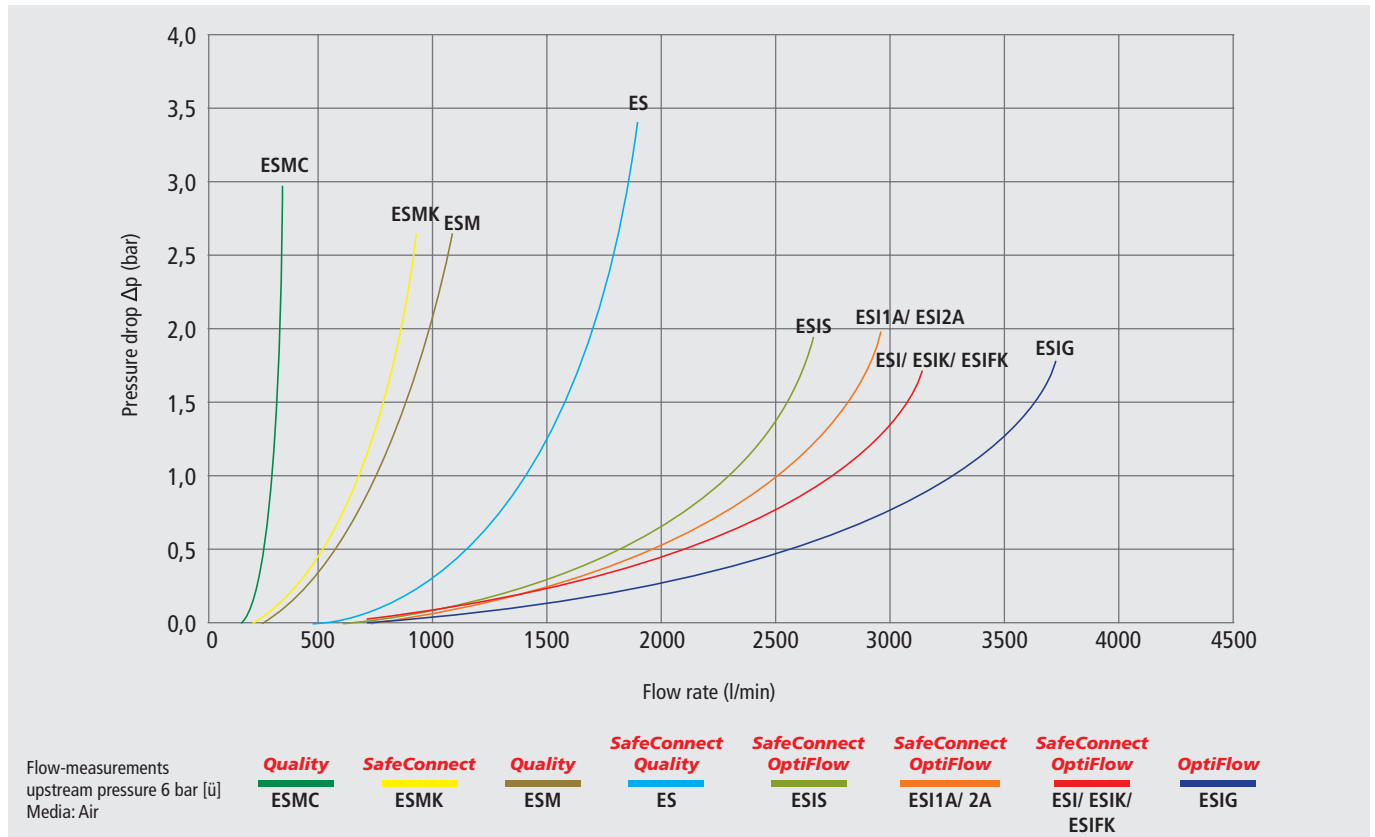


# Comparison Chart of Flow Rates

The flow rates of our coupling systems are summarized in the following chart.



