



EPEP - Competence profile inspection systems >12kW

EPBD subject matter	Energy performance of buildings	Climatic criteria	1	Can explain the term outdoor conditions
		Climatic criteria	2	Can explain the indoor climate requirements
		Cost awareness	3	Knows the factors of cost effectiveness
		Calculation	4	Knows the methodology of how to calculate the energy performance of buildings
		Requirements	5	Knows the term minimum energy performance requirements
		Application of requirements	6	Can explain the meaning of major renovation
		Application of requirements	7	Can explain the meaning of significant impact
		Application of requirements	8	Can explain the details of technical systems in buildings
		Application of requirements	9	Knows the term nearly zero energy building
		Application of requirements	10	Knows the fundamental data of energy certification
		Application of requirements	11	Knows the energy inspection targets of technical systems in buildings
		Application of requirements	12	Can explain the task of the independent control system for certificates
		EPBD definitions	Energy performance of buildings	Energy supply
Energy supply	15			Knows the calculating methods for energy performance of a building
Energy supply	16			Knows the measuring methods for energy performance of a building
Energy supply	17			Can explain the major parts of building constructions
Energy supply	18			Can explain different types of energy consumption used in buildings
Energy supply	19			Knows the thresholds of energy performance categories in buildings
Energy supply	20			Can explain the different kind of renewable energies
Energy supply	21			Can explain the term renewable sources on site
Technical building system definition	HVAC Systems			22
	HVAC Systems		23	Knows the different cooling solutions
	HVAC Systems		24	Knows the different ventilation solutions
	HVAC Systems		25	Can explain the generation of hot water
	HVAC Systems		26	Can explain the effect of lighting on the power consumption
	Energy sources		Primary energy	27
Primary energy			28	Can explain the term energy conversion
Primary energy			29	Can explain the term energy transformation
Building	Building structure		30	Can explain the term building unit
	Building structure		31	Can explain the term building envelope
	Building structure		32	Can explain the term building element
	Building structure		33	Can explain the term public buildings
	Building structure		34	Can explain the term private buildings
	Major renovation	35	Can define the meaning of major renovation technical systems	
	Major renovation	36	Can define the meaning of major renovation of building envelope	
	Building certificate categories	37	Knows what kind of building should need an energy performance certificate	
	Building certificate categories	38	Knows what kind of buildings have to display the energy performance certificates	
	European standards	Standards	39	Knows the related standards
		Standards	40	Knows the position of the standards
	Cost optimal level	Lifecycle cost calculation	41	Knows the elements and role of the investment costs
Lifecycle cost calculation		42	Knows the elements of maintenance costs	
Lifecycle cost calculation		43	Knows the elements of the operating costs	
Lifecycle cost calculation		44	Knows about earnings from energy produced on-site	
Lifecycle cost calculation		45	Knows the term estimated life-cycle of building elements	
Air-conditioning	Lifecycle cost calculation	46	Knows the term of estimated life-cycle of building	
	AC systems	47	Can explain the function of air conditioning systems	
	AC systems	48	Can define the components of air conditioning systems	
Heating system components	AC systems	49	Can explain the function of a refrigeration cycle	
	Boiler	50	Can explain the function of heating systems	
Heatload-gain calculation	Effective rated output	51	Knows the term standard working conditions	
	Effective rated output	52	Can control the calculation of the heat-load	
EPBD calculations	Calculation methodology	Effective rated output	53	Can explain the criteria for minimum energy performance requirements for buildings
		Cost-optimal levels	54	Knows the technical and financial details for calculating the optimal cost to advise the end user
		Cost-optimal levels	55	Can explain the high efficiency alternative systems to be taken into consideration
		Cost-optimal levels	56	Can explain the criteria for the minimum requirements for energy performance for an existing building to be renovated
		Cost-optimal levels	57	Knows the proper definition of nearly zero energy building (nZEB)
		Cost-optimal levels	58	Knows the existing financial incentives for opportunities for renovation & new buildings
EPBD inspections	Inspection of heating and AC systems	System methodology	59	Knows the term operator
		System methodology	60	Can explain the responsibility of an operator
		System methodology	61	Knows the system capacity thresholds of building classes
		System methodology	62	Knows the inspection frequencies for building classes
		System methodology	63	Can explain the heating system components to be inspected
		System methodology	64	Can explain the air-conditioning system components to be inspected
		System methodology	65	Can explain the basic structure and content of an inspection report
		System methodology	66	Knows the criteria of how to become an energy efficiency inspector

