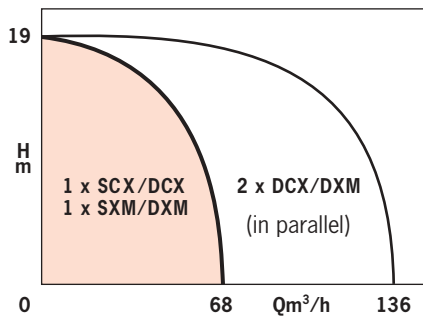


## OPERATING LIMITS

Flow rates up to:	<b>68 m<sup>3</sup>/h*</b>
Heads up to:	<b>19 m</b>
Max. service pressure:	<b>10 bar</b>
Temperature range:	<b>- 20° to + 130°C</b>
Max. ambient temperature:	<b>+ 50°C</b>
ND of ports:	<b>32 to 80</b>

\*136 m<sup>3</sup>/h: with both heads operating in parallel



• **SCX** (three-phase)



• **SXM** (single-phase)



• **DXM** (single-phase)

## SCX-DCX - SXM-DXM

### SINGLE AND TWIN-HEAD CIRCULATORS

**Commercial heating & air conditioning**  
**2 pole - 50 Hz**

#### APPLICATIONS

- Commercial central heating in housing, office buildings, greenhouses, swimming pools, farms, etc.
- Air conditioning.
- Boiler recycling.
- Primary loop, exchanger or heater, in secondary hot water system.

All new or renovated installations.



• **DCX** (three-phase)

# SCX-DCX - SXM-DXM

## ADVANTAGES

- Versatile circulators designed for use in heating, air conditioning, and secondary hot water circuits.
- Dual-voltage motors, 230-400 V.
- Built-in thermal overload protection of motor.
- Redesigned casing for better performance and even quieter operation.
- New impeller profile for optimum efficiency.
- Lower energy consumption.
- Automatic venting of rotor chamber.

### DCX-DXM

- Standby pump available at all times.
- Possibility of operating the two pumps in parallel, for lower purchase and operating costs.

## DESIGN

### • Pump

Flanged casing, **in-line** ports.  
Bosses on rear for wall mounting.  
Flanges fitted with pressure gauge ports.  
New impeller profile.

\* threaded ports on model SCX 32-80.

### Twin-head models (DCX-DXM)

Twin pumps in a single casing.  
Hydraulic separation by double flap valve on discharge end.

### • Motors

**2 pole**, voltages according to European standards.

Wet rotor, self-lubricating sleeve bearings.

– **THREE-PHASE**: dual voltage, 3 speeds by plug-in selector switch coupled to voltage (except SX 1801-1802, DX 2801-2802, with two-speed motors)

– **SINGLE-PHASE**: 2 speeds by plug-in selector switch, built-in capacitor.

Speeds : see tables

Windings 3-phase : 230-400V  
1-phase : 230V

Frequency : 50 Hz

Protection index : IP 42

Insulating category : F (155°C)

EC conformity

EMC conformity - emission : EN 61000-6-3

- immunity : EN 61000-6-2

## THE 2 POLE CIRCULATOR LINES



### SCX - DCX

Single and twin-head circulators

- Threaded G2 and ND 40 to 80.
- Three-phase, dual voltage 230-400 V motors.
- Voltages according to European standards.
- Three-speed motors by plug-in manual selector switch.
- Built-in thermal overload protection.
- 13 single head models.
- 12 twin-head models.

### SXM - DXM

Single and twin-head circulators

- Threaded G2 and ND 40 to 80.
- Single-phase 230 V, winding motors with built-in capacitor.
- Voltages according to European standards.
- Two-speed motors by plug-in manual selector switch.
- Built-in thermal overload protection.
- 9 single head models.
- 8 twin-head models.

### MIN. SUCTION PRESSURE (m w.g.) ACCORDING TO OPERATING TEMPERATURE

MODEL	3-phase		1-phase		70°C	90°C	110°C	130°
	SCX	DCX	SXM	DXM				
32-80	•	–	•	–	8	12	19	32
50-90	•	•	•	•				
40-40	•	•	•	•	5	9	16	29
65-50	•	•	•	•				
40-80	•	•	•	•	9	13	20	33
50-25	•	•	•	•				
65-25	•	•	•	•	3	7	14	27
50-50	•	•	•	•				
80-25	•	•	•	•	7	11	18	31
65-90	•	•	–	–	12	16	23	36
80-50	•	•	–	–	10	14	21	34
1801-2801	SX	DX	–	–	12	16	23	36
1802-2802	SX	DX	–	–				

NB: At high altitudes, add 0.60 m for every 500 m. (10.2 m w.g. = 1 bar)

## STANDARD CONSTRUCTION

Main parts	Material
Pump casing	Cast iron
Impeller	Composite material
Shaft	Stainless steel
Air gap sleeve	Stainless steel
Sleeve bearings	Graphite
Casing gasket	Ethylene-Propylene

## IDENTIFICATION

SCX 65-25  
DCX 65-25

SCX: single pump, 3-phase  
DCX: twin pump, 3-phase

ND of ports (mm)

Total pressure head (dm) nominal flow

SXM: single pump, 1-phase  
DXM: twin pump, 1-phase

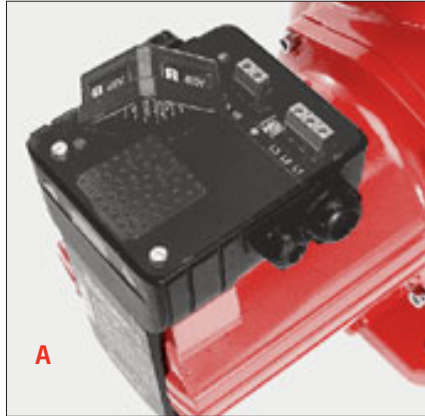
## COMPETITIVE CHANGES



### THREE-PHASE, 2 POLE MOTOR\*

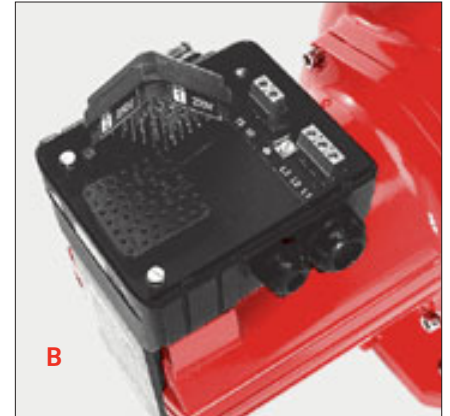
- **Dual-voltage, 3-phase 230-400 V**
- With plug-in speed selector coupled to operating voltage (see opposite).
- Built-in thermal overload probe protects winding at all speeds by external relay.
- New, more attractive terminal box.
- Electrical connections via stuffing box, input on right or left side.
- Display of rotation direction of motor, speed selected, and operating voltage.
- New data plate with information about all electrical values of the installed circulator.
- **Very quiet motors.**

For 4-poles motors C1000N and C2000N ranges see the specific data sheets.



### THREE-PHASE MOTOR TERMINAL BOX

- Electrical connections easy to make, on very accessible terminal blocks.
- Speed selected by plug-in manual selector switch coupled to the operating voltage.



Examples:

**A:** speed 3 - Voltage 400 V

**B:** speed 2 - Voltage 230 V

The speed and operating voltage are displayed on the back of the terminal box.



### SINGLE-PHASE, 2 POLE MOTOR

- **230 V** winding.
- Built-in capacitor.
- Two-speed plug-in manual selector switch.
- Connections to terminal blocks easy to reach, cables enter on right or left side.
- Built-in thermal overload probe protects winding at all speeds by external relay.



### ROTOR-SHAFT

- The perforated shaft ensures a circulation of water that allows automatic venting and lubrication.
- Permanent venting of the rotor chamber, eliminating manual air bleed when starting.
- Continuous lubrication of the rear sleeve bearing.
- **No more seizing of shaft.**

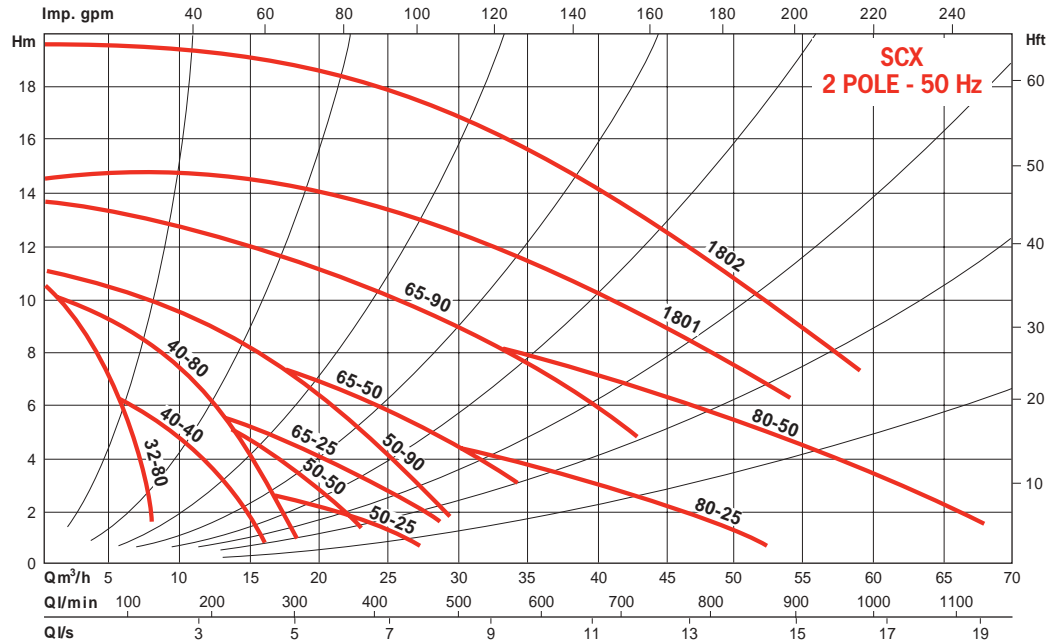
### IMPELLER

- New profile for high efficiency, lower energy consumption and noise reduction.

