

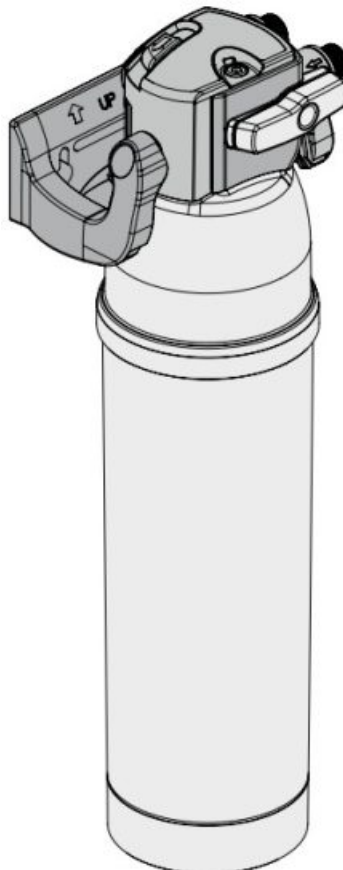


VIVREAU PURITY C Water Filter System Instruction Manual

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VIVREAU[®]
ADVANCED WATER SYSTEMS
PURITY C

PURITY C Quell ST / PURITY C Quell ST Advanced
PURITY C Finest / PURITY C Steam Advanced
PURITY C1000 AC / PURITY C XtraSafe
Water Filter System

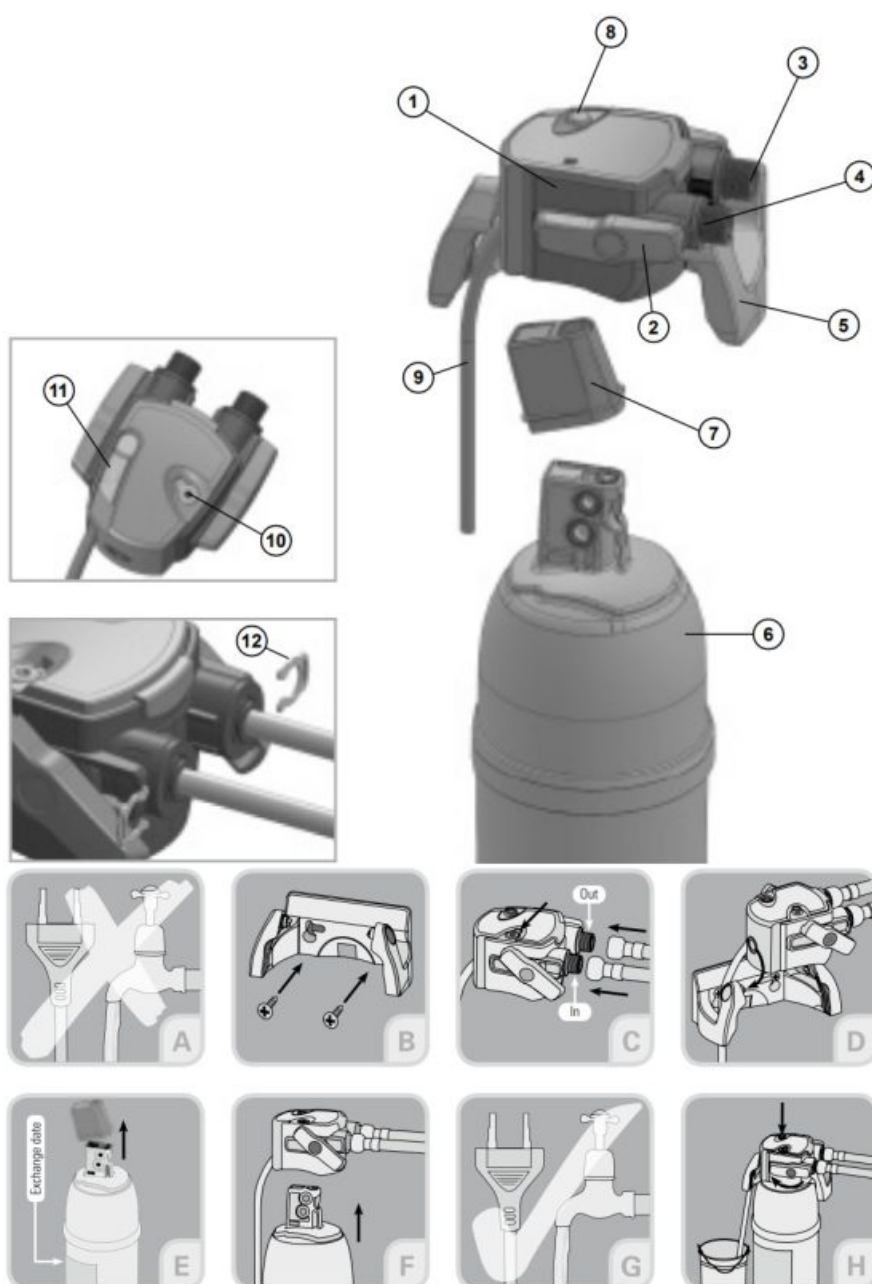


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PURITY C Water Filter System



