智慧型 **HCR** System Pressurized Storage Tank Not Required

可變速系列 Variable Speed Drive

Constant Pressure Booster Pump with Variable Speed Drive

水井牌 Luck

Luckpump

- Inverter PWN control
- Stainless steel pump
- Wetted ends are stainless steels
- Temperature range from -15°C to 120°C
- Protection IP:54
- ISO 9001 CE

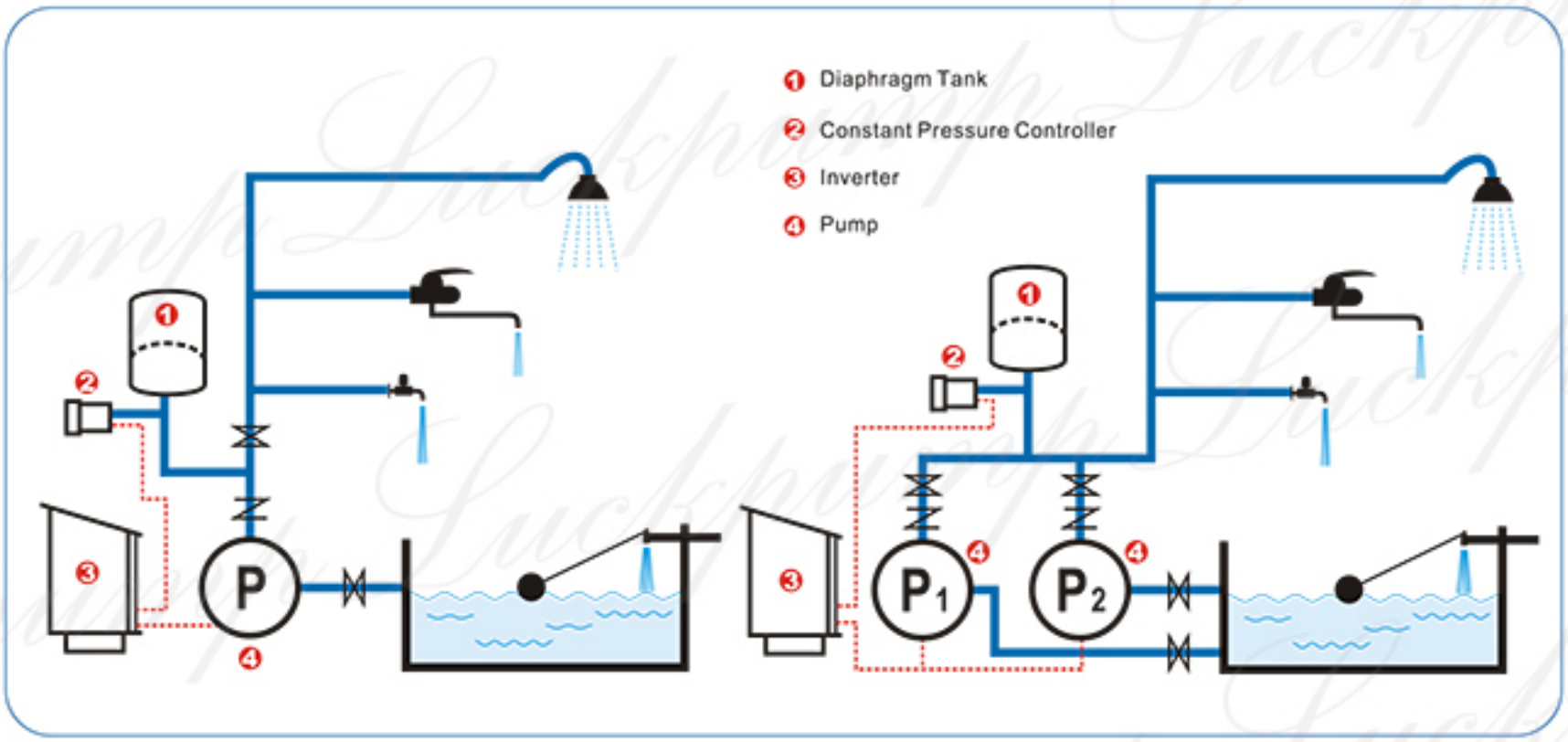
ISO 9001

ROC Patent No.119618 台灣專利新型第 119618 號

U.S. Patent No.5941690 美國專利第 5941690 號

HCR Constant Pressure Booster Pump w/Variable Speed Drive

SYSTEM ARRANGEMENT



FUNCTION

The controller senses the pressure change in the water supply piping through the signals detected by pressure transmitter, and compares with the preset pressure; then the controller will send continuous signals (DC 0-10V) to inverter, for adjusting its frequency (0-60Hz) accordingly. The Motor speed varies according to the frequency converted thus maintaining the set pressure.

CONSTANT PRESSURE BOOSTER PUMP WITH VARIABLE SPEED DRIVE

The system includes : Pump, motor, inverter, Constant Pressure Controller, interface, control panel, pressure tank etc. The system installs the CV, GV and Header on the same base to integrate the system as an operationable system.

