

Container Boiler Houses (CBH)

Equipment of Municipal Enterprise "Khar'kov Heat Networks"				Equipment for connecting through gas distribution networks				Equipment for connecting through power distribution networks	
No.	Description	Address	Capacity (MW)	Quantity (pcs.)	Gas meter size*	Metering unit*	Gas pressure regulating cabinet (GPRC)*	Power equipment and cable products*	
1	CBH package	CBH No. 1	8	1	SF Delta G-400 DN150 (1.160) min 4 max 6.8	Gas metering cabinet	GPRC - 0/15 - 2L - 100x150 - 3/3 MBN-QA DN65x100 PN16 + OS/66-AP	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 2 pcs., power transformer - 6/0.4 kV 1 MBA	
2	CBH package	CBH No. 2	0.6	1	Delta Compact G-40 DN50 (1.200) min 0.3 max 0.5	Gas metering cabinet	GPRC - 4/4 - 2L - 40x80 - 3/3 S21 MP 1" x 1/2"	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 2 pcs., power transformer - 6/0.4 kV 1 MBA	
3	CBH package	CBH No. 3	6	1	SF Delta G-400 DN150 (1.160) min 4 max 6.8 G-250 Delta Compact G-250 DN100 (1.160) min 2.5 max 4.080	Gas metering cabinet	GPRC - 8/11 - 2L - 80x125 - 3/3 MBN-QA DN65x100 PN16 + OS/66-AP	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 2 pcs., power transformer - 6/0.4 kV 1 MBA	
4	CBH package	CBH No. 4	4.2	1	G-100 + Delta SE G-100 DN80 (1.200) min 0.8 max 1.60	Gas metering cabinet	GPRC - 7/10 - 2L - 65x100 - 3/3 MBN-QA DN50x100 PN16 + OS/66-AP	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 2 pcs.;	
5	CBH package	CBH No. 5	2.2	1	Delta SE G-100 DN80 (1.200) min 0.8 max 1.60	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/14/9-AP DN50 PN16 + OS/66-AP	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 2 pcs.;	
6	CBH package	CBH No. 6	1	1	G-65 Delta SE G-65 DN50 (1.200) min 0.5 max 1.00	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/14/9-AP DN50 PN16 + OS/66-AP	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 1 pc.;	
7	CBH package	CBH No. 7	1.6	1	Delta SE G-100 DN80 (1.200) min 0.8 max 1.60	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/14/9-AP DN50 PN16 + OS/66-AP	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 2 pcs.;	
8	CBH package	CBH No. 8	0.6	1	Delta Compact G-40 DN50 (1.200) min 0.3 max 0.5	Gas metering cabinet	GPRC - 4/4 - 2L - 40x80 - 3/3 S21 MP 1" x 1/2"	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 1 pc.;	
9	CBH package	CBH No. 9	0.1	1	Delta Compact G-40 DN50 (1.200) min 0.3 max 0.5	Gas metering cabinet	GPRC - 2/2 - 2L - 25x32 - 3/3 HP 100B AP/B 1"x1" R0	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 2 pcs.;	
10	CBH package	CBH No. 10	3	1	PJ (G-100) ar G-100 Delta SE G-100 DN80 (1.200) min 0.8 max 1.60	Gas metering cabinet	GPRC e FE25 and G10	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 2 pcs.;	
11	CBH package	CBH No. 12	0.6	1	Delta SE G-100 DN80 (1.200) min 0.8 max 1.60	Gas metering cabinet	GPRC - 6/8 - 2L - 65x80 - 3/3 MBN-QA DN40x80 PN16 + OS/66-AP	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 2 pcs., power transformer - 6/0.4 kV 1 MBA	
12	CBH package	CBH No. 13	0.2	1	Delta Compact G-40 DN50 (1.200) min 0.3 max 0.5	Gas metering cabinet	GPRC - 4/4 - 2L - 40x80 - 3/3 S21 MP 1" x 1/2"	Power cables: "AAAE" 1 4x120" 0.2 km, panel equipment "HIO-09" - 2 pcs.;	