PURITY C Quell ST / PURITY C Quell ST Advanced

Bypass and capacity tables

Filter Heads PURITY C 0–70 % with variable bypass

Coffee and espresso machines/vending machines

German carbonate hardness °dh	Grains per US gallon	Recommended bypass setting	Filter capacity									
			PURITY C50 Quell ST		PURITY C150 Quell ST		PURITY C300 Quell ST Advanced		PURITY C500 Quell ST Advanced		PURITY C1100 Quell ST Advanced	
			Liters	US gallons	Liters	US gallons	Liters	US gallons	Liters	US gallons	Liters	US gallons
4	4	70%	1900	502	4766	1259	7917	2091	13458	3555	22760	6013
5	5	70%	1900	502	4766	1259	7917	2091	13458	3555	22760	6013
6	6	70%	1900	502	4766	1259	7917	2091	13458	3555	22760	6013
7	7	60%	1821	481	4569	1207	7589	2005	12902	3408	21819	5764
8	8	50%	1425	376	3574	944	5938	1569	10094	2667	17070	4509
9	9	50%	1267	335	3177	839	5278	1394	8972	2370	15174	4009
10	10	40%	960	254	2408	636	4000	1057	6800	1796	11500	3038
11	11	40%	873	231	2189	578	3636	961	6182	1633	10455	2762
12	12	30%	693	183	1738	459	2887	763	4908	1297	8300	2193
13	13	30%	640	169	1604	424	2665	704	4530	1197	7661	2024
14	14	30%	594	157	1490	394	2474	654	4207	1111	7114	1879
15	15	30%	554	146	1390	367	2310	610	3926	1037	6640	1754
16	16	30%	520	137	1303	344	2165	572	3681	972	6225	1644
17	17	30%	489	129	1227	324	2038	538	3464	915	5859	1548
18	18	30%	462	122	1159	306	1925	508	3272	864	5533	1462
19	19	20%	387	102	970	256	1612	426	2740	724	4634	1224
20	20	20%	368	97	922	244	1531	404	2603	688	4402	1163
21	21	20%	350	92	878	232	1458	385	2479	655	4193	1108
22	22	20%	334	88	838	221	1392	368	2366	625	4002	1057
23	23	20%	320	84	802	212	1332	352	2264	598	3828	1011
24	24	20%	306	81	768	203	1276	337	2169	573	3669	969
25	25	20%	294	78	737	195	1225	324	2083	550	3522	930
26	26	20%	283	75	709	187	1178	311	2002	529	3386	894
27	27	20%	272	72	683	180	1134	300	1928	509	3261	861
28	28	20%	263	69	658	174	1094	289	1859	491	3145	831
29	29	20%	253	67	636	168	1056	279	1795	474	3036	802
30	30	20%	245	65	615	162	1021	270	1735	458	2935	775
31	31	20%	237	63	595	157	988	261	1679	444	2840	750
32	32	20%	230	61	576	152	957	253	1627	430	2751	727
33	33	20%	223	59	559	148	928	245	1578	417	2668	705
34	34	20%	216	57	542	143	901	238	1531	405	2590	684
35	35	20%	210	55	527	139	875	231	1488	393	2516	665

PURITY C Finest

Bypass and capacity tables

Filter Heads PURITY C 0 % bypass

Coffee and espresso machines

Total hardness °dh	Grains per US gallon	Recommended bypass setting	PURITY C Finest Filter capacity in litre			
			PURITY C500 Finest		PURITY C1100 Finest	
			Liters	US gallons	Liters	US gallons
4	4	0%	5690	1503	10000	2642
5	5	0%	5690	1503	10000	2642
6	6	0%	5690	1503	10000	2642
7	7	0%	4877	1288	8571	2264
8	8	0%	4268	1127	7500	1981
9	9	0%	3793	1002	6667	1761
10	10	0%	3414	902	6000	1585
11	11	0%	3104	820	5455	1441

12	12	0%	2845	752	5000	1321
13	13	0%	2626	694	4615	1219
14	14	0%	2439	644	4286	1132
15	15	0%	2276	601	4000	1057
16	16	0%	2134	564	3750	991
17	17	0%	2008	530	3529	932
18	18	0%	1897	501	3333	880
19	19	0%	1797	475	3158	834
20	20	0%	1707	451	3000	793
21	21	0%	1626	430	2857	755
22	22	0%	1552	410	2727	720
23	23	0%	1484	392	2609	689
24	24	0%	1423	376	2500	660
25	25	0%	1366	361	2400	634
26	26	0%	1313	347	2308	610
27	27	0%	1264	334	2222	587
28	28	0%	1219	322	2143	566
29	29	0%	1177	311	2069	547
30	30	0%	1138	301	2000	528
31	31	0%	1101	291	1935	511
32	32	0%	1067	282	1875	495
33	33	0%	1035	273	1818	480
34	34	0%	1004	265	1765	466
35	35	0%	975	258	1714	453

PURITY C Steam Advanced Bypass and capacity tables

Filter Heads PURITY C Steam 0–3 with variable bypass
Combi ovens and conventional ovens

German carbonat e hardne ss °dh	Grains p er US gal lon	PURITY C Steam Advanced – Filter capacity in litre					
		PURITY C500 Steam Advanced					
		Recommended bypass setting					
		0	0	1/2	1/2	3	3

		Liters	US gallons	Liters	US gallons	Liters	US gallons
4	4	7083	1871	7792	2058	8677	2292
5	5	7083	1871	7792	2058	8677	2292
6	6	7083	1871	7792	2058	8677	2292
7	7	6071	1604	6679	1764	7438	1965
8	8	5313	1403	5844	1544	6508	1719
9	9	4722	1247	5194	1372	5785	1528
10	10	4250	1123	4675	1235	5206	1375
11	11	3864	1021	4250	1123	4733	1250
12	12	3542	936	3896	1029	4339	1146
13	13	3269	864	3596	950	4005	1058
14	14	3036	802	3339	882	3719	982
15	15	2833	748	3117	823	3471	917
16	16	2656	702	2922	772	3254	860
17	17	2500	660	2750	726	3063	809
18	18	2361	624	2597	686	2892	764
19	19	2237	591	2461	650	2740	724
20	20	2125	561	2338	617	2603	688
21	21	2024	535	2226	588	2479	655
22	22	1932	510	2125	561	2366	625
23	23	1848	488	2033	537	2264	598
24	24	1771	468	1948	515	2169	573
25	25	1700	449	1870	494	2083	550
26	26	1635	432	1798	475	2002	529
27	27	1574	416	1731	457	1928	509
28	28	1518	401	1670	441	1859	491
29	29	1466	387	1612	426	1795	474
30	30	1417	374	1558	412	1735	458
31	31	1371	362	1508	398	1679	444
32	32	1328	351	1461	386	1627	430
33	33	1288	340	1417	374	1578	417
34	34	1250	330	1375	363	1531	405
35	35	1214	321	1336	353	1488	393

