Cost Estimate :	**Warmtecentrale Loppersum**				
Subject :	**+/-30% begroting**				
Project Name:	**Warmtecentrale Loppersum**				
Client:	**Gemeente Eemsdelta**				
Currency:	**EUR**				
Author:		Checked by:	**RTUW**	Order no.	**55682.10**
Revision:	**A**	Date:	**17/09/2021**	Document no.	**7422003**
Office:	**100**	Department:	**373**	Docum. status	**for review**

COST CODE			Total Equipment MAT'L COST EUR	Total Equipment LABOUR COST EUR	Total Equipment SUBC./INDIR. COST EUR	**TOTAL COST EUR**	INDICATIVE MHRS	REV	REMARKS
A	**EQUIPMENT**								
15xx	Plumbing - Gas Installations		-	-	-	-			connection not included
213x	Package units Warmtepomp		306.000	-	15.000	321.000			
212x	Tanks		100.000	-	18.000	118.000			
241x	Pumps		60.000	-	6.000	66.000			
2460	Vul- expansie & ontgasunit		13.000	-	2.000	15.000			
2912	Appendages		14.000	-	143.000	157.000			
0	0		-	-	-	-			
A	**TOTAL EQUIPMENT**		**493.000**	**-**	**184.000**	**677.000**			
B	**BULK MATERIALS & SUBCONTRACTS**								
25xx	Equipment Erection		-	-	-	-			incl in equipment
13xx	Total Civil		-	-	369.000	369.000			
15xx	HVAC		-	-	23.000	23.000			
16xx	Fire Fighting		-	-	12.000	12.000			
26xx	Leiding werk		-	-	131.000	131.000			
41xx	Electrical		-	-	82.000	82.000			
43xx	Instrumentation & control		-	-	146.000	146.000			
			-	-	-	-			
B	**TOTAL BULK MATERIALS & SUBCONTRACTS**		**-**	**-**	**763.000**	**763.000**			
A~B	**TOTAL DIRECT COSTS (TDC)**		**493.000**	**-**	**947.000**	**1.440.000**			
C	**SERVICES & OTHER INDIRECTS**								
71xx	Services		-	-					
711x	Conceptual Engineering		-	-	-	-			incl in basic engineering
712x	Basic Engineering		-	-	57.500	57.500			Ontvangen PO, gebaseerd op engineering t/m bouwaanvraag
712x	Bestek en aanbestedingstukken		-	-	25.000	25.000			inschatting
713x	Detail Engineering		-	-	-	-			incl in EPCm services
713x	EPCm services	15%	-	-	216.000	216.000			inschatting
713x	Construction Management Services		-	-	-	-			incl in EPCm services
713x	Project Management Services		-	-	-	-			incl in EPCm services
713x	Safety		-	-	-	-			
714x	As-Built		-	-	4.000	4.000			inschatting
80xx	Indirect costs		-	-	-	-			
801x	Spare Parts		-	-	-	-			uitgesloten
801x	Temporary Site Facilities		-	-	10.000	10.000			stelpost
802x	Start-up & Commissioning		-	-	-	-			uitgesloten
802x	Training		-	-	-	-			uitgesloten
802x	Vendor Representatives		-	-	-	-			uitgesloten
802x	NOBO / PED / ATEX / CE costs / Certificates		-	-	-	-			uitgesloten
802x	Cleaning		-	-	-	-			uitgesloten
803x	Permits, Fees & Legal	3%	-	-	11.000	11.000			3% van civiele kosten
803x	Insurance / Construction All Risk (CAR)	0,65%	-	-	9.000	9.000			0,65% van directe kosten
804x	Miscellaneous Indirects		-	-	-	-			uitgesloten
00xx	Client Costs		-	-	-	-			uitgesloten
xxxx	Other		-	-	-	-			
C	**TOTAL SERVICES & OTHER INDIRECTS**		**-**	**-**	**333.000**	**333.000**			
A~C	**TOTAL DIRECT + INDIRECT COSTS**		**493.000**	**-**	**1.280.000**	**1.773.000**			
D&E	**CONTINGENCY & ESCALATION**								
7411	Escalation	3%	15.000	-	38.000	53.000			uitvoering 2022
7412	Contingency on Costs	22%	108.000	-	282.000	390.000			FEL index
D&E	**TOTAL CONTINGENCY & ESCALATION**		**123.000**	**-**	**320.000**	**443.000**			
A~E	**TOTAL INSTALLED COSTS**		**616.000**	**-**	**1.600.000**	**2.216.000**			
F	**ADDITIONAL COSTS**								
90xx	Additional Costs		4000			4000			Afronding
F	**TOTAL ADDITIONAL COSTS**		**4000**	**0**	**0**	**4000**			
A~F	**GRAND TOTAL**		**620.000**	**-**	**1.600.000**	**2.220.000**			

Regel invoegen

Delete regel

Cost Estimate :		**Warmtecentrale Loppersum**			
Subject :		**Plumbing - Gas Installations**			
Cost code		**15xx**			
Project Name:		**Warmtecentrale Loppersum**			
Client:		**Gemeente Eemsdelta**			
Author:	**0**	Checked by:	**RTUW**	Order No.	**55682.10**
Revision:		Date:	**17/09/2021**	Doc. No.	**7422003**
Office:	**100**	Department:	**373**	Document status	**for review**