13	CBHI package	CBHI No. 14	0.6	1	Delta Compact G-16 D850 (1-100) mm 0,25 max 25	Gas metering cabinet	GPBC - 2/2 - 2L - 25x12 - 30/05 S7 - 50 HP	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs.
14	CBHI package	CBHI No. 15	4	1	Delta Compact G-40 D850 (1-200) mm 0,3 max 65	Gas metering cabinet	GPBC - 4/4 - 2L - 40x50 - 33 S21 MP 1" x 1 1/2"	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs.
15	CBHI package	CBHI No. 16	12	1	G-250 Delta2100 G-250 DN150 (1-160) mm 2,5 max 4000	Gas metering cabinet	GPBC - 7/10 - 2L - 68x100 - 33 MBN-QA DN50x100 PN16 + OS/66-AP	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs.
16	CBHI package	CBHI No. 17	12	1	G-650 S/F Delta G-650 DN150 (1-200) mm 5 max 1000	Gas metering cabinet	GPBC - 10/16 - 2L - 150x200 - 0/3 MBN-QA DN80x100 PN16 + OS/66-AP	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs.
17	CBHI package	CBHI No. 18	12	1	S/F Delta (1-160) mm 4 max 650	Gas metering cabinet	GPBC - 10/16 - 2L - 150x200 - 6/3 MBN-QA DN60x100 PN16 + OS/66-AP	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs.
18	CBHI package	CBHI No. 19	12	1	S/F Delta (1-160) mm 4 max 651	Gas metering cabinet	GPBC - 10/16 - 2L - 150x200 - 6/3 MBN-QA DN60x100 PN16 + OS/66-AP	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs.
19	CBHI package	CBHI No. 19	12	1	S/F Delta G-650 DN150 (1-200) mm 5 max 1000	Gas metering cabinet	GPBC - 10/16 - 2L - 150x200 - 3/3 MBN-QA DN80x100 PN16 + OS/66-AP	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs.
20	CBHI package	CBHI No. 20	24	1	Flowtec 600 G-1600* DN200 (1-80) mm 32 max 2500	Gas metering cabinet	GPBC - 11/17 - 2L - 200x250 - 0/3 REVAL 182/G DN100 PN16 + 20/A + SA-91	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs. power transformer - 100/4 kV 1 MVA
21	CBHI package	CBHI No. 21	24	1	Flowtec 600 G-1600* DN200 (1-80) mm 32 max 2500	Gas metering cabinet	GPBC - 11/17 - 2L - 200x250 - 0/3 REVAL 182/G DN100 PN16 + 20/A + SA-92	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs. power transformer - 100/4 kV 1 MVA
22	CBHI package	CBHI No. 22	24	1	Flowtec 600 G-1600* DN200 (1-80) mm 32 max 2500	Gas metering cabinet	GPBC - 11/17 - 2L - 200x250 - 0/3 REVAL 182/G DN100 PN16 + 20/A + SA-91	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs. power transformer - 100/4 kV 1 MVA
23	CBHI package	CBHI No. 21	24	1	Flowtec 600 G-1600* DN200 (1-80) mm 32 max 2500	Gas metering cabinet	GPBC - 11/17 - 2L - 200x250 - 0/3 REVAL 182/G DN100 PN16 + 20/A + SA-91	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs. power transformer - 100/4 kV 1 MVA
24	CBHI package	CBHI No. 24	8	1	S/F Delta (1-160) mm 4 max 650	Gas metering cabinet	GPBC - 9/15 - 2L - 100x150 - 3/3 MBN-QA DN65x100 PN16 + OS/66-AP	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs.
25	CBHI package	CBHI No. 25	8	1	S/F Delta (1-160) mm 4 max 650	Gas metering cabinet	GPBC - 9/15 - 2L - 100x150 - 3/3 MBN-QA DN65x100 PN16 + OS/66-AP	Power cables - AABx1 1xN120" 0.2 km, panel equipment - HHO-290" - 2 pcs.

