

# DACE Price Booklet

Cost information for estimation and comparison

Edition 32, May 2017



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## COLOPHON

### **DACE Price Booklet**

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## INTRODUCTION

We take pride in presenting the 32th edition of the DACE Price Booklet. It has been edited by DACE in cooperation with Vakmedianet in Alphen aan den Rijn, The Netherlands. DACE cost information can be accessed online on [www.dacepricebooklet.com](http://www.dacepricebooklet.com). This requires a one-time registration using the unique activation code on page 2.

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### **DACE Cost and Value:**

#### **The Dutch Network and Knowledge Center for Cost Engineering and Value Management.**

DACE is an organization in which some 130 companies participate. These companies operate in the Dutch process industry and infrastructure industry. Cost engineers and value managers from these companies participate in the DACE networking meetings, the Special Interest Groups, and in other events. All activities focus on building an effective and efficient network of cost engineers and value managers. Visit [www.dace.nl](http://www.dace.nl) for more information.

Nijkerk, The Netherlands  
May 2017

DACE Cost and Value  
The Dutch Network and Knowledge Center for Cost Engineering and Value Management.

## DIRECTIONS FOR USERS

### **For what purpose can the DACE Price Booklet be used?**

Provided costs (prices) are applicable within the process industry; intended to be used for budget reasons, or for comparing alternative project implementation methods. Costs are not suitable for definitive estimates or benchmarking purposes. If for example, large quantities are used then special discounts are often possible on the listed prices.

### **How to use this DACE Price Booklet?**

All prices are:

- Applicable within the process industry;
- Intended to be used for budget reasons, or for comparing alternative project implementation methods;
- Not suitable for definitive estimates or benchmarking purposes;
- Based on West European construction method, cost level based on The Netherlands;
- Budget prices, exclusively for the use of cost estimation and comparison of costs for alternative methods of execution based on wide accuracy range, and not suitable for definitive estimates;
- Expressed in Euros and exclusive of VAT;
- Based on the price level 2nd quarter 2017, unless stated otherwise;
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- Exclusive of special discounts while ordering larger quantities;
- Generally depending on various details such as accepted risk profile (ALARP), shape, quality or type, whilst for the sake of larger quantities special discounts are usually possible;
- Related to activities, carried out by contractors or installers, assuming a process industry HSE profile;
- For activities performed by contractors, based on a normal market situation;
- Assuming a normal market situation.

Dimensions are indicated in millimeters, any deviations are clearly stated.

Generally the SI Unity system is used.

### **For which region and which year are the pricing levels the basis in the DACE Price Booklet?**

These budget costs are for West European circumstances and based on the 2Q2017 pricing level.

### **Could DACE provide additional details or clarifications of existing pricing tables?**

If you see opportunities to improve specific tables, or notice discrepancies, then please provide us with feedback. Upon receipt we shall evaluate your input, and will do our best endeavor to incorporate these possible improvements in the next DACE Price Booklet release. Please contact us at [info@dace.nl](mailto:info@dace.nl)

### **Is it possible to initiate and add new cost tables?**

Yes, we recommend new ideas and opportunities. Please submit an email to [info@dace.nl](mailto:info@dace.nl), including sufficient back-up, and DACE will contact you within 2 weeks.

### **Some tables do not include costs, e.g. B4002, E0001, F0001. Could you explain the objective of these tables?**

The content of these general sections is to clarify the subsequent cost tables.

### **We see some discrepancies in costs/prices of previous DACE Price Booklet editions. Is it possible to update the older Price Booklet editions or provide clarifications of these previous editions?**

Unfortunately we cannot and will not re-issue previous Price Booklet editions. The intention is to continuously improve the content of this booklet and to incorporate learning's within new released editions.

## DIRECTIONS FOR USERS

### **Could you describe the cost-data collection process including DACE responsibility for new DACE Price Booklet editions?**

DACE consists of a large group of volunteers – originating from owners/operating companies, EPC engineering companies and construction contractors within the process industry - who are providing cost input. DACE acts as a facilitator, and is performing some high level process checks on the information received.

Note:

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### **What is the background of the indexes outside The Netherlands listed in table H5002?**

These indexes are derived from outside organizations such as "ChemieTechnik (Germany)" and "Chemical Engineering (USA)".