SPECIFICATIONS

1. QUANTITY:____m^3/H
2. SET PRESSURE:____KG/Cm^2
3. OPERATION MODE :
4. PUMP MOTOR :____HP/KW
5. VOLTAGE:____3 ϕ /220V 380V
6. SUCTION:____mm
   DISCHARGE:____mm
7. MAIN PIPING DIA.:____mm

HCR Constant Pressure Booster Pump w/Variable Speed Drive

OPERATION MANNAL

CONSTANT PRESSURECONCONTROLLER

SPECIFICATIONS

- Pressure Transmitter:
  Input Voltage DC 20-24V,
  output voltage DC 0-10V,
  amperage110mA,
  pressure range 0-14KG/Cm^2,
  pressure stability 96% FSO,
  digital display:
- Adjustable Pressure Setting :
  A wide range 25 turns of pressure settings is available through the use of the Luck Control System. The desired pressure is easily established by means of a " set screw "; clock-wise increases pressure, counter clock-wise decreases the pressure.
- CPU maintains and compensates the pressure.
- PROTECTION INDEX IP 68 water and dust proof.

FEATURES

- WATER IN NORMAL USE,
  The controller will start the motor at 90 % of pre-set pressure in order to boost/maintain the desired pressure.
- MOTOR STOP MODE,
  When the water tap is turned off, the Green Indicator Light turns on, showing the controller is in the " MOTOR STOP " mode, if the mode lasts 20 seconds the motor will stop automatically.

- LEAKAGE DETECTION,
  The Controller continuously monitors water pressure and if pressure is under 80 % of the pre-set level (due to leaks), it will start the pump to compensate for the pressure.
- NO WATER AND LOST PRESSURE PROTECTION
  When the motor is at full speed and cannot achieve at least 60 % of the pre-set pressure, then there is either (a) no incoming water supply or (b) the impeller has failed. The Red indicator light illuminates and, after 20 seconds, the motor will automatically stop. Turn off the electricity, solve the problem and restart after 15 seconds.

All the above mentioned functions integrate in one unit, protected by metal shell, simplify the connection and, no magnetic wave interference.

INTERFACE CONTROLLER

FEATURES

- With DC 24V inter power supply controller.
- One input, two outputs for inverter to control variable motor speed.
- Automatically monitors the water pressure, enables the pump system to operate alternatively and parallelly, the Controller always starts the primary pump. Then, after 60 seconds, if the primary pump is not sufficient to reach the pre-set pressure level, the secondary pump is brought on-line by the controller. (This process continues depending upon the number of pumps in the system.)
- When water consumption is reduced, the controller will instruct the motor to decrease motor speed or bring the secondary pump off-line.
- If any pump failed, will alter to other pump automatically.
- The designated Primary pump is altered every 4 hours by the controller, That is, the secondary pump becomes the designated primary pump, and so on; therefore reducing. Individual motor use and extending motor life.
- Constant pressure in the piping, Quiet running smooth speed changing, No water hammer.

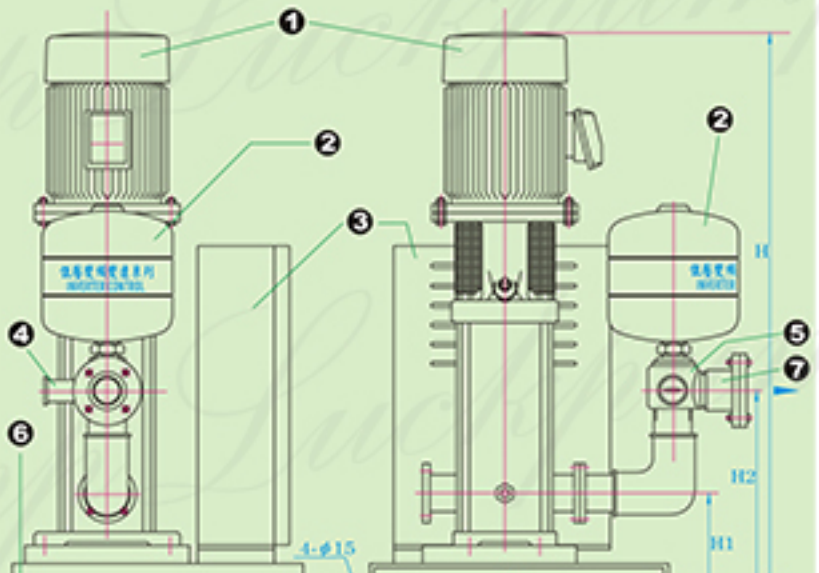
BENEFITS:

- Space saving:
  Use vertical multi-stage pumps, small pressure tank.
- Simple wiring, perfect production functions:
  One pump one inverter, soft start, soft stop, over-load, over-heat, high/low voltage, reverse rotation, sudden power off...etc. protection.
- Ideal control box construction:
  Dust free, no ventilation fan, energe saving.
- Single chip, single point, single part control:
  Minimize the defect possibility, easy maintainance.

