



Our range of couplings with ATEX explosion protection

Take explosion protection measures, reduce the risks

Siemens offers you a comprehensive range of couplings certified to the latest ATEX directive

ATEX explosion protection

siemens.com/couplings



Mandatory safety

Inflammable substances, gases, fumes, mist or dust are an ever-present issue in many industrial sectors. This is because an explosive atmosphere can arise in conjunction with oxygen that poses a risk to life and limb in the event of one single spark. Especially in applications in the chemical and petrochemical industries, in the crude oil and natural gas extraction sectors, in mining, or in milling applications (e.g. for grains or solids), serious harm to persons and equipment can occur.

In order to achieve the highest possible level of safety at all times, most countries have developed corresponding statutory requirements in the forms of laws, regulations and standards. In due course of the globalization, great efforts have been made to create uniform guidelines for explosion protection.

With Directive 94/9/EC, the European Union had already created the prerequisite for complete standardization. In April 2016, this directive will be replaced by the new Directive 2014/34/EU.

ATEX-compliant FLENDER couplings

Industrial couplings are subject to very high loading during day-to-day production processes. They transmit high torques, absorb large secondary forces and protect other, generally more expensive, drive train components.

A large proportion of the FLENDER couplings have been ATEX-certified for decades. We offer you an extensive range of safe connections for all kinds of applications. But for us, dealing responsibly with the issue of explosion protection includes constantly developing our product range further to ensure the safety of your plant and staff. This brochure provides you with a brief overview.

Our products bear the CE and EAC marks

In addition to the CE mark, our products also bear the EurAsian Conformity mark EAC of the customs union between Russia, Belarus and Kazakhstan. With this mark, we confirm that our products meet the technical requirements prescribed in these countries.

Siemens AG D 46395 Bocholt coupling N-EUPEX 2015

CE ⓑ II 2 G T4/T5/T6 D120°C -30° ≤ Ta ≤ 80°C / 50°C / 40°C CE ⓑ I M2

| Siemens AG | CE 🕼 | Ш | 2 | G | T4/T5/T6 | D120°C |
|--------------|---------|---------------------------------------|--------------|---------|-----------------------------|----------|
| Manufacturer | CE mark | Equipment group II = non-mining | 2 = category | G = gas | T = temperature class | D = dust |
| | | | | | | |
| N-EUPEX | 2015 | -30° ≤ Ta ≤ | ≤ 80°C / | CT (E) | | MO |

| coupling | 2015 | 50°C / 40°C | CE 🖾 | | MIZ |
|------------------|------------------------|---|---------|-------------------------------|---------------|
| Type designation | Year of manufacture | Permissible ambient temp. at T4/T5/T6 | CE mark | Equipment group I = mining | M2 = category |

ATEX-compliant FLENDER couplings

| | | 03 | | S |
|--------------------|---|--|---|---|
| Product | N-EUPEX | N-EUPEX DS | RUPEX RWN/RWS | N-BIPEX |
| Description | Universally applicable, damping shaft coupling to compensate for shaft misalignment | Universally applicable, damping shaft coupling to compensate for shaft misalignment | Damping, fail-safe pin and bush coupling for medium to high torques | Universally applicable, damping shaft coupling to compensate for shaft misalignment |
| Nominal torque | Tĸn = 19 Nm to 62,000 Nm | Tĸn = 60 Nm to 21,200 Nm | Tĸ = 200 Nm to 1,300,000 Nm (larger couplings available on request) | T _{κN} = 12 Nm to 4,650 Nm |
| Complete ATEX mark | (☑) II 2G T4/T5/T6 D120°-30°C<=Ta<= +80°C/+50°C/+40°C (☑) I M2 | € II 2G T4/T5/T6 D120°-30°C<=Ta<= +80°C/+50°C/+40°C € I M2 | (☑) II 2G T4/T5/T6 D120°-30°C<=Ta<= +80°C/+50°C/+40°C (☑) I M2 | (II 2G IIB T4/T5/T6 -50°C<=Ta<= +100°C/+70°C/+55°C (II 2D T120°C -50°C<=Ta<=+90°C (I M2 |
| Short ATEX mark | ᡚ ॥ 2G TX छ ॥ 2D T120℃ छ । M2 | ୍ଦ୍ରେ II 2G TX ଭ II 2D T120℃ ଭ I M2 | ଊ ॥ 2G TX ଊ ॥ 2D T120°C -30°C<=Ta<=+80°C ଊ । M2 | ᡚ II 2G IIB TX ᡚ II 2D TX ᡚ I M2 |