EPBD Background

EPBD related standards for inspection		System methodology	67	Knows the status of the energy performance reports	
		Check	68	Knows how to check the content of documentation	
		Check	69	Knows how to check the design documentation's complexity	
		Check	70	Knows how to check the relevant operating documentation	
		Check	71	Knows the major aspects of visual checking	
		Pre-inspection methodology	72	Knows how to pre-inspect the designing works	
		Pre-inspection methodology	73	Knows how to pre-inspect the related documents	
		Pre-inspection methodology	74	Knows how to pre-inspect the system characteristics	
		Pre-inspection methodology	75	Knows how to pre-inspect the operational tasks	
		Pre-inspection methodology	76	Knows how to pre-inspect the maintenance work done	
		Inspections methodology	77	Knows how to organise an energy inspection	
		Inspections methodology	78	Knows how to inspect refrigeration/cooling equipment	
		EPBD related inspection standards	Scope	Inspections methodology	79
Practical arrangements	80			Can explain the relevant documents to be produced after reporting	
Reporting	Practical arrangements			81	Knows the required content of the relevant documentation
	Practical arrangements			82	Knows how to handle the documentation
	Practical arrangements			83	Can identify the systems that are already inspected
Improvements	Practical arrangements			84	Can explain the responsibility of the personnel and organisation in charge of the inspection
	Modification and correction			85	Can explain the different methods to reduce the cooling load
	Modification and correction			86	Can explain how to improve the energy efficiency with maintenance
Alternatives	Modification and correction			87	Can evaluate the results of an energy efficiency inspection in relation to malfunctions
	Modification and correction			88	Knows the different, alternative system solutions
	Modification and correction			89	Knows the different, alternative subsystem solutions
Checklists	Modification and correction			90	Knows the different, alternative components
	Tools for proper inspection			91	Can explain the criteria of proper functioning of outdoor heat rejection
	Tools for proper inspection	92	Can explain the criteria for the proper functioning of indoor heat rejection		
	Tools for proper inspection	93	Knows how to measure indoor air parameters		
Inspection classes	Tools for proper inspection	94	Can explain how to adjust the control parameters		
	System	95	Can explain the different criteria of inspection classes of AC systems		
	Use	96	Knows how to estimate the annual running time		
	Use	97	Knows how to estimate or define the date of installation		
Inspection frequency	Use	98	Knows how to identify the refrigerant in the equipment		
	Outcomes	99	Can explain advice on system changes		
	Outcomes	100	Can explain advice on the maintenance of a system		
	Scheduling	101	Can optimise the time to be taken for inspection from the maintenance records		
Pre-inspection procedure	Scheduling	102	Can optimise the time to be taken for inspection from the balancing records		
	Pre-inspection checklists	103	Knows the pre-inspection tasks to be undertaken to check design parameters		
	Pre-inspection checklists	104	Knows the pre-inspection tasks to be undertaken for the estimation of cooling load		
	Pre-inspection checklists	105	Knows the pre-inspection tasks to be undertaken for checking the equipment		
	Pre-inspection checklists	106	Knows the pre-inspection tasks to be undertaken to define control zones		
	Pre-inspection checklists	107	Knows the pre-inspection tasks to be undertaken for the control of parameters		
	Pre-inspection checklists	108	Knows the pre-inspection tasks to be undertaken for balancing plans		
	Pre-inspection checklists	109	Knows the pre-inspection tasks to be taken on BMS & control systems		
	Pre-inspection checklists	110	Knows the pre-inspection tasks to be undertaken for maintenance plans		
	Pre-inspection checklists	111	Knows the pre-inspection tasks to be undertaken for energy supply		
Extent of inspection	Documentation	112	Can explain how to check building documentation		
	Documentation	113	Can explain how to check HVAC documentation		
	Documentation	114	Can explain how to check the cooling load calculation		
	Indoor units	115	Knows how to check indoor unit airflow		
	Indoor units	116	Knows how to check the indoor unit cooling capacity		
	Indoor units	117	Knows how to check the indoor unit control system		
	Indoor units	118	Knows how to check the level of cooling energy emission system's maintenance		
	Indoor units	119	Knows how to check the running hours		
	Outdoor units	120	Knows how to check the proper location of an outdoor unit		
	Outdoor units	121	Knows how to check the cooling capacity of an outdoor unit		
	Outdoor units	122	Knows how to check the proper calculation of COP		
	Outdoor units	123	Knows how to check the proper control solution for the outdoor unit		
	Energy supply	124	Knows how to check and measure the energy supply		
	Energy supply	125	Knows how to measure the power consumption		
	Inspection procedure	Inspection checklist	126	Can explain how to prepare a proper inspection checklist	
Inspection checklist		127	Can explain how to prepare a proper design-inspection checklist		
Inspection checklist		128	Can explain how to prepare a proper documentation-inspection checklist		
Inspection checklist		129	Can explain how to prepare a proper refrigeration equipment inspection checklist		
Inspection checklist		130	Can explain how to prepare a proper pipework and insulation inspection checklist		
Inspection checklist		131	Can explain how to prepare a proper outdoor heat exchanger inspection checklist		
Inspection checklist		132	Can explain how to prepare a proper indoor heat exchanger inspection checklist		
Inspection checklist		133	Can explain how to prepare a proper in-space air delivery system inspection checklist		
Inspection checklist		134	Can explain how to prepare a proper ducted air delivery system inspection checklist		
Inspection checklist		135	Can explain how to prepare a proper air intake inspection checklist		
Inspection report		136	Can prepare an inspection report on documents		
Inspection report		137	Can prepare an inspection report on systems inspected		

			Inspection report	138	Can prepare an inspection report about the calculations needed
			Inspection report	139	Can prepare an inspection report about the used energy
			Inspection report	140	Can prepare an inspection report about energy efficiency
			Inspection report	141	Can prepare an inspection report about the faults to be repaired
			Inspection report	142	Can prepare an inspection report about the components to be adjusted and repaired
			Inspection report	143	Can prepare an inspection report about the system, the components to be adjusted, improved or modified
			Inspection report	144	Can prepare an inspection report about the alternative solutions
		Energy impacts	Reduction heatload	145	Can prepare an estimation on how to reduce the solar gains
			Reduction heatload	146	Can prepare an estimation on how to reduce internal gains
			Reduction heatload	147	Can prepare an estimation on how to reduce the power consumption with controlled lighting
			Reduction heatload	148	Can prepare an estimation on how to reduce the power consumption of IT equipment
			Reduction heatload	149	Can prepare an estimation on how to reduce the cooling load with co-location
			Reduction heatload	150	Can prepare an estimation on how to reduce the power consumption by proper ventilation
			Reduction heatload	151	Can prepare an estimation on how to reduce the power consumption by free cooling
			Reduction heatload	152	Can prepare an estimation on how to reduce the power consumption by use of absorption cooling
			Improvement system efficiency	153	Can prepare an estimation on how to improve the energy efficiency by use of outdoor air
			Improvement system efficiency	154	Can prepare an estimation on how to improve the energy efficiency by improving the distribution efficiency
			Improvement system efficiency	155	Can prepare an estimation on how to improve the energy efficiency by improving the emission efficiency
			Improvement system efficiency	156	Can prepare an estimation on how to improve the energy efficiency by improving the generating efficiency
			Check existing solutions	157	Knows how to check the existing solution for failure of initial design
			Check existing solutions	158	Knows how to check the existing solution for failure of installation
			Check existing solutions	159	Knows how to check the existing solution for failure of fine tuning
		Check existing solutions	160	Knows how to check the existing solution for failures in the whole system	
		Scope	Air handling	161	Knows the different components of an AC system
			Air handling	162	Can explain the term dry temperature
			Air handling	163	Can explain the term wet temperature
			Air handling	164	Can explain the term of relative humidity
			Air handling	165	Can explain the Mollier (hx) chart
			Air handling	166	Knows the parameters of different air cleanliness categories
			Air handling	167	Knows the different methods of air filtering
			Air handling	168	Can explain the methodology for EPBD inspections
		Design	Design criteria	169	Knows the term of thermal comfort
			Design criteria	170	Knows the criteria of thermal comfort zones
			Design criteria	171	Can control if the design parameters are properly chosen
			Design criteria	172	Knows the meaning of energy efficiency
			Design criteria	173	Knows the optimal energy efficiency values of components
		Extent of inspection	Design criteria	174	Knows the criteria of acoustical comfort zones
			Design	175	Knows how to identify the physical parameters of a building construction
			Design	176	Knows how to identify the real demands of people
			Design	177	Can explain how to optimise the temperature levels
			Design	178	Can explain how to optimise the humidity levels
			Design	179	Can control the proper calculation of heat-load of personnel
			Design	180	Can control the proper calculation for the heat-load of appliances
			Design	181	Can control the proper calculation of heat-load
		Design documentation	Design	182	Knows the optimal setting points of controlled parameters
			Design documentation	183	Can explain the basic structure of the design documentation
			Design documentation	184	Can explain the basic structure of the execution documentation
			Design documentation	185	Knows the symbols used in HVAC drawings
		System components	Design documentation	186	Knows the different kind of technical drawings
			Cooling Energy Distribution system (CED)	187	Can explain the function of different cooling energy distribution systems
			Cooling Energy Distribution system (CED)	188	Can explain the operation of different cooling energy distribution systems
			Cooling Energy Distribution system (CED)	189	Can explain the structure of the refrigerant based air-conditioning systems
			Cooling Energy Distribution system (CED)	190	Can explain the common structure of the water-chiller based air-conditioning systems
			Cooling Energy Distribution system (CED)	191	Can explain the common structure of the air handling, unit based, air-conditioning systems
			Cooling Energy Distribution system (CED)	192	Knows the different types and behaviours of refrigerants
			Cooling Energy Distribution system (CED)	193	Knows the possible materials used in a water-based system
			Cooling Energy Distribution system (CED)	194	Knows the major components of the cooling energy distribution systems
			Cooling Energy Distribution system (CED)	195	Knows the role of the pumps and heat exchangers in the energy balance
			Cooling Energy Distribution system (CED)	196	Knows why a capacity control system should be used
			Cooling Energy Distribution system (CED)	197	Can explain about variable medium volume systems and their advantages
			Cooling Energy Emission system (CEE)	198	Can explain the function of different cooling energy emission systems
			Cooling Energy Emission system (CEE)	199	Can explain the operation of different cooling energy emission systems
			Cooling Energy Emission system (CEE)	200	Knows the major components of cooling energy emission systems
			Cooling Energy Emission system (CEE)	201	Knows the energy parameters and performance of evaporators
			Cooling Energy Emission system (CEE)	202	Knows the energy parameters and performance of Fan Coils
			Cooling Energy Emission system (CEE)	203	Knows the energetic parameter and behaviour of surface cooling/heating
			Cooling Energy Emission system (CEE)	204	Knows why to use a capacity control system for cooling energy emissions
			Cooling Energy Generating system (CEG)	205	Can explain the function of natural cooling
		Cooling Energy Generating system (CEG)	206	Can explain the function of compressor-cycle refrigeration	
		Cooling Energy Generating system (CEG)	207	Can explain the operation of absorption cooling	
		Cooling Energy Generating system (CEG)	208	Knows the major components of cooling energy generating systems	