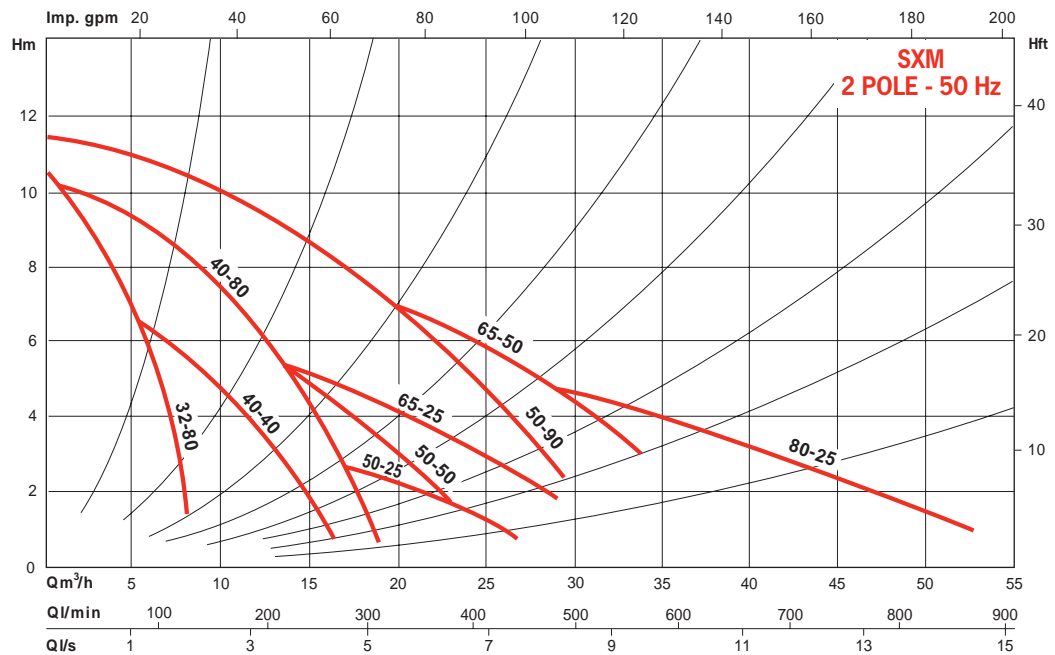
# SCX-DCX - SXM-DXM

## GENERAL SELECTION GRAPHS AT MAXIMUM SPEED

**SCX - Single Circulator**  
**2 POLE - 3-PHASE**  
**50 Hz**

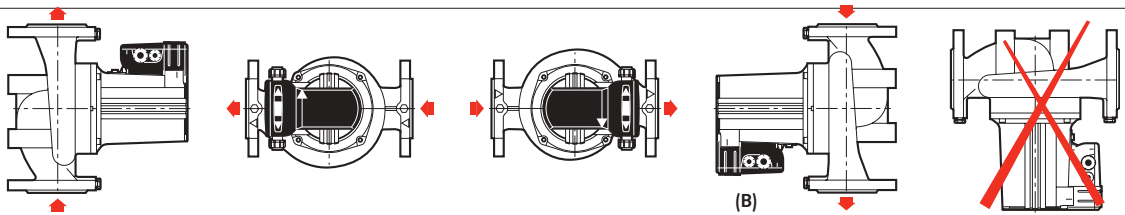


**SXM - Single Circulator**  
**2 POLE - 1-PHASE**  
**50 Hz**



**MOUNTING POSITION**

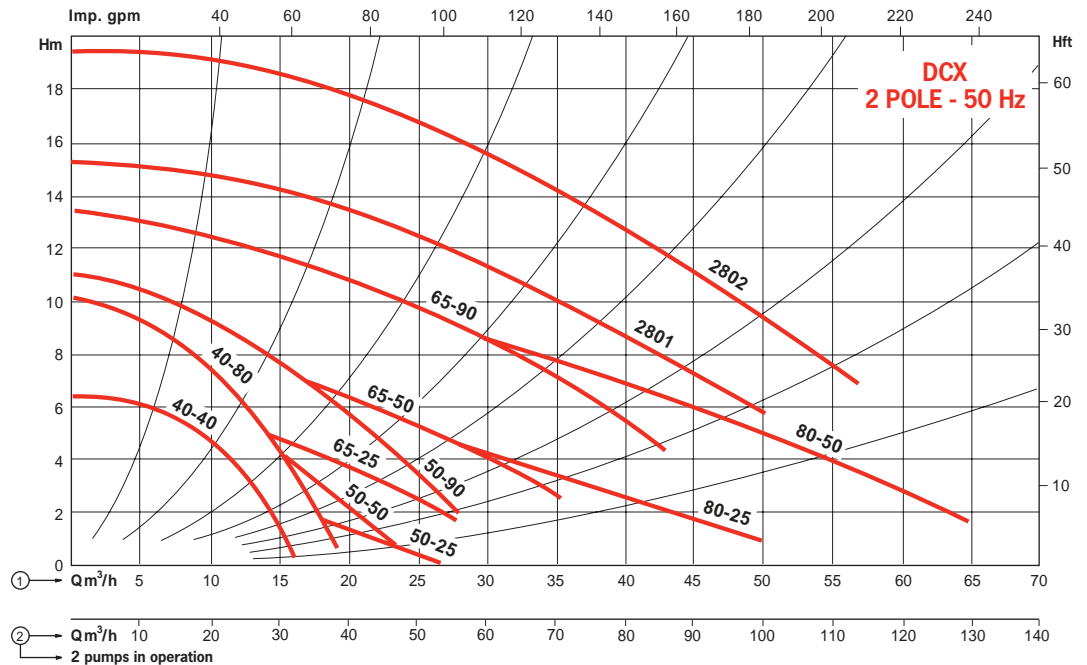
(B): Do not use with chilled water.



