

## Controls and autosums in questionnaire: Research and development (R&D) (in companies)

Code of the questionnaire: 11342024  
Periodicity: Annual

Is submitted: 05.08.2024, data about 2023

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A field with a grey background has been automatically filled online. The data in this field cannot be changed, they are visible after saving.  
If the data you entered are inconsistent internally or with the prefilled data, an error message appears upon checking. If errors (warnings) appear, check the data carefully and make corrections.  
In the case of warnings (if you are sure that the data you entered are correct), click on "Confirm warnings" button and confirm the questionnaire.

### CONTROLS

#### Controls in table 1.1. EMPLOYEES ENGAGED IN RESEARCH AND DEVELOPMENT BY EDUCATION AND SEX AND WORKING TIME SPENT ON RESEARCH AND DEVELOPMENT

Control ID	Control formula	Clarification	Type of error
33453	{RD_PERMF_DOC_BES}>={RD_PERF_DOC_BES}	The total number of male and female researchers and engineers with a doctoral degree is larger than or equal to the number of female researchers and engineers with a doctoral degree. (Row 1 Column 1 must be bigger or equal than Row 1 Column 2)	Error
33454	{RD_RESMF_HIGH}>={RD_RESF_HIGH}	The total number of male and female researchers and engineers with a master's degree, academic higher education or professional higher education is larger than or equal to the number of female researchers and engineers with a master's degree, academic higher education or professional higher education. (Row 2 Column 1 must be bigger or equal than Row 2 Column 2)	Error
33455	{RD_OTHMF_DOC}>={RD_OTHF_DOC}	The total number of male and female other R&D personnel (technicians, support staff) with a doctoral degree must be larger than or equal to the number of female other R&D personnel with a doctoral degree. (Row 1 Column 3 must be bigger or equal than Row 1 Column 4)	Error
33456	{RD_OTHMF_HIGH}>={RD_OTHF_HIGH}	The total number of male and female other R&D personnel (technicians, support staff) with a master's degree, academic higher education or professional higher education is larger than or equal to the number of female other R&D personnel with a master's degree, academic higher education or professional higher education. (Row 2 Column 3 must be bigger or equal than Row 2 Column 4)	Error
33457	{RD_OTHMF_SECN}>={RD_OTHF_SECN}	The total number of male and female other R&D personnel (technicians, support staff) with secondary education or professional secondary education or without secondary education is larger than or equal to the number of female other R&D personnel with secondary education or professional secondary education or without secondary education. (Row 3 Column 3 must be bigger or equal than Row 3 Column 4)	Error
33460	{RD_PERMF_DOC_BES}+{RD_OTHMF_DOC}={RD_PERMF_DOC_BES}+{RD_OTHMF_DOC}	The total number of male and female R&D personnel with a doctoral degree is equal to the sum of male and female researchers and engineers with a doctoral degree and male and female other R&D personnel (technicians, support staff) with a doctoral degree. (Row 1 Column 5 must be equal Row 1 Column 1 + Row 1 Column 3)	Error
33461	((RD_PERF_DOC_BES)+{RD_OTHF_DOC})={RD_PERF_DOC_BES}+{RD_OTHF_DOC}	The total number of female R&D personnel with a doctoral degree is equal to the sum of female researchers and engineers with a doctoral degree and female other R&D personnel (technicians, support staff) with a doctoral degree. (Row 1 Column 6 must be equal Row 1 Column 2 + Row 1 Column 4)	Error
33462	((RD_RESMF_HIGH)+{RD_OTHMF_HIGH})={RD_RESMF_HIGH}+{RD_OTHMF_HIGH}	The total number of male and female R&D personnel with a master's degree, academic higher education or professional higher education is equal to the sum of male and female researchers and engineers with a master's degree, academic higher education or professional higher education and male and female other R&D personnel (technicians, support staff) with a master's degree, academic higher education or professional higher education. (Row 2 Column 5 must be equal Row 2 Column 1 + Row 2 Column 3)	Error