			Cooling Energy Generating system (CEG)	209	Knows why to use a capacity control system for cooling energy generating systems
			Cooling Energy Generating system (CEG)	210	Knows the influence of the capacity control system for cooling energy generating systems on power consumption
			Cooling Energy Generating system (CEG)	211	Can explain several improvements in refrigerant system
			Cooling Energy Generating system (CEG)	212	Can explain several improvements in water-based systems
			Cooling Energy Generating system (CEG)	213	Can explain several improvements by an AHU-based systems
			Energy Supply system (ES)	214	Can explain the function of different cooling energy generating systems
			Energy Supply system (ES)	215	Can explain the operation of different cooling energy generating systems
			Energy Supply system (ES)	216	Knows why to use a capacity control system for an energy supply system
		AC subsystems indicators	Component identification	217	Knows the terms and relevant components of subsystems
			Component identification	218	Knows the proper installation of a split unit evaporator
			Component identification	219	Can explain the method for the proper use of refrigeration piping
			Component identification	220	Knows the proper installation of the split unit condenser
			Component identification	221	Knows how to control the electric supply system
			Component identification	222	Can identify missing or incorrect components
		AC operation indicators	Tasks and operation	223	Can explain which criteria are necessary for system conformity
			Tasks and operation	224	Can explain which criteria are necessary for correct operation
			Tasks and operation	225	Knows the function of a control system and the criteria of settings
			Tasks and operation	226	Knows the function of the system components and the fitting methodologies
			Energy	227	Can explain how to measure and report the power inputs
			Energy	228	Can explain how to measure and report the energy outputs
			Operation	229	Knows the measuring and assessment methods for proper system operation
			Operation	230	Knows the measuring and assessment methods for proper energy consumption
			Operation	231	Can explain the basic aspects and methodology of recommendations for the improvement of system efficiency
			Personnel certification	232	Knows the criteria and how to obtain the personnel certification in the EPBD inspection field
		Components and system commissioning	233	Can explain the sequence of events for commissioning procedures	
			234	Knows the SI units of temperature	
		Basic Units	Temperature	235	Knows the different scales such as K, °F, °C
			Pressure	236	Knows the SI units of pressure
			Pressure	237	Knows the different scales such as Pa, mbar, psi,...
			Density	238	Knows what happens with density when pressure changes
			Superheat	239	Can explain the term superheat
			Superheat	240	Knows where superheat is located on a log p/h chart
			Superheat	241	Knows where superheat is located on a cooling unit
			Superheat	242	Can measure superheat.
			Superheat	243	Knows why superheat is required
			Superheat	244	Knows the disadvantages of superheat
			Subcool	245	Can explain what subcool is
			Subcool	246	Knows where sub-cooling is located on a log p/h chart
			Subcool	247	Can measure sub-cooling.
			Subcool	248	Knows the values normally required for sub-cooling
			Subcool	249	Know why subcooling is important in a cooling circuit
		Basic Refrigeration Terms	Enthalpy	250	Knows the units of enthalpy
			Enthalpy	251	Knows where enthalpy is located on a log p/h chart
			Enthalpy	252	Knows what happens with enthalpy in the condenser
			Enthalpy	253	Knows what happens with enthalpy in the evaporator
			Enthalpy	254	Knows what happens with enthalpy in the compressor
			Enthalpy	255	Knows what happens with enthalpy along the suction line
			Enthalpy	256	Knows what happens with enthalpy when evaporation temperature drops
			Enthalpy	257	Knows what happens when condensing pressure drops (enthalpy)
			Enthalpy	258	Knows what happens when sub-cooling increases
			Enthalpy	259	Knows what happens when superheat increases.
			Vapour quality	260	Can show vapour quality on a log p/h
			Vapour quality	261	Knows how vapour quality can be improved
			Superheated Section	262	Knows why superheated suction is needed
			Superheated Section	263	Knows which device is responsible for the superheat
			Superheated Section	264	Knows common values for superheated suction
			Superheated Section	265	Knows what happens with energy consumption when superheat suction rises
			Superheated Section	266	Knows what happens with discharge temperatures when superheated suction rises.
			Superheated Section	267	Knows what happens with COP when superheated suction rises
			Discharge Temperature	268	Knows how to measure DT
			Discharge Temperature	269	Can explain why DT is higher than condensing temperature
			Discharge Temperature	270	Knows what happens with DT when superheat rises
			Discharge Temperature	271	Knows what happens with DT when sub-cooling rises
			Discharge Temperature	272	Knows what happens with DT when suction pressure drops
			Discharge Temperature	273	Knows what happens when condensing pressure drops (discharge temperature)
			Pressures	274	Knows where LP is located in a refrigeration system
			Pressures	275	Knows where HP is located in a refrigeration system
			Pressures	276	Knows what pressure is most likely measured in the compressor body
		Condensing Line	277	Knows what happens with the CL if outside temperature rises	
		Condensing Line	278	Knows what happens with the CL if there's air in the system	
		Condensing Line	279	Can explain where sub-cooling is located	

