



# PERMASTORE® BEHÄLTERBAU

Industrial solutions by Henze Harvestore GmbH

Your reliable partner for tank construction  
– since 1959 –



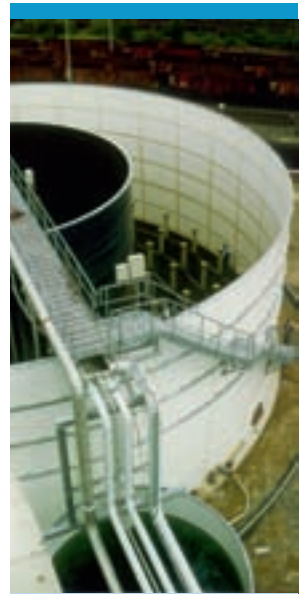
Biogas



Tanks



Slurry tanks



Industry



Industry

# Tank volume list series 1400

TYP	Diam. (m)	Height (m) Pl./ Ring	5	10	15	20	25	30	35	40	45	50	55	60	65
			1,47	2,87	4,27	5,67	7,07	8,47	9,87	11,27	12,67	14,07	15,47	16,87	18,27
			1	2	3	4	5	6	7	8	9	10	11	12	13
11	3,41	4	13,4	26,1	38,9	51,6	64,3	77,1	89,8	103	115	128	141	154	166
14	4,27	5	21	41	61	81	101	121	141	161	181	201	221	241	261
17	5,12	6	31	60	90	119	148	178	207	237	266	295	325	354	384
20	5,98	7	41	80	120	159	198	237	276	316	355	394	433	472	512
22	6,83	8	54	106	158	210	262	313	365	417	469	521	572	624	676
25	7,68	9	68	132	196	261	325	390	454	518	583	647	712	776	840
28	8,54	10	84	164	243	323	403	483	563	642	722	802	882	962	1 041
31	9,39	11	101	198	295	391	488	584	681	778	874	971	1 067	1 164	1 261
33	10,24	12	121	235	350	465	580	695	809	924	1 039	1 154	1 269	1 383	1 498
36	11,10	13	143	278	414	550	686	822	957	1 093	1 229	1 365	1 501	1 636	1 772
39	11,95	14	165	321	478	635	792	949	1 105	1 262	1 419	1 576	1 733	1 889	2 046
42	12,81	15	190	370	551	731	912	1 093	1 273	1 454	1 634	1 815	1 996	2 176	2 357
45	13,66	16	216	422	628	833	1 039	1 245	1 451	1 657	1 862	2 068	2 274	2 480	2 686
48	14,51	17	243	474	705	936	1 167	1 398	1 629	1 860	2 091	2 322	2 553	2 784	3 015
50	15,37	18	273	534	794	1 055	1 315	1 575	1 836	2 096	2 357	2 617	2 877	3 138	3 398
53	16,22	19	304	594	884	1 174	1 463	1 753	2 043	2 333	2 623	2 912	3 202	3 492	3 782
56	17,07	20	337	657	978	1 298	1 619	1 940	2 260	2 581	2 901	3 222	3 543	3 863	4 184
59	17,93	21	370	723	1 076	1 429	1 782	2 134	2 487	2 840	3 193	3 546	3 898	4 251	4 604
62	18,78	22	407	795	1 183	1 571	1 958	2 346	2 734	3 122	3 510	3 897	4 285	4 673	5 061
64	19,64	23	445	870	1 294	1 718	2 142	2 566	2 991	3 415	3 839	4 263	4 687	5 112	5 536
67	20,49	24	485	947	1 409	1 871	2 333	2 795	3 257	3 719	4 181	4 643	5 105	5 567	6 029
70	21,34	25	526	1 027	1 529	2 030	2 531	3 032	3 533	4 035	4 536	5 037	5 538	6 039	6 541
73	22,20	26	569	1 111	1 652	2 194	2 736	3 278	3 820	4 361	4 903	5 445	5 987	6 529	7 070
76	23,05	27	613	1 197	1 781	2 364	2 948	3 532	4 116	4 700	5 283	5 867	6 451	7 035	
78	23,90	28	660	1 289	1 917	2 546	3 174	3 803	4 432	5 060	5 689	6 317	6 946	7 575	
81	24,76	29	707	1 380	2 054	2 727	3 401	4 074	4 747	5 421	6 094	6 768	7 441		
84	25,61	30	757	1 478	2 199	2 920	3 641	4 362	5 083	5 804	6 525	7 246	7 967		
86	26,46	31	809	1 579	2 349	3 119	3 889	4 659	5 429	6 199	6 969	7 739			
90	27,32	32	861	1 682	2 502	3 323	4 143	4 963	5 784	6 604	7 425	8 245			
92	28,17	33	916	1 788	2 660	3 532	4 405	5 277	6 149	7 021	7 893	8 766			
95	29,03	34	973	1 900	2 827	3 754	4 680	5 607	6 534	7 461	8 388				
98	29,88	35	1 030	2 012	2 993	3 975	4 956	5 937	6 919	7 900	8 882				
101	30,73	36	1 091	2 130	3 168	4 207	5 246	6 285	7 324	8 362	9 401				
104	31,59	37	1 152	2 250	3 348	4 445	5 543	6 640	7 738	8 836					
106	32,44	38	1 216	2 373	3 531	4 689	5 847	7 005	8 162	9 320					
109	33,29	39	1 279	2 497	3 715	4 933	6 151	7 369	8 587	9 805					
112	34,15	40	1 347	2 629	3 911	5 194	6 476	7 759	9 041	10 323					
115	35,00	41	1 414	2 761	4 108	5 455	6 801	8 148	9 495	10 842					
118	35,86	42	1 485	2 899	4 313	5 727	7 141	8 555	9 969						
120	36,71	43	1 555	3 036	4 518	5 999	7 480	8 961	10 442						
123	37,56	44	1 629	3 180	4 731	6 282	7 834	9 385	10 936						
125	38,42	45	1 704	3 326	4 949	6 572	8 194	9 817	11 439						
129	39,27	46	1 780	3 476	5 171	6 866	8 562	10 257	11 953						
132	40,12	47	1 858	3 628	5 397	7 167	8 936	10 706	12 476						
134	40,98	48	1 939	3 786	5 632	7 479	9 325	11 172							
137	41,83	49	2 020	3 943	5 867	7 791	9 714	11 638							
140	42,69	50	2 104	4 107	6 110	8 114	10 117	12 121							
143	43,54	51	2 189	4 273	6 358	8 443	10 527	12 612							
146	44,39	52	2 276	4 443	6 610	8 777	10 944	13 112							
148	45,25	53	2 364	4 615	6 866	9 117	11 369	13 620							