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	$F\_HIGH\}+\{RD\_OTHMF\_HIGH\}$	professional higher education is equal to the sum of male and female researchers and engineers with a master's degree, academic higher education or professional higher education, and male and female other R&D personnel (technicians, support staff) with a master's degree, academic higher education or professional higher education. (Row 2 Column 5 must be equal Row 2 Column 1 + Row 2 Column 3)	
33463	$\{RD\_PERMF\_DOC\_BES\}+\{RD\_OTHMF\_DOC\}+\{RD\_RESMF\_HIGH\}+\{RD\_OTHMF\_HIGH\}+\{RD\_OTHMF\_SECN\}=\{RD\_PERMF\_DOC\_BES\}+\{RD\_RESMF\_HIGH\}+\{RD\_OTHMF\_DOC\}+\{RD\_OTHMF\_HIGH\}+\{RD\_OTHMF\_SECN\}$	Total number of male and female R&D personnel = total number of male and female researchers and engineers + total number of male and female other R&D personnel (technicians, support staff). (Row 4 Column 5 must be equal Row 4 Column 1 + Row 4 Column 3)	Error
33466	$\{RD\_PERF\_DOC\_BES\}+\{RD\_OTHF\_DOC\}+\{RD\_RESF\_HIGH\}+\{RD\_OTHF\_HIGH\}+\{RD\_OTHF\_SECN\}=\{RD\_PERF\_DOC\_BES\}+\{RD\_RESF\_HIGH\}+\{RD\_OTHF\_EDU\}$	Total number of female R&D personnel = total number of female researchers and engineers + total number of female other R&D personnel (technicians, support staff). (Row 4 Column 6 must be equal Row 4 Column 2 + Row 4 Column 4)	Error
33467	$\{RD\_RESF\_HIGH\}+\{RD\_OTHF\_HIGH\}=\{RD\_RESF\_HIGH\}+\{RD\_OTHF\_HIGH\}$	The total number of female R&D personnel with a master's degree, academic higher education or professional higher education is equal to the sum of female researchers and engineers with a master's degree, academic higher education or professional higher education, and female other R&D personnel (technicians, support staff) with a master's degree, academic higher education or professional higher education. (Row 2 Column 6 must be equal Row 2 Column 2 + Row 2 Column 4)	Error
33471	$\{RD\_RESMF\_FTE\_ENT\}+\{RD\_OTHMF\_FTE\_SCF\}>=\{FTE\_RES\_F\}+\{RD\_OTHF\_FTE\_SCF\}$	The number of R&D personnel in full-time equivalents must be larger than or equal to the number of female R&D personnel in full-time equivalents. (Row 5 Column 1 must be bigger or equal than Row 6 Column 1)	Error
33491	$\{RD\_PERMF\_DOC\_BES\}+\{RD\_RESMF\_HIGH\}=\{RD\_PERMF\_DOC\_BES\}+\{RD\_RESMF\_HIGH\}$	The total number of male and female researchers and engineers is equal to the sum of male and female researchers and engineers with a doctoral degree and male and female researchers and engineers with a master's degree, academic higher education or professional higher education. (Column1 Row 4 = Row 1 + Row 3)	Error
33492	$\{RD\_PERF\_DOC\_BES\}+\{RD\_RESF\_HIGH\}=\{RD\_PERF\_DOC\_BES\}+\{RD\_RESF\_HIGH\}$	The total number of female researchers and engineers is equal to the sum of female researchers and engineers with a doctoral degree and female researchers and engineers with a master's degree, academic higher education or professional higher education. (Column 2 Row4 = Row 1 + Row 3)	Error
33494	$\{RD\_OTHF\_DOC\}+\{RD\_OTHF\_HIGH\}+\{RD\_OTHF\_SECN\}=\{RD\_OTHF\_DOC\}+\{RD\_OTHF\_HIGH\}+\{RD\_OTHF\_SECN\}$	The total number of female other R&D personnel (technicians, support staff) is equal to the sum of female other R&D personnel with a doctoral degree, female other R&D personnel with a master's degree, academic higher education or professional higher education, and female other R&D personnel with secondary or professional secondary education or without secondary education. (Column 4 Row 4 = Row 1 + Row 2 + Row 3)	Error
33496	$\{RD\_PERMF\_DOC\_BES\}+\{RD\_OTHMF\_DOC\}+\{RD\_RESMF\_HIGH\}+\{RD\_OTHMF\_HIGH\}+\{RD\_OTHMF\_SECN\}=\{RD\_PERMF\_DOC\_BES\}+\{RD\_OTHMF\_DOC\}+\{RD\_RESMF\_HIGH\}+\{RD\_OTHMF\_HIGH\}+\{RD\_OTHMF\_SECN\}$	The total number of male and female R&D personnel is equal to the sum of the number of male and female R&D personnel with a doctoral degree, the number of male and female R&D personnel with a master's degree, academic higher education or professional higher education, and the number of male and female R&D personnel with secondary or professional secondary education or without secondary education. (Column 5 Row 4 = Row 1 + Row 2 + Row 3)	Error
33497	$\{RD\_PERF\_DOC\_BES\}+\{RD\_OTHF\_DOC\}+\{RD\_RESF\_HIGH\}+\{RD\_OTHF\_HIGH\}+\{RD\_OTHF\_SECN\}=\{RD\_PERF\_DOC\_BES\}+\{RD\_OTHF\_DOC\}+\{RD\_RESF\_HIGH\}+\{RD\_OTHF\_HIGH\}+\{RD\_OTHF\_SECN\}$	The total number of female R&D personnel is equal to the sum of the number of female R&D personnel with a doctoral degree, the number of female R&D personnel with a master's degree, academic higher education or professional higher education, and the number of female R&D personnel with secondary or professional secondary education or without secondary education. (Column 6 Row 4 = Row 1 + Row 2 + Row 3)	Error
33498	$\{RD\_OTHMF\_DOC\}+\{RD\_OTHMF\_HIGH\}+\{RD\_OTHMF\_SECN\}=\{RD\_OTHMF\_DOC\}+\{RD\_OTHMF\_HIGH\}+\{RD\_OTHMF\_SECN\}$	The total number of male and female other R&D personnel (technicians, support staff) is equal to the sum of male and female other R&D personnel with a doctoral degree, male and female other R&D personnel with a master's degree, academic higher education or professional higher education, and male and female other R&D personnel with secondary or professional secondary education or without secondary education. (Column 3 Row4 = Row 1 + Row 2 + Row 3)	Warning