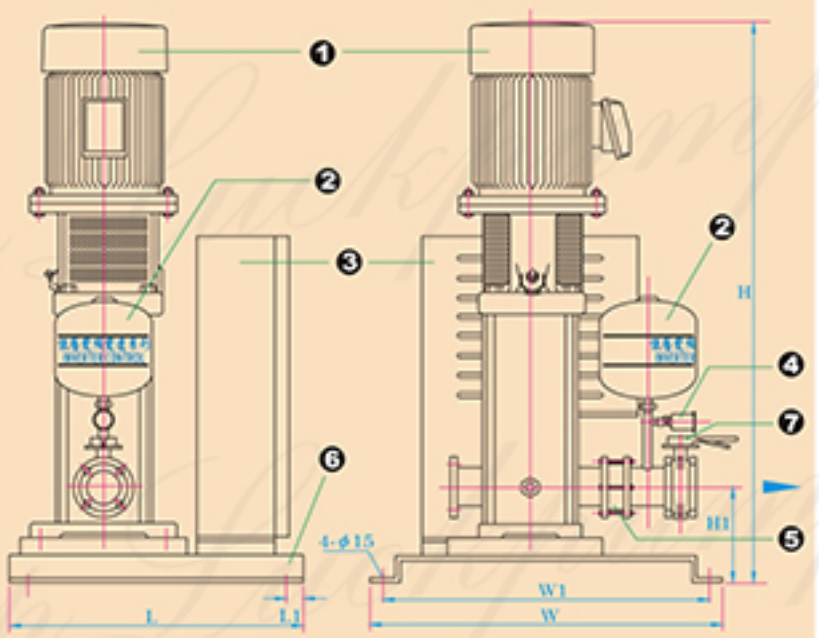
HCRS-SINGLE UNIT

DIMENSIONS

HCRS 406/407/408/410/804/805/806/808/811



HCRS 1804/1806/1808/1810/3603/3604/3605/3607/6004/6005



❶ Pump
❷ Tank
❸ Control Panel
❹ Constant Pressure Controller
❺ DP CV.
❻ Base
❼ Discharge Flange

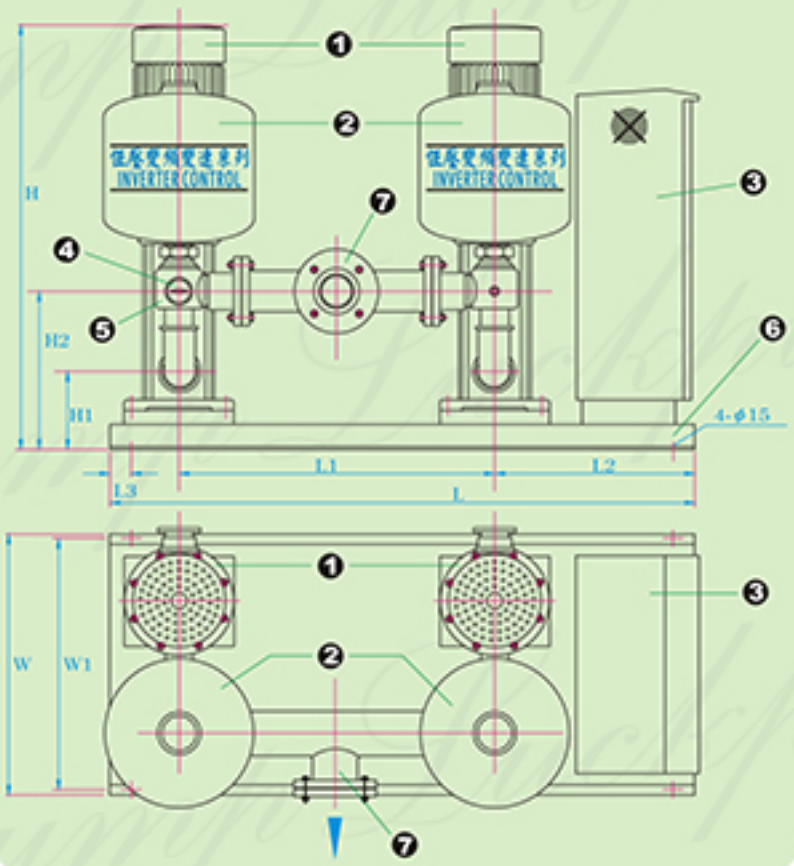
SPECIFICATION

Model	Main Piping Dia. (mm)	Suction (mm)	Discharge (mm)	Pump Motor (kw)	Quantity (m^3/H)	Height (M)	Tank (Gals)	Dimensions (mm)						
								L	L_1	W	W_1	H	H_1	H_2
HCRS-406	40	32	40	2.2	6	68	2.0	500	80	450	410	590	100	178
HCRS-407	40	32	40	3.0	6	85	2.0	500	80	450	410	590	125	203
HCRS-408	40	32	40	3.0	6	96	2.0	500	80	450	410	590	125	203
HCRS-410	40	32	40	4.0	6	120	2.0	500	80	450	410	590	125	203
HCRS-412	40	32	40	5.5	6	140	2.0	600	100	500	460	590	130	208
HCRS-414	40	32	40	5.5	6	165	2.0	600	100	500	460	590	130	208
HCRS-804	50	40	40	3.0	12	50	2.0	500	80	450	410	590	125	203
HCRS-805	50	40	40	3.7	12	63	2.0	500	80	450	410	590	125	203
HCRS-806	50	40	40	4.0	12	75	2.0	500	80	450	410	590	125	203
HCRS-808	50	40	40	5.5	12	93	2.0	600	100	500	460	590	130	208
HCRS-811	50	40	40	7.5	12	138	2.0	600	100	500	460	700	140	218
HCRS-1804	65	65	65	7.5	24	60	4.4	600	100	500	460	700	140	
HCRS-1806	65	65	65	11.0	24	93	4.4	600	100	500	460	700	140	
HCRS-1808	65	65	65	15.0	24	130	4.4	600	100	500	460	960	140	
HCRS-1810	65	65	65	18.5	24	160	4.4	600	100	500	460	960	155	
HCRS-3603	80	80	80	11.0	38	60	4.4	600	100	500	460	700	140	
HCRS-3604	80	80	80	15.0	38	80	4.4	600	100	500	460	960	140	
HCRS-3605	80	80	80	18.5	38	100	4.4	600	100	500	460	960	155	
HCRS-3607	80	80	80	22.0	38	138	4.4	600	100	500	460	990	155	
HCRS-6004	100	80	80	18.5	60	70	4.4	600	100	500	460	960	155	
HCRS-6005	100	80	80	22.0	60	90	4.4	600	100	500	460	990	155	