Refrigeration background

Basic Thermodynamics

	Condensing Line	280	Can explain where the de-superheated region is located
	Condensing Line	281	Can locate the discharge temperature
	Condensing Line	282	Can explain what happens with the CL when there's an extreme pressure drop across the discharge line
	Condensing Line	283	Can explain what happens with the CL when there's an extreme pressure drop across the liquid line
	Condensing Line	284	Can explain what happens with the CL when the liquid receiver is installed higher than the expansion device
	Condensing Line	285	Can explain what happens with the CL when outside temperature rises
	Condensing Line	286	Can explain what happens with the CL when a system is overfilled
	Condensing Line	287	Can explain what happens with the CL when the condenser gets clogged
	Condensing Line	288	Can explain what happens with the CL when a fan on the condenser fails
	Evaporator Line	289	Can explain the EL
	Evaporator Line	290	Knows what happens with the EL if cold-room temperature rises
	Evaporator Line	291	Knows what happens with the EL if the coil freezes up.
	Evaporator Line	292	Can explain what happens if the cold-room temperature decreases (freezer)
	Evaporator Line	293	Can locate the leaving temperature of the evaporator
	Evaporator Line	294	Can explain what happens with the EL when there's a pressure drop over the evaporator
	Evaporator Line	295	Can explain what happens with the EL when there's a pressure drop across the suction line
	Evaporator Line	296	Can explain what happens with superheat if the expansion valve loses its charge
	Evaporator Line	297	Can explain what happens if the speed/capacity of compressor is reduced
	Evaporator Line	298	Can explain what happens with superheat if a system loses refrigerant
	Expansion Line	299	Can explain where the expansion line is located
	Expansion Line	300	Can explain what happens during expansion
	Compression Line	301	Can locate the compression line
	Lines on log p/h	302	Can explain and locate pressure lines
	Lines on log p/h	303	Can explain and locate temperature lines
	Lines on log p/h	304	Can show the location of sub-cooled liquid
	Lines on log p/h	305	Can show where the 2-phase region is located
	Lines on log p/h	306	Can show the location of saturated gas
	Lines on log p/h	307	Can show the location of superheated gas
	Lines on log p/h	308	Knows the mass unit for which the enthalpy is related in the Log p/h diagram
	Refrigerant Tables	309	Knows that the tables are for saturated conditions only
	Refrigerant Tables	310	Knows where the enthalpy table is located
	Scheme of Compression Cycle	311	Knows where the filter/dryer is located in a circuit
	Scheme of Compression Cycle	312	Knows the purpose of the filter/dryer
	Scheme of Compression Cycle	313	Knows where the compressor is located in a circuit
	Scheme of Compression Cycle	314	Knows the purpose of the compressor
	Scheme of Compression Cycle	315	Knows where the liquid receiver is located in a circuit
	Scheme of Compression Cycle	316	Knows the purpose of the liquid receiver
	Scheme of Compression Cycle	317	Knows where the sight-glass is located in a circuit
	Scheme of Compression Cycle	318	Knows the purpose of a liquid separator
	Scheme of Compression Cycle	319	Knows where the evaporator is located
	Scheme of Compression Cycle	320	Knows the purpose of the evaporator
	Scheme of Compression Cycle	321	Knows where the condenser is located
	Scheme of Compression Cycle	322	Knows the purpose of the condenser
	Scheme of Compression Cycle	323	Can indicate on the circuit where a technician must measure different temperature and pressures
	Scheme of Compression Cycle	324	Can place operating conditions of pressure and temperature on the circuit for a common cooling system
	Scheme of Compression Cycle	325	Can place operating conditions of pressure and temperature on the circuit for a common freezing system
	Scheme of Compression Cycle	326	Can place operating conditions of pressure and temperature on the circuit for a common air-con system
	Design Pressure	327	Can explain the term design pressure
	Design Pressure	328	Knows how to perform/calculate/define a design test
	Strength pressure tests	329	Knows how to perform a strength pressure test
	Leakage pressure test	330	Knows how to perform a leakage pressure test
	Leakage checking	331	Knows the frequency of leakage checking
	Leakage checking	332	Knows how to perform a direct leakage check (EC1516/2007)
	Leakage checking	333	Knows how to perform an indirect leakage check (EC1516/2007)
	Leakage checking	334	Knows what papers need to filled in after a leakage check
	Leakage checking	335	Knows what qualification the controller needs to perform leakage check
	Vacuum Pressure	336	Knows the difference between absolute and relative pressure
	Vacuum Pressure	337	Knows what happens if VP rises and stabilizes afterwards
	Vacuum Pressure	338	Knows what happens if VP rises continuously
	Vacuum Pressure	339	Knows the criteria parameters of the vacuum-pressure test according to EN378/2008
	Pressure vessel (component under pressure)	340	Knows the 5 major components of a refrigeration circuit
	Compressor	341	Can explain the function of the compressors in refrigeration circuit
	Compressor	342	Knows the different type of compressors
	Compressor	343	Knows what happens to the refrigerant inside the compressor
	Compressor	344	Knows the proper lubrication system (compressor)
	Evaporator	345	Can explain the function of the evaporator in refrigeration circuit
	Evaporator	346	Knows what happens to the refrigerant inside the evaporator
	Expansion devices	347	Knows the different type of TXs
	Expansion devices	348	Knows how to adjust TX valves
	Condenser	349	Can explain the function of the condenser in refrigeration circuit
	Condenser	350	Knows what happens to the refrigerant inside the condenser
	Log p/h (Refrigerant graph, some call it Mollier chart)		
	Refrigerant Tables		
	Scheme of Compression Cycle		
	Different kinds of pressure and/or tests		
	RAC basics-System		