## Testing Panel

To train and thoroughly test our quick connect couplings, we developed Testing Panels. These sample bars represent the quick connect coupling series from DN 2.7 up to DN 10 of our **Quality**-, **OptiFlow**- and **SafeConnect-Line** as well as the MODY spiral hoses under pressure.

### Your advantages:

- Extensive information about each product and how they work
- Testing high-quality products under real life conditions (the coupling procedure may be executed with media passing through the lines)
- Multilingual: German and English (on request, also in other languages)

Product Information

Functional Description

Application Possibilities (coupling)

Compressed Air Connection

Pressure of the panel is reduced to 3 bar for safety

We offer the testing panels at cost price.  
If you are interested please contact our expert sales team.

# Overview of Quick Connect Couplings with

## Quality-Line

## OptiFlow-Line

Series

**ESMC**  
DN 2.7

**ESM**  
DN 5

**ES**  
DN 7.2

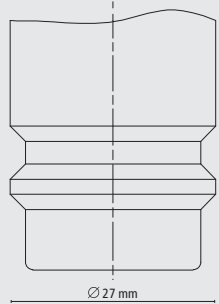
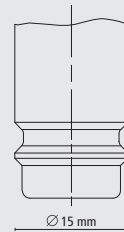
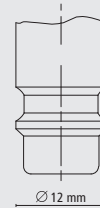
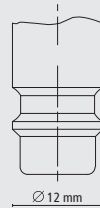
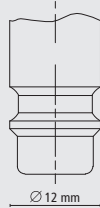
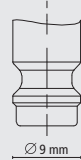
**ESI**  
DN 7.8

**ESIS\***  
DN 7.8

**ESIG**  
DN 10

**ESG**  
DN 19

Plug Profile  
(original size)