### Controls in table 1.2. EMPLOYEES ENGAGED IN RESEARCH AND DEVELOPMENT IN THE COMPANY BY LEVEL OF EDUCATION AT THE END OF THE REFERENCE YEAR

Control ID	Control formula	Clarification	Type of
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33468	{RD_RESMF_FTE_ENT}>={FTE_RES_F}	The number of researchers and engineers in full-time equivalents must be larger than or equal to the number of female researchers and engineers in full-time equivalents. (Row 1 Column 1 must be bigger or equal than Row 2 Column 1)	error Error
33469	{RD_OTHMF_FTE_SCF}>={RD_OTHF_FTE_SCF}	The number of other R&D personnel (technicians, support staff) in full-time equivalents must be larger than or equal to the number of female other R&D personnel (technicians, support staff) in full-time equivalents. (Row 3 Column 1 must be bigger or equal than Row 4 Column 1)	Error
33500	((RD_RESMF_FTE_ENT)+{RD_OTHMF_FTE_SCF})={RD_RESMF_FTE_ENT)+{RD_OTHMF_FTE_SCF}	The total number of male and female employees in full-time equivalents is equal to the sum of male and female researchers and engineers and male and female other R&D personnel (technicians, support staff) in full-time equivalents. (Column 1 Row 1 + Row 3)	Error
33501	((FTE_RES_F)+{RD_OTHF_FTE_SCF})={FTE_RES_F)+{RD_OTHF_FTE_SCF}	The total number of female employees in full-time equivalents is equal to the sum of female researchers and engineers and female other R&D personnel (technicians, support staff) in full-time equivalents. (Column 1 Row 2 + Row 4)	Error

