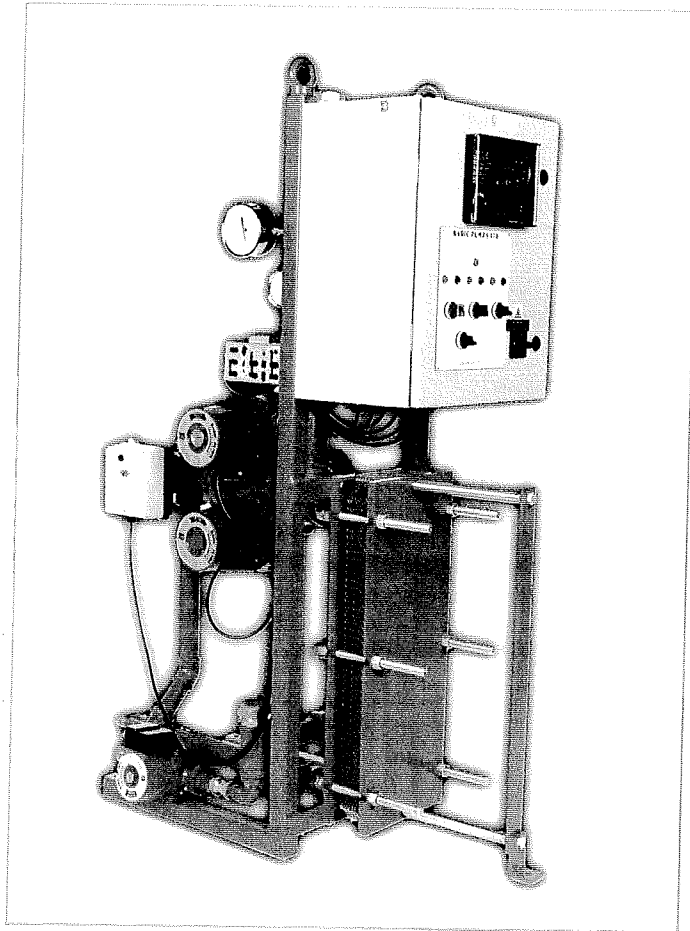
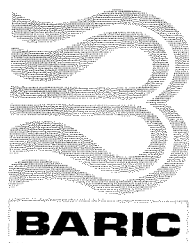


Platepak

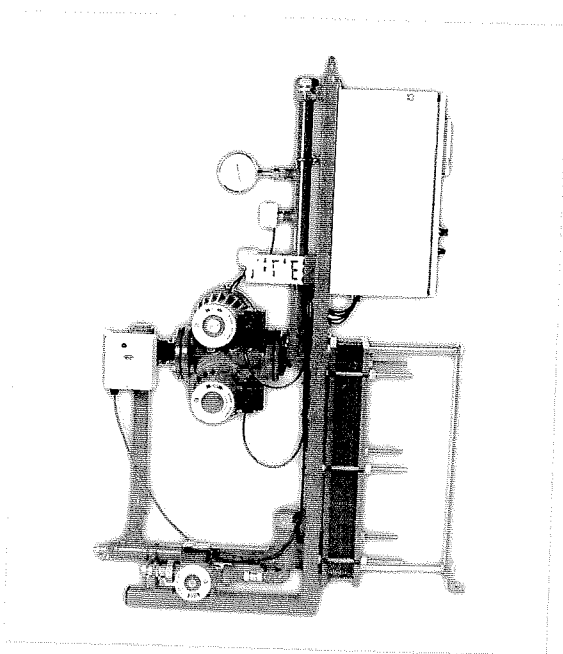


hot water
plate heat
transfer system



Fluid handling solutions for industry

The Platepak water heater package provides instant domestic hot water at constant temperature, using spare power from the heating boiler. Your local sales office or technical representative will be happy to help provide the right solution from a broad range of sizes, options and accessories.



Benefits

- Constant water temperature
- Small size, especially compared to a calorifier
- Quick response to varying water demand
- Reduced heat loss compared to stored water systems
- Wide range of options and accessories
- BMS compatibility
- Easy installation with optimized design

Specification

Controls

Provided by an IP54 cubicle incorporating:

- Door interlocked isolator
- Control and motor circuit fuses
- Control unit
- Primary pump starter
- Secondary circulating pump starter (when such pump fitted)
- Test / off / auto switches
- Duty / selector switch
- Motor starter(s)
- Run and tripped lamps
- Panel energised lamp
- Common volt free contact for high temperature alarm and pump tripped.

