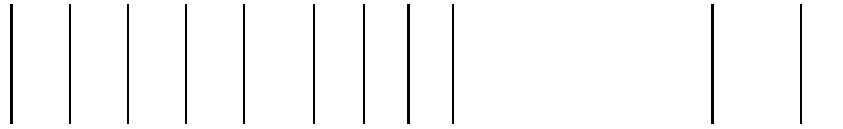


P4 / SASE 1 Beamline- preliminary

functional Label	Device	Tunnels Bldg	Source		Beam Angle	Angle of Incidence	Offset XA	Offset YA	Open diameter D	18 C water	30 C water	flow	max.input temp	power	network	air	crates	Row/Rack/Crate	space	device	daq	XFEL PD			XFEL LA									
			ZA	Length																		Y	Z	X	Y	Z	X	Y	Z					
	Tunnel start		-211,30	593,00	0		-1,60000	-0,11	5,200													0,00000	0,00	166,89910	0,00000	-2,50319	2171,39109							
	Undulator start		-201,30	201,00	0		0,00000	0,00														0,00000	0,00	176,89910	0,00000	-2,50319	2171,39109							
	Undulator end		0,00	0,00	0		0,00000	0,00														0,00000	0,00	378,19910	0,00000	-2,57669	2372,69107							
	ion pump rack		20,00						2,0				18	2,000																				
	ion pump rack		110,00						2,0				18	2,000																				
	ion pump rack		200,00						2,0				18	2,000																				
	Beam separation		219,00		0		0,00000	0,00																	0,00000	0,00	597,19910	0,00000	-2,65665	2591,69106				
	Beam outlet		219,00		0		0,00000	0,00																	0,00000	0,00	597,19910	0,00000	-2,65665	2591,69106				
	Linac valve		219,00	0,50	0		0,00000	0,00																0,00000	0,00	597,19910	0,00000	-2,65665	2591,69106					
BSEC.2613.T9	BSEC safety magnet		240,00	2,00	0		0,00000	0,050	0,050	3,0	2,0		18	3,000	1			1	A/1/1			73	76	0,00000	0,00	618,19910	0,00000	-2,66432	2612,69106					
COL1.2642.T9	COL1 collimator (20mm diameter)		269,00	0,50	0		0,00000	0,020	0,020	3,0	2,0		18	3,000	1			1	B/1/1			73	76	0,00000	0,00	647,19910	0,00000	-2,67491	2641,69106					
	BM absorber		269,50	0,50	0		0,00000																	0,00000	0,00	647,69910	0,00000	-2,67509	2642,19106					
DP.2645.T9	DP Differential pumping		272,75	4,00	0		0,00000				0,5	100	35	0,500	1			1	B/1/2			73	76	0,00000	0,00	650,94910	0,00000	-2,67628	2645,44106					
XGMD.2648.T9	XGMD XGMD (monitor)		275,00	0,50	0		0,00000			6,0			18	6,000	1			6	B/2 B/3			74	74	0,00000	0,00	653,19910	0,00000	-2,67710	2647,69106					
XBPM.2648.T9	XBPM BPM1		275,50	0,50	0		0,00000			6,0			18	6,000	1			6	B/4 B/5			74	74	0,00000	0,00	653,69910	0,00000	-2,67728	2648,19106					
DP.2648.T9	DP Differential pumping		275,50	1,50	0		0,00000				2,0	300	35	2,000	1									0,00000	0,00	653,69910	0,00000	-2,67728	2648,19106					
GAT.2648.T9	GAT gas attenuator start		275,75	120,00	0		0,00000				0,5		30	0,500	1			1	B/1/3			73	76	0,00000	0,00	653,94910	0,00000	-2,67737	2648,44106					
	ion pump rack		290,00						2,0																									
	ion pump rack		380,00						2,0																									
	Tunnel enc		382,67		0		-1,60000	-0,11	5,200																									
	Hall start		382,67	33,00	0		0,00000																											
DP.2768.T9	DP Differential pumping		395,75								2,0	300	35	2,000	1										0,00000	0,00	760,89920	0,00000	-2,71641	2755,36115				
XBPM.2770.T9	XBPM BPM2		396,92	0,50	0		0,00000			6,0			18	6,000	1			6	C/1 C/2			74	74	0,00000	0,00	775,11920	0,00000	-2,72161	2769,61115					
XGMD.2770.T9	XGMD XGMD (monitor)		397,42	0,50	0		0,00000			6,0			18	6,000	1			6	C/3 C/4			74	74	0,00000	0,00	775,61920	0,00000	-2,72180	2770,11115					
