

Information for planning and execution
Fields of applications
for metal installation systems

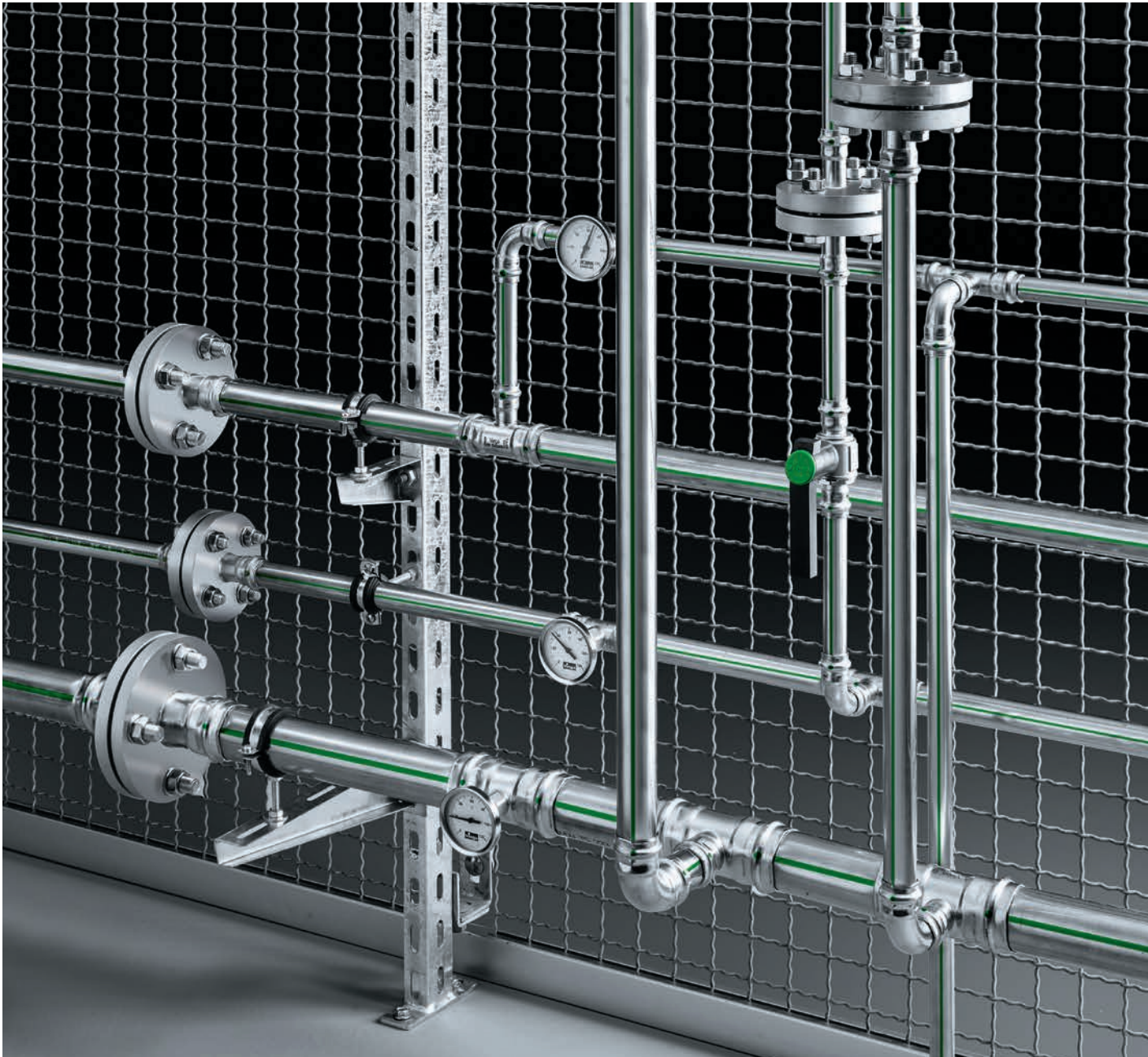
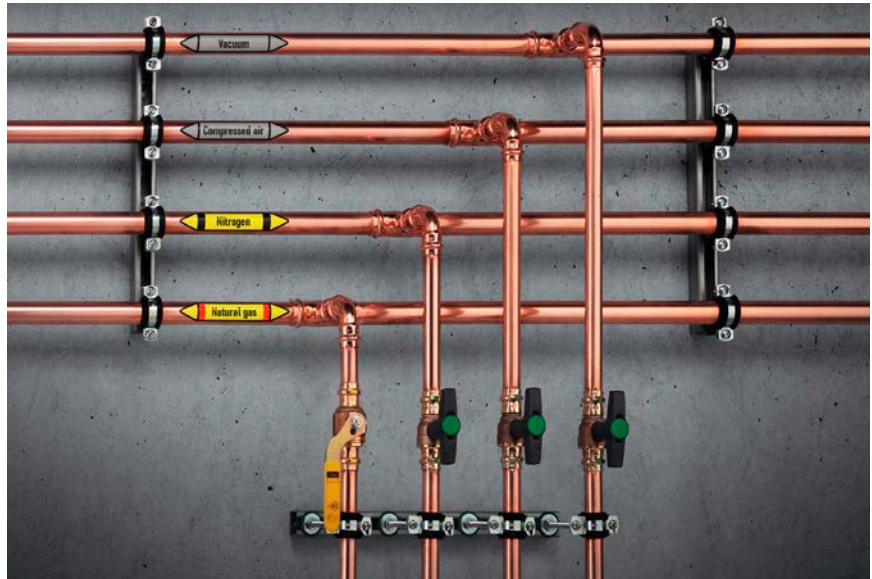