### Materials:

|                                                                      |                                  |                                                |                                                |                                     |                                     |                                          |                                     |
|----------------------------------------------------------------------|----------------------------------|------------------------------------------------|------------------------------------------------|-------------------------------------|-------------------------------------|------------------------------------------|-------------------------------------|
| Body:                                                                | MS 58 (plain/n-plated)           | MS 58 (plain/n-plated)                         | MS 58 (plain/n-plated)                         | MS 58 nickel-plated                 | MS 58 nickel-plated                 | MS 58 nickel-plated                      | MS 58 plain                         |
| Sleeve:                                                              | MS 58 (plain/n-plated)           | MS 58 (plain/n-plated)                         | MS 58 (plain/n-plated)                         | Steel hardened + nickel-pl.         | Steel hardened + nickel-pl.         | Steel hardened + nickel-pl.              | MS 58 plain                         |
| Valve Body:                                                          | MS 58 (plain/n-plated)           | MS 58 (plain/n-plated)                         | MS 58 (plain/n-plated)                         | MS 58 nickel-plated                 | MS 58 nickel-plated                 | MS 58 nickel-plated                      | MS 58 plain                         |
| Valve:                                                               | MS 58 (plain/n-plated)           | MS 58 (plain/n-plated)                         | MS 58 (plain/n-plated)                         | MS 58 plain                         | MS 58 plain                         | MS 58 plain                              | MS 58 plain                         |
| Springs, Retaining ring:                                             | Stainless Steel 1.4310           | Stainless Steel 1.4310                         | Stainless Steel 1.4310                         | Stainless Steel 1.4310              | Stainless Steel 1.4310              | Stainless Steel 1.4310                   | Stainless Steel 1.4310              |
| Balls:                                                               | Stainless Steel 1.3541           | Stainless Steel 1.3541                         | -                                              | Stainless Steel 1.4034              | Stainless Steel 1.4034              | Stainless Steel 1.4034                   | Stainless Steel 1.4034              |
| Pins:                                                                | -                                | -                                              | Stainless Steel 1.4305                         | -                                   | -                                   | -                                        | -                                   |
| Seals:                                                               | NBR                              | NBR                                            | NBR                                            | NBR                                 | NBR                                 | NBR                                      | NBR                                 |
| Special seals for other media on request:                            | EPDM, FKM, FFKM                  | EPDM, FKM, FFKM                                | EPDM, FKM, FFKM                                | EPDM, FKM, FFKM                     | EPDM, FKM, FFKM                     | EPDM, FKM                                | EPDM, FKM, FFKM                     |
| Plugs:                                                               | MS 58 (plain/nickel-plated)      | MS 58 (plain/nickel-plated)/ steel zinc-plated | MS 58 (plain/nickel-plated)/ steel zinc-plated | Steel hardened + nickel-plated      | Steel hardened + nickel-plated      | Steel hardened + nickel-plated           | MS 58 plain                         |
| Max. Working Pressure:                                               | PN 35 bar                        | PN 35 bar                                      | PN 35 bar                                      | PN 35 bar                           | PN 12 bar                           | PN 35 bar                                | PN 35 bar                           |
| Temperature:                                                         | -20°C – +100°C                   | -20°C – +100°C                                 | -20°C – +100°C                                 | -20°C – +100°C                      | -20°C – +100°C                      | -20°C – +100°C                           | -20°C – +100°C                      |
| Thread types:                                                        | ISO 228/ DIN 13                  | ISO 228/ DIN 13                                | ISO 228/ DIN EN 10226/ DIN 13                  | ISO 228/ DIN EN 10226               | ISO 228/ DIN EN 10226               | ISO 228/ DIN EN 10226                    | ISO 228                             |
| Flow rate:<br>at 6 bar [ü] and 0.5 bar pressure drop single shut-off | 165 l/min                        | 510 l/min                                      | 1100 l/min                                     | 2000 l/min                          | 1800 l/min                          | 3200 l/min                               | 8000 l/min                          |
| Type of valve:                                                       | single/ double/ straight-through | single/ double/ straight-through               | single/ double/ straight-through               | single/ double/ straight-through    | single                              | single/ double/ straight-through         | single/ double                      |
| Operation:                                                           | One-Hand                         | One-Hand                                       | One-Hand                                       | One-Hand                            | One-Hand                            | One-Hand                                 | One-Hand                            |
| Interchange:                                                         | Parker Rectus Series 20          | Parker Rectus Series 21                        | Parker Rectus Series 25/26 Cejn 320            | Parker Rectus Series 25/26 Cejn 320 | Parker Rectus Series 25/26 Cejn 320 | Parker Rectus Series 27/41/1700 Cejn 410 | Parker Rectus Series 39 Hansen 7000 |
| Page:                                                                | 32                               | 37                                             | 43                                             | 54                                  | 68                                  | 59                                       | 62                                  |

# European Plug Profiles

**SafeConnect-Line**

**NEW!**

**ESIS\***  
DN 7.8

**ES**  
DN 7.2

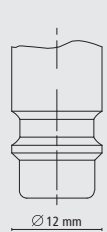
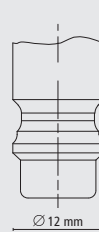
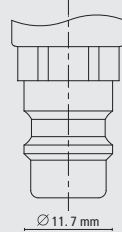
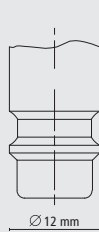
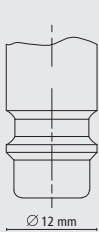
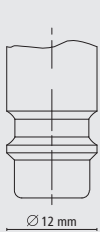
**ESI\***  
DN 7.8

