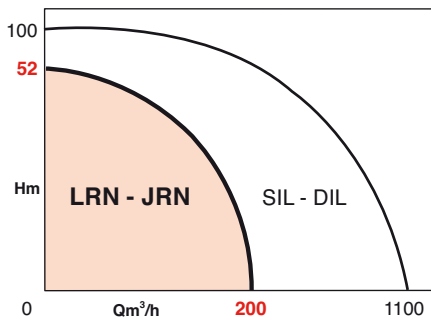


RANGE OF USE

Flows up to:	200 m ³ /h
Manometric head up to:	52 m
Maximum working pressure:	10 bar
Temperature range:	- 10° to + 110°C
nominal diameter ports:	32 to 100
MEI* of reference:	≥ 0,10

*Minimum Efficiency Index



ADVANTAGES

- Low electrical consumption.
- Mounts directly onto horizontal or vertical pipework.
- Not coupled: no need to align the shafts.
- Device to de-aerate the mechanical seal.
- Easy and quick to install.
- Practically zero maintenance.

JRN

- A backup pump permanently available.
- The two pumps can be operated in parallel to increase the flow.
- Manual or automatic pump switchover by MGP box .

LRN - JRN

SINGLE AND DOUBLE IN-LINE PUMPS

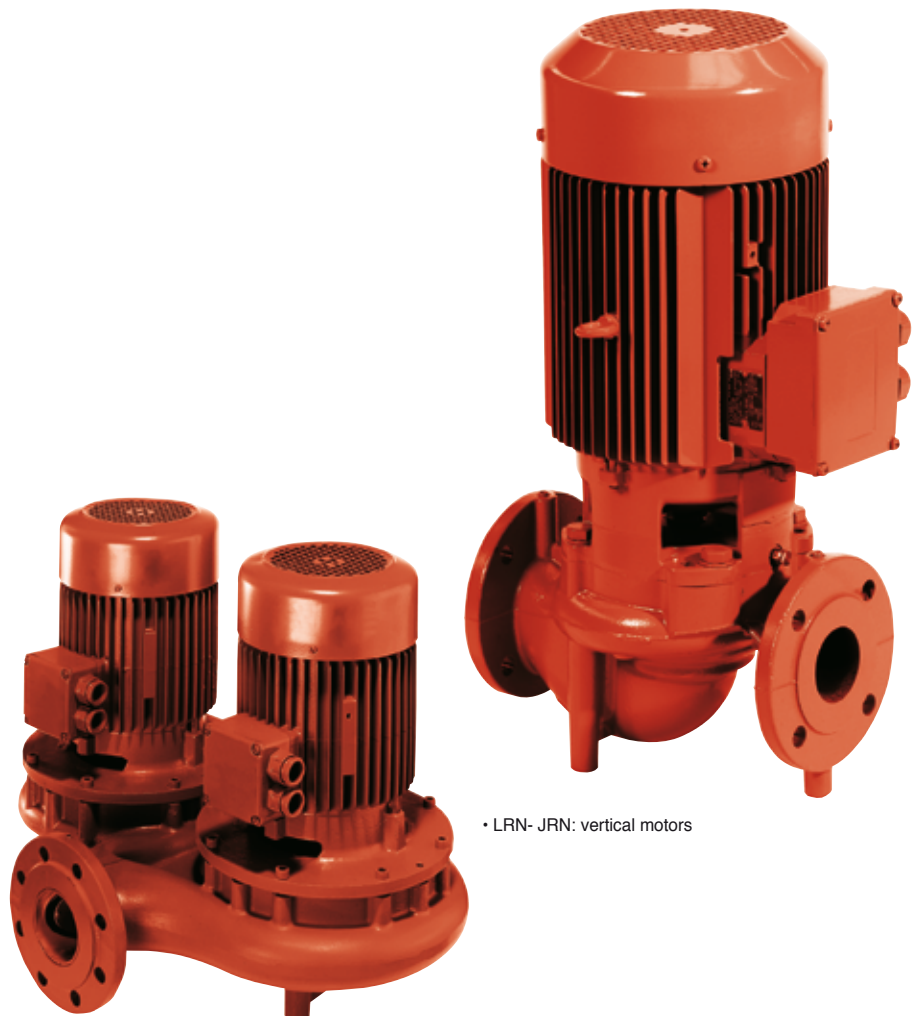
Heating - Air conditioning 50 Hz

APPLICATIONS

- Heating multiple dwellings
- Air conditioning

Many industrial and agricultural applications.

- Heating greenhouses
- Transferring antifreeze
- Circulating iced water.



• LRN- JRN: vertical motors

LRN - JRN

DESIGN

Hydraulic part

- Centrifugal, single-stage.
- Intake and outlet ports in line.
- Flanged pump housing with ports for connecting pressure gauges.
- Bearing lantern linking pump to motor.
- Dynamically balanced impeller, mounted directly on the shaft of the motor.
- Waterproof mechanical seal.

JRN

- Double pump in one housing.
- The two pumps are hydraulically separated by silent-operating valve.

Motor

- IE2
- One end of shaft lengthened.
- The rotor shaft's guide bearings selected for silent operation.

Speed: 2900 rpm

3 ~ winding = 3kW: 230 V Δ

400 V Y

Three-phase \geq 4kW: 400 V Δ

Frequency: 50 Hz (option 60 Hz)

Insulation class: 155 (F)

Protection class: IP 55

EC Compliant: EN 809

BASIC CONSTRUCTION

Main components	Material
Pump housing	Cast iron EN GJL 250
Bearing lantern	Cast iron EN GJL 250
Shaft	Steel X20 - Cr13
Mechanical seal	Graphite/ Carbide Si/EP
Impeller	Cast iron EN GJL 200

IDENTIFICATION

LRN 2 05 - 17/7.5

JRN

single/double pump

2 = 2 pole: 2900 rpm

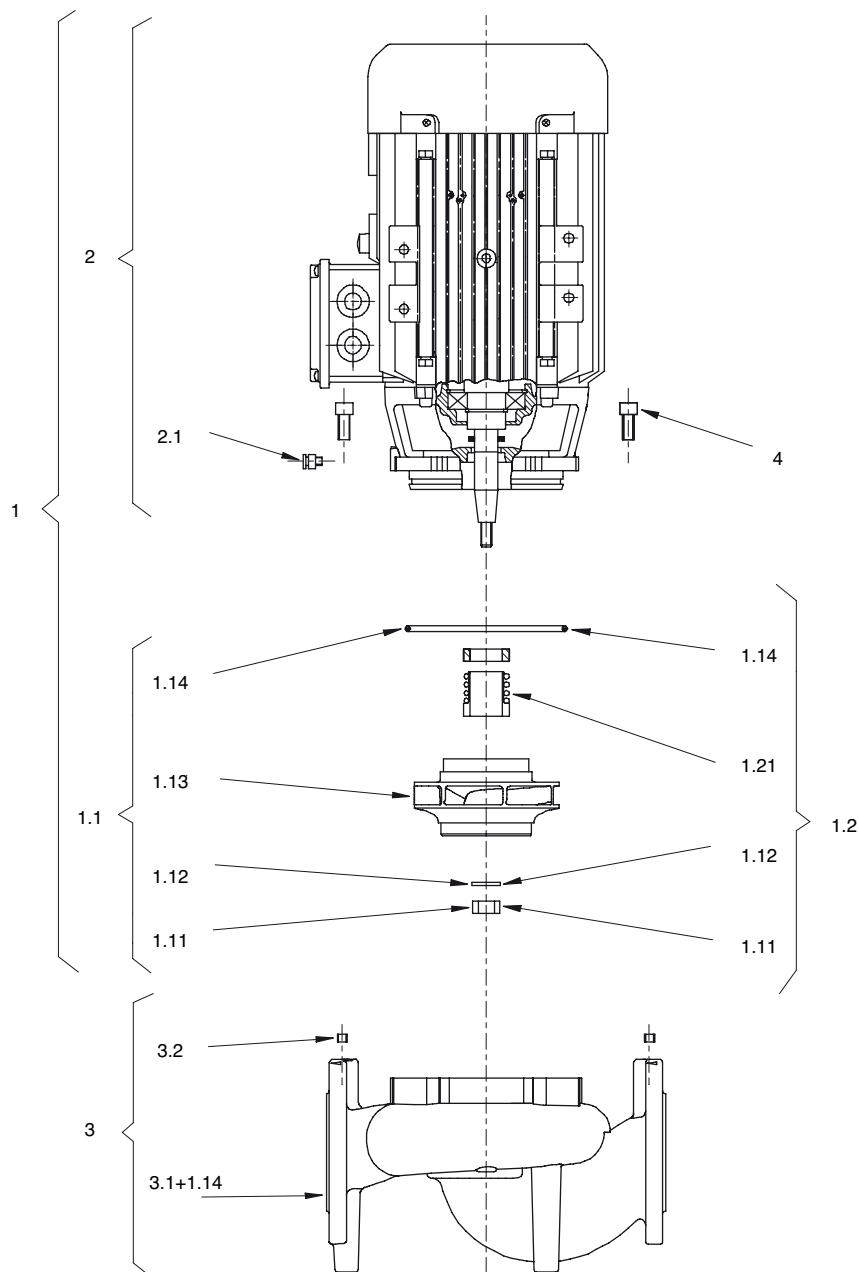
4 = 4 pole: 1450 rpm

Nominal diam. of ports (cm)

