A	42-4B	BH2C	255 00 236	STEEL
P400X6X8M	44	CP25-04	DCP2504	23903-410	T44	N/A	44-4	H2E-F	255 00 045	
P400X8X6M	52	CP17-03	DCP1703	23904-310	T52	1859	52-5	HOF	255 00 277	
P400X8X8M	54	CP17	DCP17	23904-410	T54	1857	54-5	H2F	255 00 278	
P400X8X8M"B"	B54	N/A	N/A	N/A	N/A	N/A	54-5B	BH2F	255 00 278	STEEL
P400X8X12M	56	CP17-06	DCP1706	23904-510	T56	N/A	56-5	H2F-G	AVAILABLE	
P400X12X8M	N/A	CP71-04	DCP7104	N/A	N/A	N/A	64-6	H2G-F	AVAILABLE	
P400X12X12M	N/A	CP71-06	DCP7106	N/A	N/A	N/A	66-6	H2G	AVAILABLE	
P400X12X12M"B"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BH2G	AVAILABLE	STEEL
P400X12X16M	N/A	CP71-08	DCP7108	N/A	N/A	N/A	68-6	H2G-J	AVAILABLE	
P400X4X4HB	16	CP21-42	DCP2142	23902-220	1824	736	16-3	H8C	255 00 243	
P400X4X4HB"B"	N/A	N/A	N/A	N/A	N/A	N/A	16-3B	N/A	N/A	
P400X4X5HB	18	CP21-43	DCP2143	23902-320	1827	N/A	165-3	H8C-D	255 00 244	
P400X4X6HB	17	CP21-44	DCP2144	23902-420	1826	736-6	17-3	H9C	255 00 245	
P400X6X4HB	404	CP25-42	DCP2542	23903-220	T46	N/A	46-4	N/A	N/A	
P400X6X6HB	406	CP25-44	DCP2544	23903-420	T48	1837-6	48-4	H5E	255 00 253	
P400X6X8HB	408	CP25-45	DCP2545	23903-520	T49	N/A	49-4	H6E	255 00 254	
P400X8X6HB	59	CP17-44	DCP1744	23904-420	T59	N/A	59-5	H4F	255 00 265	
P400X8X8HB	60	CP17-45	DCP1745	23904-520	T60	N/A	60-5	H5F	255 00 266	
P400X8X12HB	61	CP17-46	DCP1746	23904-620	T61	N/A	61-5	H5F-G	N/A	
P400X12X8HB	N/A	CP71-45	DCP7145	N/A	N/A	N/A	70-6	H5G-F	N/A	
P400X12X12HB	N/A	CP71-46	DCP7146	N/A	N/A	N/A	71-6	H5G	N/A	
P400X12X12HB"B"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	BH5G	N/A	
P400X12X16HB	N/A	CP71-48	DCP7148	N/A	N/A	N/A	72-6	H5G-J	N/A	
P400X4X4PO	16P	CP21-42L	N/A	23902-27	1850	1736-4	51-3	H8CP	N/A	
P400X4X4PO"B"	N/A	N/A	N/A	N/A	1850B	N/A	N/A	BH8CP	N/A	
P400X4X6PO	17P	CP21-44L	N/A	23902-28	1860	1736-6	71-3	H9CP	N/A	