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	**Material** cost/unit [EUR]	Design [%]	total costs [EUR]	**Labour** hour/unit [no]	total hours [hours]	Hour rate [EUR/hr]	Factors %	total costs [EUR]	**Subcontractors/Indirect** cost/unit [EUR]	costs [EUR]	S/C Indirects Gen.cst [%]	cost [EUR]	**TOTAL COST [EUR]**	Remarks
									-		-			-		-		-	-	
				Aansluiting					-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
				Aansluiting G100 max. 160 m3/h	1	lot			-		-			-		-		-	-	kosten van de aansluiting zijn uitgesloten
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	Qty		Material total costs		Labour total hours		Labour total costs		Sub cost	TOTAL COST	Remarks
SUBTOTAL			-				-		€ 0,00	**€ 0,00**	
Brown field factor	1,00									**0**	-> additional labour for brown field
Other mark-ups										**0**	
General costs contractor										**0**	
Profit and risk contractor										**0**	
TOTAL	**-**		**-**		-		**-**		**€ 0,00**	**€ 0,00**	**<- to the summary sheet**

Regel invoegen

Delete regel

Cost Estimate :	**Warmtecentrale Loppersum**		
Subject :	**Package units Warmtepomp**		
Cost code	**213x**		
Project Name:	**Warmtecentrale Loppersum**		
Client:	**Gemeente Eemsdelta**		
Author: **0**	Checked by: **RTUW**	Order No. **55682.10**	
Revision:	Date: **17/09/2021**	Doc. No. **7422003**	
Office: **100**	Department: **373**	Document status **for review**	

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	Material cost/unit [EUR]	Material Design [%]	Material total costs [EUR]	Labour hour/unit [no]	Labour total hours [hours]	Labour Hour rate [EUR/hr]	Labour Factors %	Labour total costs [EUR]	Subcontractors/Indirect cost/unit [EUR]	costs [EUR]	S/C Indirects Gen.cst [%]	cost [EUR]	**TOTAL COST [EUR]**	Remarks
									-		-			-		-		-	**-**	
				LT warmtepompen 1 en 2, 21,4m3/h																
				Lucht-water warmtepompen 250 kW	2	stuks	62.500	10%	137.500		-			-		-		-	**137.500**	
				Installatie	5%	perc			-		-			-	137.500	6.875		6.875	**6.875**	
				HT warmtepompen 1 en 2, 20,6m3/h					-		-			-		-		-	**-**	
				Water-water warmtepompen 240 kW	2	stuks	36.000	10%	79.200		-			-		-		-	**79.200**	
				Installatie	5%	perc			-		-			-	79.200	3.960		3.960	**3.960**	
									-		-			-		-		-	**-**	
				HT-piekketel 1 en 2 en backup ketel (ieder 300 kW)																
				CV-ketel (HT piekketel 1,2 backup)	900	kW	80	10%	79.200		-			-		-		-	**79.200**	
				Installatie	5%	perc			-		-			-	79.200	3.960		3.960	**3.960**	
									-		-			-		-		-	**-**	
				LT piekketel																
				LT piekketel (elektrisch)	125	kW	70	10%	9.625		-			-		-		-	**9.625**	
				Installatie	5%	perc			-		-			-	9.625	481		481	**481**	
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	Qty	Material total costs [EUR]	Labour total costs [EUR]	Subcontractors cost [EUR]	TOTAL COST [EUR]	Remarks
SUBTOTAL		305.525	-	15.276	**320.801**	
Brown field factor	1,00				**0**	-> additional labour for brown field
Other mark-ups					**0**	
General costs contractor					**0**	
Profit and risk contractor					**0**	
TOTAL	-	**306.000**	-	**15.000**	**321.000**	**<- to the summary sheet**

Regel invoegen	**Cost Estimate :**	**Warmtecentrale Loppersum**	
Delete regel	**Subject :**	**Tanks**	
	Cost code	**212x**	
	Project Name:	**Warmtecentrale Loppersum**	
	Client:	**Gemeente Eemsdelta**	

Author:	**0**	Checked by:	**RTUW**	Order No.	**55682.10**
Revision:		Date:	**17/09/2021**	Doc. No.	**7422003**
Office:	**100**	Department:	**373**	Document status	**for review**

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	Material cost/unit [EUR]	Design [%]	total costs [EUR]	Labour hour/unit [no]	total hours [hours]	Hour rate [EUR/hr]	Factors %	total costs [EUR]	Subcontractors/Indirect cost/unit [EUR]	costs [EUR]	S/C Indirects Gen.cst [%]	cost [EUR]	**TOTAL COST [EUR]**	Remarks
									-		-			-		-		-	**-**	
				LT buffer 14 m3	1	stuks	20.000		20.000		-			-		-		-	**20.000**	
				Installatie	5%	perc			-		-			-	20.000	1.000		1.000	**1.000**	
				Isolatie	44	equiv m2			-		-			-	120	5.286		5.286	**5.286**	
									-		-			-		-		-	**-**	
				HT Buffer 1 en HT Buffer 2, beide 28 m3	2	stuks	40.000		80.000		-			-		-		-	**80.000**	
				Installatie	5%	perc			-		-			-	80.000	4.000		4.000	**4.000**	
				Isolatie	68	equiv m2			-		-			-	120	8.143		8.143	**8.143**	
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	Qty	Material total costs	Labour total costs	Subcontractors cost	TOTAL COST	Remarks
SUBTOTAL	3	100.000	-	18.429	**118.429**	
Brown field factor	1,00				**0**	-> additional labour for brown field
Other mark-ups					**0**	
General costs contractor					**0**	
Profit and risk contractor					**0**	
TOTAL	3	**100.000**	-	**18.000**	**118.000**	**<- to the summary sheet**