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For many years, Viega press connecting technology with the Sanpress, Sanpress Inox, Prestabo and Profipress systems has proved its worth for use in drinking water and building services installations. Increasingly often, it is now used in industrial systems with special operating conditions in terms of pressure, temperature, and concentration of the transported media, requiring careful selection of the pipe and sealing materials.

This brochure intends to help with this selection. In special cases, please contact our Service Center to discuss whether your application is in compliance with the "intended use" of a system. For inquiries via fax, please use the annexed checklist.



Viega press connector systems are not approved for pharmaceutical and food installations.

The contents of this product information are not binding. We reserve the right to changes reflecting new insights and technical progress.

Conversion Bar/Pascal

bar	mbar	Pa	kPa	hPa	MPa
1	1000	100000	100	1000	0.1
0.001	1	100	0.1	1	0.0001
0.01	10	1000	1	10	0.001
0.1	100	10000	10	100	0.01

Sealing elements – Technical data

Sealing element - short name	Technical designation	Viega press connector system application	Colour
EPDM	Ethylene propylene diene rubber	Sanpress Inox/ Sanpress/Profipress/ Megapress	polished black
HNBR	Acrylonitrile butadiene rubber	Sanpress Inox G/ Profipress G/ Megapress G	yellow
FKM	Fluor rubber	Sanpress Inox/ Sanpress/Profipress/ Megapress S	matt black

1.2 Oils

Medium	Comment	P _{max} [MPa]	T _{max} [°C]	System name		Profipress		Sanpress		Profipress G		Sanpress Inox G		Prestabo		Mega-press S		Mega-press G		Sea-press			
				Profi-press	Sanpress	Profi-press G	Sanpress Inox G	Prestabo	Mega-press S	Mega-press G	Sea-press												
Mineral oils SAE	15–108 mm/3/8–4 inch	1.6	70	copper	1.4521, 1.4520, 1.4401, stainless steel	copper	stainless steel	steel galvanised	steel thick-walled														
Fuel oil acc. to DIN 51603-1 Diesel acc. to DIN EN 590	according to TRbF (German Technical Regulations for Flammable Liquids) 12–54 mm/1/2–2 inch	0.5	40	copper gunmetal Silicon bronze	1.4521, 1.4520, stainless steel	copper gunmetal Silicon bronze	stainless steel	steel galvanised	steel zinc-nickel plated														
Palm oil				EPDM	EPDM	HNBR	HNBR	EPDM	EPDM	EPDM	EPDM	HNBR	HNBR	EPDM	FKM	HNBR	EPDM						
Rapeseed oil	DIN W 51805																						
Soy oil		1.0	70																				
Sunflower oil																							
Biodiesel	EN 14214				1.4521, 1.4520, 1.4401, stainless steel																		
Palm oil heating			90		1.4521, 1.4520, 1.4401, stainless steel																		

