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# Design Concepts

Eaton's Carter product line includes Model 64900, designed to supersede earlier Model 60700-1. It is used for air reference pressure control systems. Two other versions are also available, Model 64902 for digital pressure control systems, and Model 64903, which is electro-hydraulically controlled. Many new features have been incorporated at the request of long-time users of the earlier Model 60700-1 coupler, the standard of the industry for over 35 years.

## Features

- Mates all adapters in accordance with API Bulletin 1584
- Air/fuel sense ports parallel to outlet
- All ports with straight O-ring sealed threads
- 3 and 4 inch NPT or BSPP outlet threads available
- Air bleed under sealed screw
- Closing time adjustment accessible without removal of air port fitting
- Studs used for connecting lower half, reducing chance of over-tightening connecting fasteners
- Earlier Model 60700-1 couplers can be retrofitted to gain most new features by changing only the elbow half
- Outlet of elbow is flanged to accept various outlet male adapter fittings. Options to mate older quick disconnects (QDs) available, reducing maintenance costs if male fitting is damaged.
- Thumb latches on QD — easier to remove from hose with no tools. Safety locking ring available as an option.

- Optional carrying handles available. Transverse-mounting standard, parallel optional. A second QD-mounted handle is also available.
- Carriage affixed by studs. No special length bolts required, reducing chances for errors when carriage is added in the field.
- Port to connect to hydrant provided on coupler. No special hose assembly required
- Parts common to 4 inch inline valves and Model 60700-1 coupler used for less costly maintenance
- Lower half of coupler (connecting unit to hydrant) has not been changed
- Design changes have not increased weight
- Suitable for operating pressures of 200 psig (13.793 bar) and system proof pressure of up to 450 psig (31.034 bar)
- Mates with all standard hydrant valves in accordance with API Bulletin 1584
- Pressure drop — 21.0 psi (1,448 bar) across mating Model 60554 hydrant valve and Model 64900 coupler at 1000 USgpm (3,785 l/min)

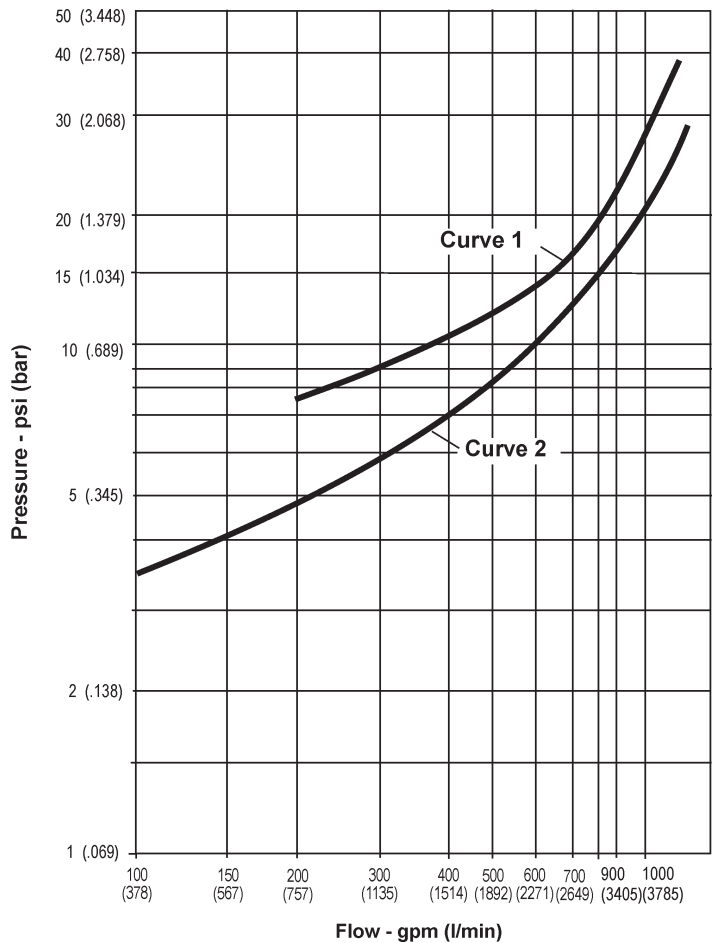
## Operation Information

Model 64900 is a direct spring-loaded pressure control unit that is controlled by the air reference pressure provided from the vehicle system. It is nearly identical in design to the widely used Model 60700-1 with changes to improve operational handling of the elbow to keep the weight the same. A sealed screw outside the air hose fitting provides closing time adjustment. A sealed screw is also used to bleed the unit of air.