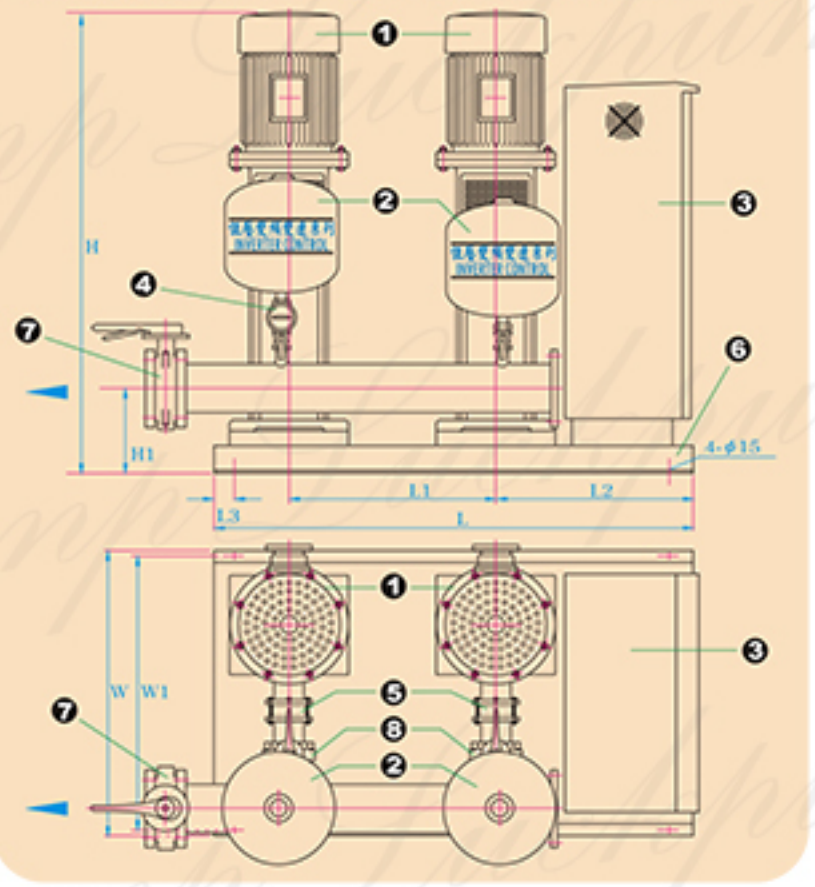
HCRP-2 UNITS ALTERNATING PARALLEL

DIMENSIONS

HCRP 406/407/408/410/804/805/806/808/811



HCRP 1804/1806/1808/1810/3603/3604/3605/3607/6004/6005



❶ Pump
❷ Tank
❸ Control Panel
❹ Constant Pressure Controller
❺ DP CV.
❻ Base
❼ Discharge Flange
❽ BF GV.

SPECIFICATION

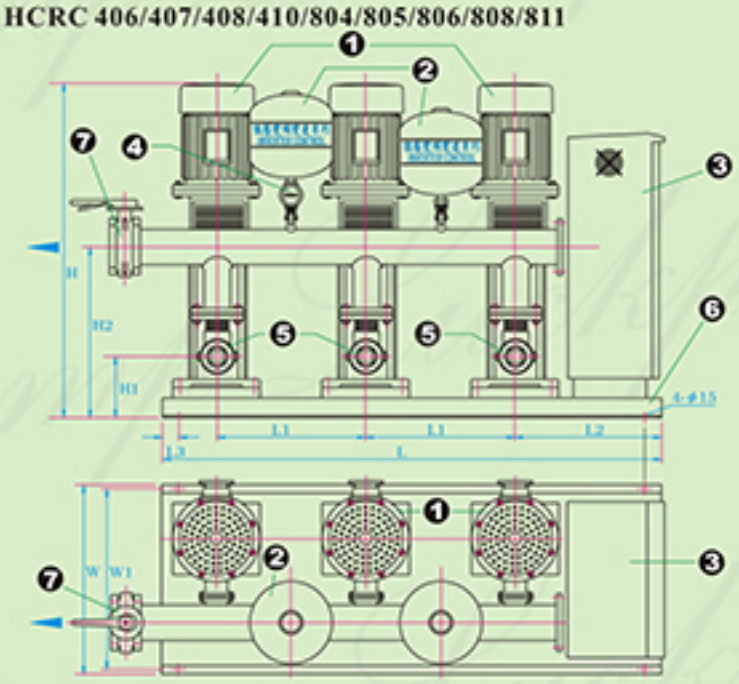
Model	Main Piping Dia. (mm)	Suction (mm)	Discharge (mm)	Pump Motor (kw)	Quantity (m^3/H)	Height (M)	Tank (Gals)	Dimensions (mm)								
								L	L_1	L_2	L_3	W	W_1	H	H_1	H_2
HCRP-406	50	32×2	50	2.2×2	12	68	2.0×2	850	340	456	150	600	560	780	100	178
HCRP-407	50	32×2	50	3.0×2	12	85	2.0×2	850	340	456	150	600	560	780	125	203
HCRP-408	50	32×2	50	3.0×2	12	96	2.0×2	850	340	456	150	600	560	780	125	203
HCRP-410	50	32×2	50	4.0×2	12	120	2.0×2	850	340	471	150	600	560	780	125	203
HCRP-412	50	32×2	50	5.5×2	12	140	2.0×2	850	340	471	150	600	560	780	130	208
HCRP-414	50	32×2	50	5.5×2	12	165	2.0×2	850	340	471	150	600	560	780	130	208
HCRP-804	65	40×2	65	3.0×2	24	50	2.0×2	850	340	471	150	600	560	780	125	203
HCRP-805	65	40×2	65	3.7×2	24	63	2.0×2	850	340	471	150	600	560	780	125	203
HCRP-806	65	40×2	65	4.0×2	24	75	2.0×2	850	340	471	150	600	560	780	125	203
HCRP-808	65	40×2	65	5.5×2	24	93	2.0×2	850	340	471	150	600	560	780	130	208
HCRP-811	65	40×2	65	7.5×2	24	138	2.0×2	950	340	491	150	850	810	920	140	218
HCRP-1804	100	65×2	80	7.5×2	48	60	4.4×2	950	340	491	150	850	810	920	140	
HCRP-1806	100	65×2	80	11.0×2	48	93	4.4×2	950	340	516	150	850	810	1030	140	
HCRP-1808	100	65×2	80	15.0×2	48	130	4.4×2	1050	440	556	150	850	810	1030	140	
HCRP-1810	100	65×2	80	18.5×2	48	160	4.4×2	1050	440	561	150	850	810	1030	155	
HCRP-3603	100	80×2	100	11.0×2	76	60	4.4×2	1050	340	516	150	850	810	1030	140	
HCRP-3604	100	80×2	100	15.0×2	76	80	4.4×2	1100	440	556	150	850	810	1030	250	
HCRP-3605	100	80×2	100	18.5×2	76	100	4.4×2	1100	440	561	150	850	810	1030	250	
HCRP-3607	100	80×2	100	22.0×2	76	138	4.4×2	1100	440	561	150	850	810	1290	250	
HCRP-6004	125	80×2	125	18.5×2	120	70	4.4×2	1100	440	561	150	850	810	1030	250	
HCRP-6005	125	80×2	125	22.0×2	120	90	4.4×2	1100	440	561	150	850	810	1290	250	