**ESIK\***  
DN 7.8

**ESI1A/2A\***  
DN 7.4

**ESMK**  
DN 5

**ESIFK\***  
DN 7.8



|                                           |                                               |                                           |                                                               |                                           |                                          |                                          |
|-------------------------------------------|-----------------------------------------------|-------------------------------------------|---------------------------------------------------------------|-------------------------------------------|------------------------------------------|------------------------------------------|
| MS 58 nickel-plated                       | MS 58 plain                                   | MS 58 nickel-plated                       | MS 58 nickel-plated                                           | MS 58 nickel-plated                       | MS 58 plain                              | MS 58 plain                              |
| Steel hardened + nickel-pl.               | MS 58 plain                                   | Steel hardened + nickel-pl.               | Steel hardened + nickel-pl.                                   | MS 58 nickel-plated                       | Aluminium anodised                       | Aluminium anodised                       |
| MS 58 nickel-plated                       | MS 58 plain                                   | MS 58 nickel-plated                       | MS 58 nickel-plated                                           | MS 58 nickel-plated                       | MS 58 plain                              | MS 58 plain                              |
| MS 58 plain                               | MS 58 plain                                   | MS 58 plain                               | MS 58 plain                                                   | MS 58 plain                               | MS 58 plain                              | MS 58 plain                              |
| Stainless Steel 1.4310                    | Stainless Steel 1.4310                        | Stainless Steel 1.4310                    | Stainless Steel 1.4310                                        | Stainless Steel 1.4310                    | Stainless Steel 1.4310                   | Stainless Steel 1.4310                   |
| Stainless Steel 1.4034                    | -                                             | Stainless Steel 1.4034                    | Stainless Steel 1.4034                                        | Stainless Steel 1.4034                    | Stainless Steel 1.3541                   | Stainless Steel 1.4034                   |
| -                                         | Stainless Steel 1.4305                        | -                                         | -                                                             | -                                         | -                                        | -                                        |
| NBR                                       | NBR                                           | NBR                                       | NBR                                                           | NBR                                       | NBR                                      | NBR                                      |
| EPDM, FKM, FFKM                           | EPDM, FKM, FFKM                               | EPDM, FKM, FFKM                           | EPDM, FKM, FFKM                                               | EPDM, FKM, FFKM                           | EPDM, FKM, FFKM                          | EPDM, FKM, FFKM                          |
| Steel hardened + nickel-plated            | MS 58 (plain/nickel-plated)/steel zinc-plated | Steel hardened + nickel-plated            | Steel hardened + nickel-plated                                | MS 58 nickel-plated                       | MS 58 plain with anodized aluminium ring | MS 58 plain with anodized aluminium ring |
| PN 12 bar                                 | PN 35 bar                                     | PN 35 bar                                 | PN 35 bar                                                     | PN 35 bar                                 | PN 35 bar                                | PN 35 bar                                |
| -20°C – +100°C                            | -20°C – +100°C                                | -20°C – +100°C                            | -20°C – +100°C                                                | -20°C – +100°C                            | -20°C – +100°C                           | -20°C – +100°C                           |
| ISO 228/<br>DIN EN 10226                  | ISO 228                                       | ISO 228/<br>DIN EN 10226                  | ISO 228/<br>DIN EN 10226                                      | ISO 228/<br>DIN EN 10226                  | ISO 228                                  | ISO 228                                  |
| 1800 l/min                                | 1100 l/min                                    | 2000 l/min                                | 2000 l/min                                                    | 1800 l/min                                | 430 l/min                                | 2000 l/min                               |
| single                                    | single                                        | single                                    | single                                                        | single                                    | single/ double                           | single                                   |
| One-Hand                                  | One-Hand                                      | One-Hand                                  | One-Hand                                                      | Two-Hands                                 | One-Hand                                 | One-Hand                                 |
| Parker Rectus<br>Series 25/26<br>Cejn 320 | Parker Rectus<br>Series 25/26<br>Cejn 320     | Parker Rectus<br>Series 25/26<br>Cejn 320 | Parker Rectus<br>Series 25/26, Cejn 320<br>Steinco Series 125 | Parker Rectus<br>Series 95/96<br>Cejn 320 | Parker Rectus<br>Series 21               | Parker Rectus<br>Series 25 KA            |
| 68                                        | 69                                            | 70                                        | 72                                                            | 74/ 75                                    | 76                                       | 80                                       |
| Self-Venting                              | Sleeve Lock Mechanism                         |                                           |                                                               | Visual Identification                     |                                          |                                          |

\* SafeConnect-Line + OptiFlow-Line

# OptiFlow-Line

## Energy-Efficient Quick Connect Couplings



### Compressed air - an expensive media?

Despite many advantages, compressed air has a reputation for being a costly media – in many cases, this is not true. When using the right components, an energy-efficient operation is possible.