DP.2772.T9	DP Differential pumping		399,67	1,00	0		0,00000				3,0	0,5	100	3,500	1			1	C/5/1			73	76	0,00000	0,00	777,89920	0,00000	-2,72262	2771,11115					
XBPA.2775.T9	XBPA Beam power absorber, movable		401,92	0,50	0		0,00000												1	C/5/2			73	76	0,00000	0,00	780,11920	0,00000	-2,72344	2774,61115				
SHUT.2775.T9	SHUT Safety shutter (25 mm diameter)		402,42	0,50	0		0,00000	0,025											1	C/5/3			73	76	0,00000	0,00	780,61920	0,00000	-2,72362	2775,11115				
	Tunnel start XTD's		415,12	545,00	0		1,25000	-0,11	4,500																1,25000	-0,11	793,31920	1,25000	-2,83828	2787,81111				
ORS.2828.T9	ORS possible separation of ORS Beam		455,22	3,00	0		0,00000	0,00		3,0	0,5								1	D/1/1			73	76	0,00000	0,00	833,41910	0,00000	-2,74290	2827,91104				
	ion pump rack		470,00						2,0																									
XSLT.2890.T9	XSLT High power slit		517,22	2,00	0		0,00000	0,00		3,0	0,5														0,00000	0,00	895,41910	0,00000	-2,76554	2899,91104				
PES.2893.T9	PES Photoelectron Spectroscopy		520,72	3,00	0		0,00000	0,00			0,5								6	E/2 E/3			73	76	0,00000	0,00	909,91910	0,00000	-2,76682	2893,41104				
XPD.2896.T9	XPD Photon diagnostics		523,72	3,00	0		0,00000	0,00		9,0				300,5...25					6	E/4 E/5			74	74	0,00000	0,00	904,91580	0,00000	-2,76791	2896,40774				
DCM.2899.T9	DCM DCM		526,72	3,00	0		0,00000	0,00		6,0				300,5...25					3	E/6	compressor		73	76	0,00000	0,00	904,91580	0,00000	-2,76901	2899,40774				
MIRR.2902.T9	MIRR horizontal mirror 1		529,22	1,50	3,472		1,736	0,00000	0,00	6,0				300,5...25					3	E/7	compressor		73	76	0,00000	0,00	907,41580	0,00000	-2,76992	2901,90774				
MIRR.2917.T9	MIRR horizontal mirror 2		544,62	1,50	-0,246		-1,859	0,05347	0,00	6,0				300,5...25					3	E/8	compressor		73	76	0,05347	0,00	922,81580	0,05347	-2,77554	2917,30774				
XBPA.2930.T9	XBPA Beam power absorber, static		557,47	0,50	-0,246		0,05031	0,00	0,00	3,0	0,5								1	F/1/1			73	76	0,05031	0,00	935,66580	0,05031	-2,78023	2930,15774				
XBSC.2931.T9	XBSC BS collimator		558,22	1,00	-0,246		0,05012	0,00	0,00										1	F/1/2			73	76	0,05012	0,00	936,41580	0,05012	-2,78051	2930,90774				
	ion pump rack		650,00						2,0																									
	ion pump rack		650,00						2,0																									
COL2_A.3081.T9	COL2_A Beam collimator		708,22	0,50	-0,246		0,01322	0,00	0,005	3,0	0,5								1	G/1/1			73	76	0,01322	0,00	1086,41580	0,01322	-2,83528	3080,90773				
	ion pump rack		740,00						2,0																									
	ion pump rack		830,00						2,0																									
	ion pump rack		820,00						2,0																									
	End of the tunnel		960,47	0,00	-0,246		0,50000	-0,11	4,500																0,50000	-0,11	1338,66580	0,50000	-3,03738	3333,15767				
XBPA_A.3335.T9	XBPA_A Beam power absorber(A)		962,47	1,00	-0,246		-0,04932	0,00	0,00	3,0	0,5								1	H/1/1			73	76	-0,04932	0,00	1340,66580	-0,04932	-2,92811	3335,15771				
SHUT_A.3336.T9	SHUT_A Safety shutter (A)		963,22	0,50	-0,246		-0,04951	0,00	0,025	3,0									1	H/2/1			73	76	-0,04951	0,00								

