ACK 2 Series

Two Pass Hot Water Boilers

Definition of Economy and Durability...
“Leader of Steel Body Boilers”

ACK 2 Series boilers have proven its reliability for years of services in numerous countries worldwide being in most difficult environmental situations.

Fully in compliance with all the norms, ACK2 type boilers offers a 100% trouble free “install and forget” product.

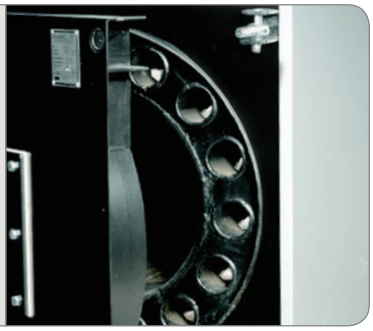
Technical Specifications

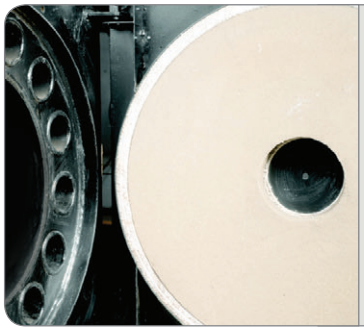
TECHNICAL SPECIFICATION OF ACK2 TYPE BOILERS			Unit	BOILER TYPE												
				ACK2-30	ACK2-40	ACK2-50	ACK2-60	ACK2-70	ACK2-80	ACK2-100	ACK2-120	ACK2-125	ACK2-140	ACK2-150	ACK2-160	ACK2-180
CAPACITY	Nominal Heat Output		kW	35	47	58	70	81	93	116	140	145	163	174	186	209
			kcal/h	30.000	40.000	50.000	60.000	70.000	80.000	100.000	120.000	125.000	140.000	150.000	160.000	180.000
	Direct Efficiency	in full load, 100%	%	92,8	92,4	92,6	92,6	92,2	92,8	92,8	92,8	92,8	92,8	92,9	92,7	92,8
OPERATING CONDITIONS	Operating® Test Pressure		bar	3 - 4,5												
	Stand-by Losses		%	0,16	0,14	0,12	0,12	0,11	0,1	0,1	0,09	0,09	0,09	0,09	0,09	0,08
	Boiler Counter Pressure		mbar	0,17	0,23	0,27	0,6	0,6	0,65	0,7	1	1,02	1,14	1,18	1,26	1,33
	Water Flow Resistance		mbar	0,38	0,63	0,76	0,82	0,95	1,34	1,7	2,2	3	2,4	4	2,7	3
MAIN DIMENSIONS	Total Width (With Cover Plates), A2		mm	650			710				850					
	Length, B		mm	766	866	966	1.015	1.115	1.155	1.170	1.417					1.467
	Boiler Height, H1		mm	695			755				895					
	Stack Size (Outer Diameter), ØD1		mm	150			200				200					
	Flue Gas Exit Connection Height, H4		mm	525			555				625					
	Boiler Empty Weight (without cover plates)		kg	131	156	160	192,5	212,2	232	240	347	353	355	412	412	426
INSTALLATION WATER CONNECTIONS	Water Outlet Connection	Diameter, ØD2	inch	1¼”			1½”			2”	2”			NW 65		NW 65
	Expansion Tank Outlet, D		inch	-			-				-			1¼”		1¼”
	Water Inlet Connection	Diameter, ØD3	inch	1¼”			1½”			2”	2”			NW 65		NW 65
	Expansion Tank Return, G		inch	¾”			¾”		1”		1”					1”
	Filling ® Drain Pipe, ØD4		inch	½”			½”	¾”			¾”					¾”
	Condensation Outlet, ØD5		inch	½”			½”	¾”			¾”					¾”
	Water Content		lt	47	54	65	86	93	91	119	181	177	172	168	168	170

ACK 2 Two Pass Low Temperature Boilers

Special hinge system offers easy installation, maintenance and operation. Double side openability. Independent 4 point adjustable sealing system.