Regel invoegen	**Cost Estimate :**	**Warmtecentrale Loppersum**		
Delete regel	**Subject :**	**Pumps**		
	Cost code	**241x**		
	Project Name:	**Warmtecentrale Loppersum**		
	Client:	**Gemeente Eemsdelta**		
	Author: **0**	Checked by: **RTUW**	Order No. **55682.10**	
	Revision:	Date: **17/09/2021**	Doc. No. **7422003**	
	Office: **100**	Department: **373**	Document status **for review**	

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	Material cost/unit [EUR]	Material Design [%]	Material total costs [EUR]	Labour hour/unit [no]	Labour total hours [hours]	Labour Hour rate [EUR/hr]	Labour Factors %	Labour total costs [EUR]	Subcontractors/Indirect cost/unit [EUR]	Subcontractors/Indirect costs [EUR]	S/C Indirects Gen.cst [%]	Subcontractors/Indirect cost [EUR]	TOTAL COST [EUR]	Remarks
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
				LT-net distributiepompen (2x), 7,1 m3/h	2	pce	3.000		6.000		-			-		-		-	**6.000**	inline pompen (incl motor)
				HT-net distributiepompen (2x), 51,4 m3/h	2	pce	9.000		18.000		-			-		-		-	**18.000**	inline pompen (incl motor)
				LT WP shuntpomp (2x), 21,4m3/h	2	pce	4.000		8.000		-			-		-		-	**8.000**	inline pompen (incl motor)
				LT piekketel shuntpomp (1x), 7,1 m3/h	1	pce	2.000		2.000		-			-		-		-	**2.000**	inline pompen (incl motor)
				HT WP Evap. Shuntpomp (2x), 20,6 m3/h	2	pce	4.000		8.000		-			-		-		-	**8.000**	inline pompen (incl motor)
				HT WP Cond. Shuntpomp (2x), 10,3 m3/h	2	pce	3.000		6.000		-			-		-		-	**6.000**	inline pompen (incl motor)
				HT piekketel shuntpomp (2x), 25,6 m3/h	2	pce	4.000		8.000		-			-		-		-	**8.000**	inline pompen (incl motor)
				HT back-up ketel shuntpomp (1x), 12,9 m3/h	1	pce	3.500		3.500		-			-		-		-	**3.500**	inline pompen (incl motor)
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
				installatie	10%				-		-			-	59.500	5.950		5.950	**5.950**	
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	Qty	Material total costs	Labour total costs	Subcontractors/Indirect cost	TOTAL COST	Remarks
SUBTOTAL	-	59.500	-	5.950	**65.450**	
Brown field factor	1,00				**0**	-> additional labour for brown field
Other mark-ups					**0**	
General costs contractor					**0**	
Profit and risk contractor					**0**	
TOTAL	-	**60.000**	-	**6.000**	**65.000**	**<- to the summary sheet**

Regel invoegen

Delete regel

Cost Estimate :	**Warmtecentrale Loppersum**
Subject :	**Vul- expansie & ontgasunit**
Cost code	**2460**
Project Name:	**Warmtecentrale Loppersum**
Client:	**Gemeente Eemsdelta**

Author:	**0**	Checked by:	**RTUW**	Order No.	**55682.10**
Revision:	**A**	Date:	**17/09/2021**	Doc. No.	**7422003**
Office:	**100**	Department:	**373**	Document status	**for review**

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	**Material** cost/unit [EUR]	Design [%]	total costs [EUR]	**Labour** hour/unit [no]	total hours [hours]	Hour rate [EUR/hr]	Factors %	total costs [EUR]	**Subcontractors/Indirect** cost/unit [EUR]	costs [EUR]	S/C Indirects Gen.cst [%]	cost [EUR]	**TOTAL COST [EUR]**	Remarks
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
				2 stuks Vul- & ontgasunit & Expansie unit					-		-			-						
				Flamcoat F G basis vat 2000L (Aanname)	2	pce	3.000		6.000		-			-		-		-	**6.000**	
				M10 pompset met uitwisselbare automaat	2	pce	2.501		5.002		-			-		-		-	**5.002**	
				SPC expansie module, master and slave	1	pce	1.130		1.130		-			-		-		-	**1.130**	
				SPC expansie module, slave	1	pce	986		986		-			-		-		-	**986**	
									-		-			-		-		-	**-**	
				transport naar site					-		-			-		-		-	**-**	incl in percentage
				transport on site					-		-			-		-		-	**-**	incl in percentage
				aansluiten	15%				-		-			-	13.118	1.968		1.968	**1.968**	
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					6															