Tankmodels up to height of 40 m and diameter to 70 m on request

Starterring (height 233 mm) and the half sheet (height 661,5 mm) allows intermediate height

The PERMASTORE-Tank type consists of the diameter and the height: e.g. type 5620 with the diameter 17,07 m and a height of 5,67 m

Other sizes are available upon request.

# Our Company

## Our company

### Since 1959 tank construction is our business.

The connection of companies Henze - Harvestore / Permastore Behälterbau is an international dealing tank constructor with focus area Europe. We are active in the industry and the community, biogas and agriculture.

### International

Over 90.000 tanks in more than 110 countries speak for themselves.

### ... but individually

We offer to our customers, respecting the specific requirements, proven solutions.

With our technical expertise, we adapt the tanks to the customer's specific needs. The large number of tank diameter and the height allows it to use for each plant the right Permastore tank.

### Service

This will be supplemented with service, modification, dismantling and reconstruction of existing facilities.

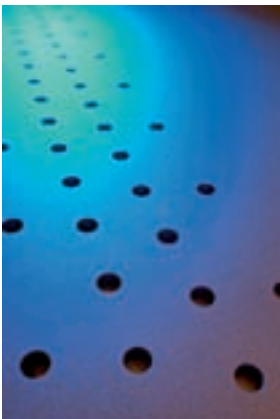
## Our product

### Steel is our business

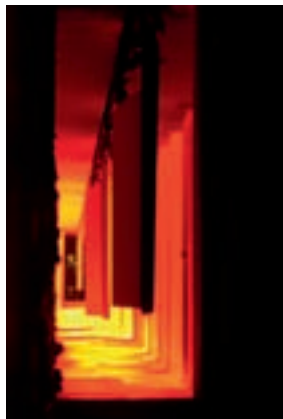
With extensive know-how and high commitment, we work with bolted steel segments and equipment components.

With our wide array of services and product range we can offer almost any medium a suitable tank.

Used by us are enamelled steel, stainless steel in grades ASI 304 and ASI 316 or plain steel.



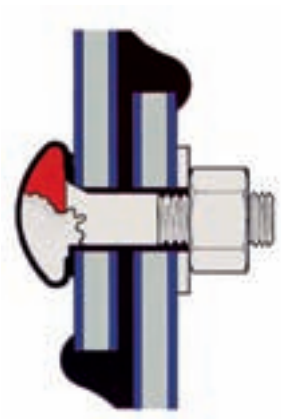
steel plate lasered and cleaned



Enamel is burned in



Checking of the enamel sheet



Drawing bolting / sealing of the segment sheets



## Quality certificates

- Object related structural engineering, can be checked or verified
- material products 3.1 according to DIN EN 10 204
- MPA monitoring contract
- records of leak tests
- specialist according to § 19 I WHG
- SCC certification
- DIBT Technical Approvals