### Energy performance is reduced by the following:

- Standard valves with large surface area
- Too small dimensioned hose or tubing
- Too small dimensioned connections
- Insufficient capacity in networks or compressed air systems
- Excess humidity

### This leads to:

- High pressure drop
- High energy consumption of compressor
- Reduced productivity
- Damages to systems/ tools

The **LUDECKE OptiFlow-Line** offers energy-optimised coupling systems which achieve higher flow rates and significantly reduce energy consumption. This in turn leads to decreasing energy costs as well as increasing durability and lifetime of machines and tools.

By continuously improving our development and production processes, we ensure that our quick connect couplings are permanently revised and performance optimised. In this way, we guarantee sustainable and efficient operation.

Find out more about the **LUDECKE** sustainability strategies in our Green Company Report ([www.ludecke.com](http://www.ludecke.com)).

### LUDECKE OptiFlow-Line

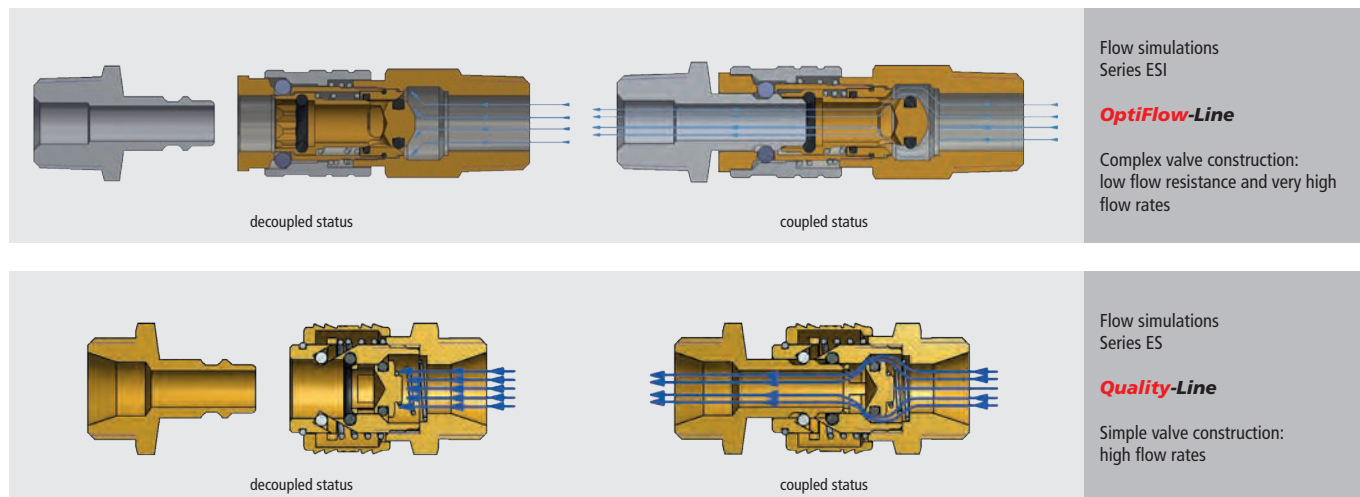
- Patented OptiFlow by **LUDECKE**® valve technology
- Extremely high flow rates
- Low pressure drop
- High durability
- Great operational safety and best sealing characteristics