### Controls in table 2. RESEARCHERS AND ENGINEERS BY AGE AT THE END OF THE REFERENCE YEAR

Control ID	Control formula	Clarification	Type of error
33472	((RD_RESMF_AGE1)+{RD_RESMF_AGE2})+{RD_RESMF_AGE3})+{RD_RESMF_AGE4})+{RD_RESMF_AGE5})+{RD_RESMF_AGE6})>=({RD_RESF_AGE1)+{RD_RESF_AGE2})+{RD_RESF_AGE3})+{RD_RESF_AGE4})+{RD_RESF_AGE5})+{RD_RESF_AGE6})	The total number of researchers and engineers must be larger than the number of female researchers and engineers. (Row 1 Column 1 must be bigger than Row 2 Column 1)	Error
33473	{RD_RESMF_AGE1}>={RD_RESF_AGE1}	The number of researchers and engineers aged under 25 must be larger than or equal to the number of female researchers and engineers aged under 25. (Row 1 Column 2 must be bigger than Row 2 Column 2)	Error
33474	{RD_RESMF_AGE2}>={RD_RESF_AGE2}	The number of researchers and engineers aged 25–34 must be larger than or equal to the number of female researchers and engineers aged 25–34. (Row 1 Column 3 must be bigger than Row 2 Column 3)	Error
33475	{RD_RESMF_AGE3}>={RD_RESF_AGE3}	The number of researchers and engineers aged 35–44 must be larger than or equal to the number of female researchers and engineers aged 35–44. (Row 1 Column 4 must be bigger than Row 2 Column 4)	Error
33476	{RD_RESMF_AGE4}>={RD_RESF_AGE4}	The number of researchers and engineers aged 45–54 must be larger than or equal to the number of female researchers and engineers aged 45–54. (Row 1 Column 5 must be bigger than Row 2 Column 5)	Error
33477	{RD_RESMF_AGE5}>={RD_RESF_AGE5}	The number of researchers and engineers aged 55–64 must be larger than or equal to the number of female researchers and engineers aged 55–64. (Row 1 Column 6 must be bigger than Row 2 Column 6)	Error
33478	{RD_RESMF_AGE6}>={RD_RESF_AGE6}	The number of researchers and engineers aged 65 and over must be larger than or equal to the number of female researchers and engineers aged 65 and over. (Row 1 Column 7 must be bigger than Row 2 Column 7)	Error
33502	((RD_RESMF_AGE1)+{RD_RESMF_AGE2})+{RD_RESMF_AGE3})+{RD_RESMF_AGE4})+{RD_RESMF_AGE5})+{RD_RESMF_AGE6})={RD_RESMF_AGE1)+{RD_RESMF_AGE2})+{RD_RESMF_AGE3})+{RD_RESMF_AGE4})+{RD_RESMF_AGE5})+{RD_RESMF_AGE6})	The total number of researchers and engineers must be equal to the sum of the following: aged under 25, aged 25–34, aged 35–44, aged 45–54, aged 55–64, aged 65 and over. (Column 1 Row 1)	Error
33504	{RD_RESF_AGET}={RD_RESF_AGE1)+{RD_RESF_AGE2})+{RD_RESF_AGE3})+{RD_RESF_AGE4})+{RD_RESF_AGE5})+{RD_RESF_AGE6})	The total number of female researchers and engineers must be equal to the sum of the following: aged under 25, aged 25–34, aged 35–44, aged 45–54, aged 55–64, aged 65 and over. (Column 1 Row 2)	Error