## Technical Data

- Outlet threads available in either 3 or 4 inch NPT or BSPP style
- Weight — (Basic coupler) 27.1 lbs (12.292 kg)
- Operated by vehicle air reference pressure
- Working pressure — 200 psi (13.793 bar)
- Proof pressure — 450 psi (31.034 bar)
- Closing Time — 2-5 seconds (adjustable)
- Opening time — 5-10 seconds (no adjustment)
- Overshoot - 50 US gal. maximum at 1,000 USgpm
- Air pressure operated — nominal bias (air pressure required above control pressure) — 25 psi (1.724 bar). Bias increases to approximately 33 psi (2.276 bar) at flow rates up to 1,200 USgpm.
- Fully open pressure drop — 21 psi (1.448 bar) at 1,000 USgpm when mated to Model 60554 hydrant valve (see chart below for more data)

## Flow Rates

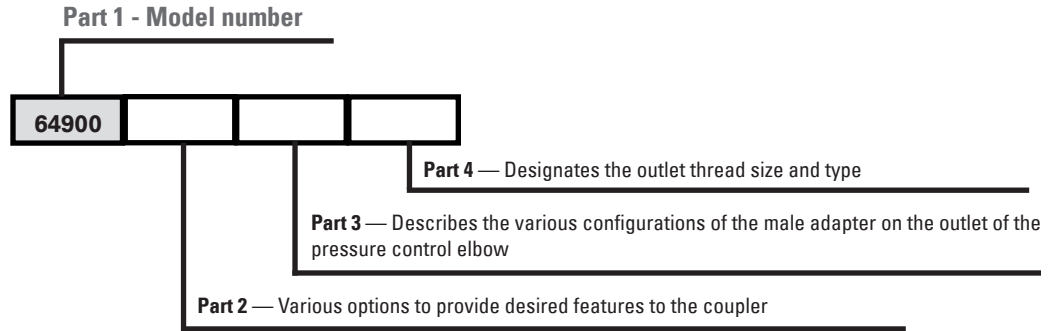


**Curve 1** Typical Model 64900 with 4 inch QD outlet options

**Curve 2** Typical Model 64900 with 3 inch QD outlets options

# Ordering Data

Various options are available on Model 64900 coupler. The complete model number is comprised of four parts, as explained in the tables below.



## Part 2

One or more of the options shown in the table (right) may be added to the basic model number 64900 to obtain desired features.

Option	Description	Option	Description
B	Adds folding handle	H	Adds 3/8 inch NPT to both air and fuel ports
C	Adds product selection	J	Adds 3/8 inch hose barbs to air and fuel
D	Adds lockwire to flange joint fasteners	R	Adds 90° elbow 1/4 inch female NPT for air/dual operated hydrant valve actuation
E	Adds API style air/fuel QD	W	Adds carriage assembly
F	Adds hose barb fittings to air and fuel ports	Y	Adds handle assembly at outlet port

## Part 3

One of the options described in the table (right) must be added to determine the outlet male adapter configuration.

Option	Description	Option	Description
3	Male adapter fitting to mate with 60700-1 style female QD	4	Male adapter to mate with 44220 QD

## Part 4

One of the options described below must be added to specify the outlet thread size and type.

Option	Description	Option	Description
L	Adds 3 inch NPT threaded female QD	P	Adds 4 inch NPT threaded female QD
M	Adds 3 inch BSPP threaded female QD	R	Adds 4 inch -8 NPSC threaded female QD
N	Adds 4 inch BSPP threaded female QD	Z	Adds 4 inch BSPP female QD with cast handle

**Note:** If Part 4 is left blank, no female quick disconnect will be shipped. This is a proper designation when it is desired to use a Model 64900 to replace a Model 60700-1, 60600 or 60600-1 coupler. In this case Part 3 must correctly designate the proper male adapter fitting.

### Examples:

- 64900BF3L Coupler with folding handle, hose barbs in all air/fuel ports, male adapter fitting to mate with female QD with 3 inch NPT threads
- 64900C3 Coupler with product selection and male adapter fitting to mate with female QD (no female QD provided)

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