	Qty	Material total costs [EUR]	Labour total costs [EUR]	Subcontractors cost [EUR]	TOTAL COST [EUR]	Remarks
SUBTOTAL	6	13.118	-	1.968	**15.086**	
Brown field factor	1,00				**0**	-> additional labour for brown field
Other mark-ups					**0**	
General costs contractor					**0**	
Profit and risk contractor					**0**	
TOTAL	6	**13.000**	-	**2.000**	**15.000**	**<- to the summary sheet**

Regel invoegen	Cost Estimate :	Warmtecentrale Loppersum	
Delete regel	Subject :	Appendages	
	Cost code	2912	
	Project Name:	Warmtecentrale Loppersum	
	Client:	Gemeente Eemsdelta	

Author:	0	Checked by:	RTUW	Order No.	55682.10
Revision:	A	Date:	17/09/2021	Doc. No.	7422003
Office:	100	Department:	373	Document status	for review

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	Material cost/unit [EUR]	Design [%]	total costs [EUR]	Labour hour/unit [no]	total hours [hours]	Hour rate [EUR/hr]	Factors %	total costs [EUR]	Subcontractors/Indirect cost/unit [EUR]	costs [EUR]	S/C Indirects Gen.cst [%]	cost [EUR]	TOTAL COST [EUR]	Remarks
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
				Afsluiters/filters gasleidingen					-		-			-		-		-	-	
				Open/dicht					-		-			-		-		-	-	
			65	Gasketels	3	stuks			-		-			-	800	2.400		2.400	**2.400**	
			65	Gasfilters	3	stuks			-		-			-	800	2.400		2.400	**2.400**	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
				Afsluiters cv leidingen					-		-			-		-		-	-	
				Open/dicht of STAF					-		-			-		-		-	-	
			80	Warmtepompen (4 stuks)	6	stuks			-		-			-	1150	6.900		6.900	**6.900**	subcontract incl 2 flenzen & assembly
			80	CV-ketel	8	stuks			-		-			-	1150	9.200		9.200	**9.200**	subcontract incl 2 flenzen & assembly
			50	Pompen, 7-10 m3/hr (3 stuks)	6	stuks			-		-			-	1150	6.900		6.900	**6.900**	subcontract incl 2 flenzen & assembly
			80	Pompen, 22-26m3/hr (5 stuks)	10	stuks			-		-			-	1150	11.500		11.500	**11.500**	subcontract incl 2 flenzen & assembly
			100	Pompen, 40m3/hr (4 stuks)	8	stuks			-		-			-	2000	16.000		16.000	**16.000**	subcontract incl 2 flenzen & assembly
			125	Pompen, 55m3/hr (2 stuks)	4	stuks			-		-			-	2700	10.800		10.800	**10.800**	subcontract incl 2 flenzen & assembly
									-		-			-		-		-	-	
			125	Tanks	4	stuks			-		-			-	2700	10.800		10.800	**10.800**	subcontract incl 2 flenzen & assembly
			100	Tanks	2	stuks			-		-			-	2000	4.000		4.000	**4.000**	subcontract incl 2 flenzen & assembly
			25	Vul- & ontgassingsunit	4	stuks			-		-			-	370	1.480		1.480	**1.480**	subcontract incl 2 flenzen & assembly
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
				Diversen					-		-			-		-		-	-	
				Filters warmtepompen DN65	6	stuks	750		4.500		-			-		-		-	**4.500**	
				Instalaltie	10%	perc			-		-			-	4500	450		450	**450**	
									-		-			-		-		-	-	
				Keerkleppen DN65	10	stuks	500		5.000		-			-		-		-	**5.000**	
				Instalaltie	10%	perc			-		-			-	5000	500		500	**500**	
									-		-			-		-		-	-	
				Expansievaten warmtepompen/ketels	8	pcs	200		1.600		-			-		-		-	**1.600**	
				Installatie	15%	perc			-		-			-	1600	240		240	**240**	
									-		-			-		-		-	-	
				thermal relief valve	6	pce	500		3.000		-			-		-		-	**3.000**	
				Installatie	15%	perc			-		-			-	3000	450		450	**450**	
				Isolatie	20%	perc			-		-			-	98.120	19.624		19.624	**19.624**	
				Design allowance					-		-			-		-		-	-	
				Design allowance	10%	%			-		-			-	117.744	11.774		11.774	**11.774**	
									-		-			-		-		-	-	
					89															

SUBTOTAL	89	14.100		-	115.418	**129.518**	
Brown field factor	1,00					**0**	-> additional labour for brown field
Other mark-ups	6%				7.771	**7.771**	
General costs contractor	9%				11.657	**11.657**	
Profit and risk contractor	6%				7.771	**7.771**	
TOTAL	89	**14.000**		-	**143.000**	**157.000**	**<- to the summary sheet**

Regel invoegen

Delete regel

Cost Estimate :	Warmtecentrale Loppersum
Subject :	Total Civil
Cost code	13xx
Project Name:	Warmtecentrale Loppersum
Client:	Gemeente Eemsdelta