The bypass position can be adjusted to the local water quality or the machine type.
 Position 0: All devices in areas with an extremely high water hardness level ($\text{CH} \geq 22 \text{ }^\circ\text{dH}$)
 Position 1: Combi ovens and conventional ovens with direct injection system
 Position 2: Combi ovens and conventional ovens with boiler system
 Position 3: All devices in soft water areas ($\text{CH} \leq 7 \text{ }^\circ\text{dH}$)
 You can obtain individual recommendations from your VIVREAU contact.
 Operation of filter only with PURITY C Steam filter head.

PURITY C Steam Advanced Bypass and capacity tables

Filter Heads PURITY C Steam 0–3 with variable bypass
 Combi ovens and conventional ovens

German carbonate hardness $^\circ\text{dH}$	Grains per US gallon	PURITY C Steam Advanced – Filter capacity in litre					
		PURITY C1100 Steam Advanced					
		Recommended bypass setting					
		0	0	1/2	1/2	3	3
		Liters	US gallons	Liters	US gallons	Liters	US gallons
4	4	11980	3165	13178	3481	14676	3877
5	5	11980	3165	13178	3481	14676	3877
6	6	11980	3165	13178	3481	14496	3829
7	7	10269	2713	11295	2984	12425	3282
8	8	8985	2374	9884	2611	10872	2872
9	9	7987	2110	8785	2321	9664	2553
10	10	7188	1899	7907	2089	8697	2298
11	11	6535	1726	7188	1899	7907	2089
12	12	5990	1582	6589	1741	7248	1915
13	13	5529	1461	6082	1607	6690	1767
14	14	5134	1356	5648	1492	6212	1641
15	15	4792	1266	5271	1392	5798	1532
16	16	4493	1187	4942	1305	5436	1436
17	17	4228	1117	4651	1229	5116	1352
18	18	3993	1055	4393	1160	4832	1276
19	19	3783	999	4161	1099	4578	1209
20	20	3594	949	3953	1044	4349	1149
21	21	3423	904	3765	995	4142	1094
22	22	3267	863	3594	949	3953	1044

23	23	3125	826	3438	908	3782	999
24	24	2995	791	3295	870	3624	957
25	25	2875	760	3163	835	3479	919
26	26	2765	730	3041	803	3345	884
27	27	2662	703	2928	774	3221	851
28	28	2567	678	2824	746	3106	821
29	29	2479	655	2726	720	2999	792
30	30	2396	633	2636	696	2899	766
31	31	2319	613	2551	674	2806	741
32	32	2246	593	2471	653	2718	718
33	33	2178	575	2396	633	2636	696
34	34	2114	558	2326	614	2558	676
35	35	2054	543	2259	597	2485	656

The bypass position can be adjusted to the local water quality or the machine type.

Position 0: All devices in areas with an extremely high water hardness level ($\text{CH} \geq 22 \text{ }^\circ\text{dH}$)

Position 1: Combi ovens and conventional ovens with direct injection system

Position 2: Combi ovens and conventional ovens with boiler system

Position 3: All devices in soft water areas ($\text{CH} \leq 7 \text{ }^\circ\text{dH}$)

You can obtain individual recommendations from your VIVREAU contact.

Operation of filter only with PURITY C Steam filter head.

Test data for PURITY C50 Quell ST

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.11 mg/l	0.40 mg/l	81.0 %	0.24 mg/l	88.7 %

* Test data for PURITY C150 Quell ST

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.11 mg/l	0.40 mg/l	81.0 %	0.24 mg/l	88.7 %

* Test data for PURITY C300 Quell ST Advanced

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.11 mg/l	0.40 mg/l	81.0 %	0.24 mg/l	88.7 %

Test data for PURITY C500 Quell ST Advanced

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.1 mg/l	0.31 mg/l	85.2 %	0.25 mg/l	88.6 %

** Test data for PURITY C1100 Quell ST Advanced

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.1 mg/l	0.31 mg/l	85.2 %	0.25 mg/l	88.6 %

* Values calculated on basis of the PURITY C50 Quell ST

** Values calculated on basis of the PURITY C500 Quell ST Advanced

Testing conditions

Flow rate PURITY C50 Quell ST:	0.25 GPM pH: 7.5 +/- 0.5
Flow rate PURITY C500 Quell ST:	0.44 GPM pH: 7.5 +/- 0.5
Pressure:	60 +/- 3 psi
Temperature:	20 +/- 3 °C

Capacity and flow rate table based on chlorine reduction

Water filter system	PURITY C50 Quell ST	PURITY C150 Quell ST	PURITY C300 Quell ST Advanced	PURITY C500 Quell ST Advanced	PURITY C1100 Quell ST Advanced
Capacity	1900 Liters/ 502 gallons	4766 Liters/ 1259 gallons	7917 Liters/ 2091 gallons	13458 Liters/ 3555 gallons	22762 Liters/ 6013 gallons
Rated service flow (lpm)	0.25 gallons/min	0.25 gallons/min	0.25 gallons/min	0.44 gallons/min	0.44 gallons/min

Capacity and flow rate table based on chloramine reduction

Water filter system	PURITY C300 Quell ST Advanced	PURITY C500 Quell ST Advanced	PURITY C1100 Quell ST Advanced
Capacity	7917 Liters/ 2091 gallons	13458 Liters/ 3555 gallons	22762 Liters/ 6013 gallons
Rated service flow (lpm)	0.25 gallons/min	0.44 gallons/min	0.44 gallons/min

PURITY C AC

The PURITY C1000 AC filter system has a filter capacity of 10,000 litres (2641 US gallons), regardless of carbonate hardness and the bypass set. All intake water is filtered (Chapter 4.2).