### Controls in table 3. COSTS OF INTERNAL RESEARCH AND DEVELOPMENT

Control ID	Control formula	Clarification	Type of error
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21085	$\{RD\_EXP\_ITH\} \leq \{RD\_EXP\_EQU\_ENT\}$	Inconsistent data. Check that the costs on the acquisition of computers and computer systems only for the purposes related to R&D (Table 3. row 7) would not be larger than the costs on the acquisition of equipment, apparatus, machinery, inventory and means of transport intended for R&D activities (Table 3. row 6).	Error
33505	$(\{RD\_EXP\_LAB\_ENT\} + \{RD\_EXP\_CUR\_OTH\}) = \{RD\_EXP\_LAB\_ENT\} + \{RD\_EXP\_CUR\_OTH\}$	Total current costs of internal R&D are the sum of labour costs (wages and salaries, social tax and unemployment insurance premium) and other current expenses (material, works and services purchased in the framework of internal R&D projects, maintenance costs of buildings and facilities etc.) (Column 1 Row 1)	Error
33508	$\{RD\_EXP\_INV\_ENT\} = \{RD\_EXP\_BUI\_INS\} + \{RD\_EXP\_EQU\_ENT\} + \{RD\_EXP\_INV2\} + \{RD\_EXP\_INV3\}$	Total internal R&D investments into non-current assets are the sum of acquisition, construction and capital repairs of buildings and facilities; costs related to the acquisition of equipment, apparatus, machinery, inventory and means of transport; acquisition of intangible fixed assets (patents, licences, computer software.); and other investments related to R&D. (Column 1 Row 4)	Error
33510	$((\{RD\_EXP\_LAB\_ENT\} + \{RD\_EXP\_CUR\_OTH\}) + (\{RD\_EXP\_BUI\_INS\} + \{RD\_EXP\_EQU\_ENT\} + \{RD\_EXP\_INV2\} + \{RD\_EXP\_INV3\})) = \{RD\_EXP\_CUR\_ENT\} + (\{RD\_EXP\_BUI\_INS\} + \{RD\_EXP\_EQU\_ENT\} + \{RD\_EXP\_INV2\} + \{RD\_EXP\_INV3\})$	Total internal R&D costs are the sum of total current costs of internal R&D and total internal R&D investments into non-current assets. (Column 1 Row 10)	Error

### Controls in table 3.1. SHARES OF COSTS ON TYPES OF INTERNAL RESEARCH AND DEVELOPMENT

Control ID	Control formula	Clarification	Type of error
33511	$(\{RD\_EXP\_SCI\_BAS\} + \{RD\_EXP\_SCI\_APP\} + \{RD\_EXP\_SCI\_EXW\}) = \{RD\_EXP\_SCI\_BAS\} + \{RD\_EXP\_SCI\_APP\} + \{RD\_EXP\_SCI\_EXW\}$	Total internal R&D costs are equal to the sum of basic research, applied research and experimental development. (Column 1 Row 4)	Error

### Controls in table 4. FUNDING OF INTERNAL R&D COSTS IN THE REFERENCE YEAR

Control ID	Control formula	Clarification	Type of error
33512	$(\{RD\_EXP\_BES\} + \{RD\_EXP\_GOV\} + \{RD\_EXP\_HES\} + \{RD\_EXP\_PNP\} + \{RD\_EXP\_BES6\} + \{RD\_EXP\_FOR1\} + \{RD\_EXP\_FOR2\} + \{RD\_EXP\_FOR3\} + \{RD\_EXP\_FOR4\}) = \{RD\_EXP\_BES\} + \{RD\_EXP\_GOV\} + \{RD\_EXP\_HES\} + \{RD\_EXP\_PNP\} + \{RD\_EXP\_BES6\} + \{RD\_EXP\_FOR1\} + \{RD\_EXP\_FOR2\} + \{RD\_EXP\_FOR3\} + \{RD\_EXP\_FOR4\}$	The funding of internal R&D costs is the sum of funding from Estonian sources: enterprise's own funds (incl. funding of R&D costs from Estonian companies in the same group, loans from extra-budgetary foundations and funds), state funds (funding from state and local governments, state grants and targeted financing from foundations and funds), higher education organisations and foundations (excl. higher education institutions), other companies (excl. companies in the same group); and funding from foreign sources: foreign companies, foreign funds and endowments, European Union research and development grants (EU Framework Programme, EC programmes), and other foreign funding. (Column 2 Row 10)	Error

### Controls in table 6. TIME SPENT ON FILLING OUT THE QUESTIONNAIRE

Control ID	Control formula	Clarification	Type of error
20299	$\{TAITMISEAEGMINUTIT\} \leq 59$	Maximum permitted value is 59 minutes. Time exceeding 60 minutes shall be indicated in hours and minutes.	Error
20300	$\{TAITMISEAEGTUNDI\} + \{TAITMISEAEGMINUTIT\} > 0$	The time spent on filling in the questionnaire must be recorded and the sum of hours and minutes must be more than 0. The time spent means time spent by all employees to read questionnaire instructions, collect and prepare data and fill in the questionnaire.	Error
20301	$\{TAITMISEAEGTUNDI\} \leq 999$	Maximum permitted value is 999 hours.	Error

