Quick-action coupling

**Quick-action coupling (Coupling with gas shut-off valve): NKD**

**Type NKD for tapping points and pressure regulators**

The quick-action coupling NKD:
- safe interruption of gas flow by automatic gas cut-off when disconnecting
- no mixing up by different coding of coupling pins
- prevents accidental disconnection
- quick connection with one click
- all metal components in brass 2.0401 / spring 1.4310

**Safety elements of the IBEDA quick-action coupling NKD:**
- SV  Shutoff valve

**Maintenance:**

Couplings are wearing parts and have to be tested by a qualified and authorised person (at least once a year). The tests have to be performed when the couplings are connected as well as disconnected. Leakage tests are to be performed with inert gas or air (free from oil and grease) or the operating gas.

It is not allowed to open the quick-action couplings.

**Technical Data:**

<table>
<thead>
<tr>
<th>Gas types</th>
<th>Acetylene (A)</th>
<th>Hydrogen Industrial gas (H)</th>
<th>Natural Gas (Methane) (M)</th>
<th>Oxygen (O)</th>
<th>Compressed Air (D)</th>
<th>Nitrogen (N)</th>
<th>Carbon dioxide (N)</th>
<th>Argon (N)</th>
<th>Helium (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working pressure</td>
<td>0,15 MPa 1,5 bar</td>
<td>2,0 MPa 20 bar</td>
<td>2,0 MPa 20 bar</td>
<td>2,0 MPa 20 bar</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas temperature</td>
<td>-20°C up to +70°C ( Oxygen -20°C up to +60°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-20°C up to +70°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threads: EN 560</td>
<td>G3/8LH</td>
<td>M16x1,5LH</td>
<td>UNF9/16-18LH</td>
<td>G1/4RH</td>
<td>G3/8RH</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISO / TR 28821</td>
<td>UNF5/8-18LH</td>
<td></td>
<td></td>
<td>M16x1,5RH</td>
<td>UNF9/16-18RH</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>UNF5/8-18RH</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Measure and weight</td>
<td>diameter: 20,0 mm</td>
<td>length: 60,0 mm</td>
<td>weight: 91,0 g</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Compatible with</td>
<td>Coupling pin N1, N2 and N4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Other materials, surface finishing, gas types and additional connections available on request.
Quick-action coupling

Type: NKD

Flow rates [air]:
- $p_v$ = Primary pressure
- $p_h$ = Secondary pressure
- $\Delta p$ = Primary pressure minus Secondary pressure

Conversion Factors:
- 0.1 MPa = 1 bar = 100 kPa = 14,504 psi
- 1 m$^3$/h = 35.31 cu ft/h

<table>
<thead>
<tr>
<th>A</th>
<th>H</th>
<th>P</th>
<th>M</th>
<th>M</th>
<th>O</th>
<th>E</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>QG</td>
<td>$C_2H_2$</td>
<td>$H_2$</td>
<td>$C_3H_8$</td>
<td>$CH_4+C$</td>
<td>$CH_4$</td>
<td>$O_2$</td>
<td>$C_2H_4$</td>
</tr>
<tr>
<td>F</td>
<td>1,2</td>
<td>3,8*</td>
<td>0,90</td>
<td>1,25</td>
<td>1,4</td>
<td>0,95</td>
<td>1,02</td>
</tr>
</tbody>
</table>

* Conversion factor 2.5 for devices comprising a flame arrester
The conversion factor for free flow is 3.8.
(Reference: BAM report 220, D. Lietze)

Example:

$Q_G = Q_D \times F$

$Q_G = 6.4 \times 1.2 = 7.68 \text{ m}^3/\text{h} \ C_2H_2$

$Q_G$ = flow / gas type
$Q_D$ = flow / air
$F$ = conversion factor

Certification/Technical Standards/Rules
- TRBS German Technical rules for operation safety
- DVS German Association for Welding, Cutting and Allied Processes
- DGUV German Employer’s liability insurance association rules and regulations

Standards/Approvals
- Company certified according to ISO 9001:2015 and ISO 14001:2015,
- CE-marking according to: Pressure Equipment Directive 2014/68/EU

(Subject to change without notice)