Primary Pumps:

- Thermopak single or twin head glandless pump with cast iron casing, plastic impeller and IP44 multispeed motor.
- Linepak or Twinline glanded pump with cast iron casing, gunmetal impeller, self adjusting mechanical seal and IP55 TEFC motor.

Secondary Pumps:

- Thermopak GS all gunmetal glandless pump with IP44 multispeed motor.
- Linepak glanded all gunmetal pump with IP55 TEFC motor.

Four Port Valve:

- Cast iron rotary plug type with 24/240 volt actuator.

Heat Exchanger:

- 316 stainless steel plates with nitrile gaskets.

Primary pipework:

- Carbon steel to BS 1387

Secondary pipework:

- Copper tube to BS 2871 table X.

Operating Limits

Pressure:

Maximum 6 bar
Buffer storage vessel (option) 1.0 or 1.6 or 2.6 bar

Temperature:

Primary flow temperatures up to 120°C
Secondary flow temperatures up to 60°C
Ambient temperature between 5 and 45°C

Options

Duty pump or Duty / standby pump
Single or three phase supply

Optional accessories

Secondary circulation pump - supplied loose or fitted to set
Provides return water circulation in domestic water system

Buffer copper cylinder - supplied loose or packaged on baseplate with Platepak

Enables the unit to meet short term peak demand loads.

Night set back timer

Provides lower water temperature at night, reducing running costs.

Volt free contacts for high temperature.

Multi function controller adds to standard specification:

LCD display with key pad

Pump cyclic timer

Pump hours run meters

Valve position indication

Visual / audible alarm covering high temperature

High temperature override

Remote enable from BMS

Alarm for pump failure

Timed programmes for primary pump, secondary pump on a weekly or annual basis

See
Cap
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det

DIMENSION DATA

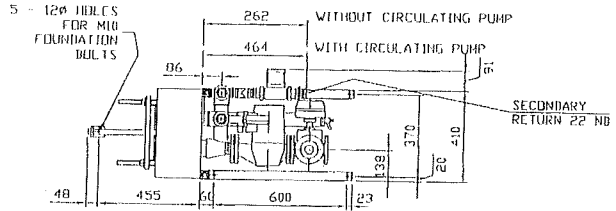
**ALL DIMENSIONS SHOWN IN MM UNLESS STATED, DO NOT SCALE.
LARGER PUMP SET DRAWINGS AVAILABLE ON REQUEST.**

Ap

GENERAL ARRANGEMENT GX12 HEAT EXCHANGERS WITH THERMOPAK TYPE PRIMARY PUMPS

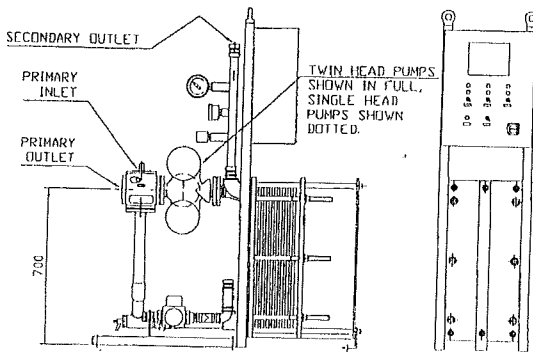
MODEL	DIMENSION DETAILS					PRIMARY INLET & OUTLET	SECONDARY OUTLET	SECONDARY FEED	MAX. WT. KG.
	'A'	'B'	'C'	'D'	'E'				
P82301221	1186	484	85	132	305	40	40	40	225
P82301217	50	.	.	222
P82301223	.	522	95	.	.	.	.	.	261
P82301227A	263
P8211225	262
P120301219A	258
P120301221B	259
P82301227	.	.	114	313	.	50	50	.	263
P82301231	266
P82301235	270
P120301219	257
P120301221A	259
P120301223A	261

PRIMARY CONNECTIONS BS4504 PN 6 FLANGES
SECONDARY CONNECTIONS COMPRESSION FITTINGS FOR TABLE X TUBE



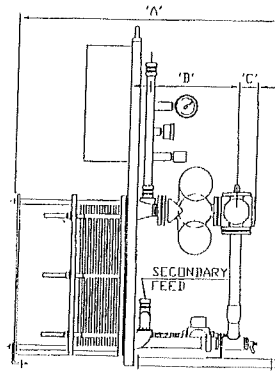
PLAN VIEW

WORKING SPACE
LEAVE 600 ON EACH
SIDE OF SET FOR
ACCESS.