### Controls across tables

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Control ID	Control formula	Clarification	Type of error
3730	{RD_EXP_COS_ENT}={RD_EXP_FIN}	The total sum does not match. Check that the current costs of the internal R&D and investments into non-current assets (Table 2.1. row 17) would equal to the total funding of internal R&D activities (Table 5. column 1 row K_58).	Error
3823	KUI({RD_ENT_YES}=2), SIIS({RD_EXP_COS_ENT}=0)	If your answer about the existence of internal R&D costs was "NO" (Table 1.0. row 0_2), Table 2.1. COSTS ON INTERNAL RESEARCH AND DEVELOPMENT remains empty.	Error
3842	{RD_EXP_FIN}={RD_EXP_COS_ENT}	The total sum does not match. Check that the total sum of funding of internal R&D costs (Table 5. column 1 row K_58) would equal to the total sum of current internal R&D costs and investments into non-current assets (Table 2.1. row 17).	Error
33479	{RD_RESMF_FTE_ENT}<=({RD_PERMF_DOC_BES}+{RD_RESMF_HIGH})	The number of researchers and engineers in full-time equivalents is smaller than or equal to the total number of researchers and engineers. (Table 1.2. Row 1 Column 1 must be smaller or equal than Table 1.1. Row 4 Column 1)	Error
33480	{FTE_RES_F}<=({RD_PERF_DOC_BES}+{RD_RESF_HIGH})	The number of female researchers and engineers in full-time equivalents is smaller than or equal to the total number of female researchers and engineers. (Table 1.2. Row 2 Column 1 must be smaller or equal than Table 1.1. Row 4 Column 2)	Error
33481	{RD_OTHMF_FTE_SCF}<=({RD_OTHMF_DOC}+{RD_OTHMF_HIGH}+{RD_OTHMF_SECN})	The number of other R&D personnel (technicians, support staff) in full-time equivalents must be smaller than or equal to the total number of other R&D personnel (technicians, support staff). (Table 1.2. Row 3 Column 1 must be smaller or equal than Table 1.1. Row 4 Column 3)	Error
33483	{RD_OTHF_FTE_SCF}<=({RD_OTHF_EDU})	The total number of female other R&D personnel (technicians, support staff) in full-time equivalents must be smaller than or equal to the total number of female other R&D personnel (technicians, support staff). (Table 1.2. Row 4 Column 1 must be smaller or equal than Table 1.1. Row 4 Column 4)	Error
33485	{RD_RESMF_FTE_ENT}+{RD_OTHMF_FTE_SCF}<=({RD_PERMF_DOC_BES}+{RD_OTHMF_DOC}+{RD_RESMF_HIGH}+{RD_OTHMF_HIGH}+{RD_OTHMF_SECN})	The total number of R&D personnel in full-time equivalents must be smaller than or equal to the total number of R&D personnel. (Table 1.2. Row 5 Column 1 must be smaller or equal than Table 1.1. Row 4 Column 5)	Error
33486	(({FTE_RES_F}+{RD_OTHF_FTE_SCF})<=({RD_PERF_DOC_BES}+{RD_OTHF_DOC}+{RD_RESF_HIGH}+{RD_OTHF_HIGH}+{RD_OTHF_SECN}))	The total number of female R&D personnel in full-time equivalents must be smaller than or equal to the total number of female R&D personnel. (Table 1.2. Row 6 Column 1 must be smaller or equal than Table 1.1. Row 4 Column 6)	Error
33487	(({RD_RESMF_AGE1}+{RD_RESMF_AGE2}+{RD_RESMF_AGE3}+{RD_RESMF_AGE4}+{RD_RESMF_AGE5}+{RD_RESMF_AGE6})=({RD_PERMF_DOC_BES}+{RD_RESMF_HIGH}))	The total number of researchers and engineers must be equal to the sum of the following: aged under 25, aged 25–34, aged 35–44, aged 45–54, aged 55–64, aged 65 and over. (Table 2. Row 1 Column 1 = Table 1.1. Column 1 Row 4)	Error
33488	(({RD_RESF_AGE1}+{RD_RESF_AGE2}+{RD_RESF_AGE3}+{RD_RESF_AGE4}+{RD_RESF_AGE5}+{RD_RESF_AGE6})=({RD_PERF_DOC_BES}+{RD_RESF_HIGH}))	The total number of female researchers and engineers must be equal to the sum of the following: aged under 25, aged 25–34, aged 35–44, aged 45–54, aged 55–64, aged 65 and over. (Table 2. Row 2 Column 1 = Table 1.1. Column 2 Row 4)	Error
33489	((({RD_EXP_LAB_ENT}+{RD_EXP_CUR_OTH})+{RD_EXP_BUI_INS}+{RD_EXP_EQU_ENT}+{RD_EXP_INV2}+{RD_EXP_INV3})=({RD_EXP_SCI_BAS}+{RD_EXP_SCI_APP}+{RD_EXP_SCI_EXW}))	Total internal R&D costs must be equal to the sum of expenditures on basic research, applied research and experimental development. (Table 3. Row 10 Column 1 = Table 3.1. Row 4 Column 1)	Error
33490	((({RD_EXP_LAB_ENT}+{RD_EXP_CUR_OTH})+{RD_EXP_BUI_INS}+{RD_EXP_EQU_ENT}+{RD_EXP_INV2}+{RD_EXP_INV3})=({RD_EXP_BES}+{RD_EXP_GOV}+{RD_EXP_HES}+{RD_EXP_PNP}+{RD_EXP_BES6}+{RD_EXP_FOR1}+{RD_EXP_FOR2}+{RD_EXP_FOR3}+{RD_EXP_FOR4}))	Total internal R&D costs must be equal to the sum of funding of R&D costs by source of funding. (Table 3. Row 10 Column 1 = Table 4. Row 12 Column 1)	Error
33813	KUI({INFO_KONTR}=1),SIIS((({RD_EXP_LAB_ENT}+{RD_EXP_CUR_OTH})/({RD_EXP_BUI_INS}+{RD_EXP_INV3}+{RD_EXP_INV2}+{RD_EXP_EQU_ENT}))>0)	Your enterprise has received funding from Structural Funds or from Horizon Framework Programme for Research and Innovation, or your enterprise is a partner in technology development centres, or you answered "Yes" to the question "Does your enterprise employ research and development personnel?" in EKOMAR questionnaire.	Warning
34135	KUI({RD_ENT_YES}="1"),SIIS({ESTAT}>0 JA)	Inconsistent data. If you answered 'Yes' in Table 1 (meaning that the company spent funds on internal R&D	Warning