OETIKER®

AUTOMATIC QUICK COUPLER Cross Reference

NORTHWEST HYDRO LINE	HANSEN	AMFLO	DIXON	ARO	TOMCO	MILTON	FOSTER	PARKER	OETIKER	
B300X4X2F	2800	N/A	N/A	23002-201	183	707	FM2803	B33A	N/A	
B300X4X4F	3000	N/A	DCB20	23002-200	184	715	FM3003	B33	205 00 311	STEEL
B300X4X6F	3200	N/A	DCB2023	23002-203	185	718	FM3203	B33E	205 00 312	STEEL
B300X6X4F	4000	N/A	DCB2622	N/A	T4000	1833	FM4004	B35C	205 00 052	STEEL
B300X6X6F	4200	N/A	DCB2622	N/A	T4200	1835	FM4204	B35	205 00 026	STEEL
B300X6X8F	4400	N/A	DCB2624	N/A	T4400	N/A	FM4404	B35F	205 00 027	STEEL
B300X8X6F	5000	N/A	DCB1023	N/A	T5000	1813	FM5005	B37E	205 00 109	STEEL
B300X8X8F	5200	N/A	DCB10	N/A	T5200	1815	FM5205	B37	205 00 110	STEEL
B300X8X12F	5400	N/A	DCB1026	N/A	T5400	N/A	FM5405	B37G	205 00 111	STEEL
B300X12X8F	6200	N/A	DC7024	N/A	N/A	N/A	FM6206	B39F	AVAILABLE	STEEL
B300X12X12F	6400	N/A	DC7026	N/A	N/A	N/A	FM6406	B39	AVAILABLE	STEEL
B300X12X16F	6600	N/A	DC7028	N/A	N/A	N/A	FM6606	B39J	AVAILABLE	STEEL
B300X4X2M	2900	N/A	N/A	N/A	180	708	FM2903	B32A	N/A	
B300X4X4M	3100	N/A	DCB21	23002-212	181	716	FM3103	B32	205 00 317	STEEL
B300X4X6M	3300	N/A	DCB2103	23002-213	182	719	FM3303	B32E	205 00 318	STEEL
B300X6X4M	4100	N/A	DCB2502	N/A	T4100	N/A	FM4104	B34C	205 00 214	STEEL
B300X6X6M	4300	N/A	DCB25	N/A	T4300	1836	FM4304	B34	205 00 030	STEEL
B300X6X8M	4500	N/A	DCB2504	N/A	T4500	N/A	FM4504	B34F	205 00 031	STEEL
B300X8X6M	5100	N/A	DCB903	N/A	T5100	1814	FM5105	B36E	205 00 112	STEEL
B300X8X8M	5300	N/A	DCB9	N/A	T5300	1816	FM5305	B36	205 00 113	STEEL
B300X8X12M	5500	N/A	DCB906	N/A	T5500	N/A	FM5505	B36G	205 00 114	STEEL
B300X12X8M	6300	N/A	DC7104	N/A	N/A	N/A	FM6306	B38F	AVAILABLE	STEEL
B300X12X12M	6500	N/A	DC7106	N/A	N/A	N/A	FM6506	B38	AVAILABLE	STEEL
B300X12X16M	6700	N/A	DC7108	N/A	N/A	N/A	FM6706	B38J	AVAILABLE	STEEL
B300X4X4HB	3600	N/A	DCB2042	N/A	186	717	FM3603	B30-3B	205 00 399	STEEL
B300X4X5HB	3800	N/A	N/A	23002-223	188	N/A	FM3653	B30-4B	205 00 400	STEEL
B300X4X6HB	3700	N/A	DCB2044	23002-224	187	717-6	FM3703	B30-5B	205 00 401	STEEL
B300X6X6HB	40600	N/A	DCB2644	N/A	T4800	1836-6	FM4804	B34-5B	205 00 417	STEEL
B300X6X8HB	40800	N/A	DCB2645	N/A	T4900	N/A	FM4904	B34-6B	205 00 418	STEEL
B300X8X8HB	5800	N/A	DCB1045	N/A	T5800	N/A	FM5805	B36-6B	N/A	
B300X8X12HB	5900	N/A	DCB1046	N/A	T5900	N/A	FM5905	B36-7B	N/A	
B300X12X8HB	6800	N/A	DC7045	N/A	N/A	N/A	FM6806	B38-6B	N/A	
B300X12X12HB	6900	N/A	DC7046	N/A	N/A	N/A	FM6906	B38-7B	N/A	
B300X12X16HB	7000	N/A	DC7048	N/A	N/A	N/A	FM7006	B38-8B	N/A	