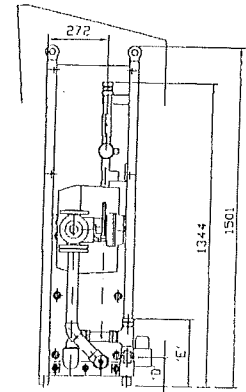


LEFT SIDE ELEVATION

FRONT ELEVATION



RIGHT SIDE ELEVATION



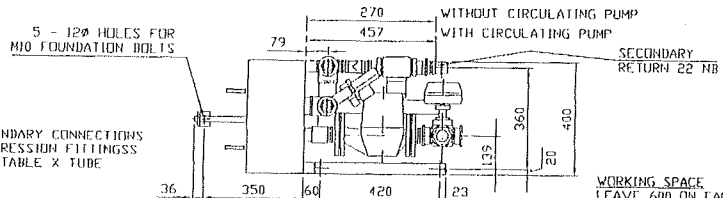
REAR ELEVATION

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GENERAL ARRANGEMENT GC30 HEAT EXCHANGERS WITH THERMOPAK TYPE PRIMARY PUMPS

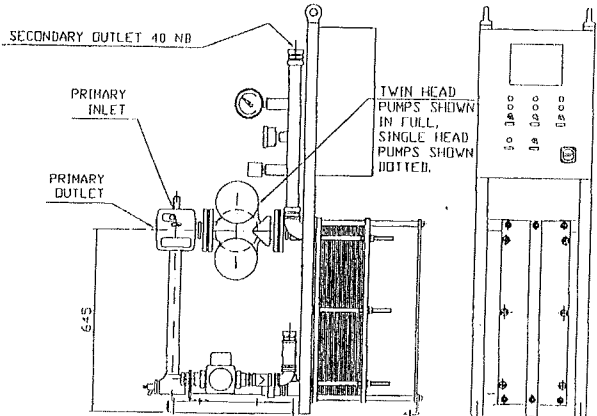
MODEL	DIMENSION DETAILS			PRIMARY INLET & OUTLET	MAX. WT. KG.
	'A'	'B'	'C'		
P120303006A	895	433	55	1 1/2" BSP	137
P120303004	.	.	.	.	136
P8213006B	.	.	.	.	137
P82303010	.	.	.	.	139
P82303006	.	.	.	.	137
P120303010A	964	474	58	1" BSP	139
P82303014	.	.	.	.	153
P120303020	980	487	70	1 1/4" BSP	163
P8213016A	.	.	.	.	143
P82303028	.	.	.	.	168
P82303022	.	.	.	.	159
P120303032	960	460	75	1 1/2" BSP	171
P120303024	.	.	.	.	166
P8213028A	.	.	.	.	160

SECONDARY CONNECTIONS COMPRESSION FITTINGS FOR TABLE X TUBE



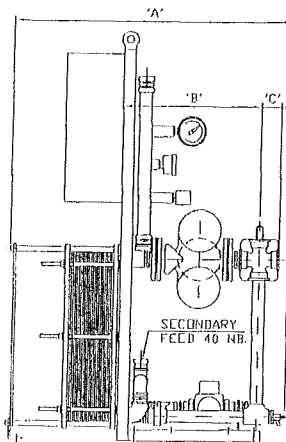
PLAN VIEW

WORKING SPACE
LEAVE 600 ON EACH
SIDE OF SET FOR
ACCESS.

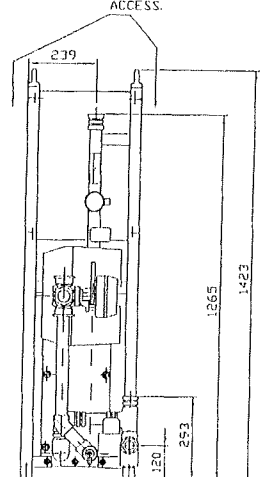


LEFT SIDE ELEVATION

FRONT ELEVATION



RIGHT SIDE ELEVATION



REAR ELEVATION

Selection

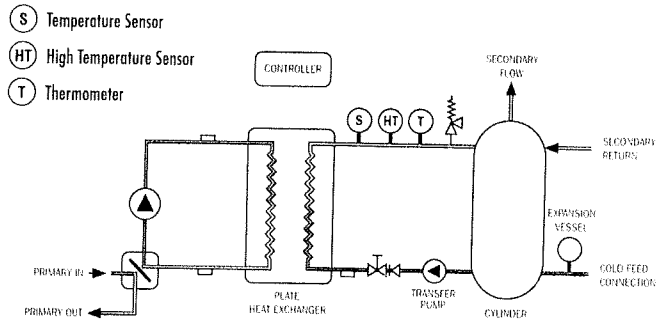
Calculate the maximum secondary hot water flow rate from the application table below. If "loading units" are utilised, read the equivalent from graph A. Next, if the boiler flow temperature is 82°C, determine the unit from the selection tables. The heat load required