HCR Constant Pressure Booster Pump w/Variable Speed Drive

HCRC-3 UNITS ALTERNATING PARALLEL

DIMENSIONS

HCRC 406/407/408/410/804/805/806/808/811



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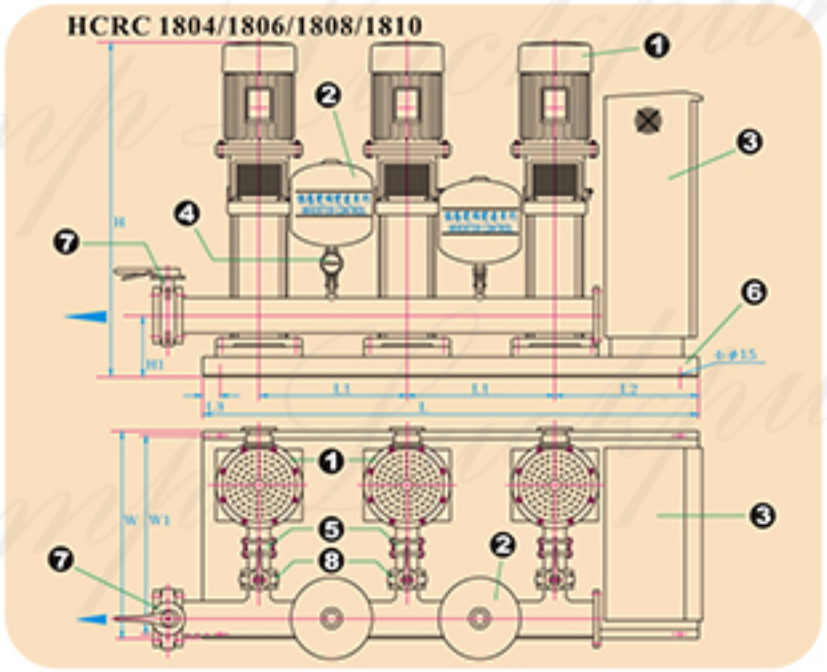

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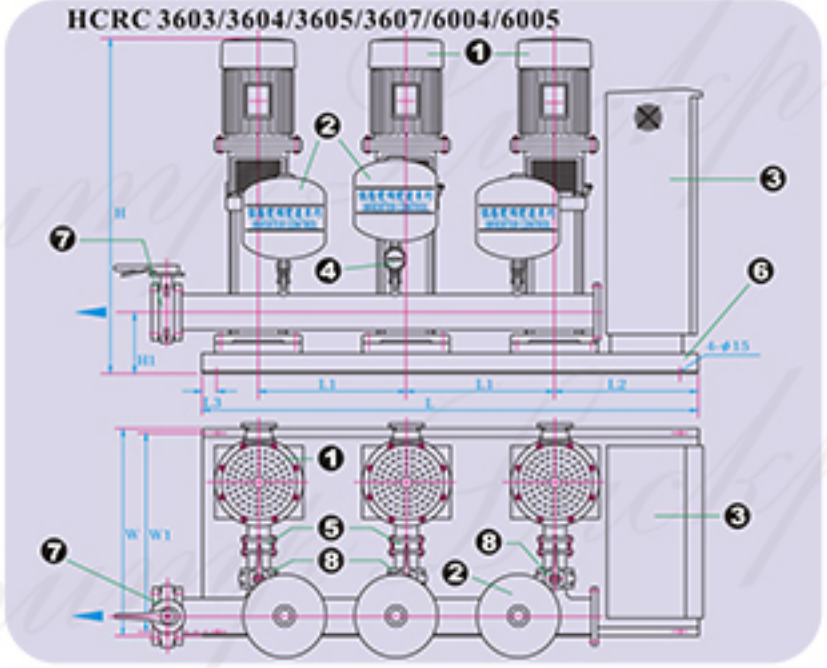


❶ Pump
❷ Tank
❸ Control Panel
❹ Constant Pressure Controller
❺ DP CV.
❻ Base
❼ Discharge Flange
❽ BF GV.