Components of refrigerating systems	Additional system components	Lubrication system	351	Can explain the function and importance of the lubrication system	
		Lubrication system	352	Knows the behaviour of the oil and refrigerant mixture	
		Capacity control	353	Can explain the various sorts of capacity control solutions	
		Liquid receiver	354	Knows the different methods used to monitor the liquid level in the circuit inside	
		Liquid separator	355	Can explain the methods used to define the charge of LS	
		RAC circuit installation	356	Can explain the importance of horizontal and vertical positioning	
		Leakage test (tightness pressure test)	357	Can explain how to find the leaks	
		Vacuum test	358	Can explain the role and proper target of the vacuum test	
		Vacuum test	359	Knows how to brake the vacuum at the end of the vacuum test	
		Charge of refrigerant	360	Can define the type and quantity of additional oil needed	
		Fill in all the legal required documents and certificates	361	Knows how to complete commissioning documents	
		Fill in all the legal required documents and certificates	362	Knows how to complete servicing and maintenance documents	
	Working procedures	Types of piping	363	Knows the type of pipes used for cooling system	
		Types of piping	364	Knows the types of materials, sealing and welding techniques used for NH3 refrigeration.	
		Installing pipes	365	Knows how to install discharge Lines	
		Installing pipes	366	Knows how to install suction lines	
		Installing pipes	367	Knows to install liquid lines	
		Installing pipes	368	Knows how to make T-joints on a liquid line	
		Installing pipes	369	Knows how to make T-joints on a suction line	
		Installing pipes	370	Knows how lines must be supported according to EN378/2008	
		Installing pipes	371	Knows when and where oil-siphons must be installed	
		Joints	372	Can explain what happens with a rubber gasket when a system is retrofitted from R22 to R404A	
		Joints	373	Knows what happens with a rubber when R404A is used in the system	
		Joints	374	Knows what happens with a rubber when R22 is used in the system	
	Administration	Valves (Open - Close valves, non- regulating ones)	375	Can explain the operation of a ball valve	
		Valves	376	Knows that certain valves have a flow direction	
		Thermal insulation	377	Knows the different types of insulation	
		Thermal insulation	378	Can explain the influence of pipe temperature	
		Thermal insulation	379	Can explain the influence of humidity	
		Thermal insulation	380	Can explain the term vapour diffusion	
	Piping and joints	Thermal insulation (Like armaflex)	381	Can explain how joints between insulation are made	
		Pipe Supports	Pipe Supports	382	Knows about the existence of pre-insulated pipe supports
		Pressure safety	Max. allowed pressure	383	Knows what is max. allowed pressure with air-cooled systems
			Max. allowed pressure	384	Knows what is max. allowed pressure with water-cooled systems
			Pressure relief valve	385	Knows the function of a pressure relief valve
			Bursting disc	386	Knows the function of a bursting disc
			Safety switching device for limit. press.	387	Knows the function of a safety switch device for limiting pressure
			Type appr. pressure cut out	388	Knows the function of a type approved pressure cut out
		Type appr. safety pressure cut out	389	Knows the function of a type approved safety pressure cut out	
		Surge protection	390	Knows the function of surge protection	
		Liquid level cut out	391	Knows the function of a liquid level cut out	
		Refrigerant safety	Refrigerant detector	392	Knows the function of a refrigerant detector
Temperature safety	Temperature limiting device	393	Knows the function of a temperature limiting device		
Safety accessories	Refrigerant	394	Can explain the function of refrigerant in the refrigeration system		
	Refrigerant	395	Knows the Personal Protective Equipment required to conduct work with refrigerants		
	Refrigerant	396	Knows the classification of refrigerant types defined by EN378		
	Heat transfer medium	397	Knows the various mediums to and from which heat can be transferred		
	Heat transfer medium	398	Can select a suitable refrigerant for specific applications		
	Toxicity	399	Knows the health and safety regulations relating to specific refrigerants		
	Flammability	400	Knows safe working procedures with refrigerants classified as flammable		
	Fractionation	401	Knows where and what fractionation can occur in the refrigeration system		
	Quality of refrigerant	402	Knows how to avoid contamination whilst working on a system		
	Quality of refrigerant	403	Knows how to test for contamination in refrigerant		
	Quality of refrigerant	404	Knows the effects of contamination in refrigerant		
	Fluids	Recover	405	Knows how to recover refrigerant safely with minimum loss	
Recover		406	Knows how to test the refrigerant for acidity		
Recycle		407	Knows how a refrigerant is recycled		
Reclaim		408	Knows how to conduct the process of reclamation		
Disposal		409	Knows the process involved in disposal of a refrigerant		
Disposal		410	Knows the reason for disposal of a refrigerant		
Bubble and dew point		411	Can use a refrigerant manifold to determine the start of condensing and evaporation		
Bubble and dew point		412	Understands the concept of glide		
Major components		413	Can explain the major components of split/multi-split systems		
Major components		414	Can explain the major components of VRV systems		
Major components		415	Knows the properties, environmental impact of different refrigerants		
Major components		416	Can explain the criteria for the proper choice of refrigerants		
Major components	417	Can explain the energetic impacts of sizing and length of the pipes			
Major components	418	Knows the role and technology of the pipes' insulations			
Operation	419	Knows how to control, adjust and set the optimal value of thermostats			
Operation	420	Knows the role of Building Management Systems and how to use it.			
Operation	421	Knows the role of Building Management Systems and how to adjust it.			
Cooling Energy Distribution System	Major components	421	Knows the role of Building Management Systems and how to adjust it.		