arises from raising mains water from 10°C to 60°C. Please note that the return temperature to the boiler circuit is 52°C. Please contact Baric Pumps for an 11°C differential selection or any other primary or secondary temperature combination

Application Table

Appliance	Loading Units	Recommended Minimum Rate of Flow L/S
Wash Basin	1.1/2	0.15
Bath	10	0.30
Sink	3 - 5	0.20
Shower	3	0.12
Public Bath	22	0.60
Lab Sink	1	0.08

Combined Storage Application

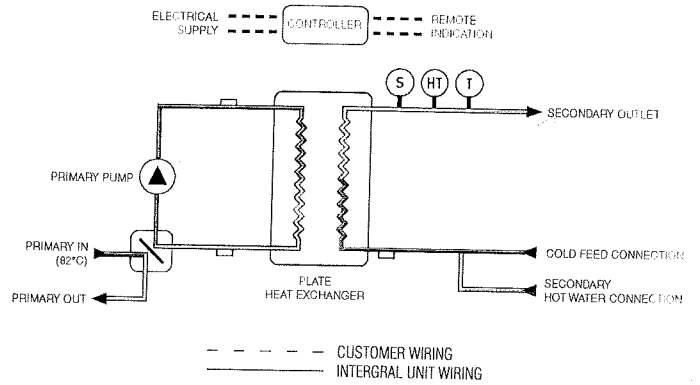


Principle of Operation

The primary and secondary water circuits are connected to the unit in an arrangement where they counterflow through the plate heat exchanger. This transfers heat from the primary source, increasing the temperature in the secondary flow.

The proportional and integral controller maintains a near constant temperature in the secondary hot water, as demand varies, by modulating the incoming flow of primary water through the unit, via the four port valve.

The four port valve mixes the cooled primary hot water leaving the plate heat exchanger with the incoming hot water from the boiler circuit, to give a controlled primary inlet temperature into the unit.