¹⁾ sealing elements replaced for FKM

⁴⁾ in connection with Viega stainless steel pipe 1.4521, 1.4520 and 1.4401

⁸⁾ following coordination with the Attendorn factory

system name	pipe material	Sealing element ¹²⁾	T _{max} [°C]	Solid particles ¹³⁾										Residual moisture content class										Oil content class				
				0	1	2	3	4	5	6	7	X	0	1	2	3	4	5	6	7	8	9	X	0	1	2	3	4
Seapress	Copper nickel wrought alloy to DIN 86019 WL 2.1972.11 or WL 2.1972.22	EPDM																										
		FKM ¹⁵⁾																										
Prestabo	Externally galvanised model 1103/1103XL	EPDM																										
		FKM ¹⁵⁾																										
	PP coated model 1104	EPDM																										
		FKM ¹⁵⁾																										
Prestabo LF	Externally and internally galvanised model 1106/1106XL	EPDM	1,6																									
		FKM ¹⁵⁾																										
	Externally galvanised model 1103/1103XL	EPDM																										
		EPDM																										
Megapress	Steel pipes according to DIN EN 10255	EPDM																										
		FKM																										
	DIN EN 10220	EPDM																										
		HNBR																										

¹²⁾ EPDM sealing element for oil concentrations < 25 mg/m³
¹³⁾ Recommendation for classes 1 to 3: Flush the line before commissioning

¹⁵⁾ The EPDM factory-fitted sealing element can be exchanged for a FKM sealing element on-site

✓ = For use

✗ = Not for use

O = Conditional use, consultation with the Service Center required

1.4 Gases

System name		Profipress		Profipress S		Sanpress					Profipress G		Sanpress Inox G		Prestabo		Mega-press S		Mega-press G		Sea-press G		
		copper	stainless steel	1.4520	stainless steel	1.4520	1.4521	1.4520	1.4521	1.4401	1.4521	1.4401	1.4521	1.4401	stainless steel	galvanised	steel	galvanised	hot dip galvanised	steel	thick-walled	CuNi-Fe	Sea-press G
Medium	Comment	p_{max} [MPa]	T_{max} [°C]																				
Natural gas		0.5																					
Liquid gases, propane, butane, methane	according to G 260																						
Acetylene	Test pressure 2.4 MPa	0.15																					
Argon	15–28mm	1.6																					
	12–54 mm/3/8–2 inch	1.0																					
Carbogen	64–108 mm/2 1/2–4 inch	1.6																					
	CO ₂ + O ₂ dry	1.0																					
Oxygen – O ₂	12–54 mm/3/8–2 inch	1.0																					
	64–108 mm/2 1/2–4 inch	1.0																					
Nitrogen – N ₂	Keep free of oil and grease	1.0	60																				
	12–54 mm/3/8–2 inch	1.6																					
Hydrogen – H ₂	Downstream of the vaporiser	1.0																					
	12–54 mm/3/8–2 inch	1.0																					
Carbon dioxide – CO ₂	64–108 mm/2 1/2–4 inch	0.5																					
	dry	1.6																					
Carbon monoxide – CO	12–54mm	1.0																					
	Stainless steel parts not permitted	1.6																					
	12–54mm	1.0																					
	64–108mm	1.0																					

* Purity requirements acc. to DIN EN 437 available on request

⁷⁾ BAM certified

⁸⁾ following coordination with the Attendorm factory

¹⁴⁾ TÜV certified

¹⁶⁾ ≤ DN 25 / also applies for Sanpress Inox LF (labs-free)

¹⁾ sealing elements replaced for FKM

⁴⁾ in connection with Viega stainless steel pipe 1.4521, 1.4520 and 1.4401

⁵⁾ in case of HTR (higher thermal resistance) requirement, max. permitted operating pressure $p_{max} = 0.1$ MPa

1.5 Special media - Examined and approved

System name		Profipress		Sanpress			Profi-press G		Sanpress Inox G		Prestabo		Mega-press S		Mega-press G		Sea-press	
System name	pipe material	Profi-press	Sanpress	Profi-press G	Sanpress	Sanpress	Profi-press G	Sanpress Inox G	Prestabo	Mega-press S	Mega-press G	Sea-press						
		1.4520 copper stainless steel	1.4521 1.4520 1.4401 1.4521 1.4521 1.4401 1.4521	1.4401 copper gunmetal Silicon bronze	1.4401 copper	Stainless steel 1.4401	steel galvanised	steel thick-walled	CuNiFe									
Medium	Comment	P_{max} [MPa]	T_{max} [°C]															
Urea solution	Max. concentration 40 %	1.0	40	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethanol			25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Methanol	Caution: toxic!			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Condensate	from gas-powered calorific value devices, not from oil-powered calorific value devices!	1.6	110	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Condensate	of vapour			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Glycerine triacetate		0.1	20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Caustic soda	30 % aqueous solution	1.0	60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Caustic soda	50 % aqueous solution			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acetone	Liquid	0.5	-10 to 40	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ammoniac	Medium free from CO ₂ + H ₂ O Caution: toxic!	0.2	25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Biogas – before bio-gas treatment	45–70 % CH ₄ / 20–45 % CO ₂ / H ₂ S < 30 mg/m ³	0.5	70	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Biogas – after biogas treatment	according to G260 and G262			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fermenter heating	Substrate temperature 65 °C	1.0	105	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* Purity requirements acc. to DIN EN 437 available on request