26	CBI package	CBI No. 26	8	1	SF Delta G-650 DNI 50 (1.160) min 4 max 650 G-650	Gas metering cabinet	GPRC - 9/15 - 2L - 150x200 - 3/3 MBRN-QA DN80x150 PNI16 + OS66-AP	Power cables -AAE1 1.4x120" 0.2 km, panel equipment -BIO-90" 2 pcs.;
27	CBI package	CBI No. 27	12	1	SF Delta G-650 DNI 50 (1.200) min 5 max 1000 G-650	Gas metering cabinet	GPRC - 10/16 - 2L - 150x200 - 3/3 MBRN-QA DN80x150 PNI16 + OS66-AP	Power cables -AAE1 1.4x120" 0.2 km, panel equipment -BIO-90" 2 pcs.;
28	CBI package	CBI No. 28	12	1	SF Delta G-650 DNI 50 (1.200) min 5 max 1000 G-650	Gas metering cabinet	GPRC - 10/16 - 2L - 150x200 - 3/3 MBRN-QA DN80x150 PNI16 + OS66-AP	Power cables -AAE1 1.4x120" 0.2 km, panel equipment -BIO-90" 2 pcs.;
29	CBI package	CBI No. 29	12	1	SF Delta G-650 DNI 50 (1.200) min 5 max 1000 G-650	Gas metering cabinet	GPRC - 10/16 - 2L - 150x200 - 3/3 MBRN-QA DN80x150 PNI16 + OS66-AP	Power cables -AAE1 1.4x120" 0.2 km, panel equipment -BIO-90" 2 pcs.;

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Note: References to a specific trade mark, firm, source of origin or manufacturer should read in conjunction with "or equivalent"

Equipment for cogeneration units (CGU)

Equipment of Municipal Enterprise "Kharkiv Heat Networks"		Equipment for connecting through gas distribution networks			Equipment for connecting through power distribution networks	
No.	GGU capacity 50, kW	Gas meter size*	Metering unit*	Gas pressure regulating cabinet (GPRC)*	Equipment for connecting through power distribution networks	Equipment for connecting through power distribution networks (high-voltage transmission lines)
1	100	Delta Compact G25 DN50 (1:160) min 0,25 max 40	Gas metering cabinet	GPRC - 4/4 - 2L - 40x50 - 3/3 B249-AP 1 1/2"x1 1/2" + OS/66-AP (Tartarini)		
2	120	Delta Compact G25 DN50 (1:160) min 0,25 max 40	Gas metering cabinet	GPRC - 4/4 - 2L - 40x50 - 3/3 B249-AP 1 1/2"x1 1/2" + OS/66-AP (Tartarini)		
3	150	Delta Compact G-40 DN50 (1:200) min 0,3 max 65	Gas metering cabinet	GPRC - 4/4 - 2L - 40x50 - 3/3 B249-AP 1 1/2"x1 1/2" + OS/66-AP (Tartarini)		
4	220	G-65 Delta SE DN50 (1:200) min 0,5 max 100	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/149-AP DN50 PN16 + OS/66-AP		
5	200	Delta Compact G-40 DN50 (1:200) min 0,3 max 65	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/149-AP DN50 PN16 + OS/66-AP		
6	1000	G-250 Delta2100 G-250 DN100 (1:160) min 2,5 max 400	Gas metering cabinet	GPRC - 7/10 - 2L - 65x100 - 3/3 MBN-QA DN50x100 PN16 + OS/66-AP	Power cables "10 3x240 mm2" 1,65 km, power transformer - 6/0,4 kV 1 MBA	
7	1000	G-250 Delta2100 G-250 DN100 (1:160) min 2,5 max 400	Gas metering cabinet	GPRC - 7/10 - 2L - 65x100 - 3/3 MBN-QA DN50x100 PN16 + OS/66-AP	Power cables "10 3x240 mm2" 1,65 km, transformer consisting of: power transformer-10/0,4 kV 630 KBA, high-voltage load switches - 3 pcs; panel equipment "IIQ-90" - 3 pcs; power transformer TMI-6/0,4 kV 1 MBA	A total of 5 pcs. of 10 kV cells including: A relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc; Surge arresters nonlinear - 3 pcs. Current transformer -3 pcs; Power cables "KBBI" Eir 4*2,5"-0,75km ; "KBBI" Eir 10*2,5"-0,75km; "IIБ-1 2,5"- 1,0km
8	1000	G-250 Delta2100 G-250 DN100 (1:160) min 2,5 max 400	Gas metering cabinet	GPRC - 7/10 - 2L - 65x100 - 3/3 MBN-QA DN50x100 PN16 + OS/66-AP	Transformer substation consisting of: power transformer TMI-6/0,4 kV 630 KBA, high-voltage load switches - 3 pcs; panel equipment "IIQ-90" - 3 pcs; power cables "AAABit 10 3x240 mm2" 1,65 km; "AAABit 10 3x120 mm2" 2 km; power transformer TMI-6/0,4 kV 1 MBA	
9	6000	FLOWSiC 600 G1600 DN250 (1:50) min 50 max 2500	Gas metering cabinet	GPRC - 11/17 - 2L - 200x250 - 3/3 B/E1 DN100 PN16 + PS/79-2 + OS-80X-BPA	Power cable "Amaterally-15 I*500/70 mm2" 2,3 km	