Author: SCTS	Checked by:	-	Order No.	55682.10	
Revision:	Date:	17/09/2021	Doc. No.	7422003	
Office: 100	Department:	313	Document status	for review	

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	Material cost/unit [EUR]	Material Design [%]	Material total costs [EUR]	Labour hour/unit [no]	Labour total hours [hours]	Labour Hour rate [EUR/hr]	Labour Factors %	Labour total costs [EUR]	Subcontractors/Indirect cost/unit [EUR]	Subcontractors/Indirect costs [EUR]	Subcontractors/Indirect S/C Indirects Gen.cst [%]	Subcontractors/Indirect cost [EUR]	TOTAL COST [EUR]	Remarks
									-		-			-		-		-	-	
				gebouwafmeting					-		-			-		-		-	-	
				L	10	m										-		-	-	
				B	12	m										-		-	-	
				A	120	m2										-		-	-	
																-		-	-	
				Ontgravingen					-		-			-		-		-	-	
				Bovenlaag	168	m3			-		-			-	12	2.016		2.016	**2.016**	
				Grondverbetering & backfill	119	m2			-		-			-	12	1.426		1.426	**1.426**	
				Afvoeren vrijgekomen grond	168	m3			-		-			-	6	1.008		1.008	**1.008**	
									-		-			-		-		-	-	
				Fundaties (funderingsbalken)	120	m2			-		-			-	206	24.720		24.720	**24.720**	
									-		-			-		-		-	-	
				palen												-		-	-	
				mobilisatie	1	sum									5150	5.150		5.150	**5.150**	
				palen fundex	18	pce									3090	55.620		55.620	**55.620**	aangenomen draagvermogen 300kN
																-		-	-	
									-		-			-		-		-	-	
				Bovenbouw					-		-			-		-		-	-	
				Vloer	120	m2			-		-			-	145	17.400		17.400	**17.400**	300mm beton op zand
				Afwerkvloer - cementdekvloer	120	m2			-		-			-	42	5.040		5.040	**5.040**	
				Buitenmuren	264	m2			-		-			-	78	20.592		20.592	**20.592**	buitenmuren in HSB incl. isolatie
				staal	16.645	kg									3,5	58.258		58.258	**58.258**	
				Gevelbekleding buitenmuren	264	m2			-		-			-	26	6.864		6.864	**6.864**	gemod hout
				Binnenwanden	150	m2			-		-			-	62	9.300		9.300	**9.300**	HSB met gips
									-		-			-		-		-	-	
				Binnendeuren - beganegrond	3	stuks			-		-			-	1339	4.017		4.017	**4.017**	
				Buitendeuren - enkel	1	stuks			-		-			-	1648	1.648		1.648	**1.648**	
				Buitendeuren - dubbel	3	stuks			-		-			-	3090	9.270		9.270	**9.270**	
									-		-			-		-		-	-	
				Dakconstructie (Hout)	120	m2			-		-			-	78	9.360		9.360	**9.360**	
				Dakisolatie	120	m2			-		-			-	26	3.120		3.120	**3.120**	60mm
				Dakbedekking	120	m2			-		-			-	78	9.360		9.360	**9.360**	EPDM
									-		-			-		-		-	-	
									-		-			-		-		-	-	
				Supporting staal leidingwerk & kabelgoten	1	lot			-		-			-	1030	1.030		1.030	**1.030**	nvt.
									-		-			-		-		-	-	
				Aarding	120	m2			-		-			-	52	6.240		6.240	**6.240**	
				Riolering en afvoer	1	lot			-		-			-	10300	10.300		10.300	**10.300**	
									-		-			-		-		-	-	
				Terreinafwerking	1	lot			-		-			-	12875	12.875		12.875	**12.875**	Stelpost
				Design allowance	10%	%			-		-			-	274613	27.461		27.461	**27.461**	
									-		-			-		-		-	-	

	Qty		Material total costs		Labour total costs		Subcontractors/Indirect cost	TOTAL COST	Remarks
SUBTOTAL			-		-		302.074	**302.074**	
Brown field factor	1,00							**0**	-> additional labour for brown field
Other mark-ups	10%						30.207	**30.207**	
General costs contractor	7%						21.145	**21.145**	
Profit and risk contractor	5%						15.104	**15.104**	
TOTAL	-		**-**		-		**369.000**	**369.000**	**<- to the summary sheet**

Regel invoegen

Delete regel

Cost Estimate :	**Warmtecentrale Loppersum**		
Subject :	**HVAC**		
Cost code	**15xx**		
Project Name:	**Warmtecentrale Loppersum**		
Client:	**Gemeente Eemsdelta**		
Author: **0**	Checked by: **RTUW**	Order No. **55682.10**	
Revision:	Date: **17/09/2021**	Doc. No. **7422003**	
Office: **100**	Department: **373**	Document status **for review**	