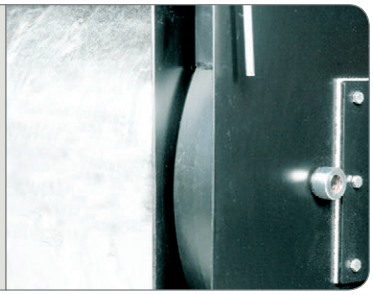
Special hinge system prevents leak damages. If hinge loosenes, front door moves forward by itself.



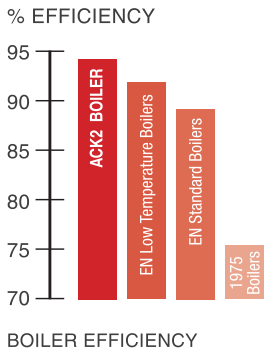


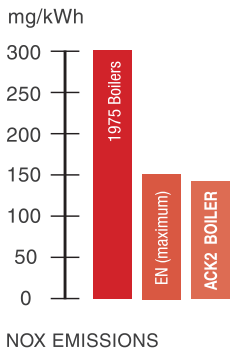
Peak values on front door heat insulation and leak proof valves:
Higher temperature endurance: 1371 °C
Higher durability: 62 kg/cm²
Lower thermal Conduction: 0,33 kcal/hr (C/M)

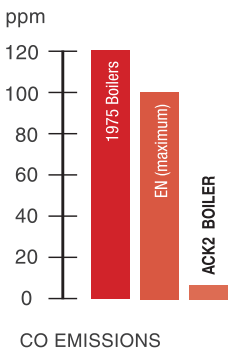
With aluminium folio wrapped high density glass wool insulation, boiler radiation losses and stand by losses are decreased to minimum states.



Perfect natural circulation and maximum heat transfer is obtained as circulation water inlet is located on bottom edge, provides balanced large water galleries inside the boiler.







BOILER EFFICIENCY

Flue gas temperatures are lowered to175-185 °C and %95-96 efficiency values attained based on DIN 4207-8 norms, providing are %3 more efficiency values are achieved the compared to EN minimum efficiency are norms allowing the boiler to be Qualified to bear international "energy the performance" mark.

NOX & CO EMISSIONS

Large combustion chamber allows complete burning along with combustion temperatures, by use of optimal heat transfer surfaces. Burner compatibility in compliance with the norms, allows hazardous gasses such as carbon monoxide, nitrogen oxide to be kept below European norms. These values are all tested in EU accredited labs and have obtained the right to be used in all of the environment sensitive European countries.

Environment Friendly:
No hazardous materials for environment are used in our products nor in the production processes. We ensure our environment friendly policy not only by controlling our processes but also for all our suppliers by demanding them to provide necessary certificates for their products.

Long Service Life:
All Certified materials, balanced and reliable design on heat expansion points, certified automated welding methods, design & production are in European norms and approved automatic resource management methods offer longer service times then ever.

Burner Compatibility:
Thanks to our versatile design, special high pressure and long ballast burners are not required. High efficiency is attained with stable, smooth and silent combustion by all burners that comply with EN676 and EN267.

Aesthetic Appearance:
Boiler cover jackets are protected against corrosion and external factors by 3 features:
1- Hot dipped Galvanized (GALVATITE®) steel material.
2- Protective double layer special organic undercoat plating.
3- Special organic paint in front, with top layer protective and aesthetic plating. (COLORCOAT®)

Top Rated in Steel Boilers Category

1. FLAME TURBULATING COMBUSTION CHAMBER
Most efficient burning is attained by Forcing Flames & Combustion gases to flow back from the end tip of the chamber. This way, unburned gases meets the burner flame again and fully burns, preventing the high emission gas generation.