*XA, YA, ZA is horizontal, vertical, longitudinal (right handed coordinate system)  
with respect to the central line of the undulator(not tunnel)  
indicates middle point of the devices*

*X, Y, Z is horizontal, vertical, longitudinal middle element position (right handed coordinate system)  
with respect to XFEL\_LA/PD system*



P1 / SASE 2 Beamline - preliminary

functional Label	Device	Tunnels Bldg.	Source dist. Z A m	Length S m	Beam Angle mrad	Angle of Incidence XA m	Offset YA m	Open diameter D m	18C water kW	30C water kW	flow lh	max input temp. deg	power	network	air	crates	Row/Rack/Crate	space	device	DAQ	XFEL_PD			XFEL_LA																																																													
																					X m	Y m	Z m	X m	Y m	Z m																																																											
intersect P1 P4 angle P1																							60.63260			2.28566																																																											
Tunnel start																							4.24845			-0.11			167.01476			4.24845			-2.60958			2161.50671																																															
Undulator start																							-256.00			256			0.000			0			0.00			4.64531			-2.50323			2171.49880																																									
Undulator enc																							0.00			0.000			0			0.00			0.00			14.85592			0.00			432.80310			14.85592			-2.59663			2427.29507																																
Beam separator																							55.00			47			0.000			0			0.00			2.00			2.000			2.000			X1			19.92134			0.00			559.70204			19.92134			-2.64296			2554.19400																				
BSEC 2575.T6																							146.00			2.00			0.000			0			0.00			0.050			3.00			2.00			3.000			1			A1/1			73			76			20.75893			0.00			580.68533			20.75893			-2.65062			2575.17729								
COL1.2604.T6																							177.00			0.50			0.000			0			0.00			0.020			3.00			2.00			3.000			1			B1/1			73			76			21.91560			0.00			609.66226			21.91560			-2.66120			2604.15421								
DP.2607.T6																							177.50			0.50			0.000			0			0.00			0.00			3.00			2.00			3.000			1			B1/1			73			76			21.93554			0.00			610.16186			21.93554			-2.66138			2604.65382								
XGMD.2609.T6																							179.75			4.00			0.000			0			0.00			0.00			0.5			100			35			0.50			1			B1/2			73			76			22.02528			0.00			612.41007			22.02528			-2.66220			2606.90203					
XBPM.2610.T6																							182.00			0.50			0.000			0			0.00			0.00			6.00			6.00			1			6.000			1			B2/B3			74			74			22.11502			0.00			614.65828			22.11502			-2.66303			2609.15024					
DP.2610.T6																							182.50			0.50			0.000			0			0.00			0.00			6.00			6.00			1			6.000			1			B4/B5			74			74			22.13497			0.00			615.15788			22.13497			-2.66321			2609.64984					
GAT.2610.T6																							182.50			120.00			0.000			0			0.00			0.50			2.0			300			35			2.00			1			B1/3			73			76			22.14494			0.00			615.40768			22.14494			-2.66330			2609.89964					
Tunnel end																							213.55			0.000			-0.11			5.200			0.00			0.00			0.50			30			0.50			1			B1/3			73			76			23.37339			-0.11			646.18300			23.37339			-2.78454			2640.67492								
Hall start																							213.55			33			0.000			0			0.00			0.00			2.00			23,37339			0.00			646.18300			23,37339			-2.87454			2640.67496																										
XBPA.2660.T6																							232.80			0.50			0.000			0			0.00			0.00			3.00			0.50			30			3.000			1			C1/1			73			76			24.14118			0.00			665.41768			24.14118			-2.68156			2659.90964					
SHUT.2660.T6																							233.30			0.50			0.000			0			0.025			0.00			3.00			0.50			30			3.000			1			C1/2			73			76			24.16113			0.00			665.91722			24.16113			-2.68174			2660.40924					
Tunnel start																							245.84			680			0.000			-0.11			4.500			0.00			4.500			2.0			300			35			2.00			1			X1			26,96107			0.00			736.06164			26,96107			-2.70735			2730.55355								
DP.2731.T9																							303.50			1.50			0.000			0			0.00			0.00			6.00			6.00			1			6.000			1			D1/D2			74			74			27.00906			0.00			737.06800			27.00906			-2.70772			2731.55275					
XBPM.2732.T6																							304.50			0.50			0.000			0			0.00			0.00			6.00			6.00			1			6.000			1			D3/D4			74			74			27.02090			0.00			737.56040			27.02090			-2.70790			2732.05235					
XGMD.2732.T6																							305.00			0.50			0.000			0			0.00			0.00			6.00			6.00			1			6.000			1			D5/D1			73			76			27.11064			0.00			739.80861			27.11064			-2.70872			2734.30056					