Nominal diam. of the impeller (cm)

Motor power (kW)

LRN - PLAN AND CROSS-SECTION



LRN

PART LIST

• common to LRN - JRN

1. Complete replacement kit

- 1.1 Set of spare parts for impeller with
 - 1.11 Nut
 - 1.12 Washer
 - 1.13 Impeller
 - 1.14 O-ring
- 1.2 Set of spare parts for mechanical seal with:
 - 1.11 Nut
 - 1.12 Washer
 - 1.14 O-ring
 - 1.21 Complete mechanical seal

2. Replacement motor kit

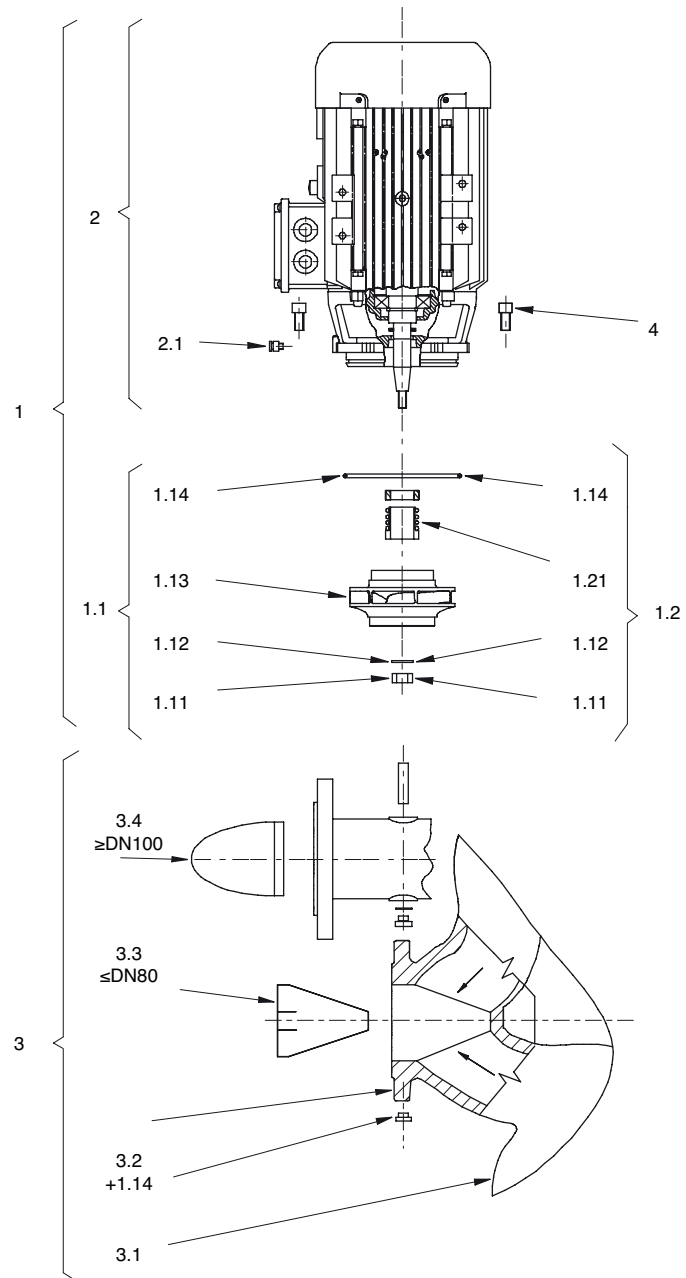
- 2.1 Air bleed screw

3. Complete pump housing with

- 3.1 Pump housing (LRN, JRN)
- 3.2 Bouchon pour prise de pression
- 3.3 Directional valve \leq nominal diameter 80 (JRN pumps only)
- 3.4 Directional valve \geq nominal diameter 100 (JRN pumps only)

- 4. Retaining screw for flange of the motor / pump housing (also included in the motor kit).

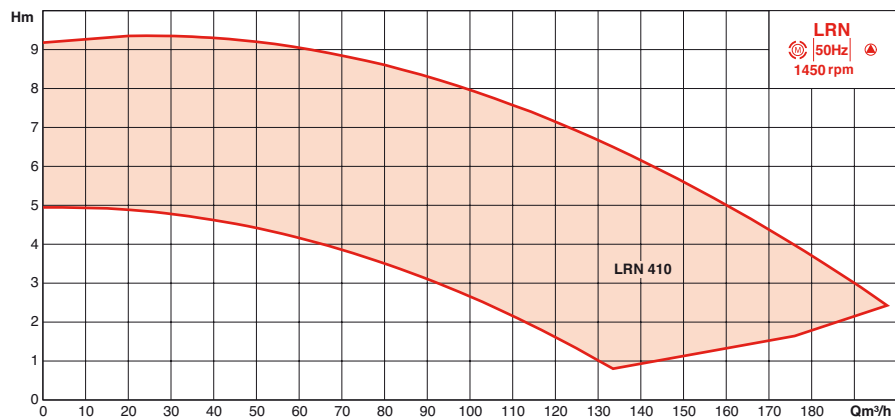
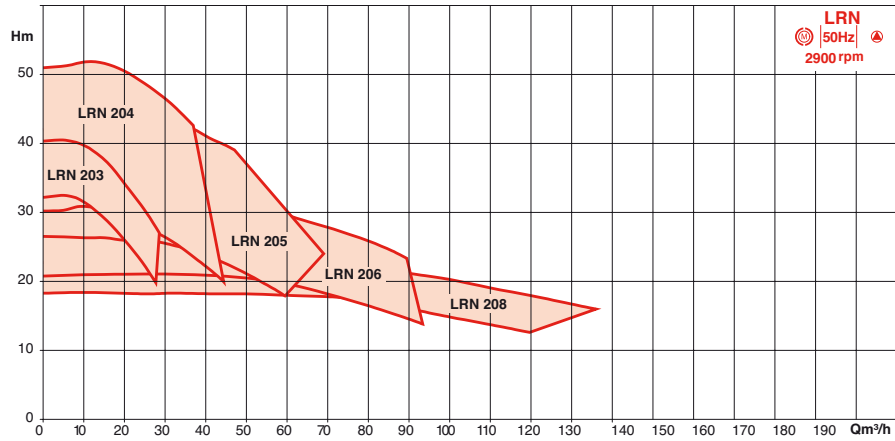
JRN - PLAN AND CROSS-SECTION