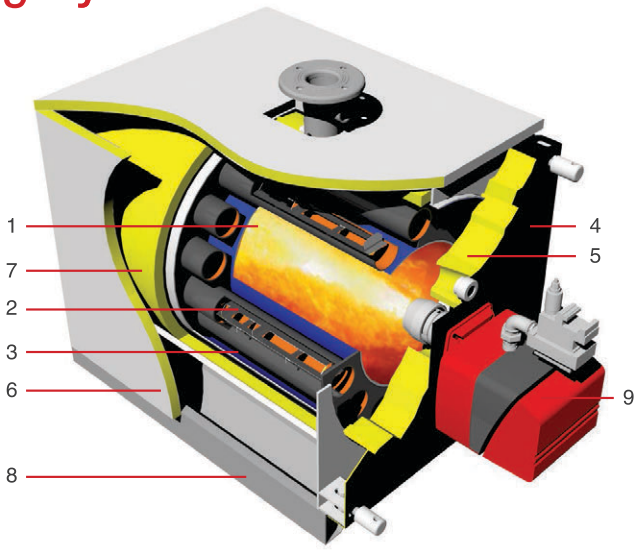
2.GAS TUBES & TURBULATORS
Stainless steel turbulators placed inside the tubes force turbulenced flow in gas flow lines. This increases heat transfer rates to the heating water through the tube walls. Flue gas temperatures decreases to desired levels, allowing optimum heating to be obtained.

3.BOILER BODY
Cylindrical, high pressure endurant, entirely welded monoblock steel body. Homogeneous heat transfer points balances possible heat expansions offering long service life.

4.REMOVABLE FRONT DOOR
Doors can be opened in both directions. Allows easy installation, maintenance and cleaning of boiler. Special hinge system allows 4 independent edges to be adjusted separately and complete sealing is obtained.

This system prevents, possible damages to insulation elements & door parts, by door moving front by itself.

5. FRONT DOOR INSULATON
High temperature resistant reflective material is used for insulation. Flexible thick gaskets provide long service life.

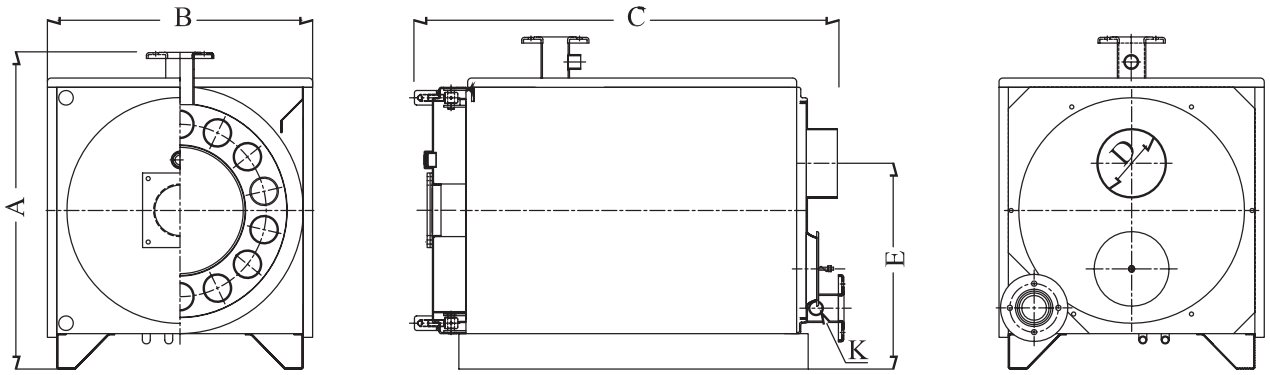


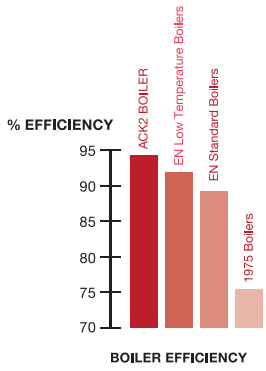
6. BOILER JACKETS
Aesthetic and modern appearances by metallic grey jackets with hot dipped galvanized and double layer protective painting.

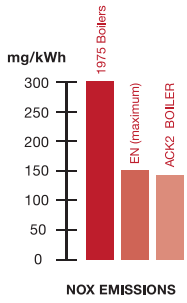
7. BODY INSULATION
Perfect isolation applied to the body minimizes stand by loses.