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	**Material** cost/unit [EUR]	Design [%]	total costs [EUR]	**Labour** hour/unit [no]	total hours [hours]	Hour rate [EUR/hr]	Factors %	total costs [EUR]	**Subcontractors/Indirect** cost/unit [EUR]	costs [EUR]	S/C Indirects Gen.cst [%]	cost [EUR]	**TOTAL COST [EUR]**	Remarks
									-		-			-		-		-	-	
				Ventilatie					-		-			-		-		-	-	
				Ventilatie technische ruimte	120	m2			-		-			-	100	12.000		12.000	**12.000**	dakventilator, thermostaat, rooster
									-		-			-		-		-	-	incl natuurlijke ventialtie stookruimte
									-		-			-						
				Airconditioning					-		-			-		-		-	-	
				Airconditioning MCC ruimte	1	lot			-		-			-	5000	5.000		5.000	**5.000**	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
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									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
				Design allowance					-		-			-		-		-	-	
				Design allowance	10%	%			-		-			-	17.000	1.700		1.700	**1.700**	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	

	Qty	Material total costs [EUR]	Labour total costs [EUR]	Subcontractors cost [EUR]	TOTAL COST [EUR]	Remarks
SUBTOTAL		-	-	18.700	**18.700**	
Brown field factor	1,00				**0**	-> additional labour for brown field
Other mark-ups	6%			1.122	**1.122**	
General costs contractor	9%			1.683	**1.683**	
Profit and risk contractor	6%			1.122	**1.122**	
TOTAL	-	**-**	-	**23.000**	**23.000**	**<- to the summary sheet**

Regel invoegen	
Delete regel	
Cost Estimate :	**Warmtecentrale Loppersum**
Subject :	**Fire Fighting**
Cost code	**16xx**
Project Name:	**Warmtecentrale Loppersum**
Client:	**Gemeente Eemsdelta**

Author:	**0**	Checked by:	**RTUW**	Order No.	**55682.10**
Revision:		Date:	**17/09/2021**	Doc. No.	**7422003**
Office:	**100**	Department:	**373**	Document status	**for review**

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	Material cost/unit [EUR]	Design [%]	total costs [EUR]	Labour hour/unit [no]	total hours [hours]	Hour rate [EUR/hr]	Factors %	total costs [EUR]	Subcontractors/Indirect cost/unit [EUR]	costs [EUR]	S/C Indirects Gen.cst [%]	cost [EUR]	TOTAL COST [EUR]	Remarks
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
				Brand- & rookmelders	1	lot			-		-			-	7500	7.500		7.500	**7.500**	incl opstellen PVE
				Blusvoorzieningen	1	lot			-		-			-	2000	2.000		2.000	**2.000**	hand brandblusser
									-		-			-		-		-	**-**	geen sprinkler
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
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									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
				Design allowance					-		-			-		-		-	**-**	
				Design allowance	10%	%			-		-			-	9.500	950		950	**950**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	

SUBTOTAL		-	-	10.450	**10.450**	
Brown field factor	1,00				**0**	-> additional labour for brown field
Other mark-ups	3%			314	**314**	
General costs contractor	9%			941	**941**	
Profit and risk contractor	6%			627	**627**	
TOTAL	-	**-**	-	**12.000**	**12.000**	**<- to the summary sheet**

Regel invoegen

Delete regel

Cost Estimate :		**Warmtecentrale Loppersum**			
Subject :		**Leiding werk**			
Cost code		**26xx**			
Project Name:		**Warmtecentrale Loppersum**			
Client:		**Gemeente Eemsdelta**			
Author:	**0**	Checked by:	**RTUW**	Order No.	**55682.10**
Revision:		Date:	**17/09/2021**	Doc. No.	**7422003**
Office:	**100**	Department:	**373**	Document status	**for review**

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	**Material** cost/unit [EUR]	Design [%]	total costs [EUR]	**Labour** hour/unit [no]	total hours [hours]	Hour rate [EUR/hr]	Factors %	total costs [EUR]	**Subcontractors/Indirect** cost/unit [EUR]	costs [EUR]	S/C Indirects Gen.cst [%]	cost [EUR]	**TOTAL COST [EUR]**	Remarks
									-		-			-		-		-	**-**	
				Gas leidingen																
									-		-			-		-		-	**-**	
				Leidingwerk in gebouw					-		-			-		-		-	**-**	
				uitgangspunten																
				Equipment items	3	pcs			-		-			-		-		-	**-**	
				Gemiddelde diameter DN80					-		-			-		-		-	**-**	
				Gemiddeld lengte leidingwerk per equipment	6	mtr			-		-			-		-		-	**-**	
				Totale lengte leidingwerk gebouw	18	mtr			-		-			-	365	6.570		6.570	**6.570**	CS, eenheidesprijs materiaal en arbeid, incl bochten, T-stukken, inbouwtijd afsluiters volgens DACE type A
									-		-			-		-		-	**-**	
				Equipment connection	3	pcs			-		-			-	600	1.800		1.800	**1.800**	aanname
				CV leidingen																
				Leidingwerk in gebouw					-		-			-		-		-	**-**	
				Uitgangspunten																
				Equipment items	15	pcs			-		-			-		-		-	**-**	4 warmte pompen, 4 ketels, 2 expansie vaten, 2 pompsets, 3 buufertanks
				Gemiddelde diameter DN80					-		-			-		-		-	**-**	
				Gemiddeld lengte leidingwerk per equipment	12	mtr			-		-			-		-		-	**-**	
				Totale lengte leidingwerk gebouw	180	mtr			-		-			-	365	65.700		65.700	**65.700**	CS DN80; aanvoer 6m, retour 6m
									-		-			-		-		-	**-**	
				Equipment connection	15	pcs			-		-			-	600	9.000		9.000	**9.000**	
									-		-			-		-		-	**-**	
				Isolatie	20%	perc			-		-			-	83070	16.614		16.614	**16.614**	
				Design allowance																
				Design allowance	10%	%			-		-			-	83.070	8.307		8.307	**8.307**	
									-		-			-		-		-	**-**	
									-		-			-		-		-	**-**	

