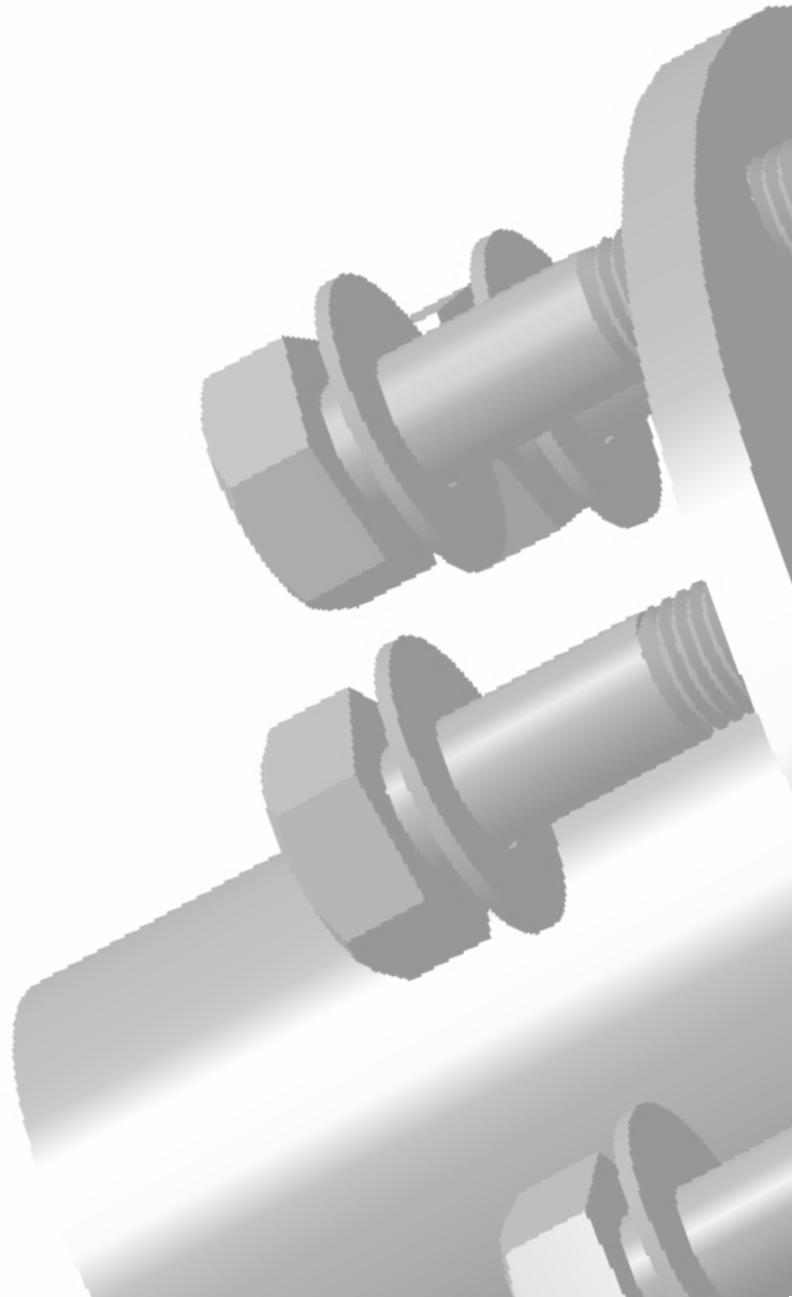


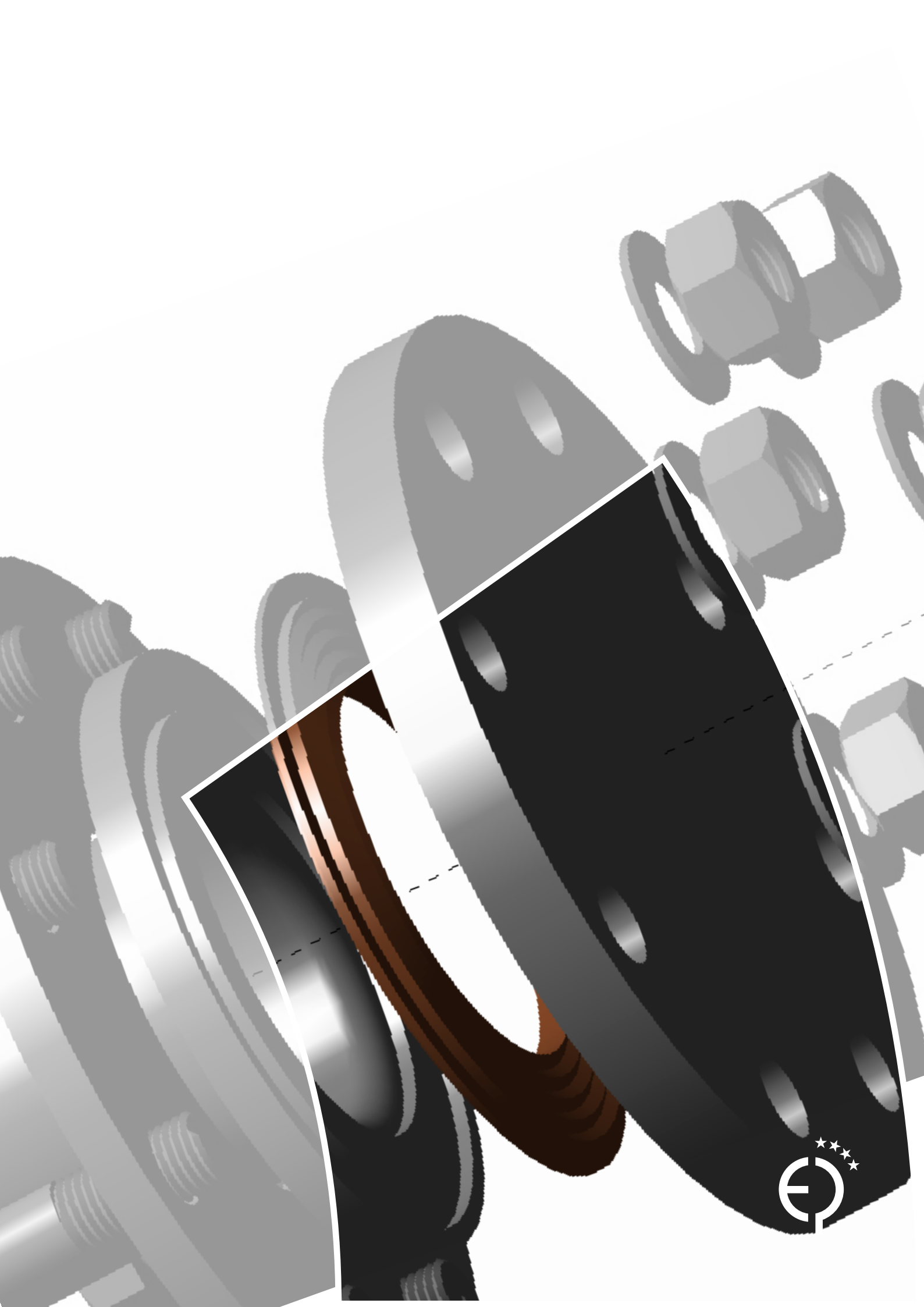


EUROPARTNER

**EUROPARTNER®**

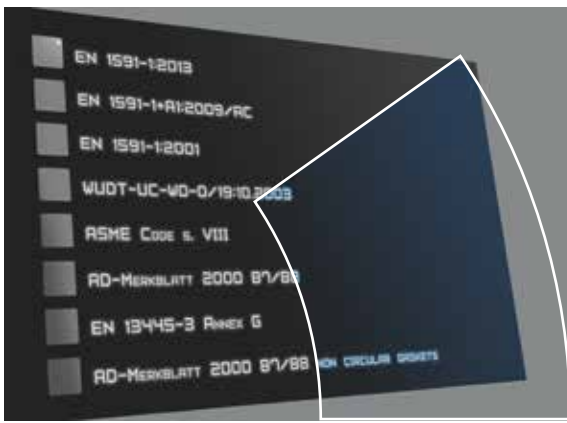
**CALCULATION SOFTWARE**





# EUROPARTNER® CALCULATION SOFTWARE

## ABOUT SOFTWARE & ADVANTAGES



### ABOUT SOFTWARE

Engineering software **EUROPARTNER®** developed in SPETECH is used by designers and service companies to select proper flange joint seal and calculate correct tension and tightening torque. Moreover, it allows to calculate the whole flange joint as regards strength. The program contains several calculation algorithms compliant with:

- EN 1591-1:2013
- EN 1591-1:2009
- EN 1591-1:2001
- WUDT-UC-WO-/19:10.2003
- ASME Code s. VIII
- AD 2000 Merkblatt B7/B8
- EN 13445-3 Annex G

Using the algorithm EN 1591-1HA1:2009 or ...2013 the designer, by selection of appropriate tightness class, can influence reduction of emissions generated by the selected seal. Thus, the joint is designed in the way compliant with requirements of such environmental protection regulations as IPPC Directive, TA-Luft and Clean Air Act. Use of the **EUROPARTNER®** program as an engineering and expert tool constitutes a part of generally applied and recommended "best available techniques" and "good engineering practices".

### ADVANTAGES

1. Enormous database of geometrical values of gaskets, flanges, faces and bolts and characteristic quantities of steel materials enables fast designing without looking these values up in relevant standards.
2. Automatic, real time calculation of output quantities that enables continuous control over the correctness of entered data.
3. Adapted rule of entered data hints maximization (expert function) however, the program finally does not impose anything. Such functionality gives the designer the possibility to perform necessary modifications of standard components.
4. Full direct control through the critical data panels system, allowing to check the whole project correctness on a current basis.
5. Configurable prints taking into account all input, output and intermediate data. They also contain all important drawings of joint components.
6. The same user interface regardless of calculation standard used.
7. Four language versions: Polish, English, German and Czech.