SPECIFICATION

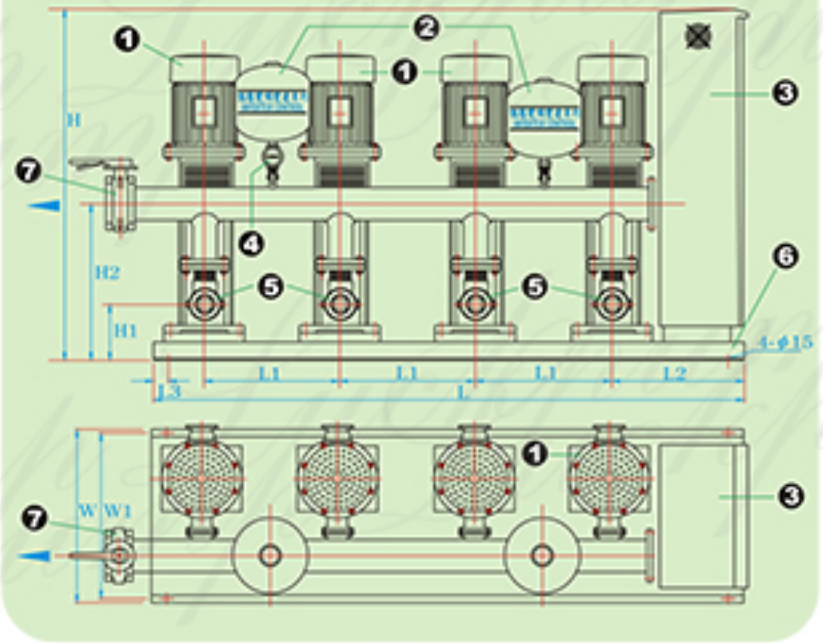
Model	Main Piping Dia. (mm)	Suction (mm)	Discharge (mm)	Pump Motor (kw)	Quantity (m^3/H)	Height (M)	Tank (Gals)	Dimensions (mm)								
								L	L_1	L_2	L_3	W	W_1	H	H_1	H_2
HCRC-406	50	32×3	50	2.2×3	18	68	2.0×2	1150	340	456	150	600	560	810	100	240
HCRC-407	50	32×3	50	3.0×3	18	85	2.0×2	1150	340	471	150	600	560	810	125	265
HCRC-408	50	32×3	50	3.0×3	18	96	2.0×2	1150	340	471	150	600	560	810	125	265
HCRC-410	50	32×3	50	4.0×3	18	120	2.0×2	1150	340	471	150	600	560	810	125	265
HCRC-412	50	32×3	50	5.5×3	18	140	2.0×2	1150	340	450	150	600	560	920	130	270
HCRC-414	50	32×3	50	5.5×3	18	165	2.0×2	1150	340	471	150	600	560	920	130	270
HCRC-804	80	40×3	80	3.0×3	36	50	4.4×2	1150	340	471	150	600	560	810	125	329
HCRC-805	80	40×3	80	3.7×3	36	63	4.4×2	1150	340	471	150	600	560	810	125	329
HCRC-806	80	40×3	80	4.0×3	36	75	4.4×2	1150	340	471	150	600	560	810	125	329
HCRC-808	80	40×3	80	5.5×3	36	93	4.4×2	1150	340	471	150	600	560	920	130	329
HCRC-811	80	40×3	80	7.5×3	36	138	4.4×2	1150	340	491	150	850	810	920	140	329
HCRC-1804	100	65×3	100	7.5×3	72	60	4.4×2	1150	340	491	150	850	810	920	140	
HCRC-1806	100	65×3	100	11.0×3	72	93	4.4×2	1150	340	516	150	850	810	1030	130	
HCRC-1808	100	65×3	100	15.0×3	72	130	4.4×2	1300	440	556	150	850	810	1030	130	
HCRC-1810	100	65×3	100	18.5×3	72	160	4.4×2	1300	440	561	150	850	810	1030	155	
HCRC-3603	125	80×3	125	11.0×3	114	60	4.4×3	1300	340	516	150	850	810	1030	140	
HCRC-3604	125	80×3	125	15.0×3	114	80	4.4×3	1550	440	556	150	850	810	1030	250	
HCRC-3605	125	80×3	125	18.5×3	114	100	4.4×3	1550	440	561	150	850	810	1030	250	
HCRC-3607	125	80×3	125	22.0×3	114	138	4.4×3	1550	440	561	150	850	810	1290	250	
HCRC-6004	150	80×3	150	18.5×3	180	70	4.4×3	1550	440	561	150	850	810	1030	250	
HCRC-6005	150	80×3	150	22.0×3	180	90	4.4×3	1550	440	561	150	850	810	1290	250	