### **What is the background of the Dutch indexes listed in table H5003?**

These indexes are derived from the CBS (refer to [www.cbs.nl](http://www.cbs.nl) Statistics Netherlands for more details), except series "30" and "32" (refer to [www.bouwkosten.nl](http://www.bouwkosten.nl) – for additional details) and "60" (Webci composite index) is a combined index for a process installation built in The Netherlands.

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### **What tables are added in this edition?**

The tables F4025 "Sustainable measures, architectural work" and F5011 "Sustainable measures, building services" are added in this edition.

F4025 Sustainable measures, architectural work consists of price information about Wall Insulation, Floor Insulation, Roof Insulation, Window Insulation and Sun Blinding. F5011 Sustainable measures, building services consists of price information about Energy Production, Free Chilling and Combined Heat and Power. F5011 consists of price information about sustainable measures from architectural work and F5011 about sustainable measures from building services.

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## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1001 Atmospherical cylindrical storage tanks

Horizontal or vertical tanks.

##### **PVC-polyester**

PVC polyester with glass fibre reinforced, approximately 70% glass.

Design with spherical head.

##### **Polyester**

Full polyester.

Including:

- Manhole with cover;
- Several nozzles.

Variation: Different L/D relations do have an impact on price while having the same volume.

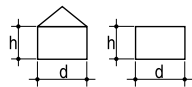
Content in m <sup>3</sup>	Cost each (x 1,000)	
	PVC-polyester	Polyester
1	13.-	13.-
5	18.-	16.-
10	20.-	19.-
20	26.-	24.-
40	33.-	28.-
60	39.-	34.-
80	50.-	39.-
100	62.-	47.-
200	91.-	85.-
300	118.-	99.-
400	145.-	129.-
500	172.-	152.-
600	200.-	182.-
800	257.-	239.-
1,000	298.-	269.-

## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1002 Vertical storage tanks

A



Material: Carbon steel.

Type: Cone roof or floating roof.

Including:

- 1 Outside cage ladder;
- 2 Manholes;
- Several nozzles;
- Hand railing;
- Assembly on site.

Excluding:

- Internals;
- Civil work, painting and insulation.

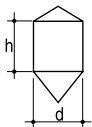
Design	Volume in m <sup>3</sup>	Height (h) in m	Diameter (d) in m	Total surface area in m <sup>2</sup>	Weight (x 1,000 kg)	Cost each (x 1,000)
Cone roof	50	5.00	3.6	77.00	3.65	45.-
	100	6.00	4.6	120.00	5.65	58.-
	150	6.00	5.6	155.00	7.30	64.-
	200	7.50	5.8	190.00	9.00	77.-
	250	7.50	6.5	220.00	10.40	87.-
	300	7.50	7.1	247.00	11.70	94.-
	350	8.00	7.5	277.00	13.10	101.-
	400	8.00	8.0	302.00	14.25	112.-
	500	9.00	8.5	355.00	16.70	122.-
	1,000	9.15	12.2	585.00	38.00	218.-
	1,800	10.70	14.6	825.00	54.00	292.-
	6,000	12.90	24.4	1,923.00	137.00	647.-
	13,500	14.70	34.2	3,415.00	290.00	1,200.-
	17,500	14.70	39.1	4,205.00	380.00	1,500.-
	25,000	16.50	44.0	5,319.00	520.00	1,995.-
31,000	16.50	48.8	6,267.00	640.00	2,505.-	
53,500	18.30	61.3	9,422.00	1,070.00	4,210.-	
Floating roof	1,000	9.15	12.2	585.00	50.00	422.-
	1,800	10.00	14.6	825.00	67.00	474.-
	6,000	12.90	24.4	1,923.00	158.00	885.-
	13,500	14.70	34.2	3,415.00	290.00	1,390.-
	17,500	14.70	39.1	4,205.00	385.00	1,730.-
	25,000	16.50	44.0	5,319.00	530.00	2,195.-
	31,000	16.50	48.8	6,267.00	650.00	2,655.-
	53,500	18.30	61.3	9,422.00	1,050.00	4,115.-
Sphere	610		10.5		100.00	1,115.-
	3,600		19.0		430.00	3,160.-



## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1003 Vertical silo's aluminium or AISI 304



Material: Aluminium or AISI 304.

Type: Conical roof or flat roof, conical bottom, cone angle 90°.

Design pressure: +0.20/-0.02 bar.

Design temperature: 60 °C.

Bulk density: 500 kg/m<sup>3</sup>.