JRN

LRN - JRN

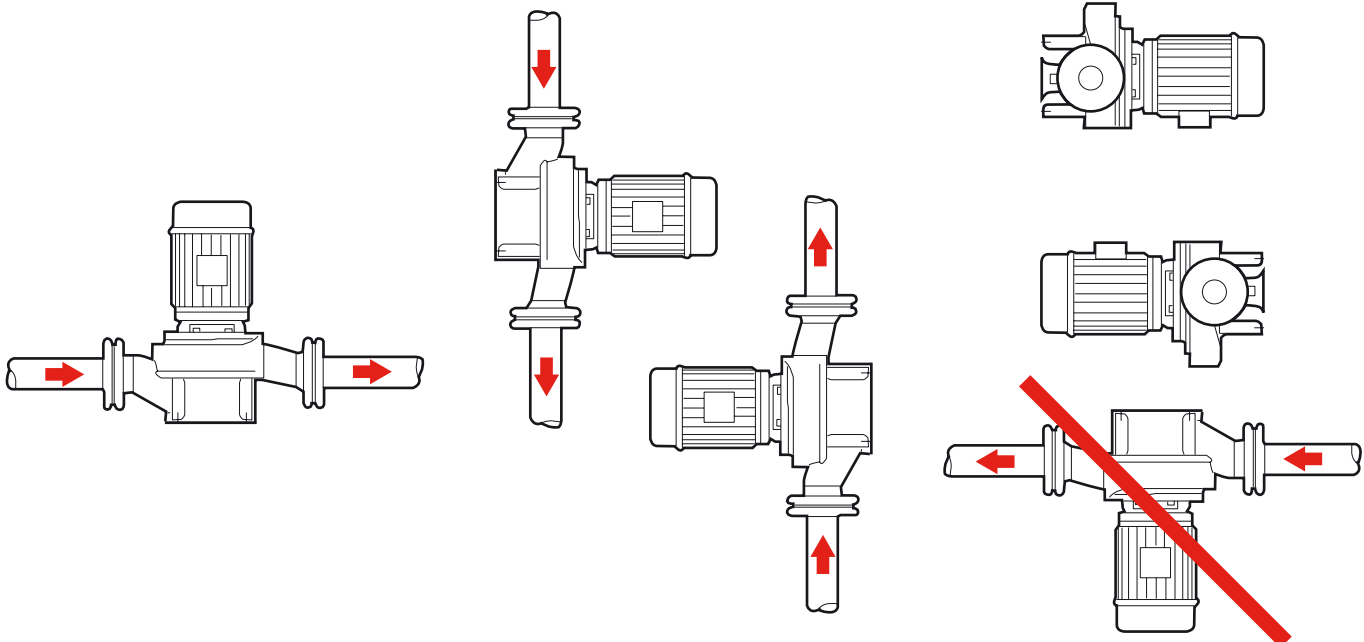
LRN - GENERAL PRESELECTION DIAGRAMS



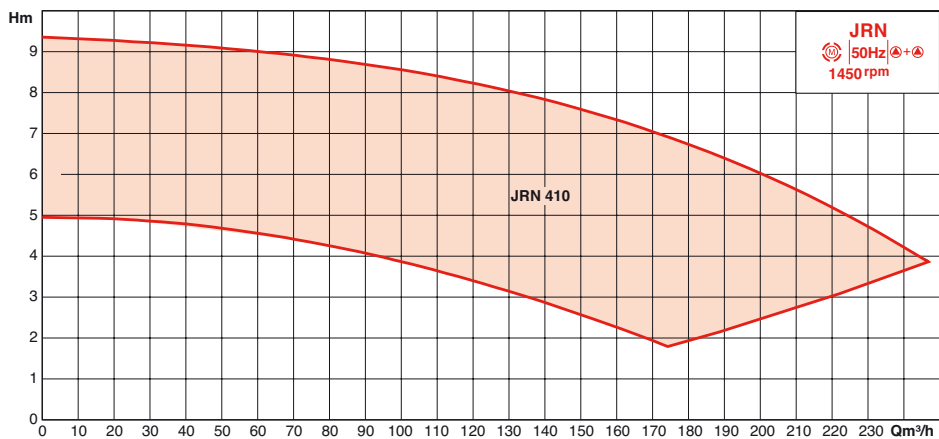
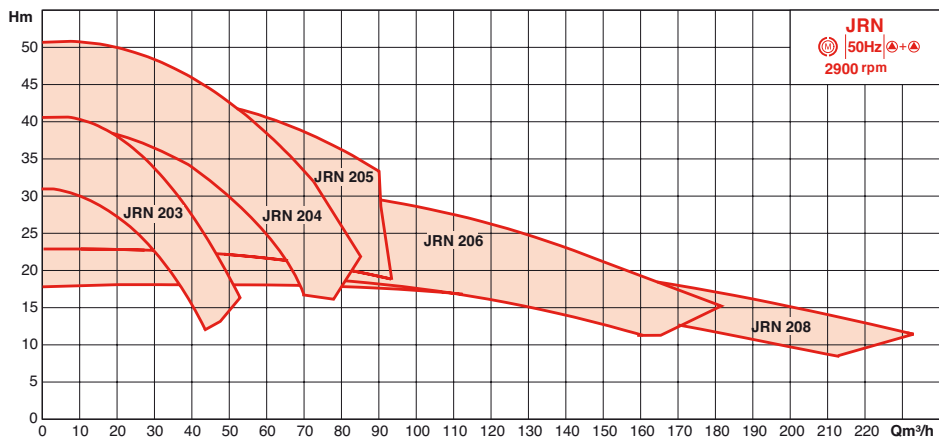
FITTING POSITIONS

mounted directly onto horizontal or vertical pipework

Pay attention to the position of the bleed screw: always upwards.