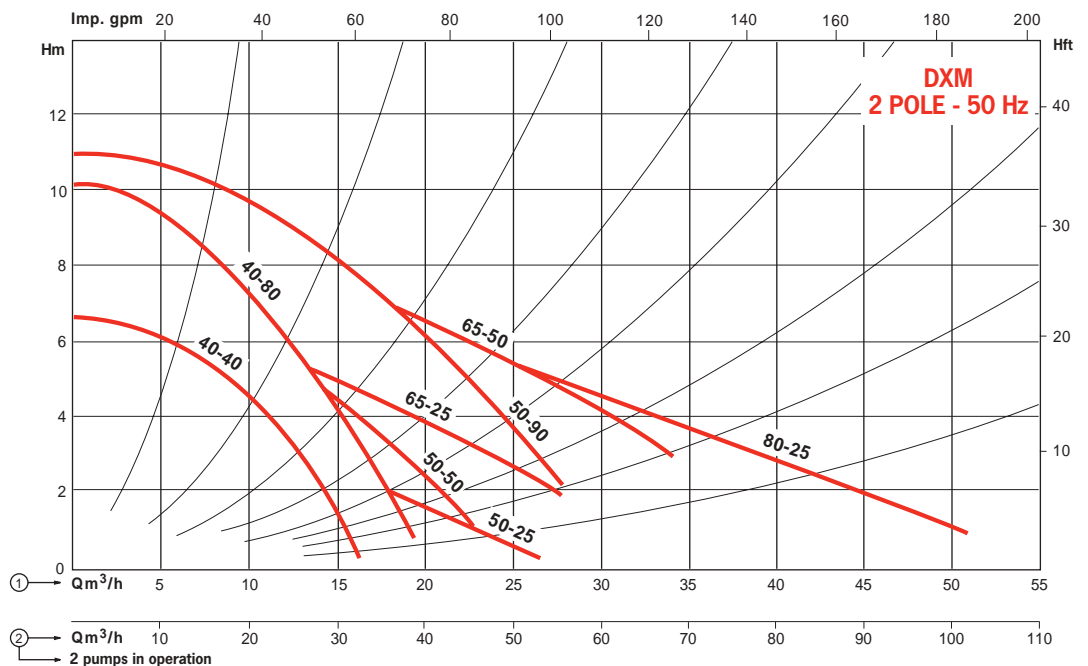
# SCX-DCX - SXM-DXM

## GENERAL SELECTION GRAPHS AT MAXIMUM SPEED

**DCX - Twin Circulator**  
**2 POLE - 3-PHASE**  
**50 Hz**

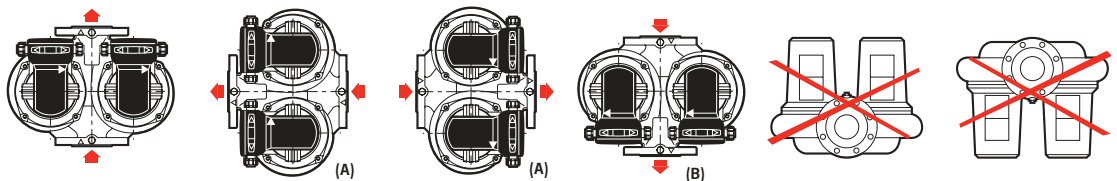


**DXM - Twin Circulator**  
**2 POLE - 1-PHASE**  
**50 Hz**



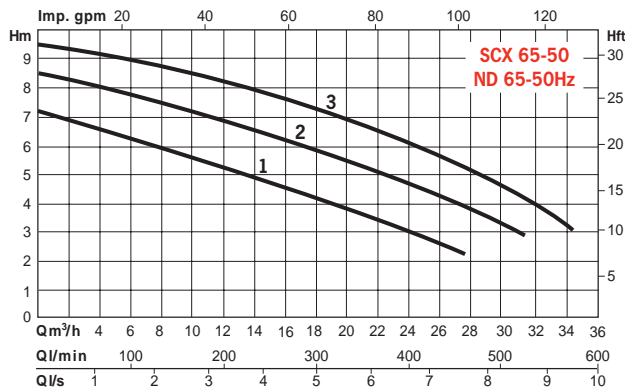
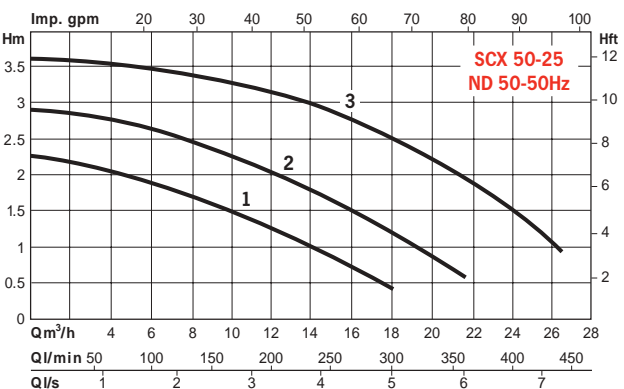
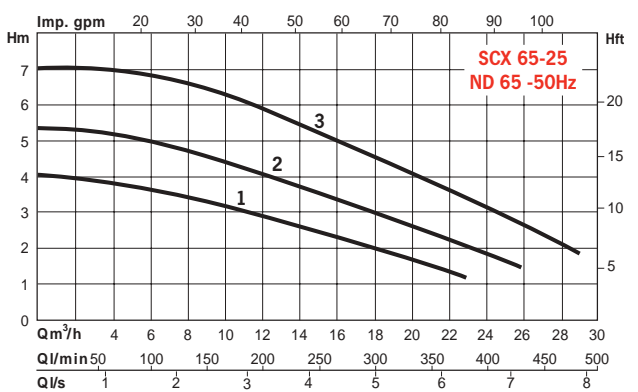
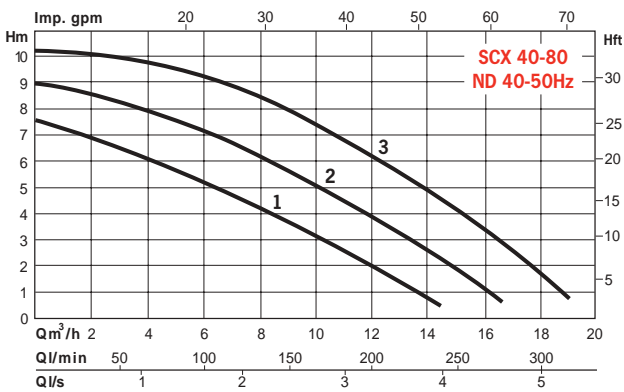
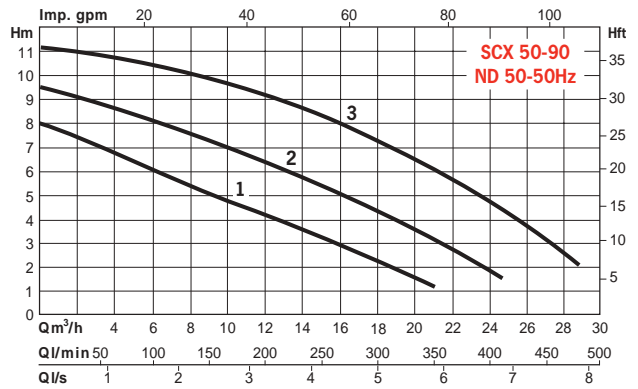
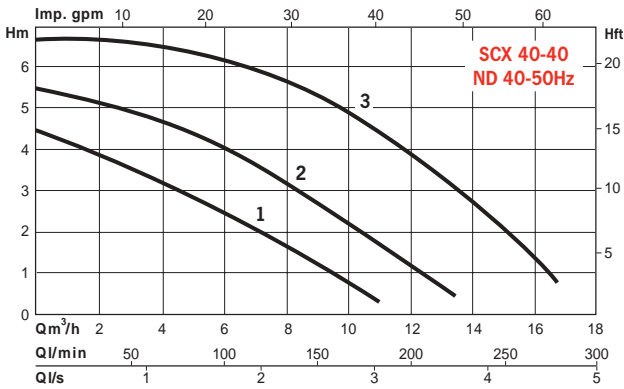
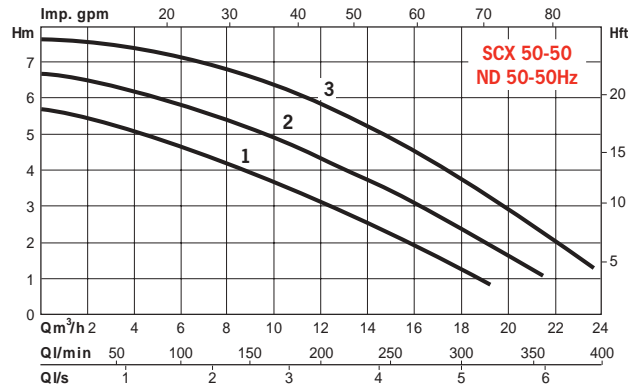
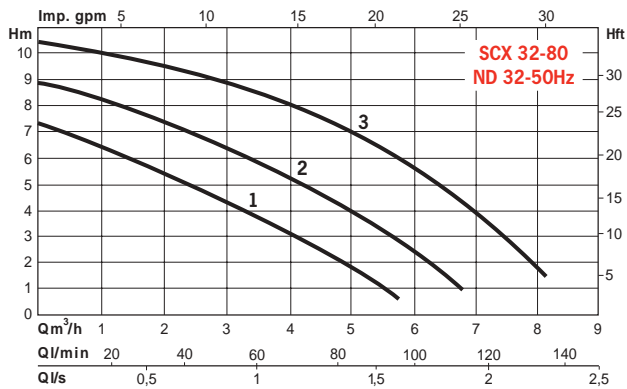
### MOUNTING POSITION

(A): possible mounting, but needs periodical changeover to avoid trapped air at the high point, or connection of a bleed to the port provided for it (Ø 1/8").  
 (B): Do not use with chilled water.



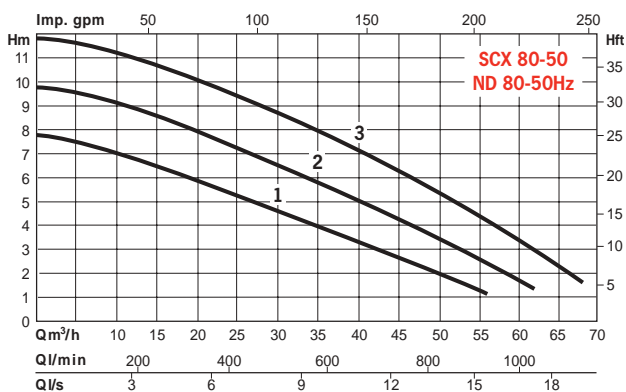
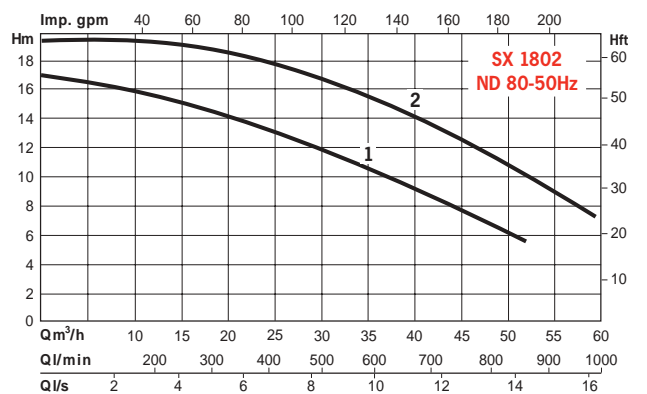
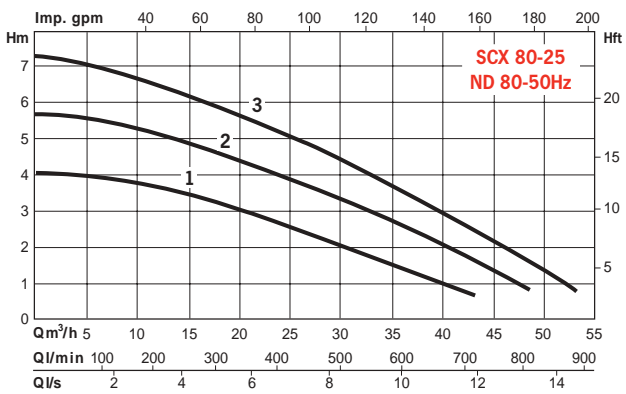
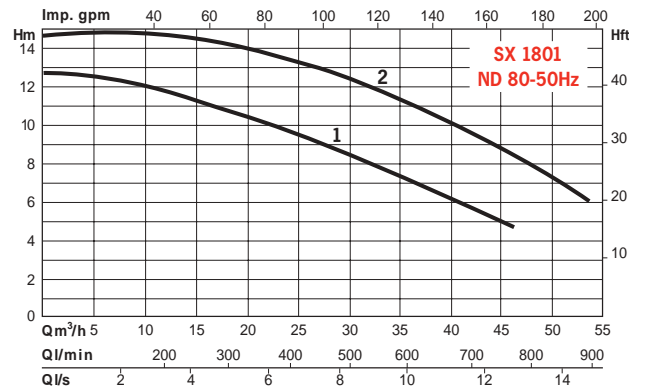
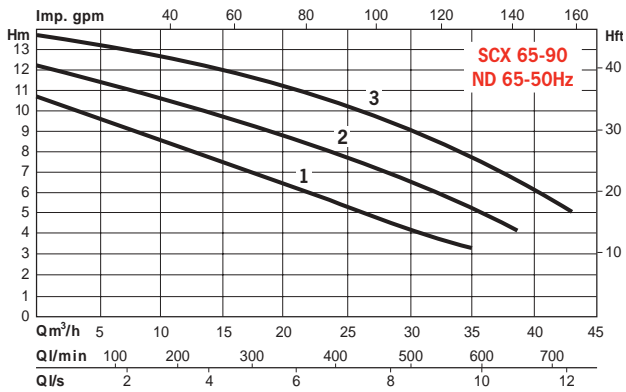
# SCX-DCX - SXM-DXM