Substance reduction

This system has been tested according to NSF/ANSI 42 for reduction of the substances listed below.

The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system as specified in NSF/ANSI 42.

Test data for PURITY C1000 AC

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.1 mg/l	0.05 mg/l	97.4 %	0.05 mg/l	97.6 %

Substance	Influent challenge concentration	Reduction requirement	Overall percent reduction
Particulate, class 1 particles 0.5 to < 1µm	At least 10.000 particles/ml	≥ 85 %	98.90 %

Testing conditions

Flow rate PURITY C1000 AC:	0.79 GPM
Pressure:	60 +/- 3 psi
Temperature:	20 +/- 3 °C

Test data for PURITY C500 Finest

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.0 mg/l	ND (0.05 mg/l) (not detectable)	97.4 %	ND(0.05 mg/l) (not detectable)	>97.5 %

Test data for PURITY C1100 Finest

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.0 mg/l	ND (0.05 mg/l) (not detectable)	97.4 %	ND(0.05 mg/l) (not detectable)	>97.5 %

Test data for PURITY C500 Steam Advanced

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.1 mg/l	0.31 mg/l	85.2 %	0.25 mg/l	88.6 %

*Test data for PURITY C1100 Steam Advanced

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.1 mg/l	0.31 mg/l	85.2 %	0.25 mg/l	88.6 %

* Values calculated on basis of the C500

Testing Conditions:

Flow Rate:	0.25 GPM	pH: 7.5+/-0.5
Pressure:	60+/- 3 psig	Temperature: 20+/-3 °C

Capacity and flow rate table based on chlorine and chloramine reduction

Water filter system	PURITY C500 Steam Advanced	PURITY C1100 Steam Advanced
Capacity	7792 Liters/ 2058 gallons	13178 Liters/ 3481 gallons
Rated service flow (lpm)	0.44 gallons/min	0.44 gallons/min

PURITY C XtraSafe

For PURITY C1100 XtraSafe please use the VIVREAU Professional Filter website for individual capacity calculation:

- Please go to the capacity calculation on the website <https://vivreauwater.com/products/purity-c1100-xtrasafe/>
- Enter locally measured Carbonate Hardness, Total Hardness and Conductivity

- **Important:** Set the by-pass accordingly, track the individually calculated capacity and change the cartridge in time!

All the intake water is filtered.

Test data for PURITY C XtraSafe

Substance	Guidelines	Average Influent Concentration	Maximum Effluent Concentration	Minimum Percent Removal	Average Effluent Concentration	Average Percent Removal
Chlorine	NSF/ANSI 42	2.0 mg/l	0.19 mg/l	90.7 %	0.10 mg/l	95.2 %

Testing Conditions:

Flow Rate:	0.52 GPM	pH: 7.5+/-0.5
Pressure:	60+/- 3 psig	Temperature: 20+/-3 °C

Definition of Terms

All filter head types:

1. Filter head
2. Locking handle
3. Water outlet (1/2"-14 NPT, G3/8" or JG8)
4. Water inlet (1/2"-14 NPT, G3/8" or JG8)
5. Wall mounting bracket
6. Filter cartridge
7. Protective cap
8. Flush valve
9. Flush hose

Additionally for filter head types PURITY C 0 – 70%:

10. Bypass setting
11. Flush valve with slider

Additionally for filter head types PURITY C with John Guest connection:

12. Safety clips

General Information

2.1 Function and Application

PURITY C is a filter system specially designed by VIVREAU for use in catering to ensure constantly high water quality for individual customer applications as well as reliable and simple operation.

The unique IntelliBypass ensures a nearly constant bypass proportion for the entire usage period, irrespective of the volumetric flow of the terminal equipment used. The result is consistently high water quality specially tailored to the requirements of the application and the local water conditions.

By reliably locking the filter cartridge in the filter head and controlling the water flow, the innovative locking handle ensures simple and reliable operation.

The food quality provided by the VIVREAU PURITY C filter system has been tested and confirmed by independent institutes. Product-specific certifications are located on the label and also at www.vivreau.com/professional-filters

2.1.1 PURITY C Quell ST / PURITY C Quell ST Advanced

PURITY C Quell ST / PURITY C Quell ST Advanced filter cartridges reduce the carbonate hardness* in drinking water, thus preventing scale deposits in the downstream terminal equipment.

Depending on the bypass setting, calcium*, magnesium* and metal ions* can be selectively removed from the drinking water during the flow process.

In addition to cloudiness* and organic pollutants*, the filter material also reduces the level of substances impairing smell and taste, such as chlorine and chloramine¹ residues in the filtrate and the bypass water.

Typical areas of applications for PURITY C Quell ST are coffee and espresso machines, hot and cold drink vending machines as well as combi ovens and conventional ovens.


*Not performance tested and certified by NSF.

¹Only for PURITY C Advanced

2.1.2 PURITY C Finest

The PURITY C Finest filtrate helps to produce the unique coffee aroma – especially in espressos – and allows the body of the coffee to develop. The characteristics of the coffee crema are experienced in their full intensity. The PURITY C Finest filter cartridges reduce the total hardness* in drinking water, thereby avoiding limescale and gypsum deposits in the downstream appliance. Calcium*, magnesium* and metal ions* are selectively removed from the drinking water using the flow method.

The filter material not only reduces cloudiness* and organic pollutants*, but also the level of substances that impair the smell and taste, such as chlorine residues in the filtrate. The PURITY C Finest is typically used in coffee and espresso machines.