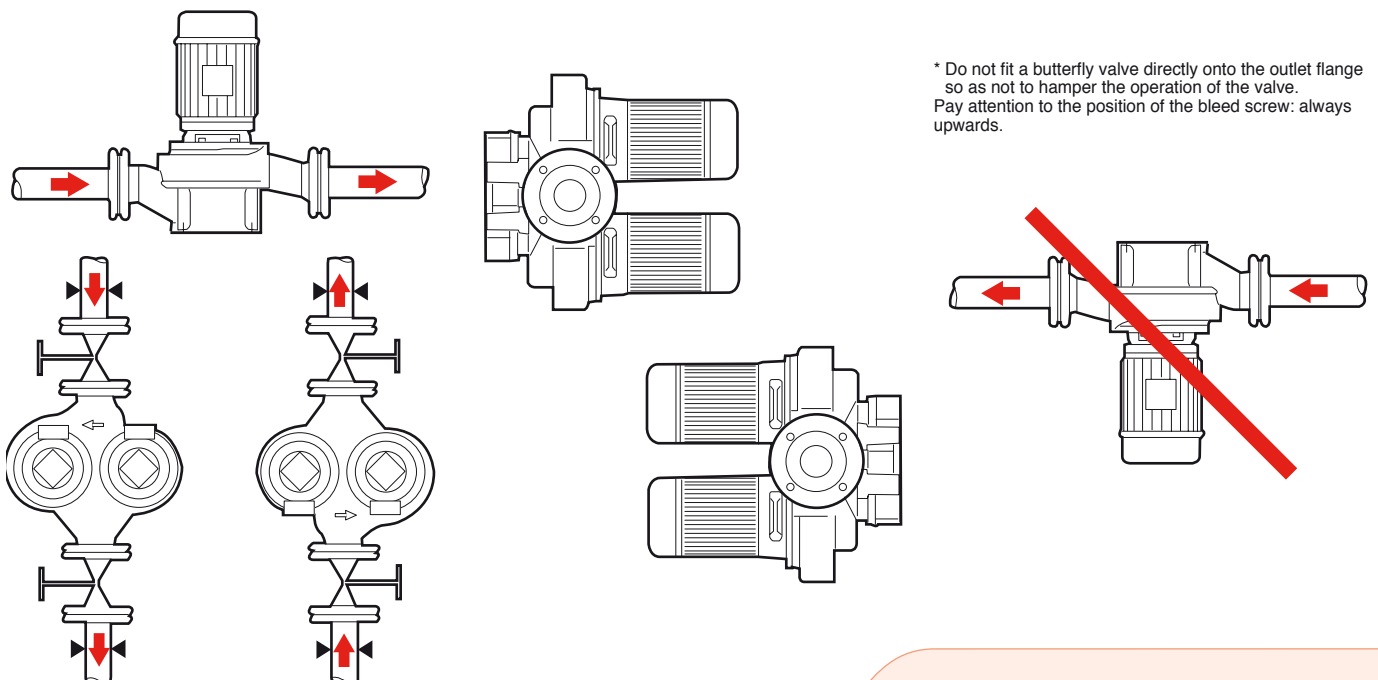


LRN - GENERAL PRESELECTION DIAGRAMS



FITTING POSITIONS

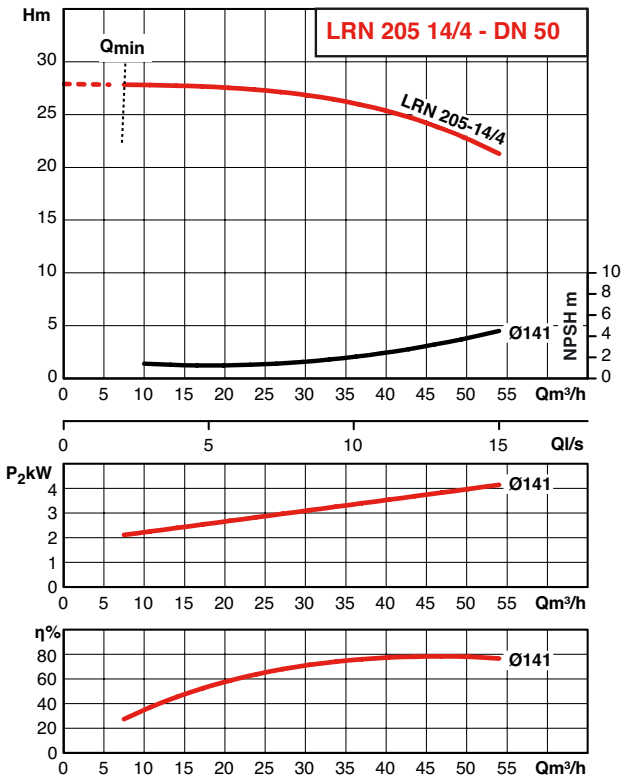
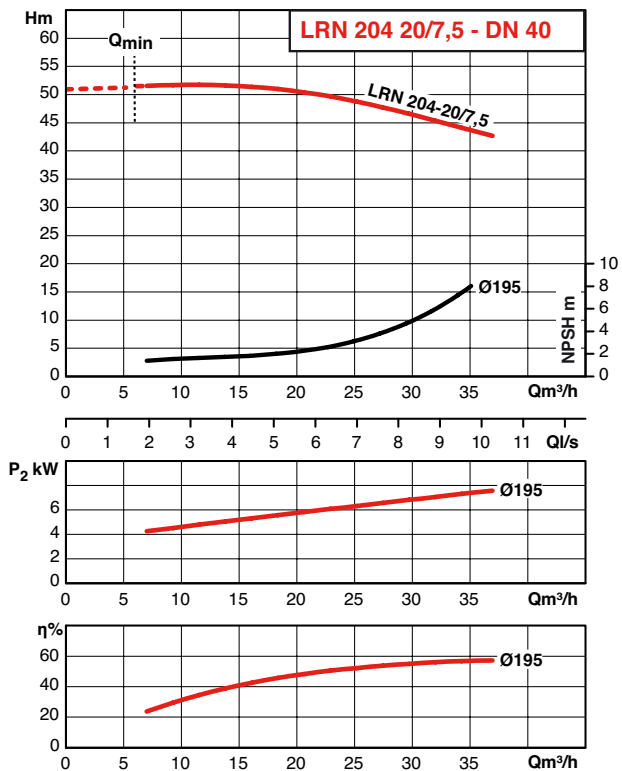
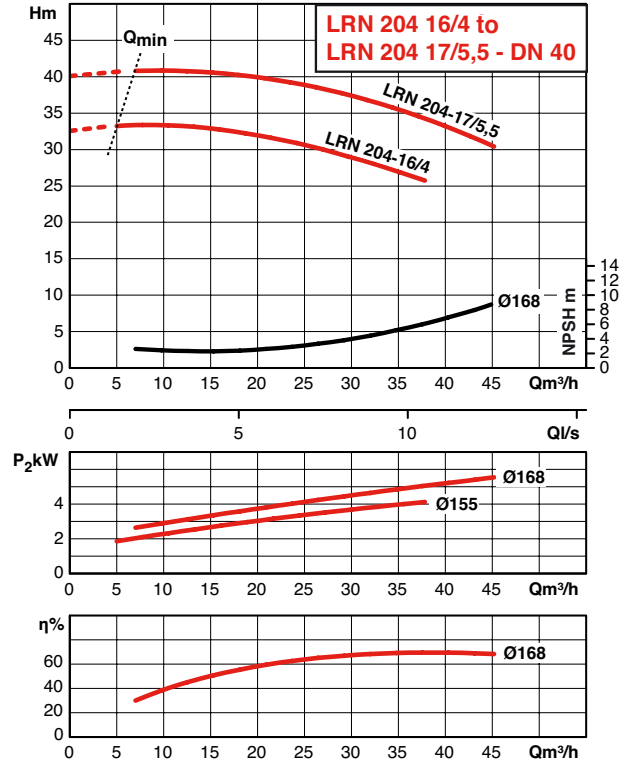
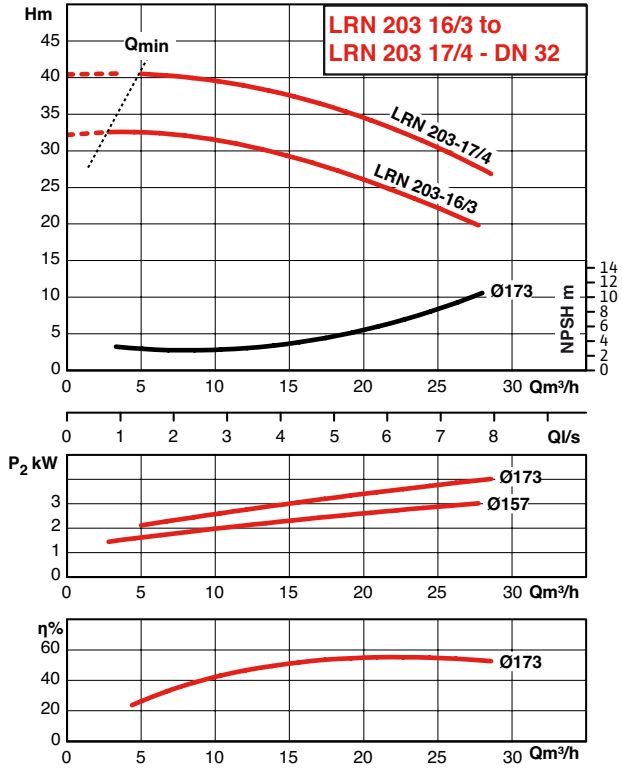
mounted directly onto horizontal or vertical pipework



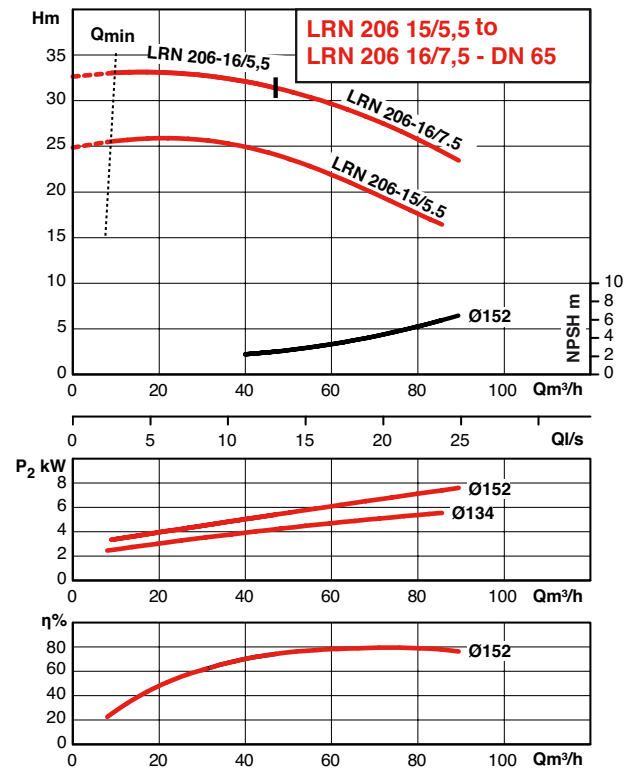
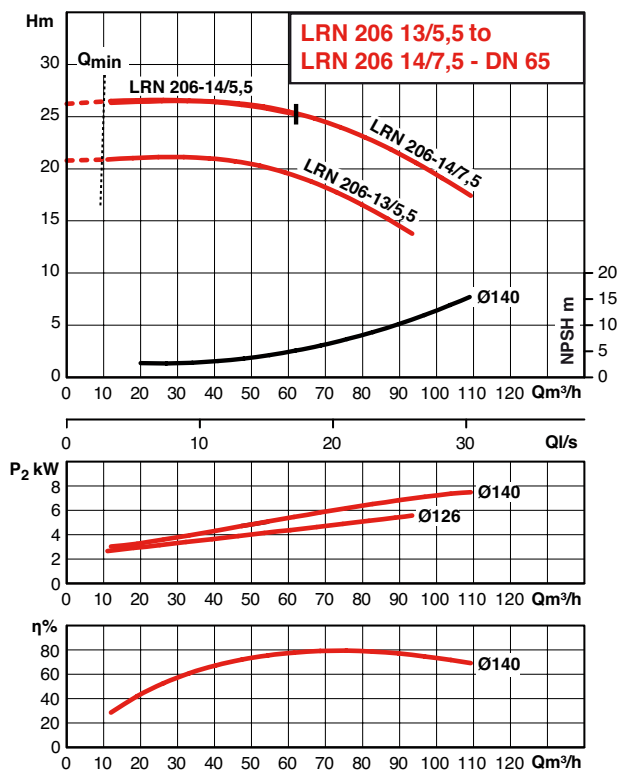
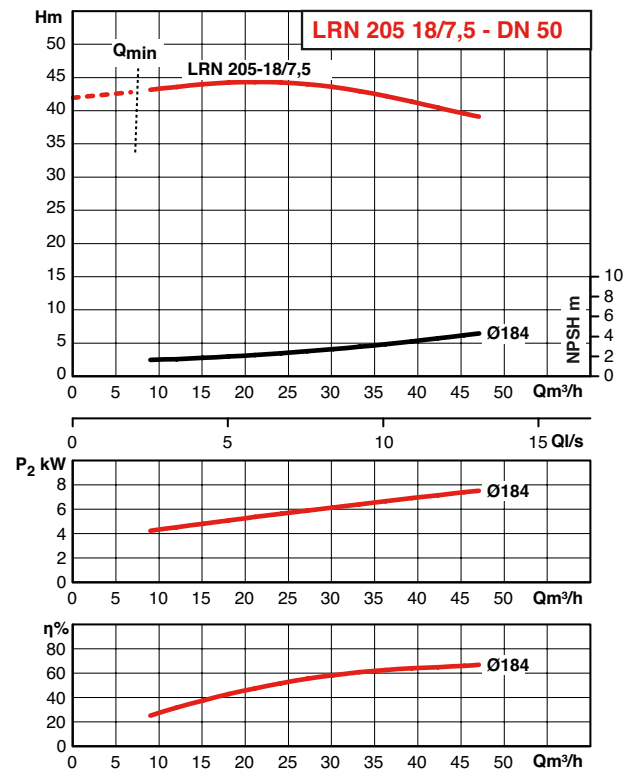
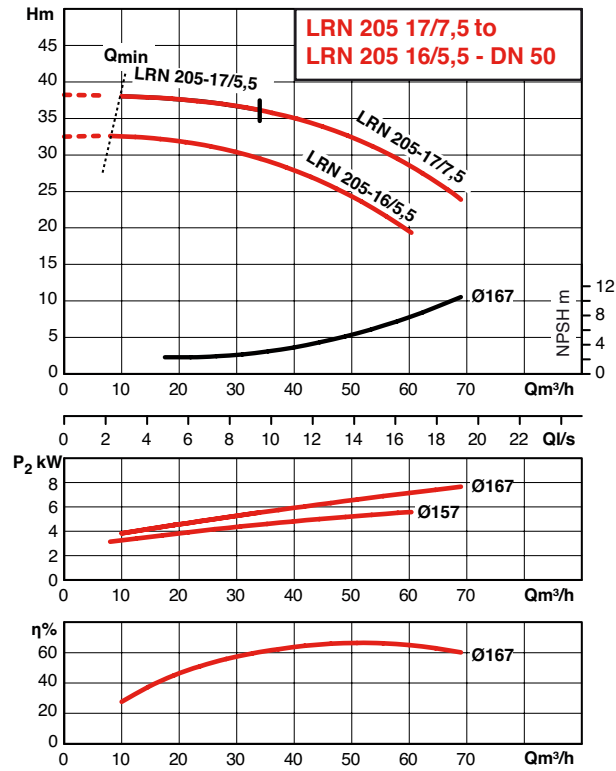
* Do not fit a butterfly valve directly onto the outlet flange so as not to hamper the operation of the valve. Pay attention to the position of the bleed screw: always upwards.