10	1500	S3F Delta (1:160) min 4 max 650	G-400 DNI 50 min 4	Gas metering cabinet	CHRC - 2L - 100X125 - 3/3 MIBN- QA DN65x100 PN16 + OS/66-AP	Transformer substation consisting of: power transformer TMF-6/0,4 kV 630 KVA, high-voltage load switches - 3 pcs; panel equipment "HQ-90" - 3 pcs.; power cables "AABr 10 3x240 mm2" 1,65 km; "AABr 10 3x120 mm2" 2 km; power transformer TMF-6/0,4 kV 1 MVA	A total of 10 pcs. of 10 kV cells including: a relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc.; Surge arresters nonlinear - 3 pcs.; Current transformer -3 pcs; Power cables "KBBTEnr-4*2,5"-1,5km . "KBBTEnr-10*2,5"-1,5km; "TB-1 2,5"- 2,0km
11	9000	FLOWSEC600 G2500 DN300 (1:50) 80 max 4000	G-400 DNI 50 min 4	Gas metering cabinet	CHRC - 12/18 - 2L - 250x300 - 3/3 FL + MIB5 DN150 PN16 + PS/79-2 + OS/80X-IBPA	Transformer substation consisting of: power transformer TMF-6/10 kV 2.5 MVA - 1 pc.; vacuum switch cells - 4 pcs.; power cables "Amulratly-15 1*500/70 mm2" 6 km.; Outdoor switchgear consisting of: vacuum switch cells - 5 pcs; voltage transformer cell - 1 pc.; Surge arresters nonlinear - 5 pcs.; power transformers TMF- 6/0,4 kV 1 MVA.; TMF-10/0,4 kV 1 MVA	A total of 10 kV cells including: a relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc.; Surge arresters nonlinear - 3 pcs.; Current transformer -3 pcs; Power cables "KBBTEnr-4*2,5"-1,5km . "KBBTEnr-10*2,5"-1,5km; "TB-1 2,5"- 2,0km
12	1500	S3F Delta (1:160) min 4 max 650	G-400 DNI 50 min 4	Gas metering cabinet	CHRC - 2L - 100X125 - 3/3 MIBN- QA DN65x100 PN16 + OS/66-AP	Power cables "AABr 10 3x240 mm2" 1,65 km; transformer substation consisting of: power transformer-10/0,4 kV 630 KVA; high-voltage load switches - 3 pcs; panel equipment "HQ-90" - 3 pcs;	A total of 3 pcs. of 10 kV cells including: A relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc.; Surge arresters nonlinear - 3 pcs.; Current transformer -3 pcs; Power cables "KBBTEnr-4*2,5"-0,45km . "KBBTEnr-10*2,5"-0,45km; "TB-1 2,5"- 0,6km
13	1500	S3F Delta (1:160) min 4 max 650	G-400 DNI 50 min 4	Gas metering cabinet	CHRC - 2L - 100X125 - 3/3 MIBN- QA DN65x100 PN16 + OS/66-AP	Power cables "AABr 10 3x240 mm2" 1,65 km	A total of 3 pcs. of 10 kV cells including: A relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc.; Surge arresters nonlinear - 3 pcs.; Current transformer -3 pcs; Power cables "KBBTEnr-4*2,5"-0,45km . "KBBTEnr-10*2,5"-0,45km; "TB-1 2,5"- 0,6km
14	1500	S3F Delta (1:160) min 4 max 650	G-400 DNI 50 min 4	Gas metering cabinet	CHRC - 2L - 100X125 - 3/3 MIBN- QA DN65x100 PN16 + OS/66-AP	Power cables "AABr 10 3x240 mm2" 1,65 km	A total of 3 pcs. of 10 kV cells including: A relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc.; Surge arresters nonlinear - 3 pcs.; Current transformer -3 pcs; Power cables "KBBTEnr-4*2,5"-0,45km . "KBBTEnr-10*2,5"-0,45km; "TB-1 2,5"- 0,6km
15	1500	S3F Delta (1:160) min 4 max 650	G-400 DNI 50 min 4	Gas metering cabinet	CHRC - 2L - 100X125 - 3/3 MIBN- QA DN65x100 PN16 + OS/66-AP	Transformer substation consisting of: power transformer TMF-6/0,4 kV 630 KVA; high-voltage load switches - 3 pcs; panel equipment "HQ-90" - 3 pcs.; power cables "AABr 10 3x240 mm2" 1,65 km; "AABr 10 3x120 mm2" 2 km.	A total of 3 pcs. of 10 kV cells including: A relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc.; Surge arresters nonlinear - 3 pcs.; Current transformer -3 pcs; Power cables "KBBTEnr-4*2,5"-0,45km . "KBBTEnr-10*2,5"-0,45km; "TB-1 2,5"- 0,6km
16	11000	FLOWSEC600 G2500 DN300 (1:50) 80 max 4000	G-400 DNI 50 min 4	Gas metering cabinet	CHRC - 12/18 - 2L - 250x300 - 3/3 FL + MIB5 DN150 PN16 + PS/79-2 + OS/80X-IBPA	Transformer substation consisting of: power transformer TMF-6/10 kV 2.5 MVA - 1 pc.; vacuum switch cells - 4 pcs.; power cables "Amulratly-15 1*500/70 mm2" 2,3 km.; Outdoor switchgear consisting of: vacuum switch cells - 5 pcs; voltage transformer cell - 1 pc.; Surge arresters nonlinear - 5 pcs.; power transformer TMF- 10/0,4 kV 1 MVA.	A total of 10 kV cells including: a relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc.; Surge arresters nonlinear - 3 pcs.; Current transformer -3 pcs; Power cables "KBBTEnr-4*2,5"-1,5km . "KBBTEnr-10*2,5"-1,5km; "TB-1 2,5"- 2,0km