DP.2734.T6																							307.25			4.00			0.000			0			0.00			0.00			3.0			2.0			100			35			3.500			1			X4			73			76			27.11064			0.00			739.80861			27.11064			-2.70872			2734.30056		
ORS.2826.T6																							325.00			3.00			0.000			0.000000			0.00			0.00			2.00			0.50			30			3.000			1			F1/1			73			76			30.78619			0.00			831.89833			30.78619			-2.74234			2826.38028					
ORS.2826.T6																							399.40			3.00			0.000			0.000000			0.00			0.00			2.00			0.50			30			3.000			1			F1/1			73			76			30.78619			0.00			831.89833			30.78619			-2.74234			2826.38028					
XSLT.2888.T6																							461.40			2.00			0.000			0.000000			0.00			0.00			3.00			0.50			30			3.000			1			G1/1			73			76			33.25907			0.00			893.83900			33.25907			-2.76496			2888.33094					
PES.2892.T6																							465.40			3.00			0.000			0.000000			0.00			0.00			6.0			0.5			30			6.000			1			G2/G3			73			76			33.41861			1.00			897.83581			33.41861			-1.76642			2892.32812					
XPD.2896.T6																							469.40			3.00			0.000			0.000000			0.00			0.00			9.0			0.0			300			5..25			9.000			1			G4/G5			74			74			33.57815			0.00			901.83263			33.57815			-2.76788			2896.32457		
DCM.2899.T6																							472.40			3.00			0.000			0.000000			0.00			0.00			6.0			0.0			300			5..25			6.000			1			G5/G6			73			76			33.69781			0.00			904.83024			33.69781			-2.76897			2899.32218		
MIRR.2902.T6																							474.90			1.50			0.000			-1.736			0.000000			0.00			6.0			0.0			300			5..25			6.000			1			G7/G8			73			76			33.74756			0.00			907.32825			33.74756			-2.76989			2901.82019		
MIRR.2917.T6																							490.30			1.50			-0.246			-1.859			0.053469			0.00			6.0			0.0			300			5..25			6.000			1			G8/G9			73			76			34.46518			0.00			922.71600			34.46518			-2.77550			2917.20794		
XBPA.2930.T6																							503.15			0.50			-0.246			0.053038			0.00			0.00			6.00			0.50			30			3.000			1			H1/1			73			76			34.97454			0.00			935.55578			34.97454			-2.78019			2930.04771					
XBSC.2931.T6																							595.00			1.00			-0.246			0.050123			0.00			0.00			2.00			0.00			30			2.000			1			H1/2			73			76			35.00427			0.00			936.30518			35.00427			-2.78047			2930.79712					
COL2_A.3081.T6																							653.90			0.50			-0.246			0.013223			0.00			0.005			3.00			0.50			30			3.500			1			I1/1			73			76			40.95018			0.00			1086.18582			40.95018			-2.83519			3080.67775					
End of the tunne																							906.15			0			0			0			0			0			2.00			0.00			30			2.000			1			X8			73			76			50.99801			-0.11			1338.23510			50.99801			-3.03722			3332.72697					
Beam power absorber(A)																							908.15			1.00			-0.246			-0.049327			0.00			0.00			3.00			0.50			30			3.000			1			J1/1			73			76			51.02850			0.00			1340.23350			51.02850			-2.92795			3334.72541					
Safety shutter (A)																							908.90			0.50			-0.246			-0.049507			0.00			0.025			3.00			0.00			30			3.000			1			J1/2			73			76			51.05823			0.00			1340.98291			51.05823			-2.92822			3335.47482					
DCM.2899.T6																							472.40			3.00			0.000			-0.050000			0.00			0.00			6.0			0.0			300			5..25			6.000			1			J2/1			73			76			33.64785			0.00			904.83024			33.64785			-2.76897			2899.32218		
MIRR.2902.T6																							474.90			1.50			0.000			-0.050000			0.00			0.00			6.0			0.0			300			5..25			6.000			1			J2/2			73			76			33.74756			0.00			907.32825			33.74756			-2.76989			2901.82019		
MIRR.2917.T6																							490.30			1.50			-0.246			-1.859			0.053469			0.00			6.0			0.0			300			5..25			6.000			1			J2/3			73			76			34.36179			0.00			922.71600			34.36179			-2.77550			2917.20794		
XBPA.2930.T6																							503.15			0.50			0.000			-0.050000			0.00			0.00			6.00			0.50			30			3.000			1			J2/4			73			76			34.87432			0.00			935.55578			34.87432			-2.78019			2930.04771					
XBSC.2931.T6																							503.90			1.00			0.000			-0.050000			0.00			0.00			6.00			0.50			30			3.000			1			J2/5			73			76			34.90423			0.00			936.30518			34.90423			-2.78047			2930.79712					
COL2_B.3081.T6																							653.90			0.000			-0.050000			0.00			0.005			0.00			3.00			0.50			30			3.500			1			I1/2			73			76			40.88701			0.00			1086.18582			40.88701			-2.83519			3080.67775					
End of the tunne																							906.15			0			0			0			0			0			2.00			0.00			30			2.000			1			X8			73			76			50.99801			-0.11			1338.23510			50.99801			-3.03722			3332.72697					
Beam power absorber(MA)																							908.15																																																														