# Applications

## Enamelled tanks

Sewage plant Klingele  
ACS high performance reactor  
Ø 6,83 m, H = 23,87 m  
V = 875 m<sup>3</sup>  
RAL 9002



MAB Mülheim  
Methan reactor Ø 16,22 m, H = 17,53 m  
Process water Ø 7,68 m, H = 8,47 m  
SBR Tank Ø 14,51 m, H = 7,07 m  
Clear water tank Ø 5,98 m, H = 5,67 m



Sewage plant Visp  
UASB Reactor  
Ø 5,98 m, H = 9,87 m  
V = 276 m<sup>3</sup>  
RAL 7004



Sewage plant Ingolstadt  
Process water treatment plant  
Sludge storage Ø 14,51 m, H = 7,07 m  
SBR Tank Ø 11,95 m, H = 5,67 m  
RAL 5013



Sewage plant Hochwald  
Clarify tank  
Ø 13,66 m, H = 4,50 m  
V = 628 m<sup>3</sup>  
RAL 5013



Disposal site Dinslaken  
Leachete tank  
2 x Ø 7,68 m, H = 7,07 m  
2 x V = 325 m<sup>3</sup>  
RAL 6001



Sewage plant Altentreptow  
Ø 19,64 m, H = 10,53 m, V = 3.101 m<sup>3</sup>  
Ø 9,39 m, H = 4,27 m, V = 478 m<sup>3</sup>  
Ø 5,12 m, H = 7,07 m, V = 148 m<sup>3</sup>  
RAL 5013



Sewage plant Baiersbronn  
Sludge storage  
Ø 12,81 m, H = 9,87 m  
V = 1.105 m<sup>3</sup>  
RAL 5013



Chemiepark Bitterfeld  
Safety tank  
Ø 23,05 m, H = 9,87 m  
V = 4.116 m<sup>3</sup>  
RAL 7035



## Stainless steel tank

Sewage plant Mederer  
 Reactor Ø 6,83 m, H = 13,12 m  
 Precidification Ø 5,12 m, H = 13,12 m  
 V = 481 m<sup>3</sup>, V = 270 m<sup>3</sup>  
 ASI 316



Sewage plant Mertens  
 M+A Tank Ø 8,54 m, H = 5,87 m  
 M+A Tank Ø 3,41 m, H = 5,87 m  
 V = 336 m<sup>3</sup>, V = 54 m<sup>3</sup>  
 ASI 304



Sewage plant ReFat  
 M+A Ø 6,83 m, H = 5,87 m  
 Anaerobic reactor Ø 10,24 m,  
 H = 10,22 m  
 V = 215 m<sup>3</sup>, V = 842 m<sup>3</sup>  
 ASI 304 + 316



Sewage plant Kröner  
 Precidification  
 Ø 7,68 m, H = 8,77 m  
 V = 407 m<sup>3</sup>  
 ASI 316



Sewage plant Altentreptow  
 Ø 22,19 m, H = 5,87 m  
 V = 2.272 m<sup>3</sup>  
 ASI 304



Sewage plant Leikeim  
 Cone tank 60°  
 Ø 5,98 m, H = 7,53 m  
 V = 85 m<sup>3</sup>  
 ASI 316



Stainless steel tank can be supplied from 8 – 14.000 m<sup>3</sup>. The tank material is selected according to the ingredients of the medium to be stored. In most cases will be decided between ASI 304 and ASI 316. Alternative stainless grades are available.

### Tank types

UASB High performance reactor  
 SBR Tank  
 Thickener  
 Hydrolyse  
 Low pressure gas holder  
 Water tank  
 Special tank

Digester  
 Leachate storage  
 Sludge storage  
 Notable water tank  
 Non-pressure gas holder  
 Slurry storage  
 Cone tanks

## Equipment components

An individual product requires special accessories. We have the best for your needs  
Accessories:

- Roofs gas-tight and odor-reducing - Materials: Stainless steel, fiberglass or PVC
- Cone 35°, 45°, 60°, 70°
- Steel Construction: hatches, flanges, sight glasses, ladders, helical staircase, platforms, stair towers, clear water channels, special components
- Gas Specific Equipment: pressure- / vacuum valves, ballast plate with telescopic guide, rental of lying gas storage
- Concrete floor off: HDPE, stainless steel, coating, leak monitored soil
- Thermal insulation, active and passive
- Mixers, level measurements, machinery equipment



**GreenGas Production site Rathenow**

2 x Biogasfermeter Type 59 70, Combinationtank Type 70 20, Balancetank Type 34 20, Fugattank Type 34 20, final substrate tank Type 81 20

## Our offer

We will be happy to work out complete solutions for your needs.

Request more detailed information on

- Low pressure gas holder
- Permastore production
- Tank volume list
- Project data sheets
- Special tanks



**Sewage plant Wansdorf**

Thick mud tank Type 20 42,5  
on supporting structure 6 m over floor

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