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	{ESTAT_1}>0)	in the reference year), you must also indicate the number of employees in Tables 1.1, 1.2 and 2 and the costs in Table 3.	
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### AUTOSUMS

#### Autosums in table 1.1. EMPLOYEES ENGAGED IN RESEARCH AND DEVELOPMENT BY EDUCATION AND SEX AND WORKING TIME SPENT ON RESEARCH AND DEVELOPMENT

Row name	Column name	Formula	Clarification
Doctor	TOTAL male and female R&D personnel	{RD_PERMF_DOC_BES}+{RD_OTHMF_DOC}	
Doctor	.. women	{RD_PERF_DOC_BES}+{RD_OTHF_DOC}	
Master's degree, academic higher education, professional higher education	TOTAL male and female R&D personnel	{RD_RESMF_HIGH}+{RD_OTHMF_HIGH}	
Master's degree, academic higher education, professional higher education	.. women	{RD_RESF_HIGH}+{RD_OTHF_HIGH}	
Secondary education, professional secondary education, without secondary education	TOTAL male and female R&D personnel	{RD_OTHMF_SECN}	
Secondary education, professional secondary education, without secondary education	.. women	{RD_OTHF_SECN}	
TOTAL R&D personnel	Total number of male and female researchers and engineers	{RD_PERMF_DOC_BES}+{RD_RESMF_HIGH}	
TOTAL R&D personnel	.. women	{RD_PERF_DOC_BES}+{RD_RESF_HIGH}	
TOTAL R&D personnel	TOTAL number of male and female other R&D personnel (technicians, support staff)	{RD_OTHMF_DOC}+{RD_OTHMF_HIGH}+{RD_OTHMF_SECN}	
TOTAL R&D personnel	.. women	{RD_OTHF_DOC}+{RD_OTHF_HIGH}+{RD_OTHF_SECN}	
TOTAL R&D personnel	TOTAL male and female R&D personnel	{RD_PERMF_DOC_BES}+{RD_OTHMF_DOC}+{RD_PERMF_HIGH}+{RD_OTHMF_SECN}	
TOTAL R&D personnel	.. women	{RD_PERF_DOC}+{RD_PERF_HIGH}+{RD_OTHF_SECN}	