Sum

107,0

15,0

113,0

31,0

65,0

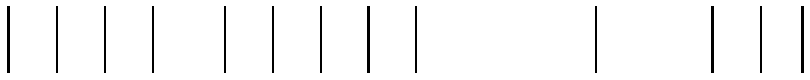
*XA, YA, ZA is horizontal, vertical, longitudinal (right handed coordinate system)  
with respect to the central line of the undulator(not tunnel)  
indicates middle point of the devices*

*X, Y, Z is horizontal, vertical, longitudinal middle element position (right handed coordinate system),  
with respect to XFEL\_LA/PD system*





*with respect to the central line of the undulator(not tunnel)*  
*indicates middle point of the devices*  
*X,Y,Z is horizontal,vertical,longitudinal middle element position (right handed coordinate system)*  
*with respect to XFEL\_LA/PD system*



P2 / U 2 Beamline - preliminary

Functional Label	Device	Tunnels Bldg.	Source dist. Z	Length S	Beam Angle	Angle of Incidence	Offset XA	Offset YA	Open diameter	18C water	30C water	flow	max. input tempo	power	network	air	crates	Row/Rack/Crate	space	device	DAQ	XFEL_PA			XFEL_LA																	
																						X	Y	Z	X	Y	Z															
	P2 start intersect P2 P4 angle P2																					18,93680	0,00	837,04590	1467,35609																	
	Tunnel start		-70	200,00		0	0	-0,11														24,38600	-0,11	978,54650																		
	Undulator start		-60	60,00		0	0	0,00														23,48940	0,00	988,57950																		
	Undulator end		0			0	0	0,00														25,14500	0,00	1043,68450																		
	Beam separation Tunnel end		110			0	0	0,00														29,18750	0,00	1153,63489																		
			134,26	23,50	0	0	0	-0,11	5,200													29,17684	-0,11	1177,88395																		
BSEC.3192.T8 COL1.3194.T8	BSEC COL1		154,26	2,00	0	0	0,00	0,050		3,00	0,50			3,000	1		1	A/1/1			73	76	29,77744	0,00	1197,87493																	
			155,51	0,50	0	0	0,00	0,020			2,00							1	A/1/2		73	76	29,81498	0,00	1199,12436																	
			156,01	0,50	0	0	0,00															73	76	29,82999	0,00	1199,62414																
	Tunnel start		157,76	660,00	0	0	0	-0,11	4,500													29,88239	-0,11	1201,36835																		
DP.3198.T8	DP		159,76	4,00	0	0	0,00			3,00	0,50	100									73	76	29,94245	0,00	1203,36745																	
XGMD.3200.T8	XGMD		162,01	0,50	0	0	0,00			6,00											74	74	30,01002	0,00	1205,61644																	
XBPM.3201.T8	XBPM		162,51	0,50	0	0	0,00			6,00											74	74	30,02504	0,00	1206,11821																	
DP.3202.T8	DP		163,51	1,50	0	0	0,00				2,00	300		35	2,000	1	x					74	74	30,05507	1,00	1207,11576																
GAT.3202.T8	GAT		164,26	30,00	0	0	0,00				0,50			30	0,500	1					73	76	30,07759	2,00	1207,86542																	
			165,00							2,00					2,000																											
DP.3233.T8	DP		195,01	1,50	0	0	0,00			6,00				35	2,000	1	x				74	74	31,00101	3,00	1238,60155																	