⁵⁾ in case of HTR (higher thermal resistance) requirement, max. permitted operating pressure $p_{max} = 0.1$ MPa

⁶⁾ without contamination

⁸⁾ following coordination with the Attendorn factory

2 Valves – transported media

2.1 Waters, frost and corrosion protection, heat carriers

Product name		Easytop ball valve	Free-flow valve	Easytop Inox ball valve	Profipress G gas ball valve	Gas ball valve
Model no.		2270, 2270.4, 2270.10, 2275, 2275.3, 2275.4	2242, 2278	2370	2670, 2670.4, 2671, 2671.3	G2101
Press connector material		gunmetal Silicon bronze		stainless steel	gunmetal Silicon bronze	brass
Seal		EPDM	EPDM	EPDM	HNBR	
Medium	Comment	P_{max} [MPa]	T_{max} [°C]			
Drinking water	Requirement acc. to DWO, DIN 50 930-6		110	✓	✓	
Treated water (no drinking water)	Fully desalinated, deionised, demineralised, distilled (open system)			✓	✓	
Cooling water, closed circuit	Open systems available on request	1.6	≥-25	✓	✓	
Well water	Requirements in acc. with DWO		110	✓	✓	
Pump hot water heating systems	in acc. with DIN EN 12 828		105	✓	✓	

Product/manufacturer	✓	✓	✓	✓	✓	✓
Antifrogen N / Clariant	✓	✓	✓	✓	✓	✓
Antifrogen L / Clariant	✓	✓	✓	✓	✓	✓
Antifrogen Sol (solar installations) / Clariant	✓	✓	✓	✓	✓	✓
Ethylene glycol (Ethan-1,2-dio)	✓	✓	✓	✓	✓	✓
Propylene glycol (1,2-Propandiol)	✓	✓	✓	✓	✓	✓
Tyfoxit / Tyforop-Chemie	✓	✓	✓	✓	✓	✓
Tyforop / Tyforop-Chemie	✓	✓	✓	✓	✓	✓
TEMPER® Antifrogen KF / Clariant Glysofor KF / Wittig	✓	✓	✓	✓	✓	✓

Anti-freeze / corrosion protection / cold and heat carrier

2.3 Gases

Gases*		Product name						Gas ball valve	
		Easytop ball valve	Free-flow valve	Easytop inox ball valve	Profipress G gas ball valve	Gas ball valve			
Medium	Comment	p_{max} [MPa]	T_{max} [°C]	Easytop ball valve	Free-flow valve	Easytop inox ball valve	Profipress G gas ball valve	Gas ball valve	
Compressed air	Oil concentration ≤ 25 mg/m ³ 12–54 mm	1.6		2270, 2270.4, 2270.10, 2275, 2275.3, 2275.4	2242, 2278	2370	2670, 2670.4, 2671, 2671.3	G2101	
	64–108 mm								
	Oil concentration ≥ 25 mg/m ³ 12–54 mm								
	64–108 mm								
Natural gas	according to G 260	0.5		gunmetal Silicon bronze		stainless steel	gunmetal Silicon bronze	brass	
Liquid gases, propane, butane, methane		1.6		EPDM	EPDM	EPDM	HNBR		
	Argon								
Carbogen	CO ₂ + O ₂ dry	1.6	60						
		1.0							
Nitrogen – N ₂	Downstream of the vaporiser	1.6							
		1.0							
Hydrogen – H ₂		0.5							
	dry	1.6							
Carbon dioxide – CO ₂		1.0							
	Stainless steel parts not permitted	1.6							
Carbon monoxide – CO		1.6							
		1.0							

* Purity requirements acc. to DIN EN 437 available on request

⁵⁾ in case of HTR (higher thermal resistance) requirement, max. permitted operating pressure $p_{max} = 0.1$ MPa