Graph A - Design Flow Rate in L/S

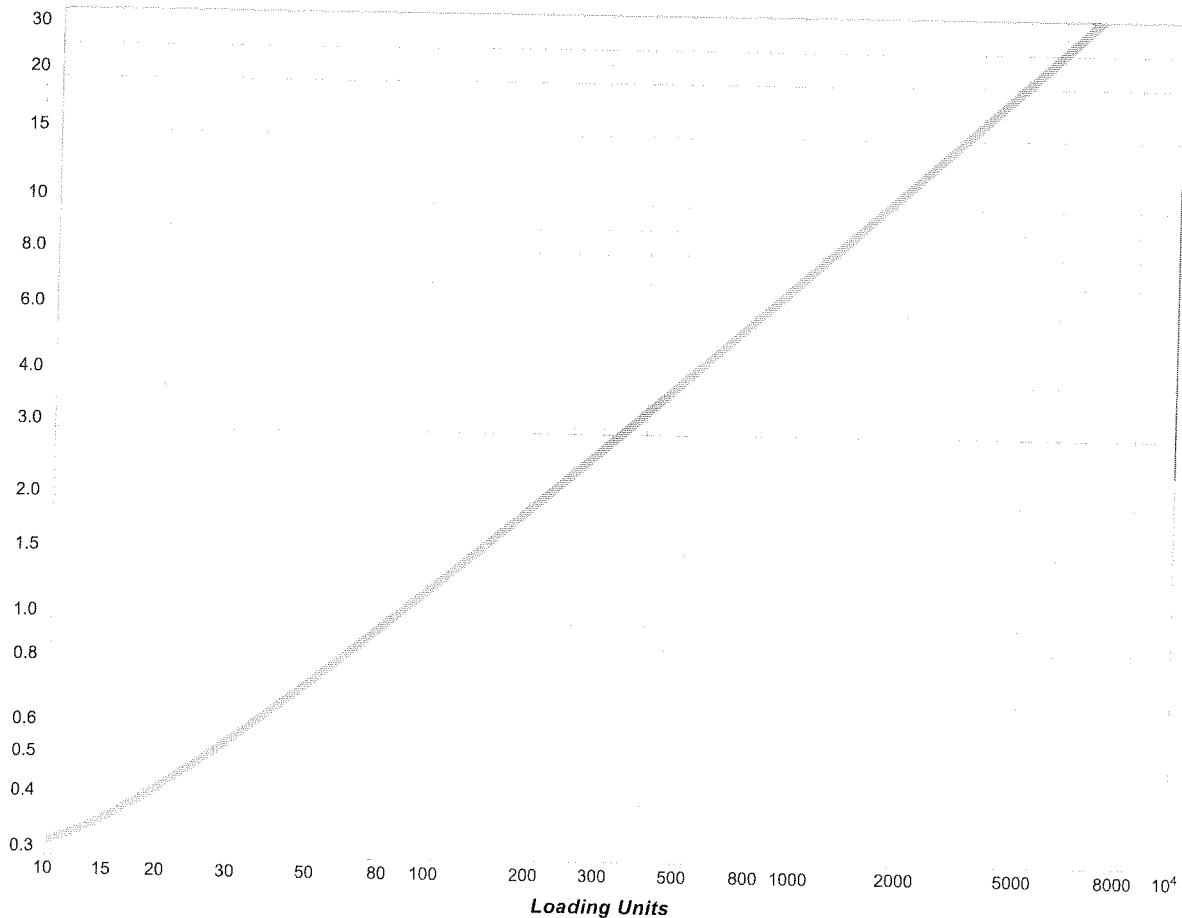


Table 1 - Primary 82°C / 52°C, Secondary 10°C / 60°C

UNIT SIZE	EXCHANGER SIZE / NO. PLATES	PRIMARY FLOW - L/S @ m. Hd.	SECONDARY FLOW - L/S	SECOND RESISTANCE kpa	OUTPUT HEAT LOAD KW	PRIMARY PUMP TYPE/SIZE/(POLES) IMPELLER DIA		
						SINGLE	TWIN	POWER KW
S82301261	GX-12/61	11.973-16.1	7.179	23	1500	L82(2) 125	TL82(2) 130	5.5
S82301257	GX-12/57	11.174-14.8	6.701	22	1400	L82(2) 120	TL82(2) 125	5.5
S82301253	GX-12/53	10.376-13.4	6.222	22	1300	L82(2) 115	TL82(2) 120	4.0
S82301249	GX-12/49	9.578-6.3	5.743	22	1200	L82(2) 170	TL82(4) 170	1.1
S82301245	GX-12/45	8.676-5.5	5.202	21	1087	L82(2) 160	TL82(4) 160	1.1
S82301241	GX-12/41	8.173-4.9	4.901	23	1024	L82(2) 155	TL82(4) 155	1.1
S82301239	GX-12/39	7.423-4	4.451	21	930	L82(2) 145	TL82(4) 145	0.75
P82301235	GX-12/35	6.673-5.5	4.001	21	836	SN50-120	ZSN50-120	1.1
P82301231	GX-12/31	5.922-4.6	3.551	21	742	SN50-120	ZSN50-120	1.1
P82301227	GX-12/27	5.148-6.4	3.087	21	645	SN50-120	ZSN50-120	1.1
P82301227A	GX-12/27	4.669-3.1	2.8	17	585	SN50-70	ZSN50-70	0.63 lph
P82301223	GX-12/23	4.174-5.3	2.503	19	523	SN50-70	ZSN50-70	0.63 lph
P82301221	GX-12/21	3.672-4.3	2.202	18	460	SN40-120	ZSN40-120	0.59
P82301217	GX-12/17	2.921-3	1.752	18	366	SN40-120	ZSN40-120	0.59
P82303028	GC-30/28	2.418-4.8	1.45	10	303	SN40-120	ZSN40-120	0.59
P82303022	GC-30/22	1.916-3	1.149	10	240	SN40-60	ZSN40-60	0.38
P82303014	GC-30/14	1.173-1.7	0.704	10	147	SN40-60	ZSN40-60	0.38
P82303010	GC-30/10	0.67-2.5	0.402	7	84	N32-80	ZN32-60	0.24 lph
P82303006	GC-30/6	0.167-0.85	0.101	4	21	N32-80	ZN32-60	0.24 lph