XBPM.3234.T8	XBPM		196,01	0,50	0	0	0,00			6,00					6,000	1					74	74	31,03104	0,00	1239,60110																	
XGMD.3235.T8	XGMD		196,51	0,50	0	0	0,00			6,00					6,000	1					74	74	31,04606	0,00	1240,10088																	
DP.3237.T8	DP		198,76	4,00	0	0	0,00			3,00	0,50	100			3,500	1	x				73	76	31,11363	0,00	1242,34986																	
XSLT.3240.T8	XSLT		201,76	2,00	0	0,000000	0,00				0,50										73	76	31,20372	0,00	1245,34851																	
PES.3242.T8	PES		204,26	3,00	0	0,000000	0,00			6,0	0,5				6,000	1	x				74	74	31,27879	1,00	1247,84738																	
XPD.3245.T8	XPD		207,26	3,00	0	0,000000	0,00			9,00				300	5...25	9,000	1				74	74	31,36888	0,00	1250,84603																	
DCM.3250.T8	DCM		211,68	3,00	0	0,000000	0,00			6,00				300	5...25	6,000	1				73	76	31,50183	0,00	1255,27103																	
MIRR.3252.T8	MIRR		214,18	1,50	-3,6	-1,800	0,000000	0,00		6,00				300	5...25	6,000	1				73	76	31,57690	0,00	1257,76990																	
MIRR.3266.T8	MIRR		228,08	1,50	0	-0,050040	0,00			6,00				300	5...25	6,000	1				73	76	31,94430	0,00	1271,66363																	
XBPA.3274.T8	XBPA		236,08	0,50	0	-0,050040	0,00			3,00	0,50				3,000	1					73	76	32,18454	0,00	1279,66003																	
XBSC.3275.T8	XBSC		236,83	1,00	0	-0,050040	0,00				0,50				30	1					73	76	32,20706	0,00	1280,40969																	
COL2_A.3285.T8	COL2_A		246,83	0,50	0	-0,050040	0,00	0,005			0,50				30	1					73	76	32,50736	0,00	1290,40518																	
			255,00							2,00					2,000																											
	End of the tunne		294,83				0																																			
XBPA_A.3335.T8 SHUT_A.3336.T8	XBPA_A SHUT_A		296,83 297,58	1,00 0,50	0	-0,050040	0,00	0,025		3,00	0,50			30	3,000	1	x				73	76	34,00891	0,00	1340,38263																	
			297,58	0,50	0	-0,050040	0,00	0,025			0,50			30		1					73	76	34,03139	0,00	1341,13229																	
DCM.3250.T8	DCM		211,68	3,00	0	-0,050000	0,00																																			
MIRR.3252.T8	MIRR		214,18	1,50	0	-0,050000	0,00																																			
MIRR.3266.T8	MIRR		228,08	1,50	0	-0,050000	0,00																																			
XBPA.3274.T8	XBPA		236,08	0,50	0	-0,050000	0,00																																			
XBSC.3275.T8	XBSC		236,83	1,00	0	-0,050000	0,00																																			
COL2_A.3285.T8	COL2_A		246,83	0,50	0	-0,050000	0,00	0,005																																		
	End of the tunne		294,83				0																																			
XBPA_A.3335.T8 SHUT_A.3336.T8	XBPA_A SHUT_A		296,83 297,58	1,00 0,50	0	-0,050000	0,00	0,025																																		
			297,58	0,50	0	-0,050000	0,00	0,025																																		
	Shield wal		298,33	1,20																																						
	Experimental area (36.95m*15m*3m)		299,53	36,95																																						