| ARPEX ARP-6 | ARPEX ARS/ARC | ARPEX ARW-4/-6 | ARPEX ARI-6/-8/-10 | ELPEX-S |
|---|--|---|--|---|
| Backlash-free, torsionally rigid all-steel multi-plate coupling | Backlash-free, torsionally rigid all-steel multi-plate coupling | Backlash-free, torsionally rigid all-steel multi-plate coupling | Backlash-free, torsionally rigid all-steel multi-plate coupling for high-speed applications | Highly flexible rubber- disk coupling to connect machines with highly nonuniform torque characteristics |
| T _{KN} = 100 Nm to 17,000 Nm | T _{KN} = 170 Nm to 1,450,000 Nm | Tκ» = 92 Nm to 80,000 Nm | Tк№ = 1,000 Nm to 588,500 Nm | Tĸℕ = 330 Nm to 63,000 Nm |
| | ⓓ II 2G T3 D160°C X ⓓ II 2G T4 D120°C X -40°C<=Ta<=+80°C | | | |
| | | | | |

ATEX-compliant FLENDER couplings

| Product | FLUDEX | ZAPEX ZW | ZAPEX ZN |
|----------------------|--|---|---|
| Description | Hydrodynamic fluid coupling | Double-jointed gear coupling | Double-jointed gear coupling |
| Nominal torque/power | Nominal power from 1.2 kW to 2,500 kW | T _{KN} = 1,300 Nm to 7,200,000 Nm | Ткя = 1,020 Nm to 162,500 Nm |
| Complete ATEX mark | € II 2G c T3 IIB | II 2GD c 120°C (T4) -20°C<=Ta<=+80°C € I M2 | II 2GD c 120°C (T4) -20°C<=Ta<=+80°C I M2 |
| Short ATEX mark | € II 2G T3 IIB | छि ॥ 2GD T120°C(T4) -20°C<=Ta<=+80°C छि । M2 | ເ II 2GD T120°С(Т4) -20°С<=Та<=+80°С ເ I М2 |



Equipment groups/categories

Equipment is classified into equipment groups. Each equipment group contains operating equipment that is, in turn, assigned to different categories. The category defines the zone in which the operating equipment can be used.

| Equipment group I (underground operations and mines) | | | | | |
|--|--|--|---|--|--|
| Equipment category | M1: very high degree of safety | M2: high degree of safety | | | |
| Level of risk | Hazard exists continuously, for long periods and frequently | Hazard exists occasionally | Hazard exists rarely and for a short duration | | |
| Sufficient safety | Through two protective measures / for two concurrent, independent faults | Must be de-energized in the event of a potentially explosive atmosphere. | | | |

| Equipment group II (other potentially explosive areas) | | | | | | | |
|--|---|-------------------------------|--|--------------------------|---|----------------------------|--|
| Equipment category | 1: very high degre | 1: very high degree of safety | | 2: high degree of safety | | 3: normal degree of safety | |
| Level of risk | Hazard exists continuously, for long periods and frequently | | Hazard exists occasionally | | Hazard exists rarely and for a short duration | | |
| Sufficient safety | Through two protective measures / for two concurrent, ind. faults | | For frequent equi malfunctions / fo | pment r one fault | For trouble-free c | operation | |
| Use in | Zone 0 | Zone 20 | Zone 1 | Zone 21 | Zone 2 | Zone 22 | |
| Atmosphere | G (gas) | D (staub) | G | D | G | D | |

Various Siemens couplings are available for the highlighted variants. Equipment is not available in the categories 1 and M1.

There's more to it

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