 **Caution:** The PURITY C Finest is not suitable for use with combi ovens and conventional ovens. Operation is not recommended in combination with domestic water-softening systems. PURITY C Finest cartridges must be operated with a bypass setting of 0%.

2.1.3 PURITY C Steam Advanced

The PURITY C Steam water filter system optimises tap water specially for combi ovens and conventional ovens. It decarbonates drinking water, thereby reducing scale deposits in and on the terminal equipment. Depending on the bypass setting, calcium* and magnesium ions* as well as metal ions* such as lead and copper are selectively removed from the drinking water. In addition, the filter material not only reduces turbidity* and organic impurities* but also substances that impair smell and taste, such as chlorine and chloramine.

The bypass setting, which is specially designed for combi ovens and conventional ovens, matches the reduction in the carbonate hardness to the local water hardness in order to achieve an optimum filtrate quality. The increased flow and the reduced pressure loss enable the smooth operation of the combi oven.

2.1.4 PURITY C AC

The PURITY C1000 AC filter cartridge reduces cloudiness*, organic pollutants* as well as the level of substances impairing smell and taste, such as chlorine residues. The filter material retains particles down to a size of 0.5 µm. Typical areas of application for PURITY C1000 AC are vending machines and on-tap watercoolers.

2.1.5 PURITY C XtraSafe

The VIVREAU PURITY C1100 XtraSafe water filter system optimizes tap water specially for coffee and vending machines as well as for combi ovens and conventional ovens in gypsum and corrosive water areas. With complete desalination of drinking water, it is reducing scale and gypsum deposits and risk of corrosion in and on the terminal equipment. Calcium and magnesium ions, chlorides and sulphates as well as metal ions such as lead and copper are selectively removed from the drinking water. In addition, the filter material not only reduces turbidity but also substances that impair smell and taste, such as chlorine.

The recommended by-pass setting, which is specially designed for Coffee and Steam applications, matches the

reduction in electrical conductivity in order to achieve an optimum filtrate quality and to protect the machines. The increased flow and the reduced pressure loss enable the smooth operation of the combi oven. The PURITY C1100 XtraSafe filter cartridge must be replaced once the filter capacity calculated individually on the VIVREAU Professional Filter website has been reached, in accordance with manufacturer's specifications or no later than 12 months after commissioning, whichever occurs first. For tracking, the usage of a VIVREAU FlowMeter is highly recommended.

Coffee & Vending:	Filter head:	Individual bypass recommendation via VIVREAU website
Coffee and espresso machines/Vending machines	Filter Heads PURITY C 0–70 % with variable bypass	40 % / 30 %
Operation of filter only with PURITY C 0–70 % filter head.		

Steam:	Filter head:	Recommended bypass setting
Combi ovens and conventional ovens	Filter Heads PURITY C Steam 0-3 with variable by-pass	2
Operation of filter only with PURITY C Steam filter head.		

2.2 Warranty Provisions

The PURITY C filter system is subject to the warranty of 2 years. A warranty claim may only be asserted only if all instructions in this manual are followed and observed.

2.3 Storage/Transport

Adhere to the ambient conditions for storage and transport detailed in the technical data (Chapter 9).

The manual should be seen as part of the product and kept for the whole service life of the filter system and passed on to subsequent owners.

2.4 Recycling/Disposal

The packaging material is suitable for recycling and can be reused. Please dispose of all materials in accordance with local regulations.

VIVREAU takes back used filter cartridges for recycling at the addresses listed on the back of the cover, or the cartridges can be disposed of according to local regulations.

If you decide not to return the filter cartridges, please dispose of all materials in accordance with local regulations.

Operating and Safety Information

3.1 Qualified personnel

Installation and maintenance of the filter system may only be carried out by trained or authorised personnel.

3.2 Correct use

Perfect and safe operation of the product is subject to the installation, use and maintenance described in this manual. Only use filter cartridges intended for use with your filter system.

3.3 Liability exclusion

Installation and cartridge exchanges must be performed precisely in accordance with the instructions in this manual.

VIVREAU shall not be held liable for any damage, including subsequent damage, arising from the incorrect installation or use of the product.

3.4 Specific safety information

- Water used as intake water for the PURITY C water filter system must be of drinking water quality. The PURITY C water filter system is only suitable for cold water use within the water intake temperature range stated in Chapter 9. No microbiologically impaired water or water of unknown quality may be used without appropriate disinfection.
- If there are official instructions to boil tap water, the filter system must be decommissioned. When the requirement to boil water comes to an end, the filter cartridge must be replaced and the connections cleaned.
- It is generally recommended to boil tap water for certain groups of people (e.g. people with weakened immune systems, babies). This also applies to filtered water.
- Note for people with kidney disease or dialysis patients: during the filter process, the potassium content may be increased slightly. If you suffer from kidney disease and/or have to stick to a special potassium diet, we recommend you consult your doctor beforehand.
- VIVREAU recommends not to decommission the filter system for long periods. If the VIVREAU PURITY C filter system is not used for several days, we recommend that the filter system be flushed with the volume of water indicated in the table below.