## SCX - SINGLE CIRCULATORS - 2 POLE - THREE-PHASE 50 Hz



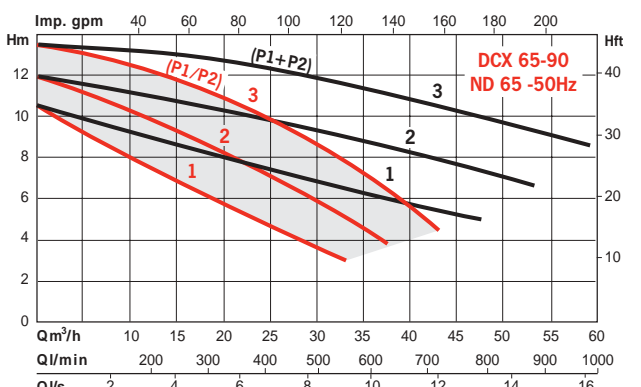
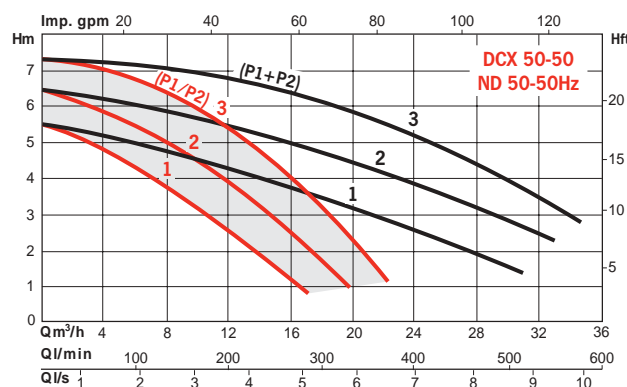
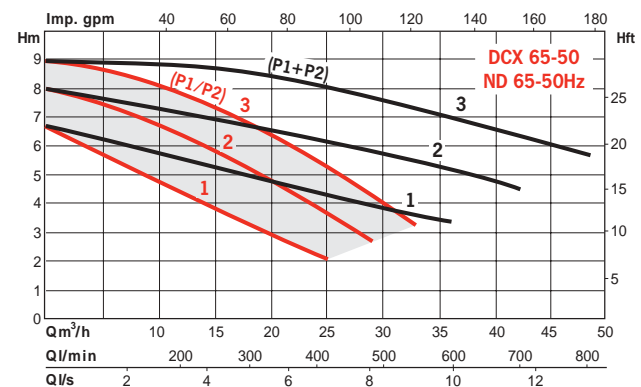
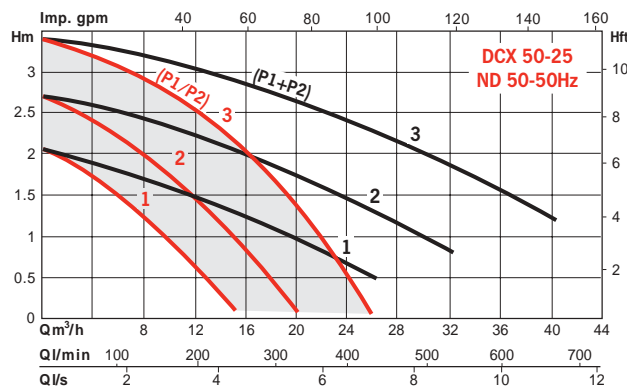
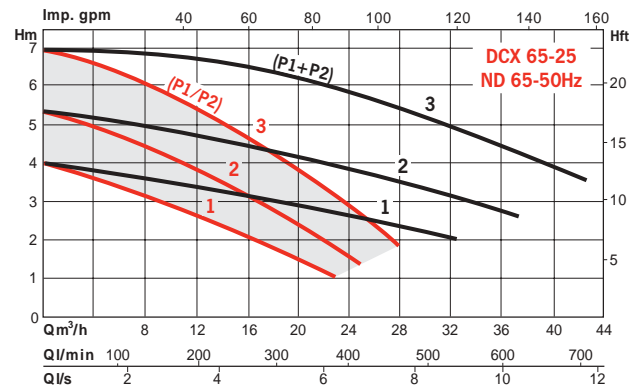
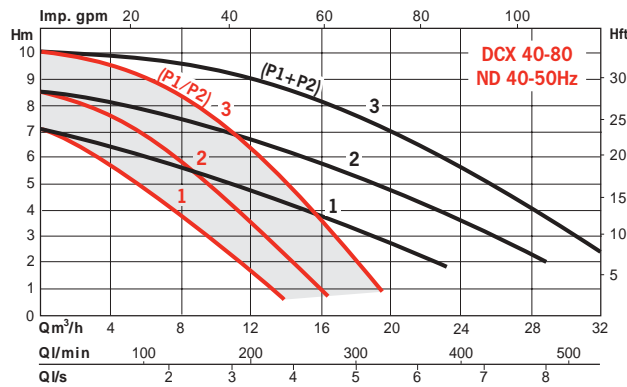
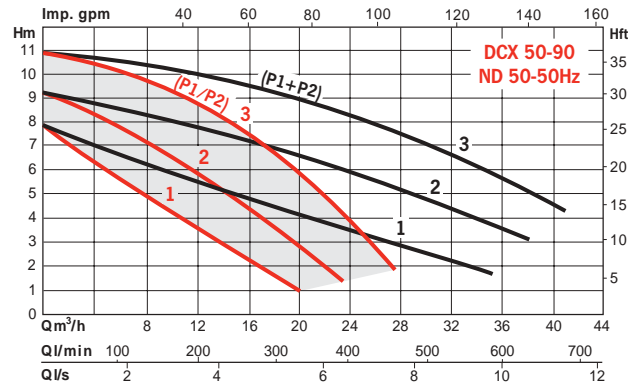
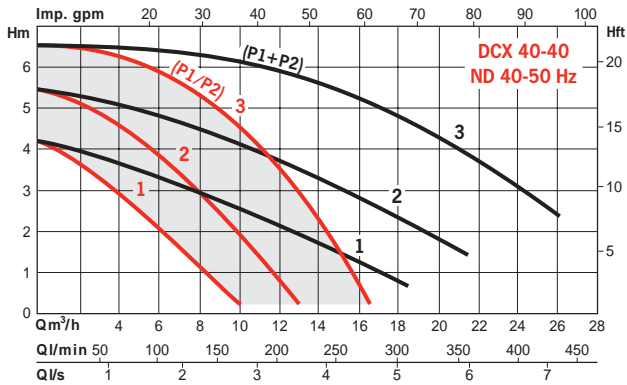
# SCX-DCX - SXM-DXM

## SCX - SINGLE CIRCULATORS - 2 POLE - THREE-PHASE 50 Hz



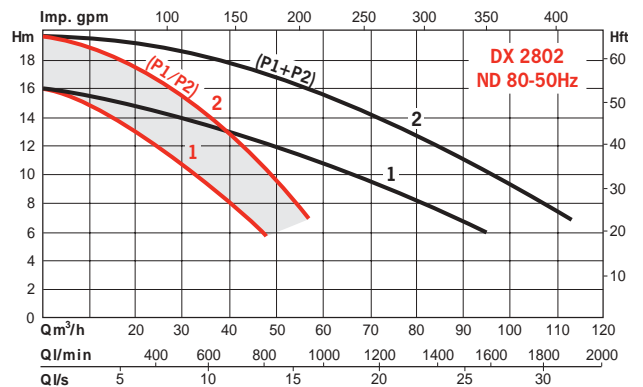
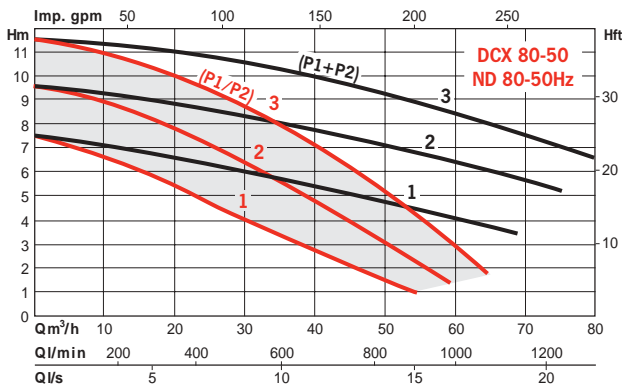
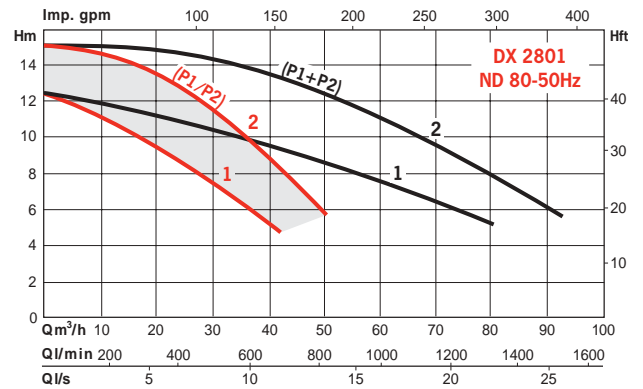
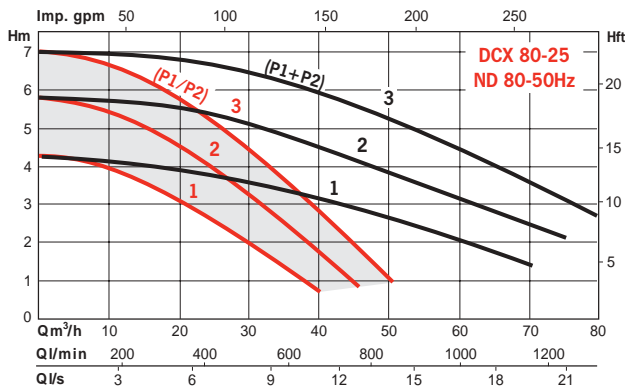
# SCX-DCX - SXM-DXM