HCR Constant Pressure Booster Pump w/Variable Speed Drive

HCRD-4 UNITS ALTERNATING PARALLEL

DIMENSIONS

HCRD 406/407/408/410/804/805/806/808/811



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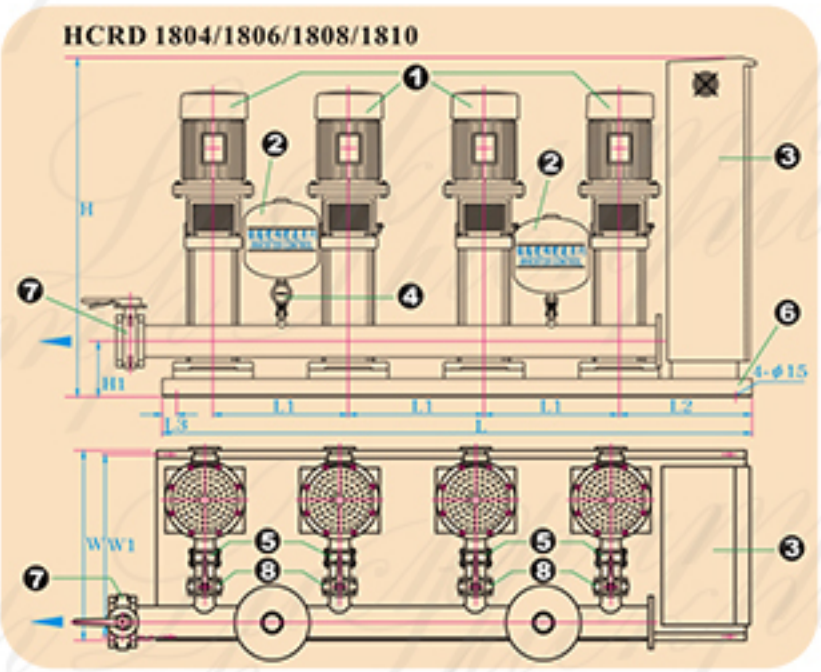

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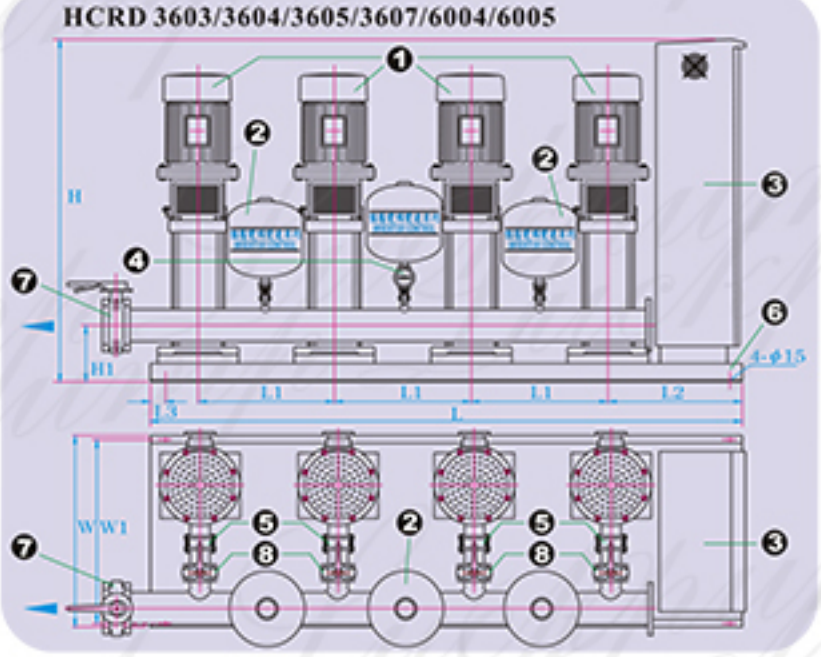
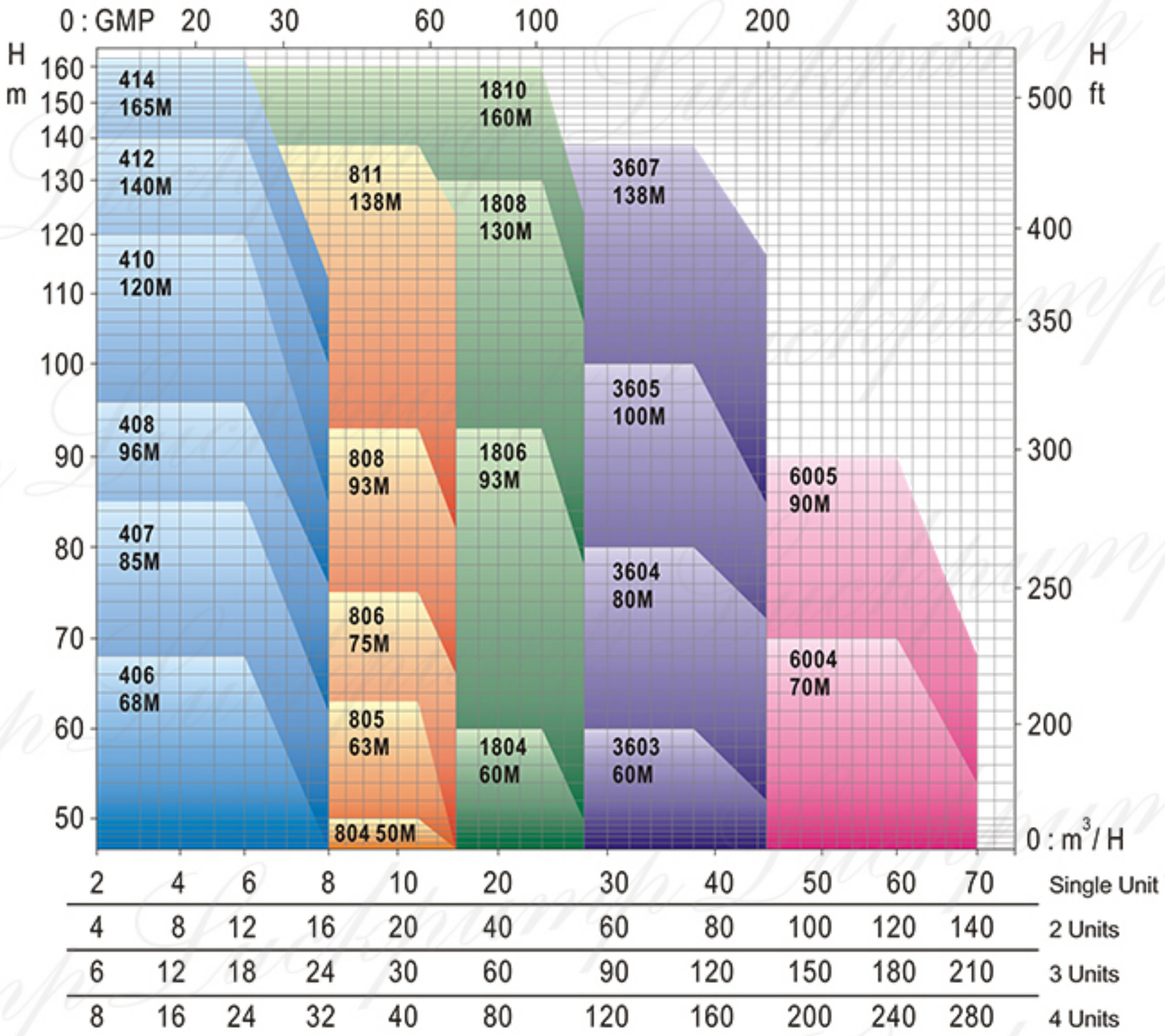