Gases*

Medium	Comment	P _{abs} [MPa]	T _{max} [°C]	Product name		Easytop ball valve		Free-flow valve	Easytop Inox ball valve	Profipress G gas ball valve	Gas ball valve
				Model no.	Press connector material	Seal	Easytop ball valve	Easytop ball valve	Easytop ball valve	Easytop ball valve	Easytop ball valve
Coarse vacuum	P _{abs} = 1hPa		70								
Forming gas, dry/inert gas	Ar + CO ₂ (e.g. argon) 15–54 mm 64–108 mm	1.6									
		1.0									
Nitrous oxide (laughing gas)	12–54 mm 64–108 mm	1.6									
		1.0									
Ethane	12–54 mm 64–108 mm	1.6									
		1.0									
Ethene (ethylene)	12–54 mm 64–108 mm	1.6									
		1.0									
Helium	15–54 mm 64–108 mm	1.6	60								
		1.0									
Krypton	15–54 mm 64–108 mm	1.6									
		1.0									
Neon	15–54 mm 64–108 mm	1.6									
		1.0									
Xenon	15–54 mm 64–108 mm	1.6									
		1.0									
Synthetic air	12–54 mm 64–108 mm	1.6									
		1.0									

* Purity requirements acc. to DIN EN 437 available on request

2.4 Special media - Examined and approved

Special media*		Product name						
		Easytop ball valve	Free-flow valve	Easytop Inox ball valve	Profipress G gas ball valve	Gas ball valve	Model no.	Seal
Medium	Comment	P _{max} [MPa]	T _{max} [°C]	2270, 2270.4, 2270.10, 2275, 2275.3, 2275.4	2270.1, 2270.2, 2275.1, 2275.2, 2275.5, 2275.6	2370	2670, 2670.4, 2671, 2671.3	G2101
Urea solution	Max. concentration 40 %	1.0	40	✓		✓		
Ethanol			25	✓	✓	✓		
Methanol	Caution: toxic!					✓		
Condensate	from gas-powered calorific value devices, not from oil-powered calorific value devices!	1.6	110			✓		
Condensate	of vapour			✓ ⁶⁾	✓ ⁶⁾	✓		
Caustic soda	50% aqueous solution	1.0	60			✓		
Acetone	liquid		-10 to 40	✓	✓	✓		
Biogas – after biogas treatment	according to G260 and G262	0.5	70				✓ ⁵⁾	✓ ⁵⁾
Fermenter heating	Substrate temperature 65 °C outside of the fermenter	1.0	105	✓	✓	✓		

* Purity requirements acc. to DIN EN 437 available on request

⁵⁾ in case of HTR (higher thermal resistance) requirement, max. permitted operating pressure p_{max} = 0.1 MPa

⁶⁾ without contamination

3 Appendix – Form

3.1 Inquiry regarding material durability

Inquiry regarding material durability



Global Service & Consulting-Team Application

Phone +49 (0) 2722 61 5666

material-request@viega.com

Customer		Building project	
Customer no.			
Customer/company*		Customer/company*	
Contact persons*		Contact persons	
Street*		Street	
Postal code/town*		Postal code/town	
Country*		Country	
Phone*		Phone	
Email*		Email	
		Potential*	

Information about the installation system	
Planned system*	
Dimension*	

Information about the medium			
Supplier/manufacturer*			
Trade name/designation*			
Application/function*			
Concentration of the medium*			
Other components			
	Time interval (Sec.)	Duration of the condition	
max. temp.*			
min. temp.*			
max. pressure*			
min. pressure*			
max. pH value			
min. pH value			

Information about the system				
Function of the complete system				
Installation site*	<input type="checkbox"/> Indoor			<input type="checkbox"/> Outdoor
Type of installation*	<input type="checkbox"/> open			<input type="checkbox"/> closed
Stagnation*	<input type="checkbox"/> yes		<input type="checkbox"/> no	
Ambient conditions*	<input type="checkbox"/> Interior spaces	<input type="checkbox"/> Country air	<input type="checkbox"/> City air	<input type="checkbox"/> Sea air
	<input type="checkbox"/> Industrial air	<input type="checkbox"/> Other:		
desired service life*	<input type="checkbox"/> < 1 year	<input type="checkbox"/> 1–5 years	<input type="checkbox"/> 5–10 years	<input type="checkbox"/> > 10 years

Free text field

* Mandatory fields

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