## DCX - TWIN CIRCULATORS - 2 POLE - THREE-PHASE 50 Hz



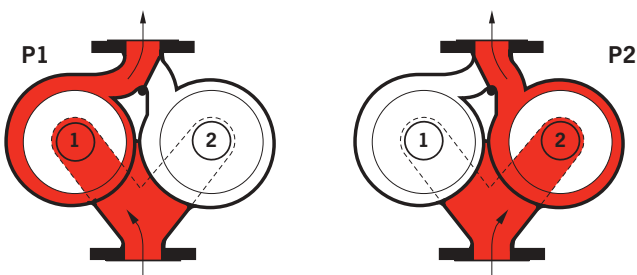
# SCX-DCX - SXM-DXM

## DCX - TWIN CIRCULATORS - 2 POLE - THREE-PHASE 50 Hz



NB: The hydraulic curves above and on the previous page give the hydraulic characteristics for one head in operation (P1 or P2) and for both heads in parallel (P1 + P2).

### ALTERNATING OPERATION

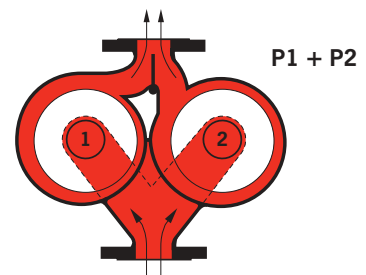


PUMP 1 OR PUMP 2 IN OPERATION

ONE HEAD ON STANDBY ENSURES OPERATING RELIABILITY WITH NO STOPPAGE OF THE INSTALLATION

Operation of the pumps programmed and switched over by control box.

### PARALLEL OPERATION



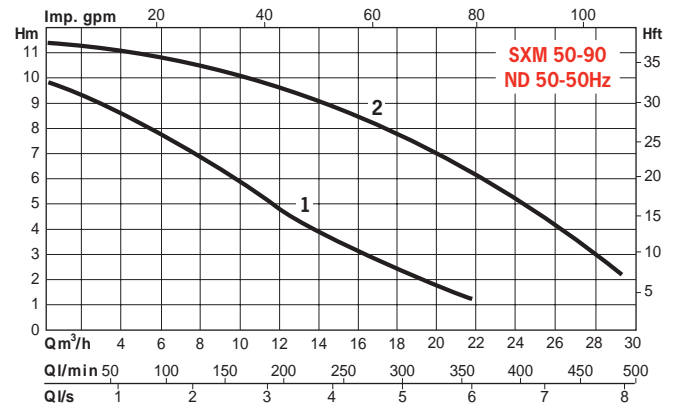
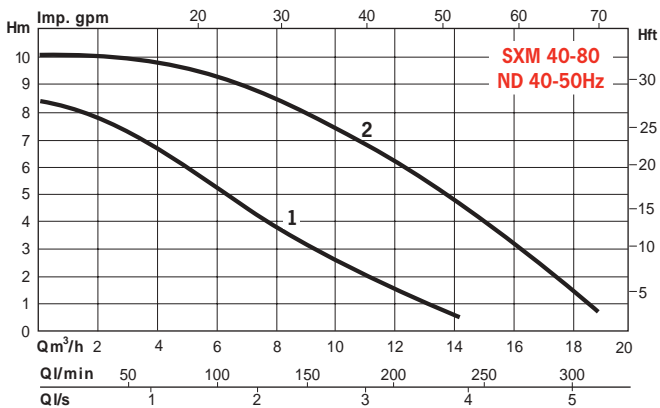
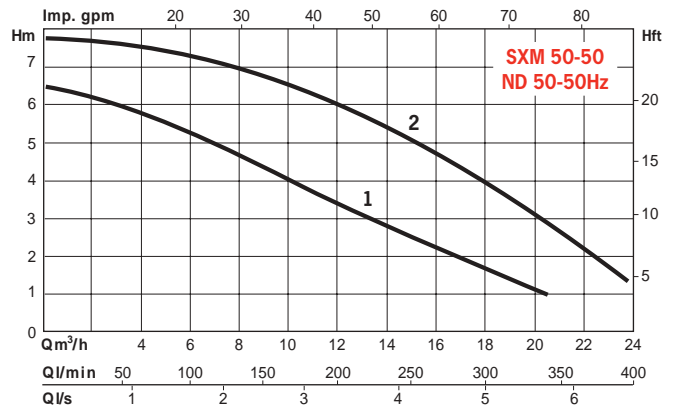
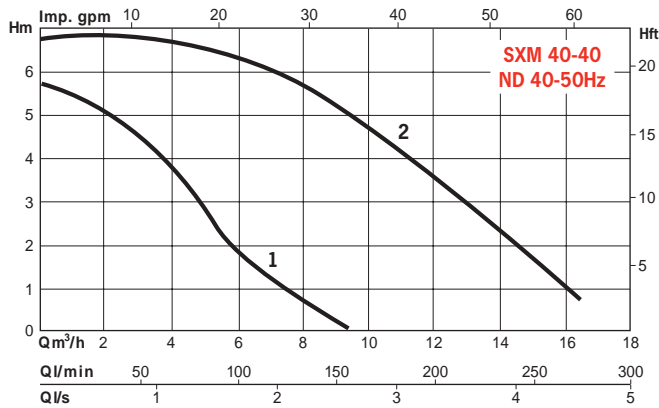
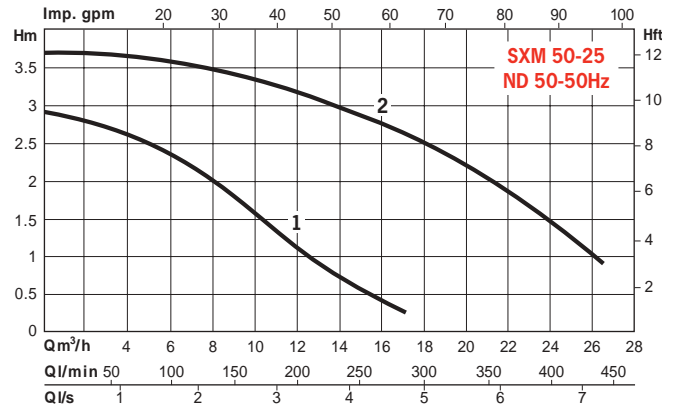
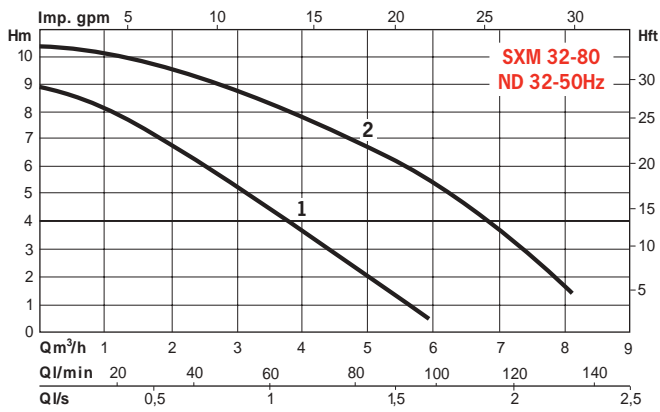
Parallel operation of both heads for the flowrate required, allows substantially lower purchase and operating costs.

A single head in operation provides about 85% of the capacity the

installation needs during the heating season. The maximum hydraulic performance needed is delivered by parallel operation of both heads. A control box is used for programming.