LRN - JRN

HYDRAULIC PERFORMANCE LRN 2-POLE

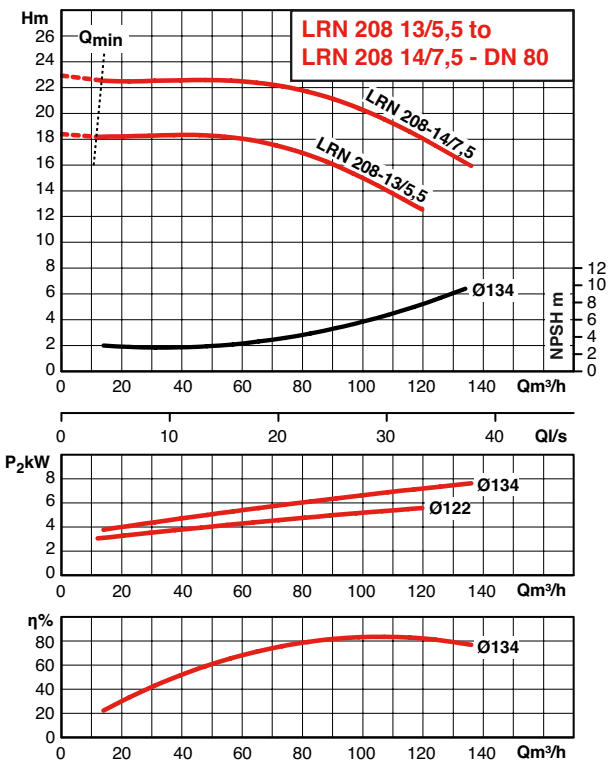


HYDRAULIC PERFORMANCE LRN 2-POLE

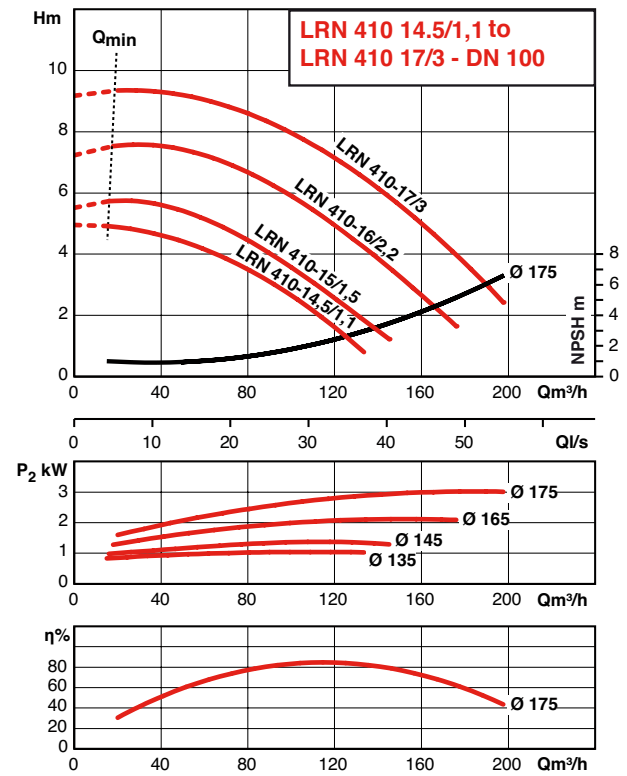


LRN - JRN

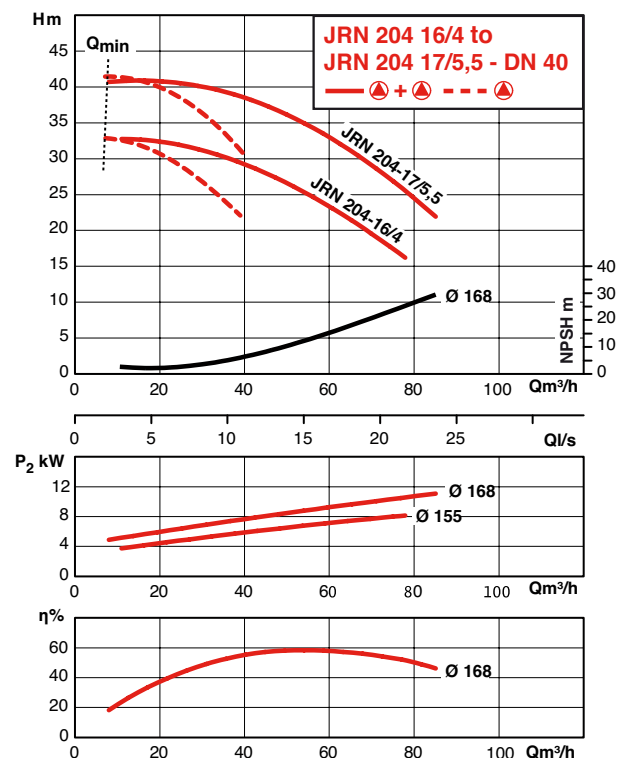
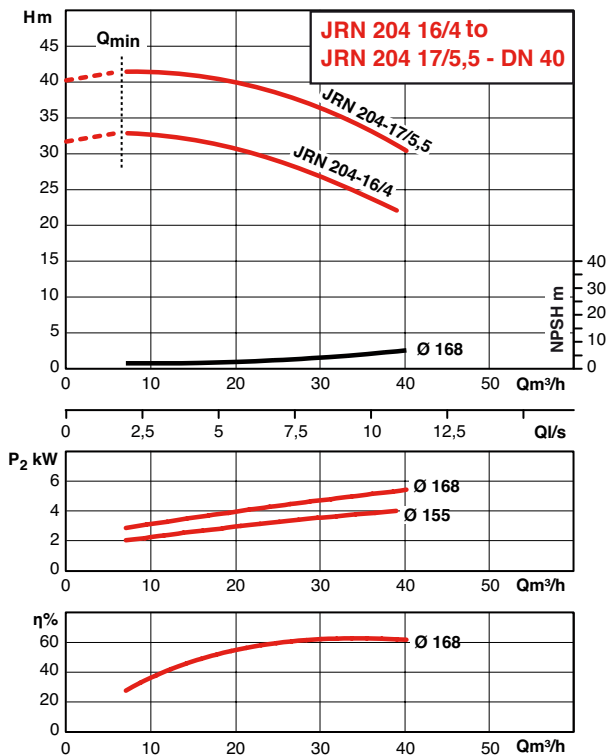
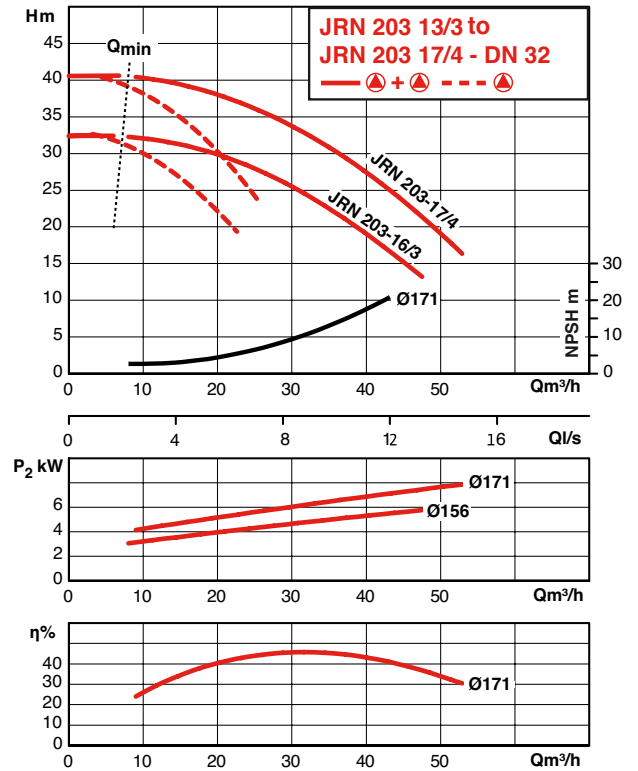
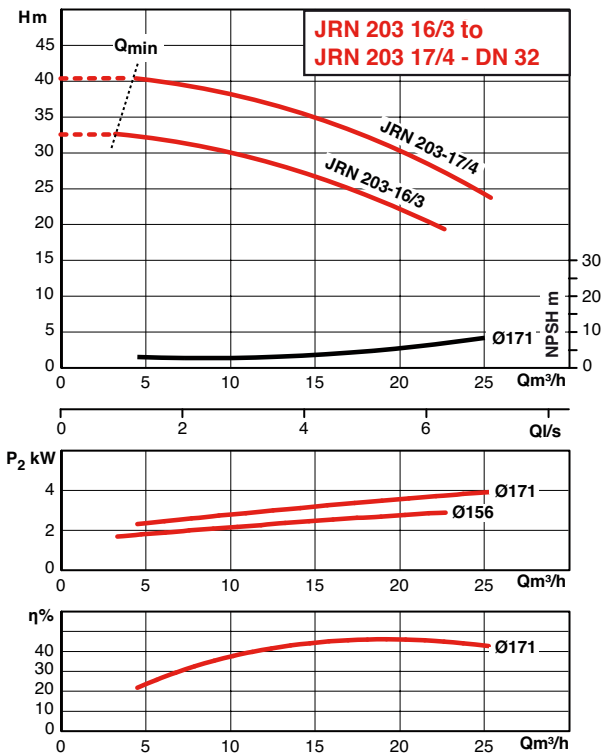
HYDRAULIC PERFORMANCE LRN 2-POLE