# EUROPARTNER® CALCULATION SOFTWARE



## EUROPARTNER DATABASE



### MEDIUM

Seal selection depending on medium and its operating parameters. The database contains about 700 types of media. Possibility to preset medium concentration and limit temperatures and pressure for the design. Tightness class plays the key role in gasket selection. By proper selection the designer influences the level of emissions from the designed joint.



### GASKET TYPE

A particular gasket type is selected automatically by the program on the basis of specified limiting conditions or manually by the designer. The program contains the database of SPETECH seals and those mentioned in a given standard. It is possible to design and calculate any gasket and the program producer can add seals of other companies.

EN, DIN, ASME standards included in database: EN 1514-1, EN 1514-2:July 2001, EN 1514-2:August 2005, EN 1514-3, EN 1514-4, EN 1514-6, EN 1514-7, DIN 2690, DIN 2691, DIN 2692, DIN 2693, DIN 2696:April 1972, DIN 2696:August 1999, DIN 2697, ASME B16.20-1998, ASME B16.21-1992



### FLANGE TYPE

Designing of flanges and faces, also for apparatuses, by manual entering of geometrical data flanges and pipeline faces can be selected from the database of geometrical values compliant with EN, DIN, ASME standards: EN 1092-1:2001, EN 1759-1, EN 1092-1:2007, DIN 2527, DIN 2627-2638, DIN 2641, DIN 2642, DIN 2655, DIN 2656, DIN 2673, ASME/ANSI B16.5-1988.

Fully editable dimensions, possible change of the units of measure.



# EUROPARTNER® CALCULATION SOFTWARE

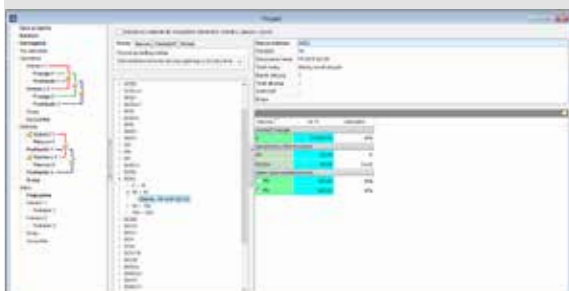
## EUROPARTNER DATABASE



### BOLTS

Correct selection of bolts, their size, number and material significantly affects the possibility of gasket forming and its operation. The program allows such a modification of all bolt-related quantities so as to obtain as a result appropriate assembly and operational tensions, at minimal number and size of bolts, and a reasonable, from the strength conditions point of view, material selection. The dimensions tab (EN 24016, EN 24018, DIN 933, DIN 2510) gives the possibility to determine the normative geometry of bolts.

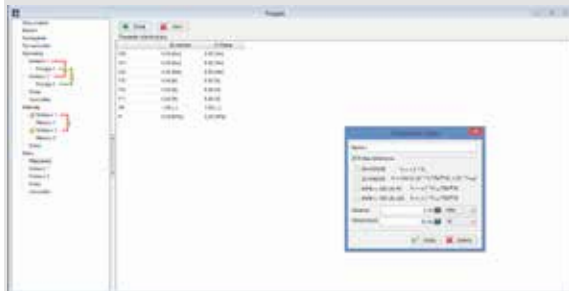
Depending on selected calculation standard, additional editable fields connected, for example, with the method of bolts tightening or with assumed friction coefficient on the bolt thread and head, appear in the bolts section.



### MATERIALS

Materials for flange and screw components can be selected from the database of hundreds of steel and their characteristic quantities. Program offers the possibility of searching by type, name, Werkstoff number and standard. Included in database: EN 10025:1990+A1:1993, EN 10028-3:1996, EN 10120:2001, EN 10216-2, EN 10216-3, EN 10216-4, EN 10216-5, EN 10216-5:2004, EN 10217-7, EN 10222-2:1999, EN 10222-5:2000, EN 10269:2004, EN 10273:09 2009, EN 10088-2:1999, EN 10083-2:1991 + A1:1996, EN 10088-3:1999, EN 100028-3:1996, DIN, ISO 3755:1994, EN ISO 898-1:2001, ASTM A 53/A 53M, ASTM A 105/A 105M, ASTM A 106, ASTM A 135, ASTM A 139, ASTM A 178/A 178M, ASTM A 179/A 179M, ASTM A 181/A 181M, ASTM A 182/A 182M, ASTM A 192/A 192M, ASTM A 193/A 193M, ASTM A 209/A 209M, ASTM A 210/A 210M, ASTM A 350/A 350M-02b.

There is the possibility to define own materials.



### WORK CONDITIONS

The program allows to add up to 10 operating conditions. Their parameters can be modified in a discretionary way for each component: flanges, bolts, gaskets, forces and external torques.

	ASB	Quality of bolting-up method		Max	Control	PTWage
	lower value	higher value		allow. allowed		max. allowed at maximum STS
Assembly Load [kN]	44.00	62.58	91.02	28.07	107.81	75.89
Assembly Torque on bolt [Nm]	221.21	164.21	290.79	102.79	344.41	247.12
Assembly Stress [MPa]	222.01	165.01	289.89	102.59	320.89	192.89
Work Stress [MPa]	11.81	38.01	77.41	165.18	324.06	185.18

Special panels enables full control over performed calculations.