Refrigerant based systems	Terms and definitions	Cooling Energy Emission System	Major components	422	Can explain the role and positioning of an indoor unit	
			Major components	423	Can explain the energetic optimisation of the evaporator	
			Major components	424	Knows the construction and energetic aspects of wall-mounted indoor units	
			Major components	425	Knows the construction and energetic aspects of ceiling mounted indoor units	
			Major components	426	Knows the construction and energetic aspects of fan coil units	
			Operation	427	Can explain the different capacity control of an indoor unit	
			Operation	428	Knows the energetic impacts of leaked refrigerants	
			Operation	429	Can define and control the optimal pressure values of the refrigeration circuit	
			Operation	430	Can define and control the optimal temperature values of the refrigeration circuit	
		Cooling Energy Generating System	Major components	431	Can explain the role and positioning of an outdoor unit	
			Major components	432	Can explain the energetic optimisation of the condenser	
			Operation	433	Can explain the energetic aspects of the different capacity controls of the outdoor unit	
			Operation	434	Can explain and use term COP	
			Operation	435	Can explain and use term EER	
		Energy Supply System	Operation	436	Can explain and use term ESEER	
	Operation		437	Can explain and calculate the TEWI value		
	Major components		438	Can explain the power supply system of electric driven HVAC systems		
	Major components		439	Can explain the power supply system of natural gas-driven HVAC systems		
	Operation		440	Knows the metering methods of power consumption		
	Energetic inspection	Pre-inspection procedure		Operation	441	Knows the documentation methods of power consumption
				Pre-inspection checklists	442	Can explain the major steps of pre-inspection procedure
				Pre-inspection checklists	443	Knows how to define control parameters
				Pre-inspection checklists	444	Can explain the content and use of a balancing plan
				Pre-inspection checklists	445	Can identify the control and BMS systems
				Pre-inspection checklists	446	Can explain the content and use of a maintenance plan
				Visual check	447	Can explain the major steps of visual check procedure
				Visual check	448	Knows the minimum documents required on site
				Visual check	449	Knows how to visually check the proper installation of refrigerant piping
				Visual check	450	Knows how to visually check for traces of leakage
				Visual check	451	Knows how to visually check the insulation of refrigerant piping
Visual check				452	Can explain how and what to check in maintenance documentation	
Visual check				453	Knows the minimum content of the logbook	
Visual check				454	Knows how to evaluate the operation and maintenance history of the equipment	
Classification				Inspection classes	455	Can estimate the annual running time
		Inspection classes	456	Can explain the inspection classes of AC solutions		
		Inspection classes	457	Knows how to define the content of energetic inspection		
Inspection frequency		Minimum requirements	458	Knows how to define the inspection frequency		
		Outcome of the inspections	459	Can give advice on how to improve the system efficiency		
		Outcome of the inspections	460	Can give advices on how to improve the maintenance of a system		
Inspection procedure		Pre-inspection checklists	461	Knows how to estimate the cooling load		
		Documentation	462	Can define the parameter of the building for calculation of the heatload		
Extent of inspection		Documentation	463	Can identify the air-conditioning systems in the building		
		Design data/facts	464	Know how to define the indoor parameters		
		Design data/facts	465	Knows the human temperature comfort zone		
		Design data/facts	466	Knows the human humidity comfort zone		
		Design data/facts	467	Can estimate the heatload of personnel		
		Design data/facts	468	Can estimate the heatload of appliances		
		Design data/facts	469	Can estimate the outdoor heatload		
		Split indoor unit	470	Can measure the airflow quantity of an indoor unit		
	Split indoor unit	471	Can determine the cooling capacity of an indoor unit			
	Split indoor unit	472	Knows how to control the adjustment of the control system			
	Split indoor unit	473	Can control the level of maintenance			
	Split outdoor unit	474	Knows the installation criteria for an outdoor unit			
	Split outdoor unit	475	Can calculate the COP/EER value of the system			
	Split outdoor unit	476	Can adjust the control parameter on site			
	Split outdoor unit	477	Knows the definition for the proper steps and frequency of maintenance			
Inspection procedure	Electric supply	478	Knows how to measure the consumption of electric supply			
	System components	479	Can explain the major steps of inspection procedure			
	System components	480	Knows how to prepare an onsite checklist for a dedicated application			
	System components	481	Can check the major cooling components of the application			
	System components	482	Can explain which parameters of the refrigeration circuit are relevant for energetic optimisation			
	System components	483	Knows how to inspect an outdoor unit			
	System components	484	Knows how to inspect an indoor unit			
	System components	485	Knows how to control the proper air distribution in a treated area			
	System components	486	Knows how to adjust the control systems			
	System components	487	Knows how to check the energy distribution system			
	System components	488	Knows how to control the real temperature, humidity, velocity in a treated area			
	Inspection content	Inspection checklists	489	Can explain the basic data for design works		
Inspection checklists		490	Can check and evaluate the design documentation			
Inspection checklists		491	Can check the proper sizing of refrigeration equipment			
Inspection checklists		492	Knows the inspection criteria for proper piping and insulation			

Inspection report	Precautionary arrangements	Preparing inspection reports	493	knows the major aspects for the evaluation of inspections		
		Preparing inspection reports	494	Knows how to describe the improvements		
		Preparing inspection reports	495	knows how to propose alternative solutions		
		Preparing inspection reports	496	knows how to list the documents that should needed to inspection		
		Descriptions	Creation of inspection report	497	Knows how to describe the systems that have been inspected	
			Creation of inspection report	498	Knows how to describe the results of inspections	
			Creation of inspection report	499	Knows the energy impact related calculation methods	
			Creation of inspection report	500	Knows how to describe the measured parameters of energy supply	
			Creation of inspection report	501	knows how to estimate energy efficiency	
			Creation of inspection report	502	Knows how to determine faults to be repaired	
			Creation of inspection report	503	Knows how to determine faults to be adjusted	
			Creation of inspection report	504	Knows how to determine faults to be improved or modified	
	Energy impacts	Reducing cooling needs	505	Knows the solutions for how to reduce solar gains		
		Reducing cooling needs	506	knows how to reduce internal gains		
		Reducing cooling needs	507	Knows the impact of a controlled lighting system on heatload		
		Reducing cooling needs	508	knows the way to reduce the heatload of IT equipment		
		Reducing cooling needs	509	Can explain the advantages of proper ventilation		
		Improving system efficiency	510	Can explain the advantages and use of free cooling		
		Improving system efficiency	511	Can explain the need of ventilation by using outdoor air		
		Improving system efficiency	512	Knows how to improve emission efficiency		
		Improving system efficiency	513	knows how to improve the distribution efficiency		
		Improving system efficiency	514	Knows how to improve cooling energy generating efficiency		
		Checks existing solutions	515	Can explain how to check installation and fine tuning		
		Proposals	Improvements	516	Can compare the designed and actual use of the building	
			Improvements	517	Can explain the influence of proper maintenance on the energy efficiency	
	Improvements		518	Can identify incorrect system operation		
	Improvements		519	Can identify the incorrect subsystem operation		
	Improvements		520	Can identify incorrect components operation		
	Alternatives		521	knows how to work out alternative system solutions		
	Alternatives		522	Knows how to work out alternative subsystem solutions		
	Alternatives		523	knows how to work out alternative component solutions		
	Terms and definitions		Cooling Energy Distribution System	Major components	524	Can explain the major components of air handling unit based AC systems
				Major components	525	Can explain the major components of air handling units
		Major components		526	Can explain the optimal sizing and adjustment of ventilators	
		Major components		527	Can explain the optimal air-cooling process in the AHU	
		Major components		528	Can explain the optimal air-dehumidification process in the AHU	
		Major components		529	Can explain the role and criteria of filters in the AHU	
		Major components		530	Can explain the major components of the distribution (duct) system	
		Major components		531	Knows the influences on energy efficiency of untight duct systems	
		Major components		532	Can explain the energetic impacts of sizing the duct system	
		Major components		533	knows the role and technology of duct insulations	
		Major components		534	Can explain the energetic impacts of duct system insulation	
		Major components		535	Can explain the criteria of outdoor air intake	
Major components		536		Can explain the role and criteria of balancing dampers		
Major components		537		Can explain the role and criteria of noise absorbers		
Major components		538		Can explain the role and criteria of air outlets		
Major components		539		Knows how to control and adjust the electronic/thermostatic expansion valves		
Major components		540		Knows how to control, adjust and set the optimal value of temperature in the AHU		
Major components		541		knows how to control, adjust and set the optimal value of humidity in the AHU		
Major components		542		Can explain the criteria for air distribution in a treated area		
Major components		543		Can explain the need and how to reach overpressure in treated area		
Cooling Energy Emission System		Major components		544	Can explain the role and positioning of air-blow-in components	
		Major components	545	Knows how to adjust the air-quantity and direction of air-blow-in components		
		Major components	546	Can explain the role and positioning of air-suction components		
		Major components	547	Knows how to adjust the air-quantity of air-suction components		
		Major components	548	Can explain the role and energetic impact of variable air volume		
		Major components	549	Can explain the role and energetic impact of after heaters		
		Operation	550	Knows how to define the optimal air parameters of the dedicated area		
		Operation	551	Can explain the different capacity control of a treated area		
		Operation	552	Knows how to measure the wet and dry temperatures of a treated area		
Cooling Energy Generating System		Operation	553	knows how to measure the relative humidity of a treated area		
		Operation	554	Knows how to measure the air velocities in a treated area		
		Operation	555	Knows the different solutions for natural cooling methods		
		Operation	556	Knows the different solutions for direct expansion cooling methods		
	Operation	557	Knows the different solutions for chiller based cooling methods			
	Pre-inspection checklists	558	Can explain the major steps of pre-inspection procedure			
	Pre-inspection checklists	559	knows how to define control zones			
	Pre-inspection checklists	560	knows how to define control areas			
	Pre-inspection checklists	561	knows how to define control parameters			
	Pre-inspection checklists	562	Can explain the content and use of a balancing plan			
Pre-inspection checklists	563	Can identify the control and BMS systems				