HYDRAULIC PERFORMANCE LRN 4-POLE

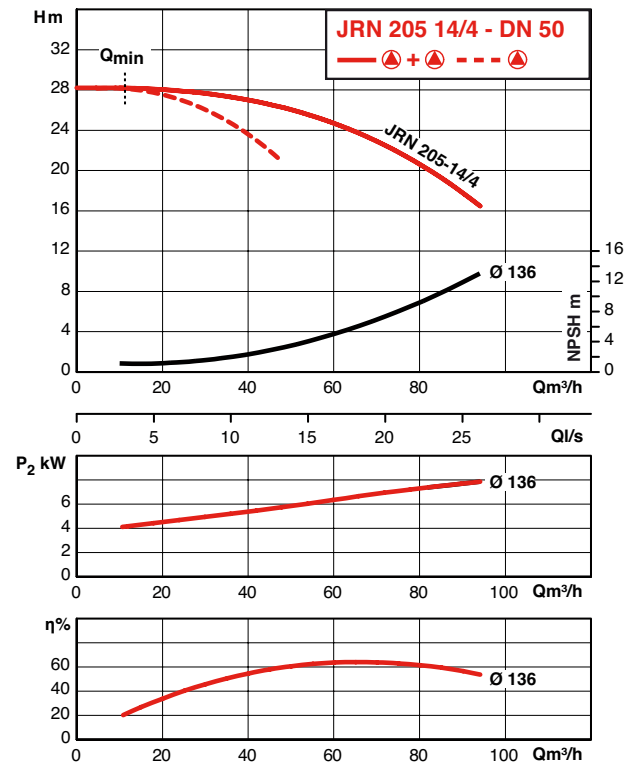
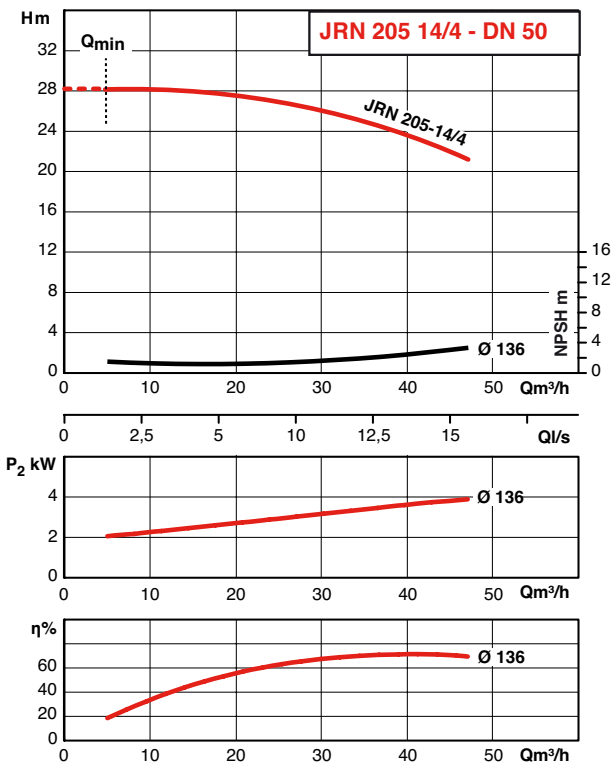
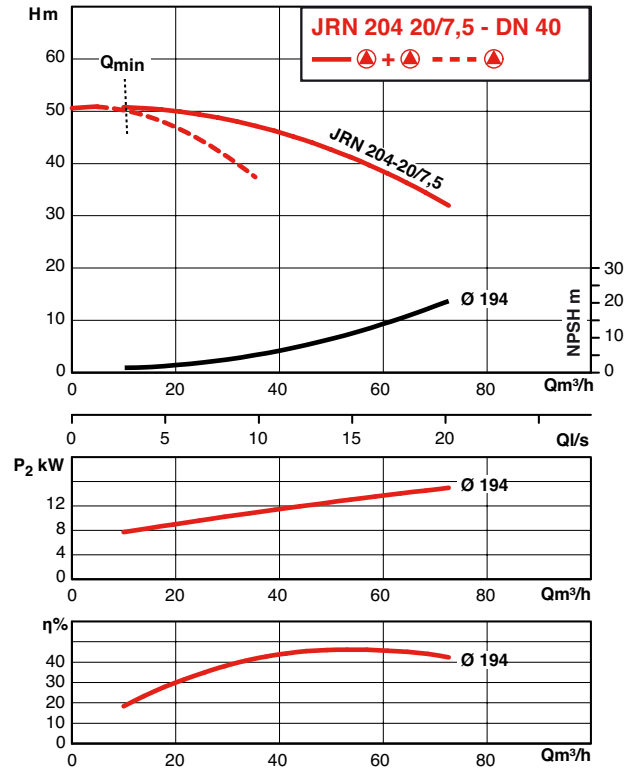
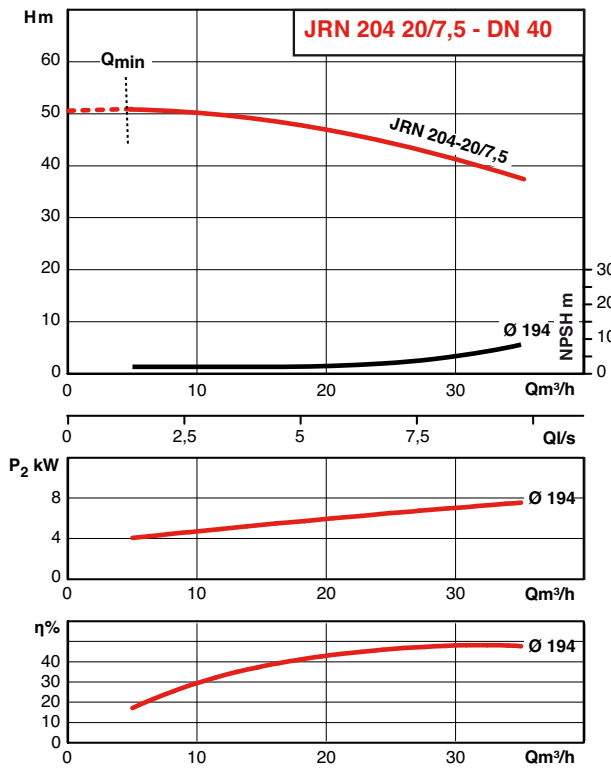