❶ Pump
❷ Tank
❸ Control Panel
❹ Constant Pressure Controller
❺ DP CV.
❻ Base
❼ Discharge Flange
❽ BF GV.

SPECIFICATION

Model	Main Piping Dia. (mm)	Suction (mm)	Discharge (mm)	Pump Motor (kw)	Quantity (m^3/H)	Height (M)	Tank (Gals)	Dimensions (mm)								
								L	L_1	L_2	L_3	W	W_1	H	H_1	H_2
HCRD-406	65	32×4	65	2.2×4	24	68	2.0×2	1650	340	456	150	600	560	810	100	298
HCRD-407	65	32×4	65	3.0×4	24	85	2.0×2	1650	340	471	150	600	560	810	125	323
HCRD-408	65	32×4	65	3.0×4	24	96	2.0×2	1650	340	471	150	600	560	810	125	323
HCRD-410	65	32×4	65	4.0×4	24	120	2.0×2	1650	340	471	150	600	560	810	125	323
HCRD-412	65	32×4	65	5.5×4	24	140	2.0×2	1650	340	471	150	600	560	920	130	328
HCRD-414	65	32×4	65	5.5×4	24	165	2.0×2	1650	340	471	150	600	560	920	130	328
HCRD-804	100	40×4	80	3.0×4	48	50	2.0×2	1650	340	471	150	600	560	810	125	329
HCRD-805	100	40×4	80	3.7×4	48	63	2.0×2	1650	340	471	150	600	560	810	125	329
HCRD-806	100	40×4	80	4.0×4	48	75	2.0×2	1650	340	471	150	600	560	810	125	329
HCRD-808	100	40×4	80	5.5×4	48	93	2.0×2	1650	340	471	150	600	560	920	130	334
HCRD-811	100	40×4	80	7.5×4	48	138	2.0×2	1650	340	491	150	850	810	920	140	334
HCRD-1804	125	65×4	125	7.5×4	96	60	4.4×2	1650	340	491	150	850	810	920	140	
HCRD-1806	125	65×4	125	11.0×4	96	93	4.4×2	1650	340	516	150	850	810	1030	130	
HCRD-1808	125	65×4	125	15.0×4	96	130	4.4×2	1850	440	556	150	850	810	1030	130	
HCRD-1810	125	65×4	125	18.5×4	96	160	4.4×2	1850	440	561	150	850	810	1030	155	
HCRD-3603	150	80×4	150	11.0×4	152	60	4.4×3	1850	340	516	150	850	810	1030	140	
HCRD-3604	150	80×4	150	15.0×4	152	80	4.4×3	2030	440	556	150	850	810	1030	250	
HCRD-3605	150	80×4	150	18.5×4	152	100	4.4×3	2030	440	561	150	850	810	1030	250	
HCRD-3607	150	80×4	150	22.0×4	152	138	4.4×3	2030	440	561	150	850	810	1290	250	
HCRD-6604	200	80×4	150	18.5×4	240	70	4.4×3	2030	440	561	150	850	810	1030	250	
HCRD-6605	200	80×4	150	22.0×4	240	90	4.4×3	2030	440	561	150	850	810	1290	250	

HCR Constant Pressure Booster Pump w/Variable Speed Drive

PERFORMANCE CURVE