ARO STYLE COUPLER Cross Reference

NORTHWEST HYDRO LINE	HANSEN	AMFLO	DIXON	ARO	TOMCO	MILTON	FOSTER	PARKER	OETIKER
B500X4X4F	20AS-25F	C38	DC38	210	M100	775	210-3003	B53	205 00 291
B500X4X6F	20AS-37F	C38-23	DC3823	210-203	M106	N/A	210-3203	B53E	205 00 292
B500X4X4M	20AS-25M	C37	DC37	210-212	M101	N/A	210-3103	B52	205 00 297
B500X4X6M	20AS-37M	C37-03	DC3703	210-213	M107	N/A	210-3303	B52E	205 00 298
B500X4X4HB	20AS-25H	C38-42	DC3842	N/A	M104	776-4	210-3603	N/A	205 00 395
B500X4X6HB	20AS-37H	C38-44	DC3844	N/A	M105	776-6	210-3703	N/A	205 00 397
B500X4X4PO	20AS-25HP	C38-42L	N/A	210-227	N/A	1776-4	210-1513	B50-3BP	N/A
B500X4X6PO	20AS-37HP	C38-44L	N/A	N/A	N/A	1776-6	210-1713	B50-5BP	N/A

ARO STYLE PLUG

NORTHWEST HYDRO LINE	HANSEN	AMFLO	DIXON	ARO	TOMCO	MILTON	FOSTER	PARKER	OETIKER
P500X4X4F	20AP-25F	CP38	DCP38	2609	300	778	210-11	A3C	255 00 007
P500X4X6F	20AP-37F	CP38-23	DCP3823	22237	N/A	N/A	N/A	N/A	255 00 068
P500X4X4M	20AP-25M	CP37	DCP37	2608	200	777	210-10	A2C	255 00 003
P500X4X6M	20AP-37M	CP37-03	DCP3703	22236	N/A	N/A	N/A	N/A	255 00 066
P500X4X4HB	20AP-25H	CP37-42	DCP3742	3946	400	777-4	210-16	A8C	255 00 240
P500X4X4PO	20AP-25HP	CP37-42L	N/A	6944	N/A	1777-4	210-51	A8CP	N/A

AUTOMOTIVE STANDARD COUPLER and PLUG Cross Reference

NORTHWEST HYDRO LINE	HANSEN	AMFLO	DIXON	ARO	TOMCO	MILTON	FOSTER	PARKER	OETIKER
All	All	All	All	All	All	All	All	All	N/A

Oetiker does not produce an automotive design coupler.

OETIKER®

OETIKER
Swing Couplings SC

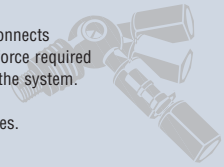
OETIKER Products

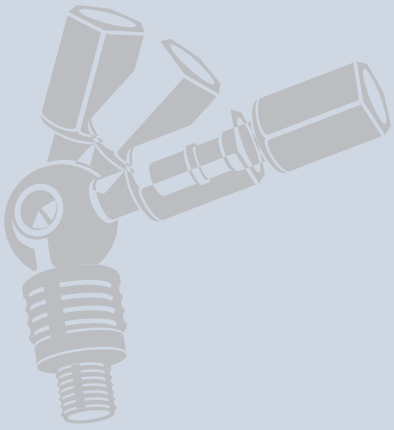
Clamps and Rings

Permanent, tight connection will only be released if required.
For all clamping and pressure ranges, hard or soft materials, hoses, cables or ropes.
Made from tube or band, stepless, self-tensioning or reusable.
Simple and straightforward to use.
Tools and accessories available.

Couplings

Safely swing to connect. Connects easily and quickly with no force required and no loss of pressure in the system.
Full flow. Compatible with most current adaptor profiles.





Internet: www.oetiker.com

OETIKER has been developing connecting technology for over 50 years.
OETIKER products are manufactured by its own companies in line with ISO/TS 16949 and sold worldwide by subsidiary companies or agents in over 40 countries.
Numerous patents are proof of continuous innovation.

SC Training Presentation Binder / 10.03

OETIKER®
Connecting Technology

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