Table 2 - Primary 82°C / 71°C, Secondary 10°C / 60°C

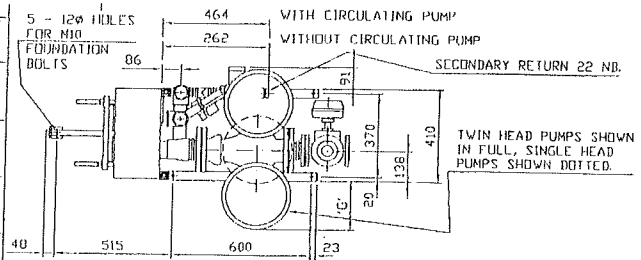
UNIT SIZE	EXCHANGER SIZE / NO. PLATES	PRIMARY FLOW - L/S @ m. Hd.	SECONDARY FLOW - L/S	SECOND RESISTANCE kpa	OUTPUT HEAT LOAD KW	PRIMARY PUMP TYPE/SIZE/(POLES) IMPELLER DIA		
						SINGLE	TWIN	POWER KW
S82112650	GC-26/50	32.609-11.7	7.179	2	1500	L100(2) 130	TL100(2) 130	11.0
S82112646	GC-26/46	30.435-9.7	6.701	2	1400	L100(2) 130	TL100(2) 130	11.0
S82112642	GC-26/42	28.262-8.6	6.222	2	1300	L100(2) 130	TL100(2) 130	11.0
S82112638	GC-26/38	26.088-7.1	5.743	2	1200	L100(4) 179	TL100(4) 170	3.0
S82112634	GC-26/34	23.631-6.75	5.202	2	1087	L100(4) 179	TL100(4) 170	3.0
S82112632	GC-26/32	22.261-6.56	4.901	2	1024	L100(4) 165	TL100(4) 170	2.2/3.0
S82112630	GC-26/30	20.218-6.26	4.451	2	930	L100(4) 165	TL100(4) 165	2.2
S82112626	GC-26/26	18.174-5.84	4.001	2	836	L100(4) 165	TL100(4) 165	2.2
S82111263	GX-12/63	16.131-6.3	3.551	5	742	L82(2) 120	TL82(2) 120	4.0
S82111253	GX-12/53	14.022-5.3	3.087	6	645	L82(2) 115	TL82(2) 115	4.0
S82111263A	GX-12/63	12.718-4.1	2.8	3	585	L82(2) 100	TL82(2) 100	3.0
S82111255	GX-12/55	11.370-10.5	2.503	3	523	L82(2) 112	TL82(2) 112	3.0
S82111247	GX-12/47	10.000-7.8	2.202	4	460	L82(2) 105	TL82(2) 105	3.0
S82111237A	GX-12/37	7.957-4.9	1.752	4	366	L82(4) 155	TL82(4) 155	1.1
S82111231B	GX-12/31	6.587-4	1.45	4	303	L82(4) 135	TL82(4) 135	0.75
P82111225	GX-12/25	5.218-6.24	1.149	1	240	SN50-120	ZSN50-120	1.1
P82113028A	GC30/28	3.196-4.24	0.704	1	147	SN40-120	ZSN40-120	0.59
P82113016A	GC30/16	1.826-1.82	0.402	2	84	SN40-60	ZSN40-60	0.38
P82113006B	GC30/6	0.457-1.7	0.101	1	21	N32-80	ZN32-60	0.24 lph