Air based systems	Energetic inspection	Pre-inspection procedure	Pre-inspection checklists	564	Can explain the content and use of a maintenance plan
			Pre-inspection checklists	565	Knows the criteria for how to record energy supply
			Pre-inspection checklists	566	Knows how to prepare a pre-inspection checklist
			Pre-inspection checklists	567	Can evaluate and explain the results of a pre-inspection
			Pre-inspection checklists	568	Can make a report about a pre-inspection
			Visual check	569	Can explain the major steps of visual check procedure
			Visual check	570	Knows the minimum documents required on site
			Visual check	571	Knows how to visually check the proper installation the air ducts
			Visual check	572	Knows how to visually check the proper positioning of air in/outlets
			Visual check	573	Knows how to visually check the insulation of air ducts
			Visual check	574	Can explain how and what to check in the maintenance documentation
			Visual check	575	Knows the minimum content of the logbook
			Visual check	576	Knows how to evaluate the operation and maintenance history of the equipment
			Outcome of the inspections	577	Can give advice on how to improve the system efficiency
		Outcome of the inspections	578	Can give advice on how to improve the maintenance	
		Classification	Inspection classes	579	Can estimate the annual running times of different components
			Inspection classes	580	Can explain the inspection classes of AC solutions
			Inspection classes	581	Knows how to determine the content of energetic inspection
			Inspection classes	582	Knows how to determine the inspection frequency
		Extent of inspection	Documentation	583	Can recognize the air-conditioning systems in the building
			Documentation	584	Knows how to control the adjustment of the control system
			Documentation	585	Can control the level of maintenance
		Inspection procedure	Documentation	586	Knows the definition of proper steps and frequency of maintenance
			System components	587	Knows how to prepare an onsite checklist for a dedicated application
			System components	588	Can inspect the major components of the application
			System components	589	Can explain which parameters of the system are relevant for energetic optimisation
			System components	590	Knows how to control the proper air distribution in a treated area
			System components	591	Knows how to control the proper adjustment and functioning of the control systems
			System components	592	Knows how to check the ductwork system
		Inspection content	System components	593	Knows how to control the real temperature, humidity, velocity in a treated area
			Inspection checklists	594	Can explain the basic data of design works
			Inspection checklists	595	Can check and evaluate the design documentation
	Inspection checklists		596	Can check the proper sizing of cooling source	
	Inspection checklists		597	Knows the inspection criteria for proper ducting and insulation	
	Inspection checklists		598	Knows the installation criteria of an Air Handling Unit	
	Inspection checklists		599	Knows how to check the proper air delivery in a treated area	
	Inspection checklists		600	Knows how to check the proper positioning of air intake	
	Inspection checklists		601	Knows how to check proper air ductwork installation	
	Inspection checklists		602	Knows how to check the proper ductwork insulation	
	Inspection report	Precautionary arrangements	Preparing inspection reports	603	Knows the major aspects of the evaluation of inspections
			Preparing inspection reports	604	Knows how to describe the improvements
			Preparing inspection reports	605	Knows how to propose alternative solutions
			Preparing inspection reports	606	Knows how to list the documents that should needed for inspection
		Descriptions	Creation of inspection report	607	Knows how to describe the systems that have been inspected
			Creation of inspection report	608	Knows how to describe the results of inspections
			Creation of inspection report	609	Knows the energy impact related calculation methods
			Creation of inspection report	610	Knows how to describe the measured parameters of energy supply
			Creation of inspection report	611	Knows how to estimate the energy efficiency
			Creation of inspection report	612	Knows how to determine faults to be repaired
			Creation of inspection report	613	Knows how to determine faults to be improved or modified
		Energy impacts	Reducing cooling needs	614	Can explain the advantages of proper ventilation
			Improving system efficiency	615	Can explain the advantages and use of free cooling
			Improving system efficiency	616	Can explain the need for ventilation by using outdoor air
			Improving system efficiency	617	Knows how to improve the emission efficiency
		Proposals	Improving system efficiency	618	Knows how to improve the distribution efficiency
			Checks existing solutions	619	Can explain the basic aspects of how to check initial design
			Checks existing solutions	620	Can explain how to check installation and fine tuning
			Improvements	621	Can compare the designed and actual use of the building
			Improvements	622	Can explain the influence of the proper maintenance on the energy efficiency
	Improvements		623	Can identify incorrect system operation	
	Improvements		624	Can identify incorrect subsystem operation	
	Improvements		625	Can identify incorrect components operation	
	Alternatives		626	Knows how to work out alternative system solutions	
	Alternatives	627	Knows how to work out alternative subsystem solutions		
Alternatives	628	Knows how to work out alternative component solutions			
Major components	Major components	629	Can explain the major components of chiller based hydraulic AC systems		
	Major components	630	Can explain the major components of chillers		
	Major components	631	Can explain the major components of a hydronic system		
	Major components	632	Can explain the optimal sizing and adjustment of pumps		
	Major components	633	Can explain the major components of the distribution (chilled water network) system		
	Major components	634	Can explain the optimal parameters of water-cooling in chillers		