SUBTOTAL		-	-	107.991	**107.991**	
Brown field factor	1,00				**0**	-> additional labour for brown field
Other mark-ups	6%			6.479	**6.479**	
General costs contractor	9%			9.719	**9.719**	
Profit and risk contractor	6%			6.479	**6.479**	
TOTAL	-	**-**	-	**131.000**	**131.000**	**<- to the summary sheet**

Regel invoegen / Delete regel	Cost Estimate :	Warmtecentrale Loppersum
	Subject :	Electrical
	Cost code	41xx
	Project Name:	Warmtecentrale Loppersum
	Client:	Gemeente Eemsdelta

Author:	0	Checked by:	RTUW	Order No.	55682.10
Revision:		Date:	17/09/2021	Doc. No.	7422003
Office:	100	Department:	373	Document status	for review

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	Material cost/unit [EUR]	Design [%]	total costs [EUR]	Labour hour/unit [no]	total hours [hours]	Hour rate [EUR/hr]	Factors %	total costs [EUR]	Subcontractors/Indirect cost/unit [EUR]	costs [EUR]	S/C Indirects Gen.cst [%]	cost [EUR]	TOTAL COST [EUR]	Remarks
									-		-			-		-		-	-	
				Plot area					-		-			-		-		-	-	
				GFA total	120	m2 GFA			-		-			-		-		-	-	
									-		-			-		-		-	-	
				Connection																
				De eenmalige aansluiting van een MS-D aansluiting op het 10 KV netwerk.					-		-			-		-		-	-	
				Aansluiting 800 kVA MS-D op het 10 KV netwerk.	0	lot			-		-			-		-		-	-	kosten voor aansluiting niet in kostenraming opgenomen
				High voltage power					-		-			-		-		-	-	
				Tansformers trafo	0	pce			-		-			-		-		-	-	huur, niet opgenomen in kostenraming
									-		-			-		-		-	-	
				Low voltage power					-		-			-		-		-	-	
				Main distribution cabinet	1	pce			-		-			-	20000	20.000		20.000	**20.000**	
				Distribution cabinet lighting	1	pce			-		-			-	2000	2.000		2.000	**2.000**	
				Distribution cabinet power	1	pce			-		-			-	2000	2.000		2.000	**2.000**	
				Distribution cabinet emergency power	0	pce			-		-			-	7500	-		-	-	
				Distribution cabinet UPS power	0	pce			-		-			-	7500	-		-	-	
				Feeder cables large pumps	8	pce			-		-			-	1500	12.000		12.000	**12.000**	
				Feeder cables small pumps	15	pce			-		-			-	125	1.875		1.875	**1.875**	
				Cable trays	50	m1			-		-			-	60	3.000		3.000	**3.000**	
				Power outlet WCD 230/16 double 1 per 20 m2 GFA	6	pce			-		-			-	35	210		210	**210**	
				Power connection WCD 230/16 1 per 50 m2 GFA	2	pce			-		-			-	35	84		84	**84**	
				Power connection lighting 1 per 25 m2 GFA	5	pce			-		-			-	20	96		96	**96**	
				Power outlet 400/16 single 1 per 100 m2 GFA	1	pce			-		-			-	70	84		84	**84**	
				Power connection 400/16 1 per 100 m2 GFA	1	pce			-		-			-	70	84		84	**84**	
				Electrical cables 230/16 outlets 15 m1 per connect.	198	m1			-		-			-	5	990		990	**990**	
				Electrical cables 400/16 outlets 40m1 per connect.	15	m1			-		-			-	15	225		225	**225**	
									-		-			-		-		-	-	
				Lighting					-		-			-		-		-	-	
				Lighting fixtures 1 per 12,5 m2	10	pce			-		-			-	325	3.120		3.120	**3.120**	
				Cables Lighting	150	m1			-		-			-	5	750		750	**750**	
				switches/connections to BMS 1 switch per 5 fixtures	2	pce			-		-			-	40	77		77	**77**	
									-		-			-		-		-	-	
				Earthing / lightning protection					-		-			-		-		-	-	
				Earthing	120	m1			-		-			-	10	1.200		1.200	**1.200**	
				Earthing connection	25	pce			-		-			-	100	2.500		2.500	**2.500**	
				Reference earthing	1	pce			-		-			-	2500	2.500		2.500	**2.500**	
				Lightning protection	150	m1			-		-			-	10	1.500		1.500	**1.500**	
									-		-			-		-		-	-	
				Emergency lighting					-		-			-		-		-	-	
				Central UPS emergency lighting		sum										-		-	-	
				Emergency lighting fixtures 1 per 75 m2	5	pce			-		-			-	275	1.375		1.375	**1.375**	
				Emergency fixtures 1 per 75 m2	4	pce			-		-			-	275	1.100		1.100	**1.100**	
				Switches/connections to BMS		pce			-		-			-	40	-		-	-	
									-		-			-		-		-	-	
				Data & telecommunication					-		-			-		-		-	-	not applicable