Filter cartridge	Flushing volume from 2 days to 1 week not used	Flushing volume > 1 week not used
PURITY C50	2 liters (0.5 US gallons)	20 liters (5.3 US gallons)
PURITY C150	3 liters (0.8 US gallons)	30 liters (7.9 US gallons)
PURITY C300	6 liters (1.6 US gallons)	60 liters (15.9 US gallons)
PURITY C500	10 liters (2.6 US gallons)	100 liters (26.4 US gallons)
PURITY C1100	18 liters (4.76 US gallons)	180 liters (47.6 US gallons)
PURITY C1000 AC	1 liter (0.26 US gallons)	10 liters (2.6 US gallons)

- The filter system must not be opened or dismantled during operation. The filter cartridge must not be opened.
- Production date

Production code filter head – example: H 8375 01381	
8	Production year, this example: 2018
37	Production week, this example: calendar week 37
5	Production day from Monday (1) to Sunday (7), this example: Friday
01381	Serial identification number

Production code filter cartridge – example: B8224350010	
8	Production year, this example: 2018
22	Production week, this example: calendar week 22
4	Production day from Monday (1) to Sunday (7), this example: Thursday
35	Internal Identification No. of filter medium, this example No. 35
0010	Consecutive number of the filter cartridge, this example the tenth cartridge; reset when the day changes

3.5 Technical safety assembly instructions

- The appliance in which the filter is used must be free of limescale prior to installation.
- Protect the filter system from sunlight and mechanical damage. Do not assemble near sources of heat and open flames.
- A stop valve must be installed before the filter system inlet hose.
- If the water pressure is higher than 8.6 bar (125 psi), a pressure reducer must be installed in front of the filter system.
- When choosing the material for parts that come into contact with water after the VIVREAU filter system, it is important to remember that, due to the process, decarbonised water contains free carbon dioxide. For this reason, only materials that are compatible with free carbon dioxide must be used.

Note: The water is not decarbonised when using PURITY C AC filter cartridges.



- All parts must be installed in accordance with the country-specific guidelines on the installation of drinking water facilities.

Installation



Caution: Prior to installation, read the technical data (Chapter 9) and the operating and safety information (Chapter 3). After storage and transport below 0 °C (32 °F), the product must be stored in the open original packaging for at least 24 hours before it is commissioned at the stated ambient temperatures (Chapter 9) for operation.


4.1 Assembling the filter head, water connection

A	<ul style="list-style-type: none"> ● Close the water intake and switch off the power supply to the end device. ● Fit the wall mounting bracket ⑤ in the intended position.
B	<p> Caution: When fitting the bracket, note the installation dimensions, bending radii of the hoses and dimensions of the accessories (e.g. VIVREAU Flow Meter). When using the wall mount, install vertically only! The PURITY C1100 cannot be installed using the wall mounting bracket.</p>
C	<ul style="list-style-type: none"> ● Fit the hoses to the water inlet “IN” ④ and outlet “OUT” ③ on the filter head ①.
D	<p> Caution: The max. tightening torque at the connections must not exceed 14 Nm!</p> <ul style="list-style-type: none"> ● When using PURITY C 0-70% filter heads, check bypass setting 10 (set to 30% at the factory) and if necessary adjust this setting to the local carbonate hardness (chapter 4.2). ● Lock the filter head ① in the wall mounting bracket ⑤.

4.2 Bypass setting for and capacity of PURITY C 0 – 70% filter heads

- Determine the carbonate hardness (for PURITY C filter cartridges) by performing the VIVREAU carbonate hardness test. Alternatively, your local water supplier will be able to provide information on the local water hardness.
- Determine the bypass setting and capacity in line with the application and the carbonate hardness identified using the bypass and capacity table (pages 2–5).
- Then turn the bypass setting **10** to the identified value.
- To ensure precise and continuous control of the degree of filter cartridge exhaustion, it is recommended to install the VIVREAU FlowMeter 10 – 100 A.
- **Note:** With PURITY C1000 AC and PURITY C Finest filter cartridges, all of the intake water is filtered. The filter cartridge can be used with filter heads that have a variable or fixed bypass. The bypass that may be set in the filter head is not taken into account.

4.3 Inserting the filter cartridge


E	<ul style="list-style-type: none"> ● Pull the flap of the protective cap ⑦ upwards and remove the protective cap. ● Note the next exchange date in the date field on the filter cartridge ⑥. ● Insert the filter cartridge ⑥ in the filter head ① in a vertical position.
F	<p> Caution: The filter cartridge can only be inserted when the locking handle is open.</p> <ul style="list-style-type: none"> ● Make sure that the filter cartridge is positioned correctly. ● Turn the locking handle ② until you feel it engage.

4.4 Commissioning

G	<ul style="list-style-type: none"> • Open the water intake and switch on the terminal equipment's power supply. • Operate the flush valve ⑧ and flush the filter system until the filtered water runs clear and without bubbles. At least two empty filter cartridge volumes must be flushed (Chapter 9).
H	<p>Note: When bleeding/flushing, catch water emerging from the flush hose ⑨ in an appropriate container.</p> <ul style="list-style-type: none"> • Check system for any leaks.

Changing the filter cartridge

The PURITY C filter cartridge must be replaced once the stated capacity has been reached (see Chapter 6), in accordance with manufacturer's specifications or no later than 12 months after commissioning, whichever occurs first.

 **Caution:** When changing a filter cartridge, examine all remaining parts carefully! Faulty parts must be exchanged and contaminated parts should be cleaned. Read the operating and safety information (Chapter 3) before changing the cartridge. After storage and transport below 0 °C (32 °F) the product must be stored in the open original packaging for at least 24 hours before it is commissioned at the stated ambient temperatures (Chapter 9) for operation. !

Note: When the locking handle is open, the water supply to the cartridge is interrupted and short circuit operation with direct water flow from the water inlet ④ to the water outlet ③ is possible (if necessary, close the water intake and switch off the power supply to the terminal equipment).

- Open locking handle ②.
- Activate the flush valve ⑧ and depressurise the system.
- Remove exhausted filter cartridge ⑥ from the filter head ①, bearing in mind the weight of the cartridge. Note: The filter cartridge can be pivoted by 90 ° in the wall mounting bracket for easy removal.
- Perform the steps described at 4.3 and 4.4.

Bypass and capacity tables

The capacity tables for the PURITY C filter systems are provided on pages 2–5. The capacities shown in the capacity tables are based on German carbonate hardness and are not certified by NSF.