Water based systems	Terms and definitions	Cooling Energy Distribution System	Major components	635	Knows the different secondary heat transfer media and their parameters
			Major components	636	Can explain the role and major components of Fan Coil units
			Major components	637	Can explain the proper positioning of fan coils
			Major components	638	Can explain the role and major components of surface cooling
			Major components	639	Can explain the energetic impacts of sizing the pipe network
			Major components	640	Knows how to work with Tichelmann principle
			Major components	641	Knows the role and technology of pipe insulations
			Major components	642	Can explain the energetic impacts of pipe network insulation
			Major components	643	Can explain the role and criteria of balancing valves
			Operation	644	Knows how to control, adjust and set the optimal value of temperature on chillers
			Operation	645	Knows how to control, adjust and set the optimal value of quantity for secondary heat transfer media
			Cooling Energy Emission System	Operation	646
	Operation	647		Knows how to define the optimal air parameters of a dedicated area	
	Operation	648		Can explain the different capacity control of a treated area	
	Operation	649		Knows how to measure the wet and dry temperatures of a treated area	
	Operation	650		Knows how to measure the relative humidity of a treated area	
	Operation	651		Knows how to measure the air velocities in a treated area	
	Operation	652		Knows how to measure the transfer media flow rate in the network	
	Operation	653		Knows the different solutions for natural cooling methods	
	Cooling Energy Generating System	Operation	654	Knows the different solutions for direct expansion cooling methods	
Operation		655	Knows the different solutions for chiller based cooling methods		
Pre-inspection checklists		656	Can explain the major steps of pre-inspection procedure		
Pre-inspection checklists		657	Knows how to define control zones		
Energetic inspection	Pre-inspection procedure	Pre-inspection checklists	658	Knows how to define control areas	
		Pre-inspection checklists	659	Knows how to define control parameters	
		Pre-inspection checklists	660	Can explain the content and use of a balancing plan	
		Pre-inspection checklists	661	Can identify the control and BMS systems	
		Pre-inspection checklists	662	Can explain the content and use of a maintenance plan	
		Pre-inspection checklists	663	Knows the criteria for how to record energy supply	
		Pre-inspection checklists	664	Knows how to prepare a pre-inspection checklist	
		Pre-inspection checklists	665	Can evaluate and explain the results of the pre-inspection	
		Pre-inspection checklists	666	Can make a report about the pre-inspection	
		Visual check	667	Can explain the major steps of visual check procedure	
		Visual check	668	Knows the minimum documents required on site	
		Visual check	669	Knows how to visually check the proper installation of a pipe network	
		Visual check	670	Knows how to visually check the proper positioning of air in/outlets	
		Visual check	671	Knows how to visually check the insulation of a pipe network	
		Visual check	672	Can explain how and what to check in the maintenance documentation	
		Visual check	673	Knows the minimum content of the logbook	
	Visual check	674	Knows how to evaluate the operation and maintenance history of the equipment		
	Classification	Inspection classes	675	Can estimate the annual running times of different components	
		Inspection classes	676	Can explain the inspection classes of AC solutions	
		Inspection classes	677	Knows how to determine the content of energetic inspection	
		Inspection classes	678	Knows how to determine the inspection frequency	
	Inspection results	Outcome of the inspections	679	Can give advices, how to improve the system efficiency	
		Outcome of the inspections	680	Can give advice on how to improve the maintenance	
	Extent of inspection	Documentation	681	Can recognize the air-conditioning systems in a building	
		Documentation	682	Knows how to control the adjustment of the control system	
		Documentation	683	Can control the level of maintenance	
	Inspection procedure	Documentation	684	Knows the definition for the proper steps and frequency of maintenance	
		System components	685	Knows how to prepare an onsite checklist for a dedicated application	
System components		686	Can inspect the major components of the application		
System components		687	Can explain which parameters of the system are relevant for energetic optimisation		
System components		688	Knows how to control the proper air distribution in a treated area		
Inspection content	System components	689	Knows how to control the proper adjustment and functioning the control systems		
	System components	690	Knows how to control the dry and wet bulb air temperature and velocity in a treated area		
	Inspection checklists	691	Can explain the basic data of design works		
	Inspection checklists	692	Can check and evaluate the design documentation		
	Inspection checklists	693	Can check the proper sizing of cooling source		
	Inspection checklists	694	Knows the inspection criteria for proper pipework insulation		
	Inspection checklists	695	Knows the installation criteria for an outdoor chiller		
	Inspection checklists	696	Knows the installation criteria for an indoor chiller		
	Inspection checklists	697	Knows the installation criteria for an outdoor condenser and cooling tower		
	Inspection checklists	698	Knows how to check the execution of a proper pipe network		
Precautionary arrangements	Inspection checklists	699	Knows how to check for proper pipe network insulation		
	Preparing inspection reports	700	Knows the major aspects for the evaluation of inspections		
	Preparing inspection reports	701	Knows how to describe the improvements		
	Preparing inspection reports	702	Knows how to propose alternative solutions		
	Preparing inspection reports	703	Knows how to list the documents that should be needed for inspection		
	Creation of inspection report	704	Knows how to describe the systems that have been inspected		
	Creation of inspection report	705	Knows how to describe the results of inspections		

	Inspection report	Descriptions	Creation of inspection report	706	Knows the energy impacts related calculation methods		
			Creation of inspection report	707	Knows how to describe the measured parameters of energy supply		
			Creation of inspection report	708	Knows how to estimate the energy efficiency		
			Creation of inspection report	709	Knows how to determine faults to be repaired		
			Creation of inspection report	710	Knows how to determine faults to be improved or modified		
		Energy impacts	Improving system efficiency	711	Knows how to improve the emission efficiency		
			Improving system efficiency	712	Knows how to improve the distribution efficiency		
			Checks existing solutions	713	Can explain the basic aspects of how to check initial design		
			Checks existing solutions	714	Can explain how to check installation and fine tuning		
			Improvements	715	Can compare the designed and actual use of the building		
		Proposals	Improvements	716	Can explain the influence of the proper maintenance on the energy efficiency		
			Improvements	717	Can identify the incorrect system operation		
			Improvements	718	Can identify the incorrect subsystem operation		
			Improvements	719	Can identify the incorrect components operation		
			Alternatives	720	Knows how to work out alternative system solutions		
			Alternatives	721	Knows how to work out alternative subsystem solutions		
			Alternatives	722	Knows how to work out alternative component solutions		
			Alternatives	723	...		
		National requirements	National requirements	National requirements	National requirements	723	...