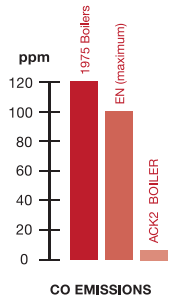
8. BASES
Single piece durable steel welded stands along the boiler allow the boiler to be moved on pipes for transportation pursoses.

9. GAS / DIESEL FUEL BURNER
Long blast tubed and high-pressure burners are not required. Compatible with every burner complies with the norms.









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Technical Specifications

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				ACK2-200	ACK2-250	ACK2-300	ACK2-350	ACK2-400	ACK2-500	ACK2-600	ACK2-700	ACK2-800	ACK2-900	ACK2-1000	ACK2-1250	ACK2-1500	ACK2-1750	ACK2-2000	ACK2-2500	ACK2-3000
CAPACITY	Nominal Heat Output		kW	233	291	349	407	465	581	698	814	930	1.047	1.163	1.453	1.744	2.035	2.326	2.907	3.488
			kcal/h	200.000	250.000	300.000	350.000	400.000	500.000	600.000	700.000	800.000	900.000	1.000.000	1.250.000	1.500.000	1.750.000	2.000.000	2.500.000	3.000.000
	Direct Efficiency	in full load, 100%	%	93,0	93,1	93,1	93,1	93,0	93,0	93,1	93,1	93,2	92,6	92,0	90,5	89,0	89,0	89,0	90,0	90,0
OPERATING CONDI-TIONS	Operating & Test Pressure		bar	4 - 6											4 - 6				4 - 6	
	Stand-by Losses		%	0,32	0,28	0,27	0,25	0,24	0,17	0,17	0,16	0,16	0,16	0,16	0,15	0,15	0,15	0,15	0,15	0,15
	Boiler Counter Pressure		mbar	1,52	1,78	1,46	1,64	1,6	1,6	1,82	2,3	2,56	2,8	3	3,68	3,83	4,75	4,93	5,02	4,46
	Water Flow Resistance		mbar	12	14	14	15	15	16	16	18	20	22	22	28	31	35	46	48	50
MAIN DI-MENSIONS	Total Width (With Cover Plates), A2		mm	923		1.040			1.240		1.450				1.550		1.650		1.890	2.050
	Length, B		mm	1.425		1.734		1.964	2.005		2.400				2.800	3.100	3.000	3.268	3.300	3.670
	Water Connections Height, H3		mm	1.104		1.305			1.511		1.700				1.810		1.918		2.171	2.325
	Stack Size (Outer Diameter), ØD1		mm	250		300			400		450				500		500		600	600
	Flue Gas Exit Connection Height, H4		mm	744		821			956		1.045				1.123		1.277		1.406	1.480
	Boiler Empty Weight (without cover plates)		kg	507	534	829	860	951	1.274	1.348	1.820	1.877	1.934	2.025	2.703	3.026	3.455	3.743	4.864	5.924
INSTALL ATION WATER CONNEC-TIONS	Water Outlet Connection	Diam-eter, ØD2	inch	NW 65		NW 80			NW 100		NW 125				NW 150		NW 150		NW 200	NW 200
	Expansion Tank Outlet, D		inch	1¼"	1½"	1½"	2"		2"		2½"				2½"	3"	3"	4"	4"	4"
	Water Inlet Connection	Diam-eter, ØD3	inch	NW 65		NW 80			NW 100		NW 125				NW 150		NW 150		NW 200	NW 200
	Expansion Tank Return, G		inch	1¼"		1¼"			1½"		2"				2½"		2½"		2½"	3"
	Filling & Drain Pipe, ØD4		inch	¾"		¾"			¾"		1"				1"		1"		1"	1"
	Condensation Outlet, ØD5		inch	¾"		¾"			¾"		¾"				¾"		¾"		¾"	¾"
	Water Content		lt	194	170	293	269	315	661	606	988	947	947	882	1.370	1.578	1.652	1.813	2.568	3.379