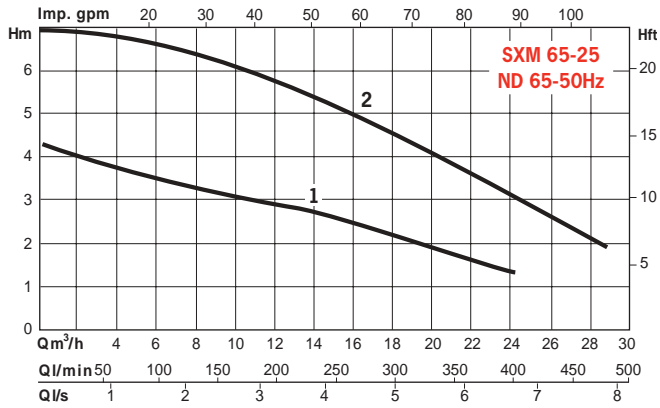
# SCX-DCX - SXM-DXM

## SXM - SINGLE CIRCULATORS - 2 POLE - SINGLE-PHASE 50 Hz

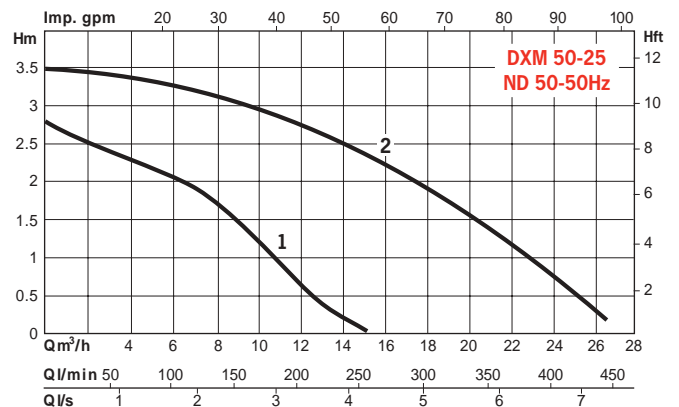
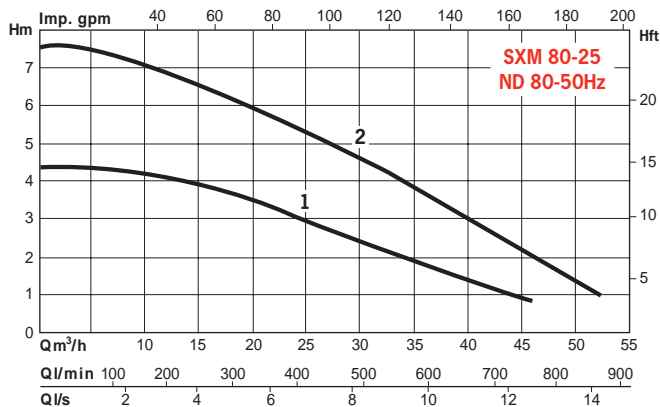
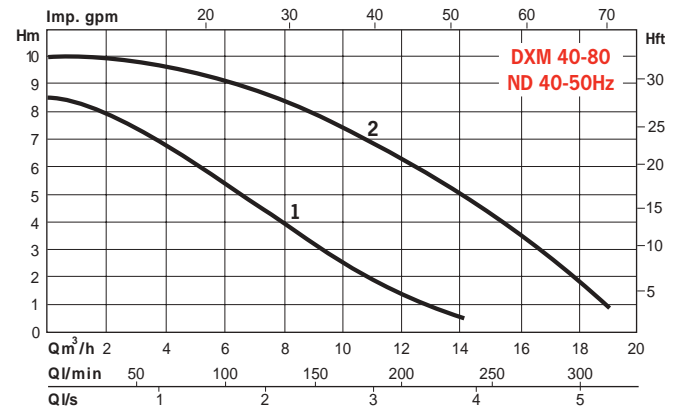
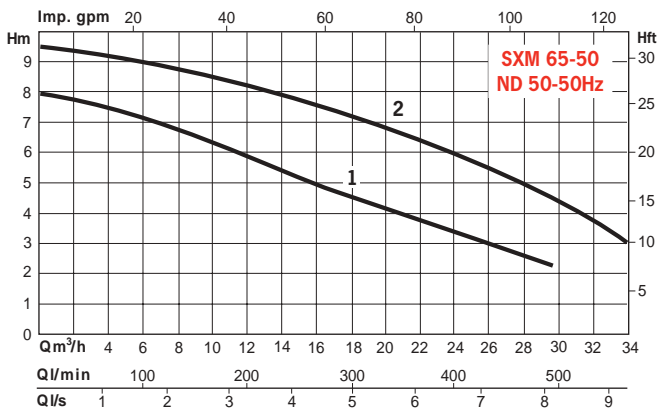
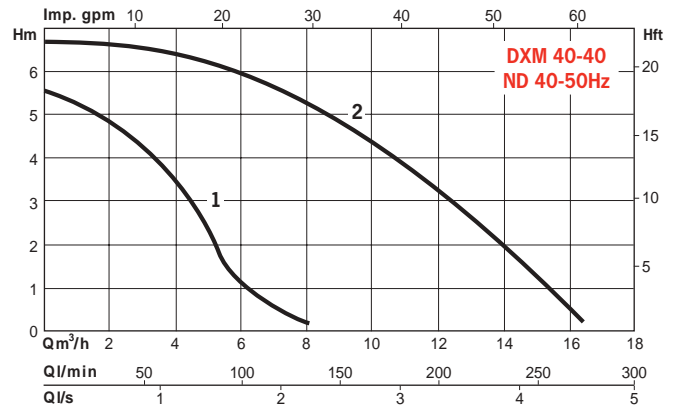


# SCX-DCX - SXM-DXM

**SXM - SINGLE CIRCULATORS - 2 POLE - SINGLE-PHASE 50 Hz**

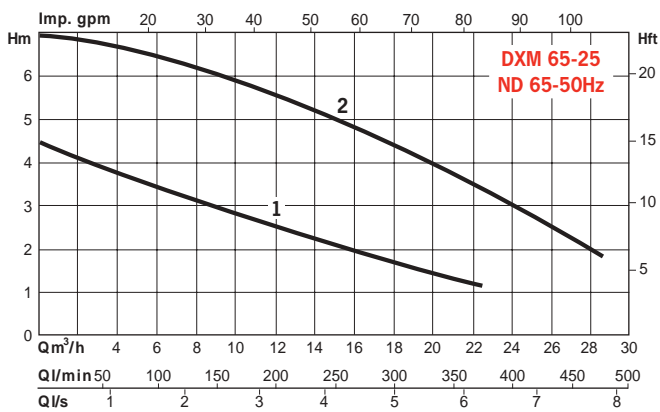
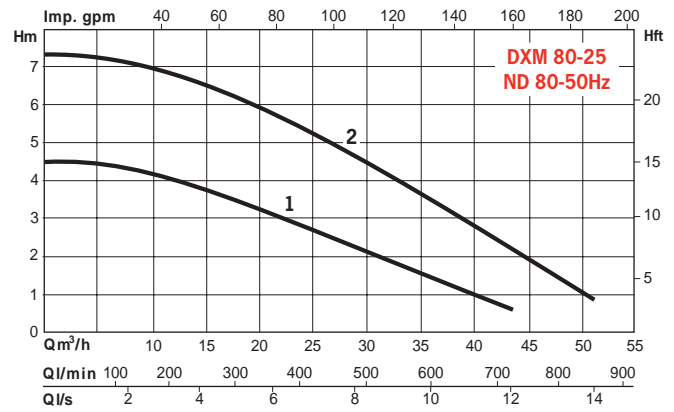
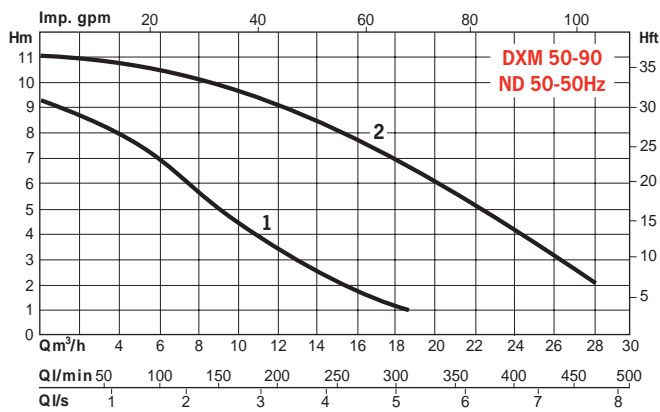
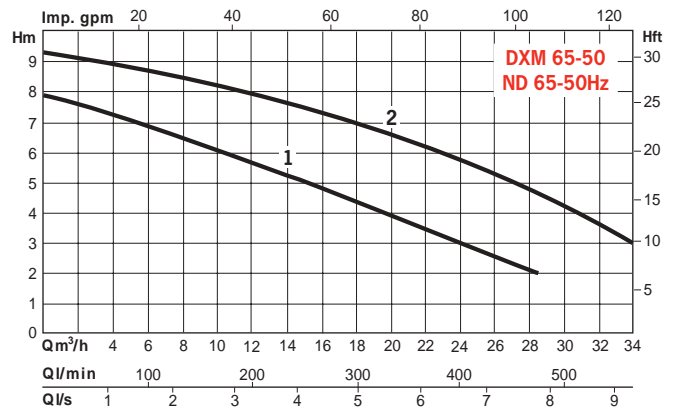
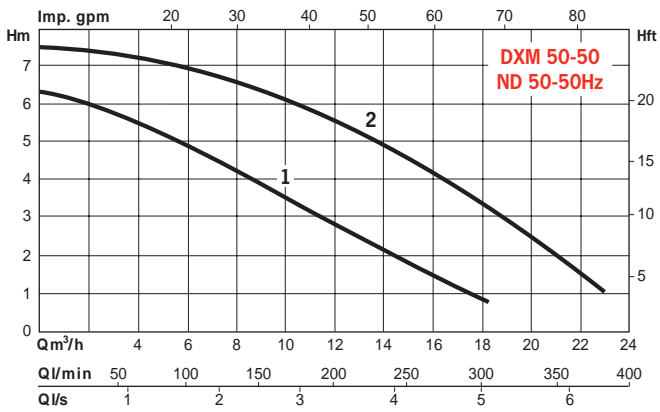