HYDRAULIC PERFORMANCE JRN 2 POLE

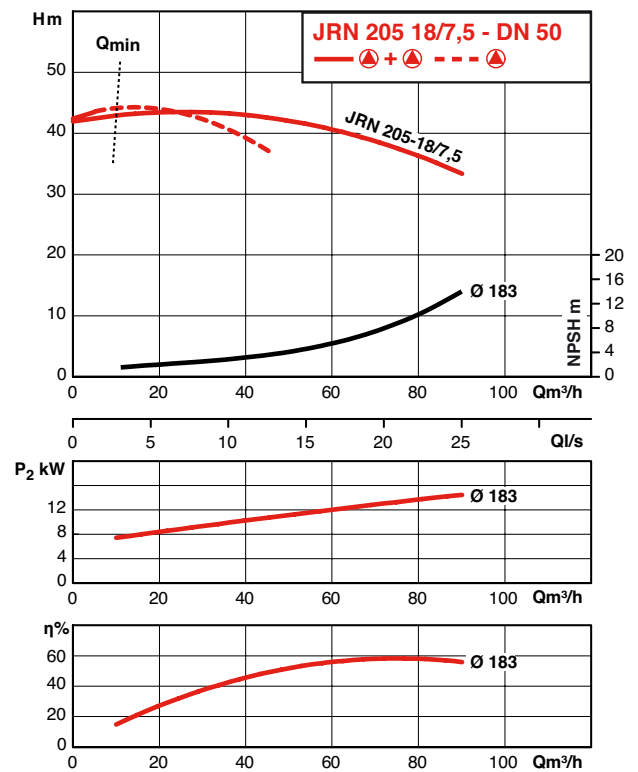
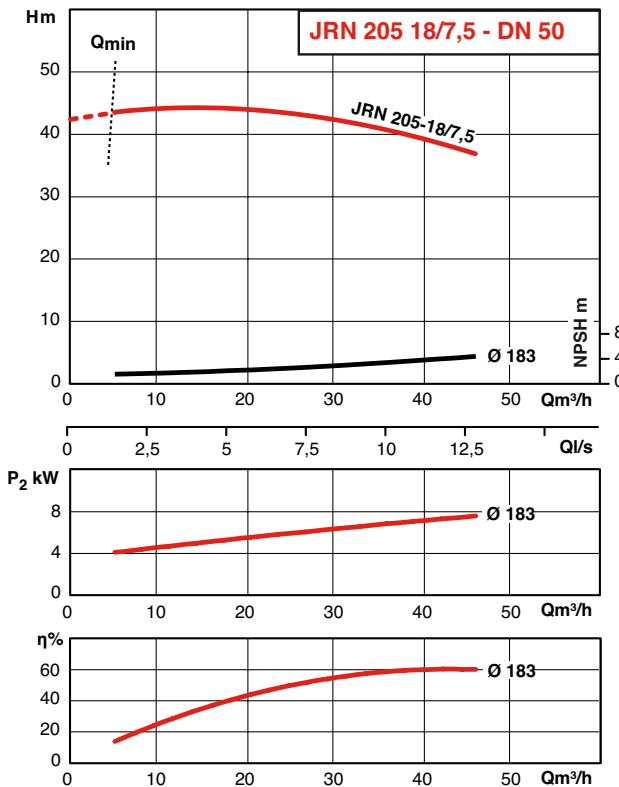
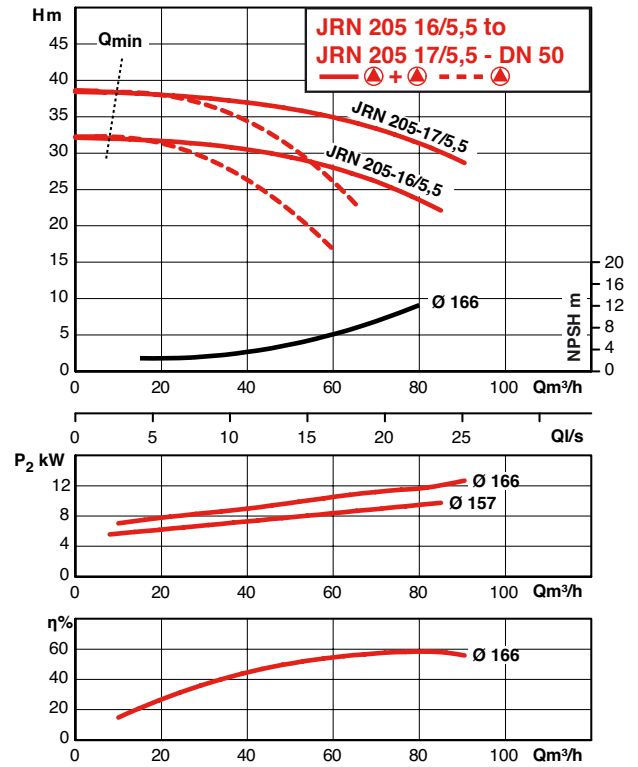
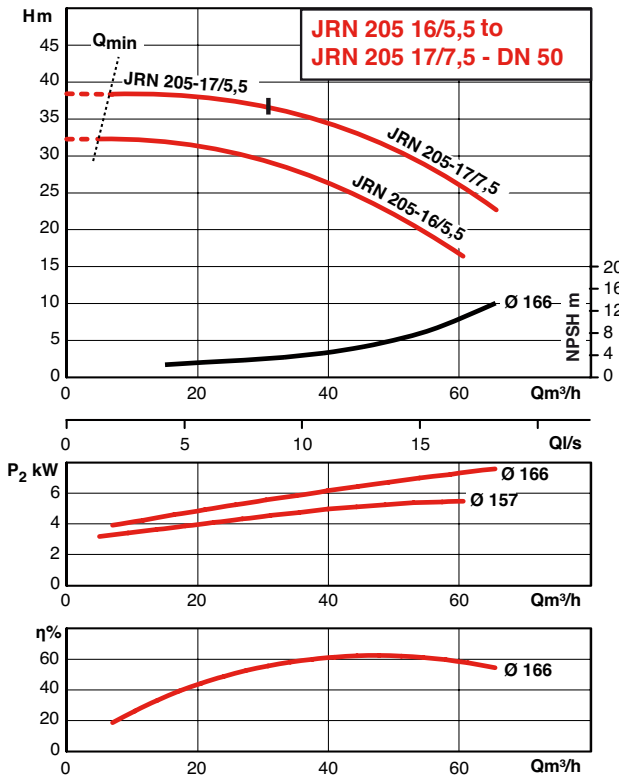


LRN - JRN

HYDRAULIC PERFORMANCE JRN 2 POLE

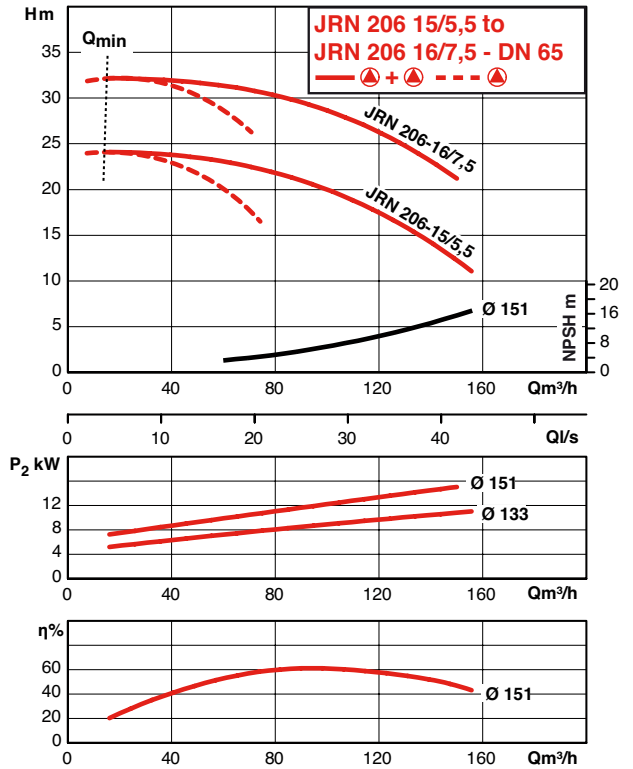
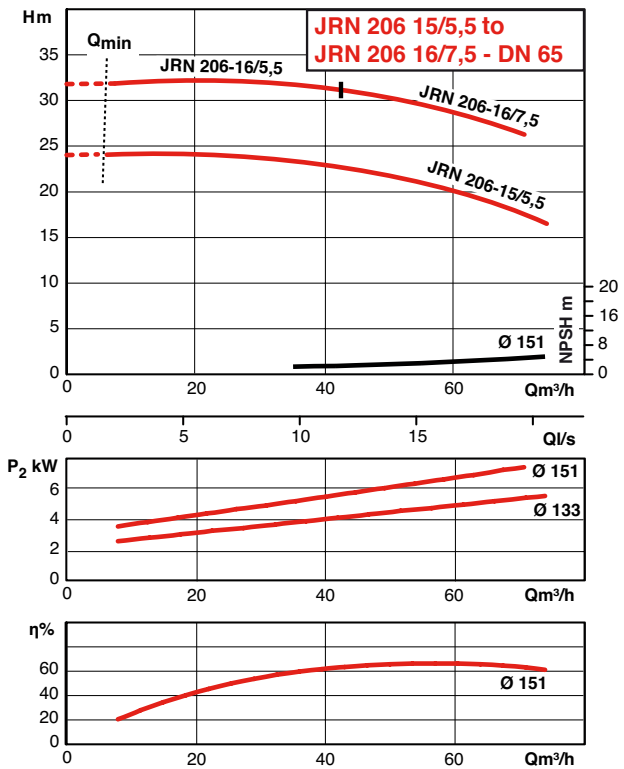
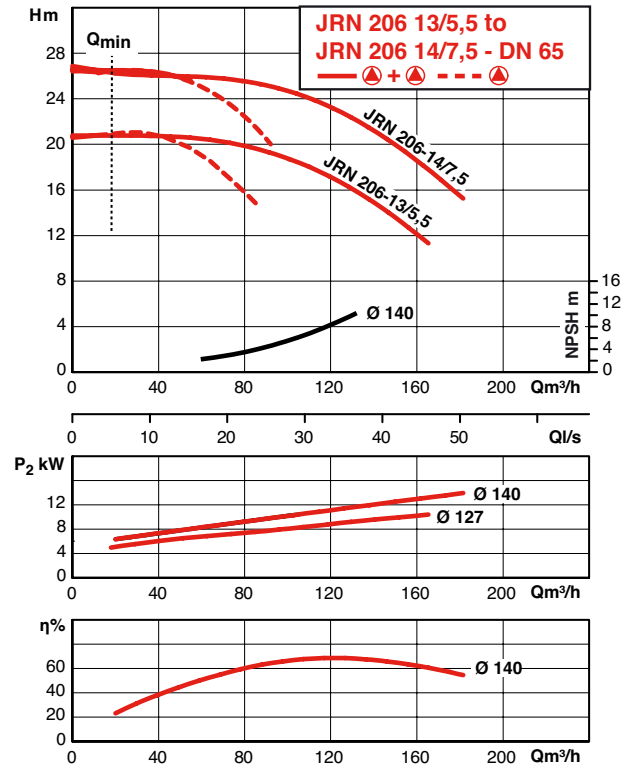
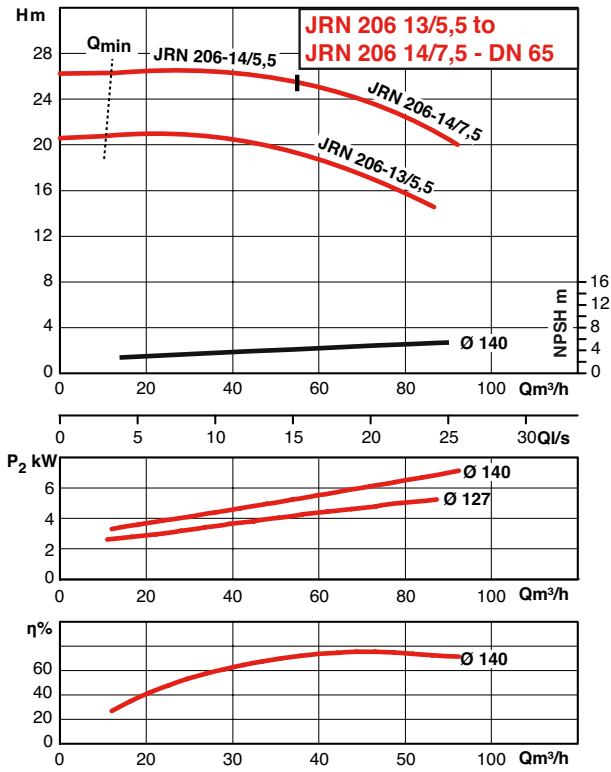