Wall thickness: Average wall thickness of the cylindrical shell.

Price and weight are including:

- Skirt;
- Manhole;
- Several nozzles;
- Cage ladder in carbon steel;
- Handrail in carbon steel;
- Platform in carbon steel.

Excluding:

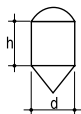
- Transport and installation;
- Foundation;
- Structural steel.

Material	Content in m <sup>3</sup>	Height (h) in m	Diameter (d) in m	Average plate thickness in mm	Weight in kg	Cost each (x 1,000)
Aluminium	10	6.6	1.4	4	690	20.-
				5	770	21.-
	20	8.0	1.8	5	1,170	24.-
				6	1,300	26.-
	40	9.0	2.4	5	1,800	27.-
				6	2,000	30.-
	60	8.6	3.0	5	2,300	36.-
				6	2,600	38.-
	100	10.0	3.6	6	3,700	49.-
				7	4,100	52.-
	200	14.6	4.2	7	6,600	74.-
				8	7,200	81.-
	300	14.0	5.3	8	9,300	98.-
				10	11,000	116.-
	400	16.0	5.7	9	11,500	123.-
10				13,500	145.-	
500	18.0	6.0	8	13,800	148.-	
			10	16,100	172.-	
AISI 304	10	6.6	1.4	4	1,860	32.-
				4	2,840	45.-
	20	8.0	1.8	4	5,030	60.-
				5	8,540	82.-
	40	9.0	2.4	5	12,980	112.-
				7	24,460	163.-
	60	8.6	3.0	7	40,450	246.-
				8	51,740	310.-
	100	10.0	3.6	8	63,700	380.-
				10		
200	14.6	4.2	10			
			13			
300	14.0	5.3	13			
			14			
400	16.0	5.7	14			
			15			
500	18.0	6.0	15			

## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1004 Vertical silo's in plastic material

**A**

Material: Glass reinforced plastic (polyester).

Type: Spherical roof, conical bottom, cone angle 60°.

Design pressure: +0.20/-0.02 bar.

Design temperature: 60 °C.

Bulk density: 500 kg/m<sup>3</sup>.

Including:

- Skirt;
- Manhole;
- Several nozzles;
- Cage ladder;
- Handrail;
- Platform.

Excluding:

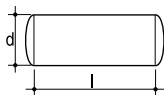
- Transport and installation;
- Foundation;
- Structural steel.

Content in m <sup>3</sup>	Height (h) in m	Diameter (d) in m	Cost each (x 1,000)
10	4.9	1.9	8.20
20	5.9	2.4	9.20
40	8.1	2.4	10.80
60	11.6	2.8	18.30
100	12.3	3.5	20.20
200	18.9	4.0	60.70

## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1005 Cylindrical vessels with hemispherical head



Horizontal or vertical vessels.

Including:

- Supports;
- X-ray;
- Inspection;
- Blasting in- and outside;
- 1 Manhole;
- Maximum 9 nozzles;
- Painting outside;
- Reinforcement rings if necessary.

Excluding:

- Heat treatment.

Variation: Different L/D relations do have an impact on price while having the same volume.

Content in m <sup>3</sup>	Length (l) in m	Diameter (d) in m	Total surface area in m <sup>2</sup>	Average plate thickness in mm	Weight in kg	Cost each (x 1,000)	
						Carbon steel	AISI 304
1	1.1	1.0	5.3	3	255	10.-	14.-
				5	405	12.-	15.-
				8	615	13.-	17.-
				10	745	13.-	
				13	940	15.-	
5	1.7	1.8	15.3	16	1,130	16.-	
				3	670	17.-	22.-
				5	1,045	21.-	28.-
				8	1,575	25.-	35.-
				10	1,915	27.-	
10	2.1	2.3	25.0	13	2,405	29.-	
				16	2,910	31.-	
				3	1,010	21.-	28.-
				5	1,570	23.-	32.-
				8	2,370	26.-	39.-
20	4.5	2.3	38.0	10	2,900	28.-	
				13	3,700	30.-	
				16	4,485	34.-	
				3	1,515	26.-	38.-
				5	2,365	30.-	44.-
40	5.2	3.0	67.0	8	3,630	34.-	54.-
				10	4,465	38.-	
				13	5,685	41.-	
				16	6,930	45.-	
				3	2,235	32.-	47.-
60	8.0	3.0	91.0	5	3,550	38.-	57.-
				8	5,475	44.-	72.-
				10	6,755	48.-	
				13	8,660	54.-	
				16	10,510	59.-	
80	10.9	3.0	118.0	5	4,725	43.-	70.-
				8	7,335	55.-	92.-
				10	9,045	61.-	106.-
				13	11,570	69.-	
				16	14,255	76.-	
100	13.7	3.0	145.0	8	9,215	62.-	109.-
				10	11,345	72.-	127.-
				13	14,765	81.-	
				16	18,195	90.-	
				8	10,985	76.-	133.-
				10	13,720	88.-	156.-
				13	17,855	100.-	185.-
				16	22,000	112.-	

## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1006 Columns

Including:

– Blasting in- and outside, X-ray, Inspection, Painting outside one coat, skirt, nozzles, manholes.

Excluding:

– Platforms, cage ladders, transport, fillings, internals.

Average wall thickness in mm	Average length between the tangential lines (l) in m	Diameter (d) in m	Weight (x 1,000 kg)	Cost each (x 1,000)		
				Carbon steel	AISI 304	AISI 316 L
8	5	0.5	1.1	17.-	87.-	115.-
		1.0	2.5	30.-	145.-	180.-
		1.5	4.2	45.-	195.-	237.-
		2.0	5.7	56.-	224.-	282.-
		2.5	7.6	69.-	266.-	331.-
		3.0	10.2	86.-	369.-	406.-
10	10	0.5	2.3	28.-	147.-	173.-
		1.0	4.6	47.-	215.-	252.-
		1.5	7.2	67.-	286.-	319.-
		2.0	9.6	83.-	322.-	372.-
		2.5	12.4	101.-	379.-	427.-
		3.0	15.9	122.-	427.-	490.-
		3.5	19.2	141.-	452.-	542.-
		4.0	22.9	161.-	489.-	596.-
12	15	0.5	3.8	41.-	210.-	240.-
		1.0	7.2	67.-	307.-	348.-
		1.5	10.9	91.-	353.-	399.-
		2.0	14.4	113.-	383.-	464.-
		2.5	18.4	135.-	438.-	531.-
		3.0	23.1	162.-	492.-	599.-
		3.5	27.8	185.-	542.-	663.-
		4.0	32.7	210.-	586.-	725.-
14	20	1.0	10.5	88.-	348.-	392.-
		1.5	15.6	120.-	407.-	484.-
		2.0	20.6	147.-	487.-	564.-
		2.5	25.9	176.-	626.-	731.-
		3.0	32.1	207.-	572.-	718.-
		3.5	38.3	237.-	635.-	789.-
		4.0	44.7	266.-	674.-	859.-
16	25	1.0	14.3	112.-	395.-	463.-
		1.5	21.3	152.-	471.-	575.-
		2.0	28	186.-	527.-	666.-
		2.5	34.7	220.-	577.-	748.-
		3.0	42.7	257.-	713.-	853.-
		3.5	50.6	292.-	751.-	919.-
		4.0	59	329.-	830.-	998.-
		18	30	1.0	18.9	139.-
1.5	27.9			186.-	540.-	666.-
2.0	36.4			227.-	622.-	769.-
2.5	45.2			269.-	706.-	864.-
3.0	54.9			311.-	797.-	959.-
3.5	65.1			354.-	880.-	1,055.-
4.0	75.7			398.-	958.-	1,140.-
20	35			1.5	35.3	223.-
		2.0	45.9	271.-	703.-	871.-
		2.5	57.2	321.-	803.-	981.-
		3.0	69.1	371.-	913.-	1,085.-
		3.5	81.7	421.-	1,020.-	1,190.-
		4.0	94.6	470.-	1,125.-	1,290.-
22	40	1.5	40.3	245.-	671.-	812.-
		2.0	52.2	300.-	779.-	934.-
		2.5	64.7	353.-	887.-	1,050.-
		3.0	77.6	404.-	992.-	1,155.-
		3.5	91.5	459.-	1,110.-	1,265.-
		4.0	105.7	512.-	1,235.-	1,405.-

## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1007 Internals

Description	Diameter in m	Cost per m <sup>2</sup>	
		AISI 410 S	AISI 316
Valve trays	1	881.-	652.-
	2	836.-	588.-
	3	801.-	526.-
	4	748.-	491.-
Sieve trays	1	836.-	562.-
	2	801.-	508.-
	3	739.-	437.-
	4	712.-	410.-