**DXM - TWIN CIRCULATORS - 2 POLE - SINGLE-PHASE 50 Hz**



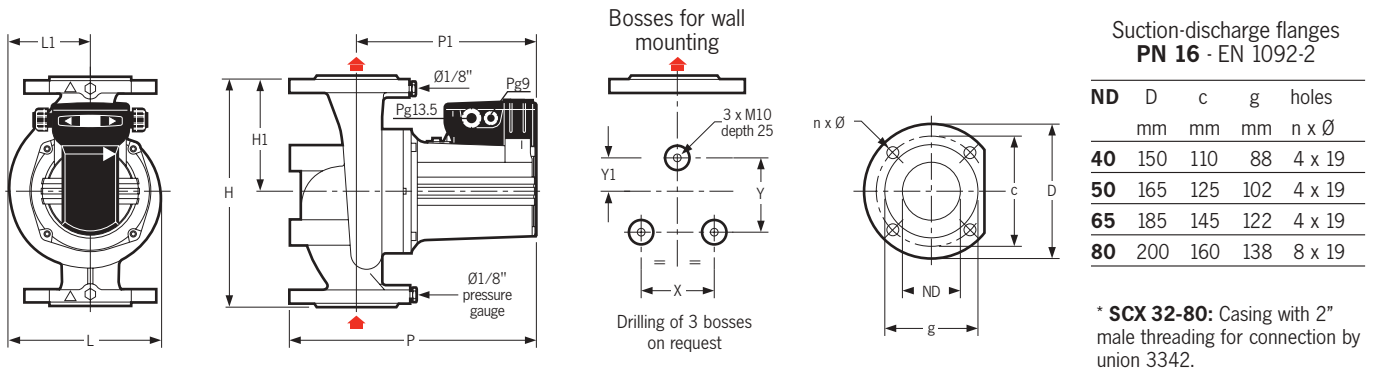
# SCX-DCX - SXM-DXM

## DXM - TWIN CIRCULATORS - 2 POLE - SINGLE-PHASE 50 Hz



# SCX-DCX - SXM-DXM

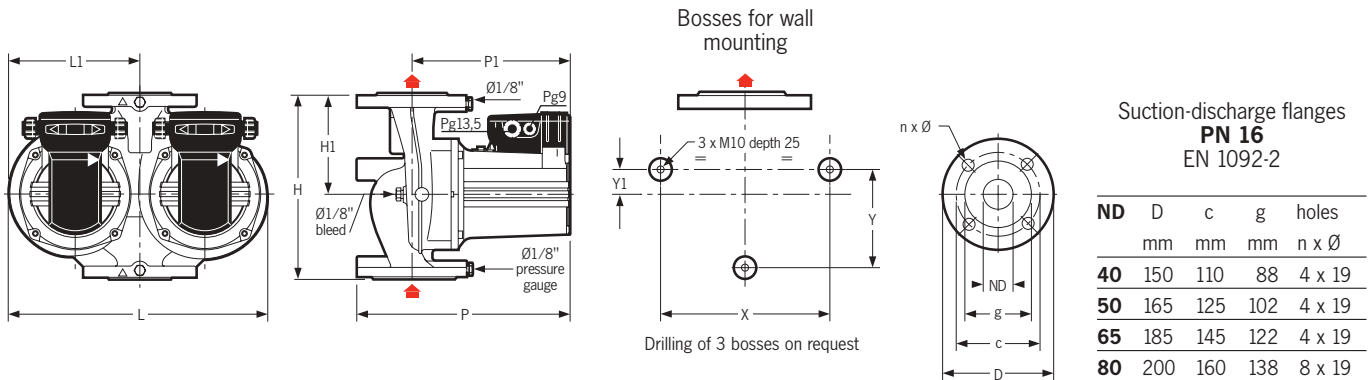
## ELECTRICAL DATA AND DIMENSIONS - SCX - THREE-PHASE 50 Hz



ORDER REFERENCE	P2	speed position	M O T O R					ports	L	H	P	P U M P					Y1	mass (approx.) kg	REPLACEMENTS	
			P1	full load	current	in A	3-phase					H1	L1	P1	X	Y			MOTOR HEAD ORDER REF.	HYDRAULIC POUCH ORDER REF.
SCX 32-80	180	1	1900	121	190	0.40	0.35	32	142	180	229	103	73	185	---	---	---	7	RL 180-2	PHE 01
		2	2280	140	250	0.65	0.45													
		3	2665	180	325	1.15	0.65													
SCX 40-40	180	1	1700	135	210	0.40	0.35	40	155	250	269	125	80	194	75	147	38	12	RL 180-2	PHE 02
		2	2060	165	285	0.70	0.50													
		3	2580	205	390	1.30	0.75													
SCX 40-80	350	1	2050	225	350	0.70	0.60	40	171	250	292	125	90	217	90	90	40	16	RL 350-2	PHE 03
		2	2390	270	440	1.15	0.75													
		3	2730	340	550	1.95	1.10													
SCX 50-25	180	1	1800	150	200	0.40	0.35	50	178	280	283	140	95	200	85	162	125	14	RL 180-2	PHE 04
		2	2130	180	270	0.70	0.45													
		3	2620	230	360	1.20	0.70													
SCX 50-50	350	1	2180	225	315	0.70	0.55	50	174	280	308	140	91	225	90	90	40	18	RL 350-2	PHE 05
		2	2480	270	390	1.05	0.70													
		3	2770	355	485	2.00	1.15													
SCX 50-90	450	1	1930	300	475	0.95	0.80	50	189	280	306	140	101	223	90	90	40	19	RL 450-2	PHE 06
		2	2260	360	620	1.60	1.05													
		3	2660	455	810	2.55	1.50													
SCX 65-25	350	1	2020	285	345	0.75	0.60	65	204	340	327	170	111	234	104	90	40	22	RL 350-2	PHE 07
		2	2350	365	440	1.20	0.75													
		3	2720	435	570	2.00	1.15													
SCX 65-50	570	1	2200	460	610	1.25	1.05	65	218	340	349	170	118	256	104	90	40	26	RL 570-2	PHE 08
		2	2510	540	750	2.05	1.30													
		3	2810	640	870	2.90	1.65													
SCX 65-90	1100	1	2240	660	1000	2.25	1.75	65	218	340	349	170	118	256	104	90	40	28	RL 1100-2	PHE 09
		2	2510	770	1230	3.30	2.10													
		3	2800	900	1470	4.75	2.75													
SCX 80-25	570	1	2060	510	650	1.35	1.15	80	244	360	358	180	135	258	135	95	40	29	RL 570-2	PHE 10
		2	2370	620	850	2.30	1.50													
		3	2740	720	1040	3.25	1.85													
SCX 80-50	1100	1	2240	830	980	2.25	1.75	80	244	360	358	180	135	258	135	95	40	31	RL 1100-2	PHE 11
		2	2490	1000	1260	3.35	2.15													
		3	2780	1180	1530	5.00	2.90													
SX 1801	2200	1	2480	1150	1900	5.60	3.25	80	275	360	403	170	147	294	---	---	---	46	RA 2200-2	PHE 12
		2	2880	1650	2600	10.70	6.20													
SX 1802	2500	1	2500	1550	2600	7.80	4.50	80	275	360	403	170	147	294	---	---	---	48	RA 2500-2	PHE 13
		2	2900	2250	3550	12.70	7.30													

# SCX-DCX - SXM-DXM

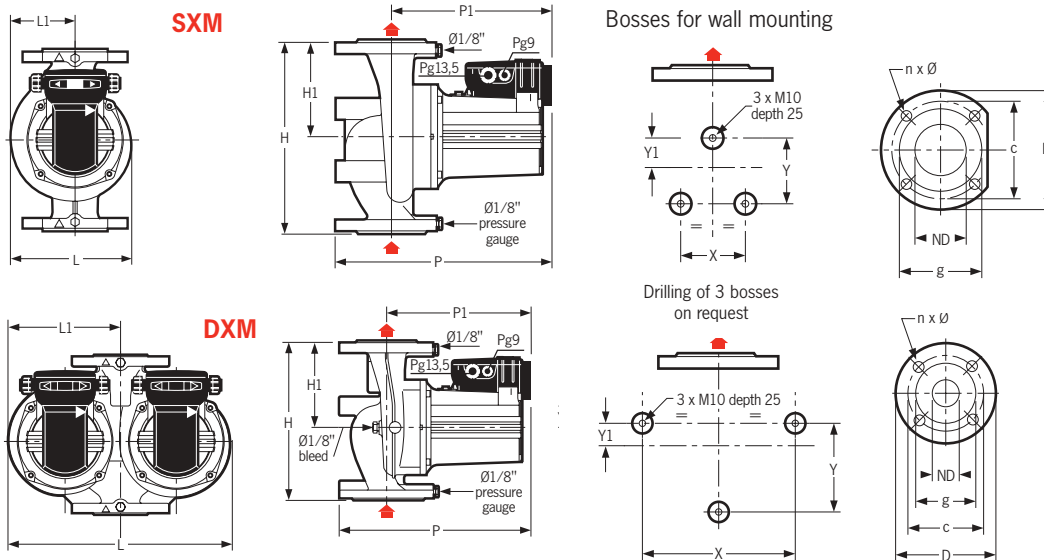
## ELECTRICAL DATA AND DIMENSIONS - DCX - THREE-PHASE 50 Hz