**Opti  
Flow**  
by **LUDECKE**



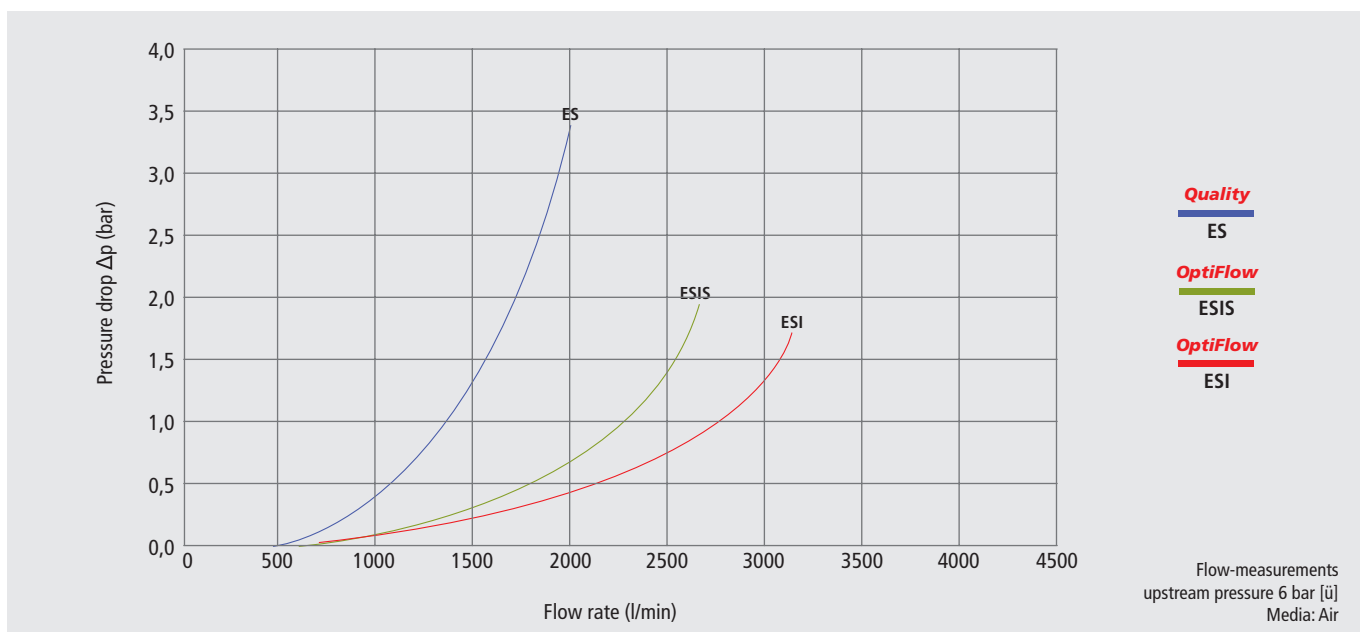
# Flow Simulation - Comparison

The products of the **LUDECKE OptiFlow-Line** have a valve with optimised geometry for higher flow rates.



## Comparison Chart of Flow Rates

The flow rates of the **LUDECKE OptiFlow-Line** (in comparison to the **Quality-Line**) are summarized in the following chart.



## Different Sizes and Versions

The **LUDECKE OptiFlow-Line** is made up of different series.

| Industrial Quick Connect Couplings |                    | Industrial Quick Connect Couplings | Safety Quick Connect Couplings |                    |                     |                                      |                      |
|------------------------------------|--------------------|------------------------------------|--------------------------------|--------------------|---------------------|--------------------------------------|----------------------|
| Series: ESI DN 7.8                 | Series: ESIG DN 10 | Series: ESG DN 19                  | Series: ESIK DN 7.8            | Series: ESI DN 7.8 | Series: ESIK DN 7.8 | Series: ESI1A DN 7.4<br>ESI2A DN 7.4 | Series: ESIFK DN 7.8 |
|                                    |                    |                                    |                                |                    |                     |                                      |                      |