Table 3 - Primary 120°C / 90°C, Secondary 10°C / 60°C

UNIT SIZE	EXCHANGER SIZE / NO. PLATES	PRIMARY FLOW - L/S @ m. Hd.	SECONDARY FLOW - L/S	SECOND RESISTANCE kpa	OUTPUT HEAT LOAD KW	PRIMARY PUMP TYPE/SIZE/(POLES) IMPELLER DIA		
						SINGLE	TWIN	POWER KW
S120301243	GX-12/43	11.861-16.1	7.179	36	1500	L82(2) 125	TL82(2) 130	5.5
S120301241A	GX-12/41	11.070-14.8	6.701	36	1400	L82(2) 120	TL82(2) 125	5.5
S120301237	GX-12/37	10.279-13.4	6.222	35	1300	L82(2) 115	TL82(2) 120	4.0
S120301235A	GX-12/35	9.489-6.3	5.743	36	1200	L82(4) 170	TL82(4) 170	1.1
S120301231A	GX-12/31	8.595-5.5	5.202	33	1087	L82(4) 160	TL82(4) 160	1.1
S120301229	GX-12/29	8.097-4.9	4.901	34	1024	L82(4) 155	TL82(4) 155	1.1
S120301227B	GX-12/27	7.354-4	4.451	35	930	L82(4) 145	TL82(4) 145	0.75
P120301223A	GX-12/23	6.610-5.5	4.001	34	836	SN50-120	ZSN50-120	1.1
P120301221A	GX-12/21	5.867-4.6	3.551	36	742	SN50-120	ZSN50-120	1.1
P120301219	GX-12/19	5.100-6.4	3.087	34	645	SN50-120	ZSN50-120	1.1
P120301221B	GX-12/21	4.626-3.1	2.8	20	585	SN50-70	ZSN50-70	0.63 lph
P120301219A	GX-12/19	4.135-5.3	2.503	22	523	SN50-70	ZSN50-70	0.63 lph
P120303032	GC-30/32	3.637-4.3	2.202	10	460	SN40-120	ZSN40-120	0.59
P120303024	GC-30/24	2.894-3	1.752	11	366	SN40-120	ZSN40-120	0.59
P120303020	GC-30/20	2.396-4.8	1.45	11	303	SN40-120	ZSN40-120	0.59
P120303016	GC-30/16	1.898-3	1.149	11	240	SN40-60	ZSN40-60	0.38
P120303010A	GC-30/10	1.162-1.7	0.704	13	147	SN40-60	ZSN40-60	0.38
P120303006A	GC-30/6	0.664-2.5	0.402	16	84	N32-80	ZN32-60	0.24 lph
P120303004	GC-30/4	0.166-0.85	0.101	15	21	N32-80	ZN32-60	0.24 lph

GENERAL ARRANGEMENT GX12 HEAT EXCHANGERS WITH LINEPAK TYPE PRIMARY PUMPS

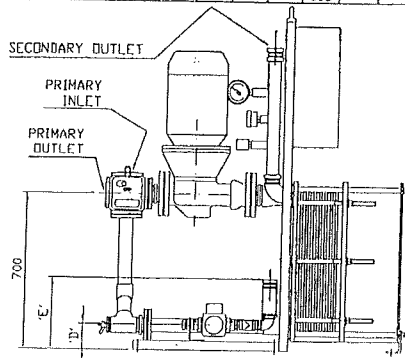
MODEL	DIMENSION DETAILS						PRIMARY INLET & OUTLET	SECONDARY OUTLET	SECONDARY FEED	MAX Wt KG
	'A'	'B'	'C'	'D'	'E'	'F'				
P82301239	1410	780	105	113	317	515	50	50	352	
P82301241	"	"	"	"	"	"	"	"	353	
P82301245	"	"	"	"	"	"	"	"	356	
P82301249	"	"	"	"	"	"	"	"	359	
P82301253	1348	724	95	"	"	217	"	"	377	
P120301237	"	"	"	"	"	"	"	"	365	
P120301241A	"	"	"	"	"	"	"	"	383	
P120301243	"	"	"	"	"	"	"	"	391	
P120301227B	1410	780	105	"	"	168	"	"	342	
P120301229	"	"	"	"	"	"	"	"	344	
P120301231A	"	"	"	"	"	"	"	"	346	
P120301235A	"	"	"	"	"	"	"	"	349	
P82301257	1648	724	135	"	"	815	217	"	395	
P82301261	"	"	"	"	"	"	"	"	398	
P8211231B	1413	780	105	132	303	515	65	40	349	
P8211237A	"	"	"	"	"	"	"	"	353	
P8211247	"	"	"	"	"	"	"	"	371	
P8211255	"	"	"	"	"	"	"	"	377	
P8211263A	1823	879	135	113	317	815	80	"	393	
P8211253	1520	"	"	"	"	815	"	50	385	
P8211263	1823	"	"	"	"	815	"	50	393	



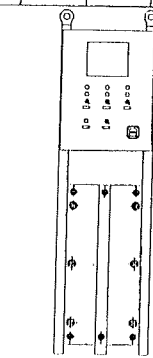
PLAN VIEW

PRIMARY CONNECTIONS BS4504 PN 6 FLANGES
SECONDARY CONNECTIONS COMPRESSION FITTINGS FOR TABLE 'X' TUBE.