#### Autosums in table 1.2. EMPLOYEES ENGAGED IN RESEARCH AND DEVELOPMENT IN THE COMPANY BY LEVEL OF EDUCATION AT THE END OF THE REFERENCE YEAR

Row name	Column name	Formula	Clarification
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TOTAL employees engaged in R&D	Number of employees in full-time equivalents	{RD_RESMF_FTE_ENT}+{RD_OTHMF_FTE_SCF}	
.. TOTAL women	Number of employees in full-time equivalents	{FTE_RES_F}+{RD_OTHF_FTE_SCF}	

### Autosums in table 2. RESEARCHERS AND ENGINEERS BY AGE AT THE END OF THE REFERENCE YEAR

Row name	Column name	Formula	Clarification
TOTAL (equal to Table 1.1. row 4 column 1)	Total scientists and engineers	{RD_RESMF_AGE1}+{RD_RESMF_AGE2}+{RD_RESMF_AGE3}+{RD_RESMF_AGE4}+{RD_RESMF_AGE5}+{RD_RESMF_AGE6}	
.. women	Total scientists and engineers	{RD_RESF_AGE1}+{RD_RESF_AGE2}+{RD_RESF_AGE3}+{RD_RESF_AGE4}+{RD_RESF_AGE5}+{RD_RESF_AGE6}	Total scientists and engineers (women) is equal to the sum of columns 2, 3, 4, 5, 6 and 7.

### Autosums in table 3. COSTS OF INTERNAL RESEARCH AND DEVELOPMENT

Row name	Column name	Formula	Clarification
Internal R&D costs: TOTAL current costs	Costs, euros	{RD_EXP_LAB_ENT}+{RD_EXP_CUR_OTH}	
Internal R&D costs: TOTAL investments (rows 5+6+8+9)	Costs, euros	{RD_EXP_BUI_INS}+{RD_EXP_EQU_ENT}+{RD_EXP_INV2}+{RD_EXP_INV3}	
Internal R&D costs: TOTAL current costs and investments into non-current assets (rows 1+4)	Costs, euros	{RD_EXP_CUR_ENT}+{RD_EXP_INV_ENT}	

### Autosums in table 3.1. SHARES OF COSTS ON TYPES OF INTERNAL RESEARCH AND DEVELOPMENT

Row name	Column name	Formula	Clarification
TOTAL rows 1-3	Costs, euros	{RD_EXP_SCI_BAS}+{RD_EXP_SCI_APP}+{RD_EXP_SCI_EXW}	

### Autosums in table 4. FUNDING OF INTERNAL R&D COSTS IN THE REFERENCE YEAR

Row name	Column name	Formula	Clarification
TOTAL funding of internal R&D (equal to Table 3 row 10)	Costs, euros	{RD_EXP_BES}+{RD_EXP_GOV}+{RD_EXP_HES}+{RD_EXP_PNP}+{RD_EXP_BES6}+{RD_EXP_FOR1}+{RD_EXP_FOR2}+{RD_EXP_FOR3}+{RD_EXP_FOR4}	
The value of row 10 in table 3	Costs, euros	{RD_EXP_COS_ENT}	

### Autosums in table Info

Row name	Column name	Formula	Clarification
	Indicator	{RD_PERMF_EDU_BES}	

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**Research and development (R&D) (in companies)**

Code of the questionnaire: 11342024

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	Indicator	{RD_EXP_COS_ENT}	
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