17	3500	FLOW/SIC 600 G1000 DN200 (1:30) min 50 max 1600	Gas metering cabinet	GPRC - 10/16 - 2L - 150x200 - 3/3 MIBN-QA DN100x200 PNI16 + OS/66- AP	Power cables "AAEn 10 3x240 mm2" 1,65 km, transformer substation consisting of: power transformer-10/0,4 kV 630 KBA, high-voltage load switches - 3 pcs; panel equipment "ЦО-90" - 3 pcs.; power transformer TMT-10/0,4 kV 1 MBA	
18	250	G-65 Delta SE G-65 DN50 (1:200) min 0,5 max 100	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/149- AP DN50 PNI16 + OS/66- AP	Power cables "AAEn 10 3x240 mm2" 1,65 km	
19	250	G-65 Delta SE G-65 DN50 (1:200) min 0,5 max 100	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/149- AP DN50 PNI16 + OS/66- AP	Power cables "AAEn 10 3x240 mm2" 1,65 km	
20	250	G-65 Delta SE G-65 DN50 (1:200) min 0,5 max 100	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/149- AP DN50 PNI16 + OS/66- AP	Power cables "AAEn 10 3x240 mm2" 1,65 km	A total of 7 pcs. of 10 kV cells including: A relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc.; Surge arresters nonlinear - 3 pcs. Current transformer -3 pcs; Power cables "KBBTEur 4*2,5" 1,05km ; "KBBTEur 10*2,5"-1,05km, "TIB-1 2,5" - 1,4km
21	3000	TZ-FLUXI G650 DN200 (1:20) min 50 max 1000 (G- 650) Delta only D200 S3F Delta G-650 DN150 (1:200) min 5 max 1000)	Gas metering cabinet	GPRC - 10/16 - 2L - 150x200 - 3/3 MIBN-QA DN100x200 PNI16 + OS/66-AP	Transformer substation consisting of: power transformer TMT-6/0,4 kV 630 KBA, high-voltage load switches - 3 pcs; panel equipment "ЦО-90" - 3 pcs.; power cables "AAEn 10 3x120 mm2" 2 km,	
22	8000	FLOW/SIC 600 G2500 DN300 (1:50) min 80 max 4000	Gas metering cabinet	GPRC - 12/18 - 2L - 250x300 - 3/3 FL + MBS DN150 PNI16 + PS/79-2 + OS/80X-RPA	Transformer substation consisting of: power transformer TMT-6/10 kV 2.5 MBA - 1 pc., vacuum switch cells - 4 pcs.; power cables "AAEn 15 1*500/70 mm2" 6 km.; Outdoor switchgear consisting of: vacuum switch cells - 5 pcs; voltage transformer cell - 1 pc.; Surge arresters nonlinear - 5 pcs.; power transformers TMT - 6/0,4 kV 1 MBA ; TMT-10/0,4 kV 1 MBA	A total of 3 pcs. of 10 kV cells including: A relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc.; Surge arresters nonlinear - 3 pcs.; Current transformer -3 pcs; Power cables "KBBTEur 4*2,5" -0,45km ; "KBBTEur 10*2,5"-0,45km, "TIB-1 2,5" - 0,6km