#### A1008 Filling

Description	Material	Diameter in mm	Contents in m <sup>3</sup>	Cost per m <sup>3</sup>
Pall ring	Carbon Steel	16	1	3,905.-
			10	3,400.-
		25	1	1,655.-
			10	1,150.-
		38	1	1,150.-
			10	655.-
		50	1	948.-
	10		524.-	
	AISI 304	16	1	4,420.-
			10	3,865.-
		25	1	3,310.-
			10	2,760.-
		38	1	2,675.-
			10	2,075.-
50		1	2,305.-	
	10	1,795.-		
Ceramic balls	6	1	2,715.-	
		5	2,555.-	
		1	2,390.-	
		5	1,950.-	
	13	1	1,855.-	
		5	1,350.-	
	19	1	1,855.-	
		5	1,350.-	
25	1	1,755.-		
	5	1,260.-		

## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1009 Carbon steel heat exchangers

Pipe bundle and shell of carbon steel, fixed tube sheet, without expansion bellows, Ø 20 mm.  
Design: 'U' tube bundle 10 - 15% cost increase and 5 - 12% weight increase.

Heated surface in m <sup>2</sup>	Weight in kg	Cost each (x 1,000)
2	200	13.-
4	300	17.-
6	400	19.-
8	450	21.-
10	500	22.-
15	800	26.-
20	900	28.-
30	1,300	33.-
40	1,600	36.-
50	1,900	40.-
70	2,600	44.-
100	3,600	52.-
200	6,500	71.-
300	10,000	88.-
500	15,000	118.-
700	21,000	147.-
1,000	29,000	176.-

#### A1010 Stainless steel heat exchangers

Pipe bundle and shell of stainless steel, fixed tube sheet, without expansion bellows, Ø 20 mm.  
Variation: 'U' tube bundle 10 - 15% cost increase and 5 - 12% weight increase.

Heated surface in m <sup>2</sup>	Mass in kg	Cost each (x 1,000)	
		AISI 304	AISI 316L
2	150	16.-	17.-
4	250	19.-	21.-
6	300	23.-	25.-
8	400	25.-	27.-
10	450	25.-	28.-
15	600	30.-	33.-
20	700	34.-	36.-
30	1,000	41.-	44.-
40	1,200	46.-	50.-
50	1,500	53.-	57.-
70	1,900	57.-	65.-
100	2,500	70.-	79.-
200	4,700	106.-	120.-
300	6,600	142.-	156.-
500	11,000	206.-	228.-
700	15,000	268.-	296.-
1,000	20,000	340.-	372.-

## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1011 Combination carbon steel and stainless steel heat exchanger

Type: Shell of carbon steel, rest stainless steel, fixed tube sheet, without expansion bellows, Ø 20 mm.

Design: 'U' tube bundle 10 - 15% cost increase and 5 - 12% weight increase.

Heated surface in m <sup>2</sup>	Cost each (x 1,000)		
	Material pipe bundles		
	AISI 304	AISI 316L	Hastelloy 'B'
2	18.-	19.-	47.-
4	20.-	22.-	52.-
6	22.-	24.-	57.-
8	23.-	25.-	61.-
10	24.-	26.-	64.-
15	25.-	28.-	75.-
20	28.-	30.-	85.-
30	32.-	34.-	114.-
40	33.-	36.-	133.-
50	37.-	40.-	162.-
70	40.-	44.-	198.-
100	56.-	60.-	241.-
200	81.-	87.-	381.-
300	105.-	113.-	579.-
500	151.-	162.-	998.-
700	197.-	213.-	
1,000	265.-	286.-	

#### A1012 Plate heat exchangers

Type: Plate heat exchanger of one material, including plates, packing and compression bolts.

Working pressure up to 1 MPa, temperature up to 250 °C.

Plate area is sum of all plates per exchanger.

Plate surface in m <sup>2</sup>	Cost each (x 1,000)	
	AISI 316	Titanium
40	25.-	76.-
50	27.-	88.-
60	30.-	101.-
70	32.-	107.-
80	35.-	119.-
100	40.-	125.-
120	45.-	123.-
140	49.-	126.-
160	51.-	137.-
200	59.-	164.-
220	62.-	159.-
240	64.-	171.-
260	67.-	176.-
280	69.-	173.-
300	74.-	172.-

## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1013 Graphite heat exchangers

Material shell or frame: Steel H II.