Note: The stated capacities were tested and calculated based on standard application and machine conditions. This information may vary according to external influencing factors.


The PURITY C1000 AC has a filter capacity of 10,000 litres, regardless of the carbonate hardness and the bypass set. All intake water is filtered.

For PURITY C1100 XtraSafe please use the VIVREAU Professional Filter website for individual capacity calculation:


- Please go to the capacity calculation on the website <https://vivreauwater.com/products/purity-c1100-xtrasafe/>
- Enter locally measured Carbonate Hardness, Total Hardness and Conductivity
- **Important:** Set the by-pass accordingly, track the individually calculated capacity and change the cartridge in time!

Repair

Regularly check the filter system for leaks. Regularly check the hoses for kinks. Bent hoses must be replaced. The complete filter system must be replaced in rotation after a maximum of ten years. The hoses must be replaced in rotation after a maximum of five years.

 **Caution:** Before replacing filter systems or hoses, read the technical data (Chapter 9) and the operating and safety information (Chapter 3).

Regularly clean the outside of the filter system with a soft, damp cloth.

 **Caution:** Do not use any abrasive chemicals, cleaning solutions or astringent cleaning agents.

Troubleshooting

8.1 No water flow

Cause:	Water intake closed.
Troubleshooting:	Open the water intake at the upstream stop valve or by closing the locking handle ② on the filter head ①.

8.2 No or low water flow in spite of open water intake

Cause:	Mains pressure too low.
Troubleshooting:	Check mains pressure. If the fault continues, check the filter system and filter cartridge and replace if necessary.
Cause:	Filter head not mounted in direction of flow.
Troubleshooting:	Dismantle filter head and install in direction of flow (Chapter 4).

8.3 Leak

Cause:	Screwed connections not fitted correctly.
Troubleshooting:	Check mains pressure. Check all screwed connections and mount according to Chapter 4. If the fault persists, replace filter system.

Technical Data

9.1 PURITY C Quell ST



		PURITY C Filter System with Filter Cartridge				
		PURITY C50 Quell ST	PURITY C15 0 Quell ST	PURITY C30 0 Quell ST Advanced	PURITY C50 0 Quell ST Advanced	PURITY C11 00 Quell ST Advanced
Operating pressure		2 bar – max. 8.6 bar (29 psi – max. 125 psi)				
Water intake temperature		4 °C – 30°C (39.2 °F – 86 °F)				
Ambient temperature during	operation	4 °C – 40 °C (39.2 °F – 104 °F)				
	Storage/transport	-20 °C – 50 °C (-4 °F – 122 °F)				
Flow rate with 1 bar pressure loss (14.5 psi)		160 l/h (42.27 US gallons/h)	145 l/h (38.30 US gallons/h)	140 l/h (36.99 US gallons/h)	140 l/h (36.99 US gallons/h)	150 l/h (39.63 US gallons/h)
Nominal flow		60 l/h (15.85 US gallons/h)	60 l/h (15.85 US gallons/h)	60 l/h (15.85 US gallons/h)	100 l/h (26.41 US gallons/h)	100 l/h (26.42 US gallons/h)
Pressure loss at nominal flow		0.25 bar (3.6 psi)	0.25 bar (3.6 psi)	0.25 bar (3.6 psi)	0.5 bar (7.3 psi)	0.5 bar (7.3 psi)
Empty filter cartridge volume		1.0 l (0.26 US gallons)	1.9 l (0.5 US gallons)	2.9 l (0.8 US gallons)	5.4 l (1.4 US gallons)	8.7 l (2.3 US gallons)
Weight (dry/wet)		1.0/1.6 kg (2.2/3.5 lb)	1.8/2.8 kg (4/6.2 lb)	2.8/4.2 kg (6.2/9.3 lb)	4.6/6.9 kg (10.1/15.2 lb)	7.7 /12.5 kg (16.9/27.5 lb)
Dimensions of filter system (filter head with filter cartridge) (Width/Depth/Height)		119/108/268 mm (4.69/4.25/ 10.55 inch)	117/104/419 mm (4.60/4.09/ 16.5 inch)	125/119/466 mm (4.92/4.69/18.35 inch)	144/144/557 mm (5.67/5.67/21.93 inch)	184/184/557 mm (7.24/7.24/21.93 inch)
Dimensions (filter cartridge) with protective cap (Width/Depth/Height)		108/108/259 mm (4.25/4.25/10.19 inch)	104/104/410 mm (4.09 /4.09/16.14 inch)	119/119/457 mm (4.68/4.68/17.99 inch)	144/144/548 mm (5.67/5.67/21.58 inch)	184/184/548 mm (7.24/7.24/21.58 inch)
Installed dimensions (vertical installation with wall mounting) (Width/Depth/Height)		137/130/268 mm (5.39/5.11/10.55 inch)	137/128/419 mm (5.39/5.04/16.5 inch)	137/136/466 mm (5.39/5.35/18.35 inch)	144/148/557 mm (5.67/5.83/21.93 inch)	–
In addition to the accessories, the bending radii of the intake and outlet hose must be considered in addition to the dimensions of the complete system, depending on the installation orientation.						
Operating position		Horizontal or vertical				
Inlet connection		1/2"-14 NPT, G3/8" or JG8				
Outlet connection		1/2"-14 NPT, G3/8" or JG8				

The PURITY C water filter system is used to remove carbonate hardness (temporary hardness/alkalinity)* from drinking water to prevent limescale deposits in downstream appliances. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Use cold water only. All of the materials used are safe for contact with drinking water. Observe relevant regulations. Read the manual prior to use.