23	20000	S3F Delta G-400 DN150 (1:160) min 4 max 650	Gas metering cabinet	GPRC - 0/15 - 2L - 100x150 - 3/3 MIBN-QA DN65x100 PNT6 + OS/66-AP	Transformer substation consisting of: power transformer TMI-60/0.4 kV 630 KBA; high-voltage load switches - 3 pcs; panel equipment "HIO-90" - 3 pcs; power cables "AA15n 10 3x120 mm ² " 2 km. Outdoor switchgear consisting of vacuum switch cells - 5 pcs; voltage transformer cell - 1 pc.; Surge arresters nonlinear - 5 pcs;	A total of 5 pcs. of 10 kV cells including: A relay protection and automation (RPA) panel with a microprocessor device and power direction - 1 pc. Vacuum switch 1 pc.; Surge arresters nonlinear - 3 pcs; Current transformer - 3 pcs; Power cables "KBBT-Eur 4*2.5" -0.75km, "KBBT-Eur 10*2.5" -0.75km; "HIB-1 2.5" - 1.0km
24	3000	G-65 Delta SE G-65 DNS0 (1:200) min 0.5 max 100	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/149-AP DN50 PNT6 + OS/66- AP	Power cables "AA15n 14x120 mm ² " 0.2 km	
25	700	FLOWSTIC500 G160 DN100 (1:50) min 5 max250 (Delta SE G-160 DN80 (1:200) min 1.3 max 250 G-160 there is no D100)	Gas metering cabinet	GPRC - 6/8 - 2L - 65x80 - 3/3 MIBN-QA DN10x80 PNT6 + OS/66-AP	Power cables "AA15n 14x120 mm ² " 0.2 km; transformer substation consisting of power transformer-10/0.4 kV 630 KBA; high-voltage load switches - 3 pcs; panel equipment "HIO-90" - 3 pcs;	
26	700	FLOWSTIC500 G160 DN100 (1:50) min 5 max250 (Delta SE G-160 DN80 (1:200) min 1.3 max 250 G-160 there is no D100)	Gas metering cabinet	GPRC - 6/8 - 2L - 65x80 - 3/3 MIBN-QA DN10x80 PNT6 + OS/66-AP	Power cables "AA15n 14x120 mm ² " 0.2 km; transformer substation consisting of power transformer-10/0.4 kV 630 KBA; high-voltage load switches - 3 pcs; panel equipment "HIO-90" - 3 pcs;	
27	200	Delta Compact G-40 DNS0 (1:200) min 0.3 max 65	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/149-AP DN50 PNT6 + OS/66- AP		
28	200	Delta Compact G-40 DNS0 (1:200) min 0.3 max 65	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/149-AP DN50 PNT6 + OS/66- AP		
29	3000	G-65 Delta SE G-65 DNS0 (1:200) min 0.5 max 100	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/149-AP DN50 PNT6 + OS/66- AP		