Description	Qty	Unit				Rate			Total	Remarks
			-	-	-		-	-	**-**	
Fire detection			-	-	-		-	-	**-**	not applicable
			-	-	-		-	-	**-**	
Access control			-	-	-		-	-	**-**	not applicable
			-	-	-		-	-	**-**	
CCTV			-	-	-		-	-	**-**	not applicable
			-	-	-		-	-	**-**	
Alarm & audio			-	-	-		-	-	**-**	not applicable
			-	-	-		-	-	**-**	
BMS/EMS			-	-	-		-	-	**-**	not applicable
			-	-	-		-	-	**-**	
Site infrastructure			-	-	-		-	-	**-**	not applicable
			-	-	-		-	-	**-**	
			-	-	-		-	-	**-**	
			-	-	-		-	-	**-**	
kathodische bescherming	1	lot	-	-	-	5000	5.000	5.000	**5.000**	
Design allowance			-	-	-		-	-	**-**	
Design allowance	10%	%	-	-	-	61.770	6.177	6.177	**6.177**	
			-	-	-		-	-	**-**	

		-	-		67.947	**67.947**	
SUBTOTAL							
Brown field factor	1,00					**0**	-> additional labour for brown field
Other mark-ups	6%				4.077	**4.077**	
General costs contractor	9%				6.115	**6.115**	
Profit and risk contractor	6%				4.077	**4.077**	
	-	**-**	-		**82.000**	**82.000**	**<- to the summary sheet**
TOTAL							

Regel invoegen

Delete regel

Cost Estimate :	**Warmtecentrale Loppersum**
Subject :	**Instrumentation & control**
Cost code	**43xx**
Project Name:	**Warmtecentrale Loppersum**
Client:	**Gemeente Eemsdelta**

Author:	**0**	Checked by:	**RTUW**	Order No.	**55682.10**
Revision:		Date:	**17/09/2021**	Doc. No.	**7422003**
Office:	**100**	Department:	**373**	Document status	**for review**

Rev.	Costcode MAIN	SUB	ITEM NO	Description	Qty	Unit [Lot]	Material cost/unit [EUR]	Design [%]	total costs [EUR]	Labour hour/unit [no]	total hours [hours]	Hour rate [EUR/hr]	Factors %	total costs [EUR]	Subcontractors/Indirect cost/unit [EUR]	costs [EUR]	S/C Indirects Gen.cst [%]	cost [EUR]	TOTAL COST [EUR]	Remarks
									-		-			-		-		-	-	
									-		-			-		-		-	-	
				Temp. transmitters	36	pcs			-		-			-	150	5.400		5.400	**5.400**	
									-		-			-		-		-	-	
				Druktransmitters	2	pcs			-		-			-	300	600		600	**600**	
									-		-			-		-		-	-	
				Flow transmitter DN125	2	pcs			-		-			-	3000	6.000		6.000	**6.000**	
									-		-			-		-		-	-	
				Pompaansturing (tbv installatie& bekabeling)	14	pcs			-		-			-		-		-	-	materiaal prijs in tabblad pompen, hier alleen ingevoegd voor kabel lengte
				WP aansturing	4	pcs			-		-			-		-		-	-	materiaal prijs in tabblad pompen, hier alleen ingevoegd voor kabel lengte
				CV ketel aansturing	4	pcs			-		-			-		-		-	-	materiaal prijs in tabblad pompen, hier alleen ingevoegd voor kabel lengte
				Pompexpansie ontgasser aansturing	2	pcs			-		-			-		-		-	-	materiaal prijs in tabblad pompen, hier alleen ingevoegd voor kabel lengte
									-		-			-		-		-	-	
				3 weg Regelafsluiter DN80	4	pcs			-		-			-	3000	12.000		12.000	**12.000**	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
				Installatie & bekabeling	68	instr			-		-			-	200	13.600		13.600	**13.600**	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
				Process control	96	I/O's			-		-			-	750	72.000		72.000	**72.000**	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
				Lekdetectie op basis van flowmetingen	0	lot			-		-			-		-		-	-	uitgesloten, geen chemicalien
									-		-			-		-		-	-	
				Design allowance					-		-			-		-		-	-	
				Design allowance	10%	%			-		-			-	109.600	10.960		10.960	**10.960**	
									-		-			-		-		-	-	
									-		-			-		-		-	-	
									-		-			-		-		-	-	

	Qty	Material total costs	Labour total costs	Subcontractors cost	TOTAL COST	Remarks
SUBTOTAL		-	-	120.560	**120.560**	
Brown field factor	1,00				**0**	-> additional labour for brown field
Other mark-ups	6%			7.234	**7.234**	
General costs contractor	9%			10.850	**10.850**	
Profit and risk contractor	6%			7.234	**7.234**	
TOTAL	-	**-**	-	**146.000**	**146.000**	**<- to the summary sheet**