ORDER REFERENCE	P2 W	speed position rpm	M O T O R				ports ND	L mm	H mm	P mm	H1 mm	P U M P				Y1 mm	mass (approx.) kg	REPLACEMENTS		
			P1	full load current in A, 3-phase	230V	400V						L1	P1	X	Y			MOTOR ORDER REF.	HYDRAULIC POUCH ORDER REF.	
DCX 40-40	180	1	1700	140	220	0.45	0.40	40	297	250	269	135	154	194	173	108	11	20	RL 180-2	PHE 02
		2	2060	175	300	0.75	0.50													
		3	2580	215	410	1.35	0.80													
DCX 40-80	350	1	2000	240	360	0.75	0.60	40	350	250	292	135	178	217	225	132	35	29	RL 350-2	PHE 03
		2	2330	285	460	1.20	0.80													
		3	2710	360	590	2.00	1.15													
DCX 50-25	180	1	1800	160	210	0.45	0.40	50	336	280	283	155	178	200	225	132	25	23	RL 180-2	PHE 04
		2	2130	190	285	0.75	0.50													
		3	2620	240	380	1.25	0.75													
DCX 50-50	350	1	2140	225	325	0.70	0.55	50	348	280	308	160	179	225	225	132	30	31	RL 350-2	PHE 05
		2	2450	265	405	1.10	0.70													
		3	2760	340	510	1.85	1.05													
DCX 50-90	450	1	1890	300	490	0.95	0.80	50	390	280	306	155	198	223	228	157	50	33	RL 450-2	PHE 06
		2	2220	370	650	1.60	1.05													
		3	2650	470	825	2.65	1.55													
DCX 65-25	350	1	2020	310	345	0.75	0.60	65	414	340	327	185	215	234	225	162	25	37	RL 350-2	PHE 07
		2	2350	390	435	1.20	0.75													
		3	2720	490	560	2.00	1.15													
DCX 65-50	570	1	2120	470	630	1.30	1.10	65	432	340	349	185	223	256	225	162	25	45	RL 570-2	PHE 08
		2	2460	555	790	2.20	1.35													
		3	2800	660	915	3.00	1.75													
DCX 65-90	1100	1	2180	670	1020	2.35	1.75	65	432	340	349	185	223	256	225	162	25	49	RL 1100-2	PHE 09
		2	2490	780	1260	3.35	2.15													
		3	2780	910	1520	5.10	2.95													
DCX 80-25	570	1	2050	520	650	1.40	1.20	80	480	360	358	205	249	258	240	180	43	51	RL 570-2	PHE 10
		2	2360	630	860	2.35	1.50													
		3	2730	730	1050	3.30	1.95													
DCX 80-50	1100	1	2230	840	1050	2.30	1.80	80	480	360	358	205	249	258	240	180	43	55	RL 1100-2	PHE 11
		2	2480	1020	1300	3.40	2.20													
		3	2770	1215	1700	5.35	3.10													
DX 2801	2200	1	2480	1350	1900	5.60	3.25	80	600	360	394	190	300	294	358	196	44	86	RA 2200-2	PHE 12-mot.1
		2	2870	2000	2700	11.00	6.40													PHE 14-mot.2
DX 2802	2500	1	2470	2000	2700	8.10	4.70	80	600	360	394	190	300	294	358	196	44	90	RA 2500-2	PHE 13-mot.1
		2	2890	2700	3600	13.00	7.50													PHE 15-mot.2

# SCX-DCX - SXM-DXM

## ELECTRICAL DATA AND DIMENSIONS - SXM - DXM - SINGLE-PHASE 50 Hz



ORDER REFERENCE	P2 W	capacitor $\mu$ F	speed position	M O T O R				ports ND	L mm	H mm	P mm	H1 mm	P U L1 mm	M P P1 mm	X mm	Y mm	Y1 mm	mass (approx.) kg	REPLACEMENTS	
				rpm	Wmin	Wmax	full load current in A, 3-phase 230V												MOTOR ORDER REF.	HYDRAULIC HEAD POUCH ORDER REF.
SXM 32-80	180	8x400V	1	1950	180	315	1.45	32	142	180	228	90	73	185	-----	-----	-----	7	RA 180-2 M	PHE 01
			2	2680	230	340	1.50													
SXM 40-40	180	8x400V	1	1470	240	405	1.80	40	155	250	268	125	80	193	75	147	38	12	RA 180-2 M	PHE 02
			2	2530	240	410	1.80													
SXM 40-80	350	16x400V	1	2010	350	590	2.95	40	171	250	292	125	90	217	90	90	40	16	RA 350-2 M	PHE 03
			2	2730	450	665	3.05													
SXM 50-25	180	8x400V	1	1660	220	345	1.60	50	178	280	283	140	95	200	85	162	125	14	RA 180-2 M	PHE 04
			2	2600	260	385	1.70													
SXM 50-50	350	16x400V	1	2360	315	480	2.50	50	174	280	308	140	91	225	90	90	40	18	RA 350-2 M	PHE 05
			2	2800	400	590	2.75													
SXM 50-90	450	25x400V	1	1960	400	760	3.65	50	190	280	306	140	101	223	90	90	40	19	RA 450-2 M	PHE 06
			2	2720	540	895	3.90													
SXM 65-25	350	16x400V	1	2090	460	580	2.80	65	204	340	327	170	111	234	104	90	40	22	RA 350-2 M	PHE 07
			2	2730	545	675	3.15													
SXM 65-50	570	25x400V	1	2290	525	820	3.80	65	218	340	349	170	118	256	104	90	40	26	RA 570-2 M	PHE 08
			2	2775	715	950	4.10													
SXM 80-25	570	25x400V	1	2060	615	840	4.10	80	244	360	358	180	135	258	135	95	40	29	RA 570-2 M	PHE 10
			2	2720	760	1040	4.60													
DXM 40-40	180	8x400V	1	1470	240	425	1.90	40	297	250	268	135	154	193	173	108	11	20	RA 180-2 M	PHE 02
			2	2530	240	430	1.90													
DXM 40-80	350	16x400V	1	1990	350	600	3.00	40	350	250	292	135	178	217	225	132	35	29	RA 350-2 M	PHE 03
			2	2720	450	680	3.20													
DXM 50-25	180	8x400V	1	1660	220	360	1.70	50	336	280	283	155	178	200	225	132	25	23	RA 180-2 M	PHE 04
			2	2600	260	405	1.80													
DXM 50-50	350	16x400V	1	2270	320	520	2.50	50	348	280	308	160	179	225	225	132	30	31	RA 350-2 M	PHE 05
			2	2780	410	595	2.90													
DXM 50-90	450	25x400V	1	1800	450	805	3.90	50	390	280	306	155	198	223	228	157	50	33	RA 450-2 M	PHE 06
			2	2700	590	935	4.10													
DXM 65-25	350	16x400V	1	2080	540	595	3.00	65	414	340	327	185	215	234	225	162	25	37	RA 350-2 M	PHE 07
			2	2740	600	675	3.15													
DXM 65-50	570	25x400V	1	2245	505	790	3.85	65	432	340	349	185	223	256	225	162	25	45	RA 570-2 M	PHE 08
			2	2765	680	950	4.10													
DXM 80-25	570	25x400V	1	2110	595	810	3.95	80	480	360	358	205	249	258	240	180	43	51	RA 570-2 M	PHE 10
			2	2735	745	975	4.40													

# SCX-DCX - SXM-DXM

## PRESSURE GAUGE KIT



### Differential pressure gauge kit

- For single and twin-head pumps
- Rapid connection without welding, to ports provided on flanges.

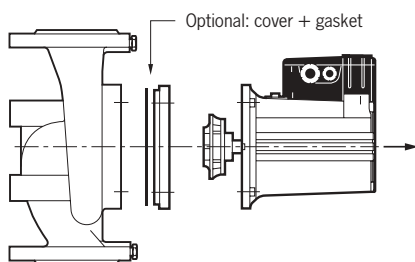
KIT includes:

- 0-6 or 0-16 bar glycerin bath pressure gauge,
- isolating cocks,
- unions and connecting tubes,
- bleed.

Supplied in pouch with installation instructions.

ORDER REF.: **PRESS KIT 6** or  
**PRESS KIT 16**

## BLANK COVER



### REPLACEMENT OF MOTOR HEAD AND HYDRAULIC PARTS:

#### Supplies:

- bare shaft motor
- hydraulic pouch with:
  - impeller + circlip
  - motor attachment screws and Allen key
  - mounting instructions.

Order ref.: see tables on preceding pages.

### Blank cover with gasket for twin-head pumps

If one pump fails, blanks the opening left by the removal of the hydraulic assembly and motor from the pump casing.

During troubleshooting, the standby pump is started and keeps the installation in operation.

type of twin-head circulator	ORDER REF. BLANK COVER
DCX 40-40 - DXM 40-40	<b>COUV. 32</b>
DCX 50-25 - DXM 50-25	
DCX 40-80 - DXM 40-80	<b>COUV. 42</b>
DCX 50-50 - DXM 50-50	
DCX 50-90 - DXM 50-90	
DCX 65-25 - DXM 65-25	<b>COUV. 52</b>
DCX 65-50 - DXM 65-50	
DCX 65-90	
DCX 80-25 - DXM 80-25	
DCX 80-50	<b>COUV. 6</b>
DX 2801 - DX 2802	

## FEATURES

### a) Electrical data

- Three-phase 230 V or 400 V - 50 Hz.
- Single-phase 230 V - 50 Hz with built-in capacitor.
- Single and three-phase motors must have a protection.
- Connection to the terminal box via stuffing box, inlet on left or right.

### b) Installation

- Direct on piping, motor shaft always horizontal.
- Connection to the installation: welded, round counter-flanges (not included).

### c) Packaging

- Supplied with gaskets and bolts, without counter-flanges.

### d) Maintenance

- Replacement of motor head and hydraulic parts (*see tables for order ref.*).

## OPTIONS & ACCESSORIES

- Motor protection circuit-breaker (SCX).
- Motor control and protection box (DCX).
- Speed controller box.
- Blank off cover (DCX).
- Pressure gauge kit.
- Welded round counter-flanges, unions.
- Isolating valves.
- Anti-vibration sleeves, etc.