30	250	G-65 Delta SE G-65 DN50 (1:200) min 0.5 max 100	Gas metering cabinet	GPRC - 5/5 - 2L - 50x65 - 3/3 A/149- AP DN50 PN16 + OS/66- AP		
31	70	Delta Compact G16 DN50 (1:100) min 0.25 max 25	Gas metering cabinet	GPRC - 2/2 - 2L - 25x32 - 3/3/74-AP 3/4"x1/4"		
32	70	Delta Compact G16 DN50 (1:100) min 0.25 max 25	Gas metering cabinet	GPRC - 2/2 - 2L - 25x32 - 3/3/74-AP 3/4"x1/4"		
33	70	Delta Compact G16 DN50 (1:100) min 0.25 max 25	Gas metering cabinet	GPRC - 2/2 - 2L - 25x32 - 3/3/74-AP 3/4"x1/4"		
34	70	Delta Compact G16 DN50 (1:100) min 0.25 max 25	Gas metering cabinet	GPRC - 2/2 - 2L - 25x32 - 3/3/74-AP 3/4"x1/4"		
35	70	Delta Compact G16 DN50 (1:100) min 0.25 max 25	Gas metering cabinet	GPRC - 2/2 - 2L - 25x32 - 3/3/74-AP 3/4"x1/4"		
36	70	Delta Compact G16 DN50 (1:100) min 0.25 max 25	Gas metering cabinet	GPRC - 2/2 - 2L - 25x32 - 3/3/74-AP 3/4"x1/4"		
37	70	Delta Compact G16 DN50 (1:100) min 0.25 max 25	Gas metering cabinet	GPRC - 2/2 - 2L - 25x32 - 3/3/74-AP 3/4"x1/4"		
total	57680					

Note: References to a specific trade mark, firm, source of origin or manufacturer should read in conjunction with "or equivalent"

Gas turbine power units

Equipment of Municipal Enterprise "Kharkiv Heat Networks"			Equipment for connecting through gas distribution networks			Equipment for connecting through power distribution networks	
No.	Electric capacity	Output voltage	Gas meter size*	Metering unit*	Gas pressure regulating cabinet (GPRC)*	Additional compressor unit	Energy equipment
1	54 MW	11 kV	FLAWSIC600 G4000 DN300 (1:1.100) min 65 max 6500 - 2 pcs. per unit	Gas metering cabinet FLAWSIC600 - 2 pcs. per unit	Additional compressor unit and GPRC - 2L - 500x600 - 3/3 FL + MB5 DN250 PN16 + PS/79-2 + OS/80X-BPA are needed	Increase from 0.15 MPa to 0.6 MPa	
2	40 MW	11 kV	FLAWSIC600 G4000 DN300 (1:1.100) min 65 max 6500 - 2 pcs. per unit	Gas metering cabinet FLAWSIC600 - 2 pcs. per unit	Additional compressor unit and GPRC - 2L - 500x600 - 3/3 FL + MB5 DN250 PN16 + PS/79-2 + OS/80X-BPA are needed	Increase from 0.15 MPa to 0.6 MPa	
3	40 MW	11 kV	FLAWSIC600 G4000 DN300 (1:1.100) min 65 max 6500 - 2 pcs. per unit	Gas metering cabinet FLAWSIC600 - 2 pcs. per unit	Additional compressor unit and GPRC - 2L - 500x600 - 3/3 FL + MB5 DN250 PN16 + PS/79-2 + OS/80X-BPA are needed	Increase from 0.15 MPa to 0.6 MPa	
4	40 MW	11 kV	FLAWSIC600 G4000 DN300 (1:1.100) min 65 max 6500 - 2 pcs. per unit	Gas metering cabinet FLAWSIC600 - 2 pcs. per unit	Additional compressor unit and GPRC - 2L - 500x600 - 3/3 FL + MB5 DN250 PN16 + PS/79-2 + OS/80X-BPA are needed	Increase from 0.15 MPa to 0.6 MPa	<p>A 110 kV cell including:</p> <p>110 kV electric gas switch - 1 pc; 110 kV disconnecter - 2 pcs; Surge arresters nonlinear - 3 pcs.; 110 kV current transformer - 3 pcs.;</p> <p>A relay protection and automation (RPA) panel with a microprocessor device and power direction + alarm system - 1 pc.;</p> <p>backup protection panel - 1 pc; control panel - 1 pc; power cables "KBBTEhr 4*2.5" - 2.5km; "KBBTEhr 19*2.5" - 2km; "KBBTEhr 10*2.5" - 2.5km; "KBBTEhr 4*7" - 2km; "AC-240"-2km; blocking relay - 10 pcs.; cable trays - 200 pcs.; external man-machine devices - 10 pcs.; suspended insulation LK-110 kV-100 pcs.; line traps - 10 pcs.;</p> <p>accounting devices - 70 pcs.; terminal block (TM and TV)-31 pcs; current-limiting reactors-6 pcs.; portal racks-8 pcs.; portal rack jumpers- 4 pcs.; line fittings -100v</p>

Note: References to a specific trade mark, firm, source of origin or manufacturer should read in conjunction with "or equivalent"