Material blocks, pipes or plates: Graphite.

Blocks: Design pressure: 6 bar; design temperature: 160 °C.

Pipe bundle: Design pressure: 6 bar; design temperature: 180 °C.

Plate: Design pressure: 6 bar; design temperature: 180 °C.

Ring nut: Design pressure: 6 bar; design temperature: 180 °C.

Heated surface in m <sup>2</sup>	Cost each			
	Blocks	Pipe bundle	Plate	Ring nut
1	14,850.-		13,900.-	11,350.-
2	18,750.-		17,200.-	13,650.-
3	20,300.-	26,400.-	27,450.-	18,750.-
5	34,250.-	31,100.-	30,350.-	26,450.-
10	37,100.-	43,700.-	37,650.-	36,350.-
20	48,250.-	66,100.-	53,300.-	54,200.-
30	73,600.-	86,450.-	84,700.-	
50	101,600.-	125,300.-	108,400.-	
100	149,750.-	195,250.-	175,750.-	

#### A1014 Basket strainer

Material basket: AISI 316.

Working temperature: 100 °C.

Cast carbon steel: Working pressure 16 bar.

Cast AISI 316: Working pressure 16 bar.

Plate carbon steel: Working pressure 25 bar.

Diameter connection in inches	Cost each			
	Material housing			
	Cast carbon steel	Cast AISI 316	Plate carbon steel	Plate AISI 316
1	343.-	1,205.-	2,710.-	3,555.-
2	540.-	1,910.-	2,810.-	3,730.-
3	782.-	2,705.-	3,120.-	3,930.-
4	1,120.-	3,960.-	3,365.-	4,205.-
6	2,920.-	6,975.-	3,445.-	4,695.-
8	4,830.-		3,910.-	5,190.-
10			4,385.-	6,320.-
12			5,550.-	7,210.-
14			6,205.-	8,865.-

#### A1015 Filter presses

Material plates: Plastic (polypropylene).

Working pressure: 6 bar.

As from 20 m<sup>2</sup> with automatic plate transport.

Nett filtering surface in m <sup>2</sup>	Cost each
2	14,350.-
5	16,300.-
7	18,100.-
10	19,600.-
20	35,750.-
30	43,300.-
50	59,650.-
100	102,250.-



## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1016 Plate filters

Working pressure: 6 bar.

Working temperature: Up to 120 °C.

Material plates: AISI 316.

Nett filtering surface in m <sup>2</sup>	Cost Each	
	Material filter housing	
	Carbon steel	AISI 316
2	16,900.-	23,650.-
5	18,300.-	25,700.-
7	21,250.-	32,750.-
10	24,600.-	39,050.-
20	30,050.-	49,500.-
30	36,550.-	60,200.-
50	48,550.-	76,600.-
100	90,150.-	134,800.-

## A PROCESS EQUIPMENT

### A1 Static process equipment

#### A1017 Candle filters

Material housing	Material candles	Type candles	Nett filtering surface in m <sup>2</sup>	Cost each		
Carbon steel	AISI 316	Wire netting, wrinkled	0.1	345.-		
			0.3	1,410.-		
			1	2,840.-		
			1.5	4,140.-		
			2	6,200.-		
			2.5	7,245.-		
			5	13,975.-		
			10	23,500.-		
			15	33,085.-		
			20	40,570.-		
			30	65,510.-		
			40	84,465.-		
			60	125,435.-		
			Disposable candle	Wrinkled	0.1	100.-
					0.3	390.-
					1	1,160.-
					1.5	3,020.-
					2	3,100.-
	2.5	3,195.-				
	AISI 321	AISI 304	Sintered, cylindrical	0.1	920.-	
				0.3	3,160.-	
				1	6,965.-	
				1.5	10,460.-	
				2	13,595.-	
2.5				15,855.-		
5				29,115.-		
10				54,800.-		
15				76,015.-		
20				101,660.-		
30				152,885.-		
40				200,410.-		
60	301,555.-					
AISI 316	Disposable candle	Wrinkled	0.1	545.-		
			0.3	860.-		
			1	3,710.-		
			1.5	3,915.-		
			2	3,915.-		
			2.5	4,020.-		
			5	4,630.-		
			10	5,215.-		
			15	5,720.-		
			20	6,130.-		
			30	8,215.-		
			40	9,370.-		
			60	11,540.-		