9.2 PURITY C Finest, PURITY C AC, PURITY C Steam Advanced, PURITY C XtraSafe

		PURITY C filter system with filter cartridge		
		PURITY C500 Finest	PURITY C1100 Finest	PURITY C1000 AC
Operating pressure		2 bar to max. 8.6 bar (29 psi – max. 125 psi)		
Water intake temperature		4 °C to 30 °C (39.2 °F – 86 °F)		
Ambient temperature during	operation	4 °C to 40 °C (39.2 °F – 104 °F)		
	storage/transport	-20 °C to 50 °C (-4 °F – 122 °F)		
Flow rate with 1 bar pressure loss (14.5 psi)		140 l/h (36.99 US gallons/h)	150 l/h (39.63 US gallons/h)	140 l/h (36.99 US gallons/h)
Nominal flow		100 l/h (26.41 US gallons/h)		30 – 180 l/h (7.9 – 47.55 US gallons/h)
Pressure loss at nominal flow		0.5 bar (7.3 psi)		0.2 – 1.4 bar (2.9 – 20.3 psi)
Empty filter cartridge volume		5.4 l	8.7 l	0.23 l
Weight	dry	4.6 kg (10.1 lb)	7.7 kg (16.9 lb)	0.5 kg (1.10 lb)
	wet	6.9 kg (15.2 lb)	12.5 kg (27.5 lb)	1.0 kg (2.20 lb)
Dimensions of filter system (filter head with filter cartridge) (Width/ Depth/Height)		144/144/557 mm (5.67/5.67/ 21.9 inch)	184/184/ 557 mm (7.24/ 7.24/ 21.93 inch)	109/93/ 238 mm (4.29/3.66/ 9.37 inch)
Dimensions (filter cartridge) (Width/ Depth/Height)		144/144/548 mm (5.67/5.67/21.57 inch)	184/184/548 mm (7.24/7.24/21.6 inch)	88/88/ 231 mm (3.5/3.5/8.9 inch)
Installed dimensions (vertical installation with wall mounting) (Width/ Depth/Height)		144/148/557 mm (5.67/5.83/21.9 inch)	–	137/120/238 mm (5.39/4.72/9.37 inch)
In addition to the accessories (e.g. FlowMeter), the bending radii of the intake and outlet hose must be considered in addition to the dimensions of the complete system, depending on the installation orientation.				
Operating position		Vertical		Horizontal or vertical
Inlet connection		1/2"-14 NPT, G3/8" or JG8		
Outlet connection		1/2"-14 NPT, G3/8" or JG8		
Nominal capacity		–	–	10,000 l 2641 US gallons
Chlorine reduction DIN EN 14898		–	–	> 90%
Chlorine reduction NSF 42		–	–	Class I (50%)
Particle retention NSF 42		–	–	Class I (0.5 µm)

		PURITY C filter system with filter cartridge		
		PURITY C500 Steam Advanced	PURITY C1100 Steam Advanced	PURITY C1100 XtraSafe
Operating pressure		2 bar to max. 8.6 bar (29 psi – max. 125 psi)		
Water intake temperature		4 °C to 30 °C (39.2 °F – 86 °F)		
Ambient temperature during	operation	4 °C to 40 °C (39.2 °F – 104 °F)		
	storage/transport	-20 °C to 50 °C (-4 °F – 122 °F)		
Flow rate with 1 bar pressure loss (14.5 psi)		300l/h (79.25 US gallons/h)		
Nominal flow		100 l/h (26.41 US gallons/h)		
Pressure loss at nominal flow		0.1 bar (1.5 psi)	0.2 bar (2.9 psi)	0.2 bar (2.9 psi)
Empty filter cartridge volume		5.4 l	8.7 l	8.7 l
Weight	dry	4.6 kg (10.1 lb)	7.7 kg (16.9 lb)	7.7 kg (16.9 lb)
	wet	6.9 kg (15.2 lb)	12.5 kg (27.5 lb)	12.5 kg (27.5 lb)
Dimensions of filter system (filter head with filter cartridge) (Width/ Depth/Height)		144/144/557 mm (5.67/5.67/21.9 inch)	184/184/557 mm (7.24/7.24/21.93 inch)	184/184/ 557 mm (7.24/7.24/21.93 inch)
Dimensions (filter cartridge) (Width/ Depth/Height)		144/144/548 mm (5.67/5.67/21.57 inch)	184/184/548 mm (7.24/7.24/21.6 inch)	184/184/548 mm (7.24/7.24/21.6 inch)
Installed dimensions (vertical installation with wall mounting) (Width/ Depth/Height)		144/148/557 mm (5.67/5.83/21.9 inch)	–	–
In addition to the accessories (e.g. FlowMeter), the bending radii of the intake and outlet hose must be considered in addition to the dimensions of the complete system, depending on the installation orientation.				
Operating position		Horizontal or vertical		Vertical
Inlet connection		1/2"-14 NPT		
Outlet connection		1/2"-14 NPT		

	PURITY C System tested and certified by NSF International against NSF/ANSI Standard 42 and CSA B483.1 for the reduction of Chlorine Taste and Odor.
	PURITY C Advanced System tested and certified by NSF International against NSF/ANSI Standard 42 and CSA B483.1 for the reduction of Chlorine and Chloramine Taste and Odor.

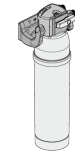
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Information in the instruction for use subject to change

VIVREAU[®]
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Documents / Resources

 <p>VIVREAU[®] PURITY C PURITY C QUILL ST / PURITY C QUILL ST ADVANCED PURITY C FINEST / PURITY C STEAM ADVANCED PURITY C1000 AC / PURITY C WATERSAFE Water Filter System</p> <p>Model: Purity C Model: Purity C Model: Purity C</p> <p>Version 1002EN</p>	<p>VIVREAU PURITY C Water Filter System [pdf] Instruction Manual C Quell ST, C Quell ST Advanced, C Finest, C Steam Advanced, C1000 AC, XtraSafe, PURITY C Water Filter System, PURITY C, Water Filter System, Filter System</p>
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References

- [User Manual](#)

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