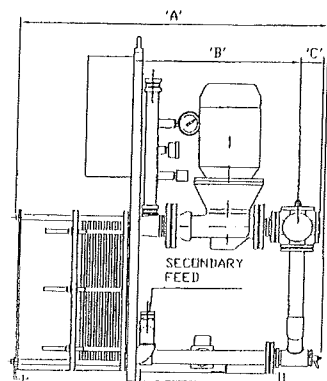
WORKING SPACE
LEAVE 600 ON EACH
SIDE OF SET FOR
ACCESS.



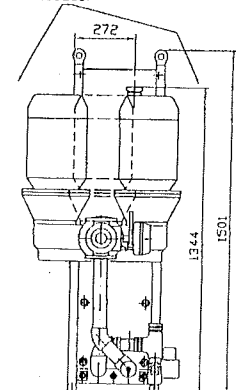
LEFT SIDE ELEVATION



FRONT ELEVATION



RIGHT SIDE ELEVATION

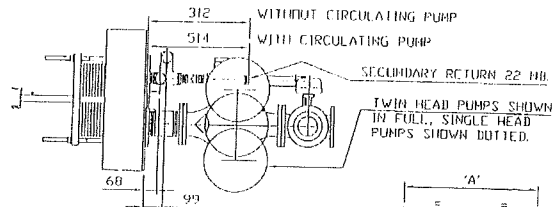


REAR ELEVATION

GENERAL ARRANGEMENT GC26 HEAT EXCHANGERS WITH LINEPAK TYPE PRIMARY PUMPS

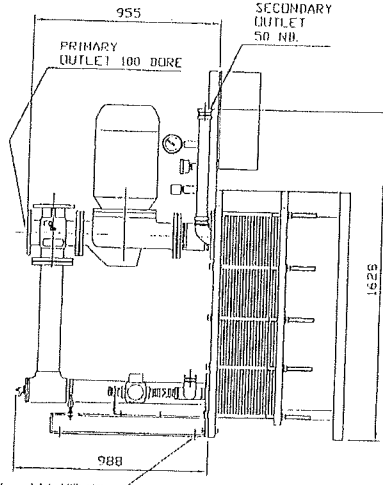
MODEL	DIMENSION 'A'	MAX Wt KG
P82112626	400	685
P82112630	"	691
P82112632	"	694
P82112634	"	697
P82112638	"	703
P82112642	700	840
P82112646	"	846
P82112650	"	852

PRIMARY CONNECTIONS BS4504 PN 6 FLANGES.
SECONDARY CONNECTIONS COMPRESSION FITTINGS FOR TABLE 'X' TUBE.

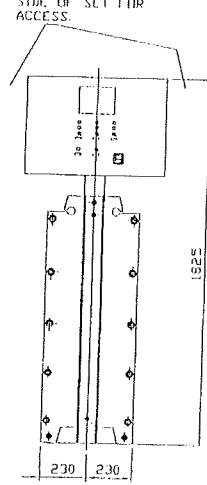


PLAN VIEW

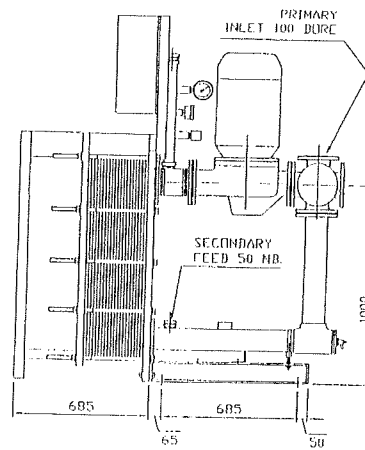
WORKING SPACE
LEAVE 600 ON EACH
SIDE OF SET FOR
ACCESS.



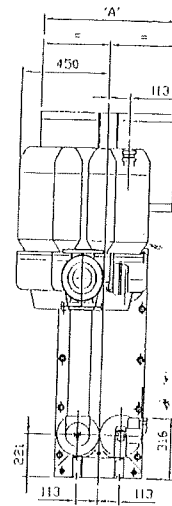
LEFT SIDE ELEVATION



FRONT ELEVATION



RIGHT SIDE ELEVATION



REAR ELEVATION

Baric Pumps Limited

Head Office: PO Box 51 Aines Street Manchester M12 5UF Tel: 0161 230 6744 Fax: 0161 230 6752

London Office: PO Box 469 Kingston-U-Thames KT1 2YH Tel: 0181 336 2828 Fax: 0181 336 0808

Email: sales@baric-pumps.com Website: www.baric-pumps.com