HYDRAULIC PERFORMANCE JRN 2 POLE

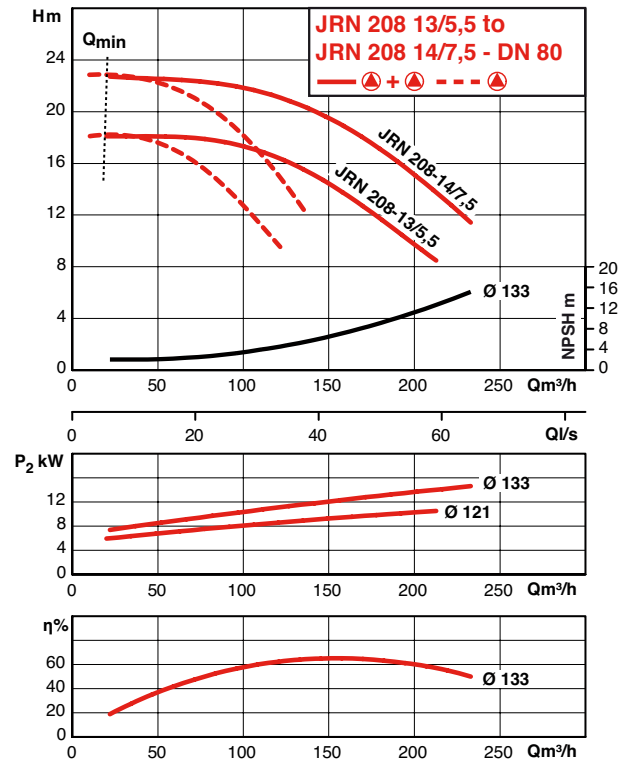
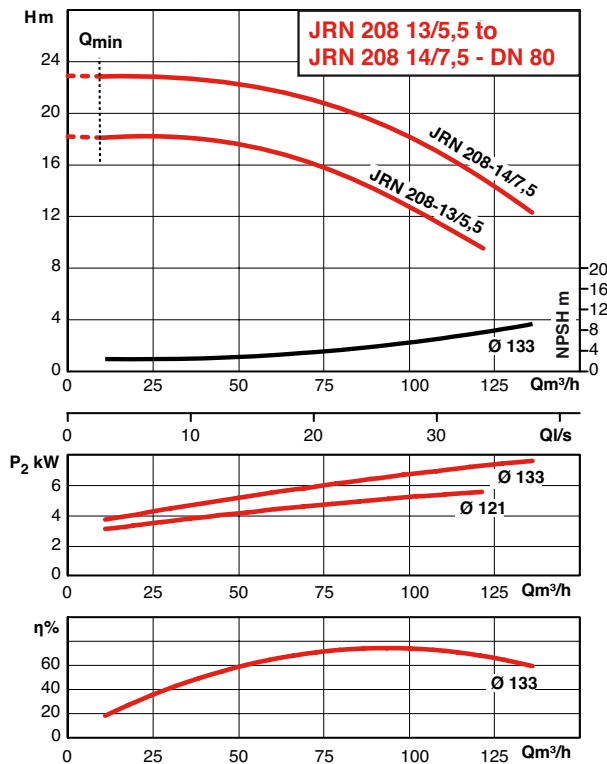


LRN - JRN

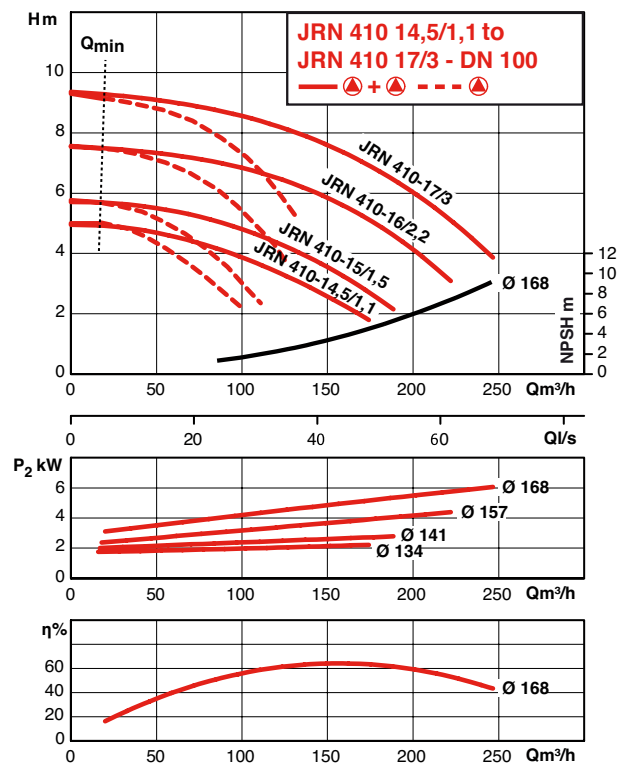
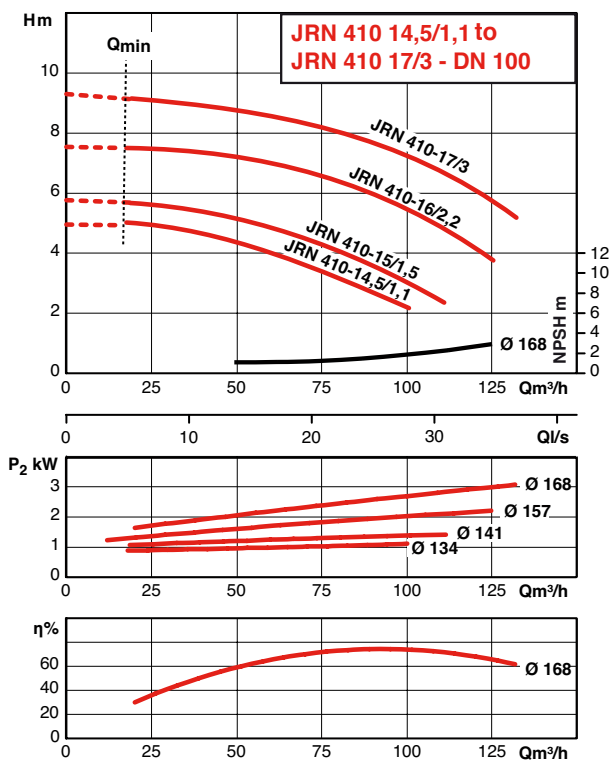
HYDRAULIC PERFORMANCE JRN 2 POLE



HYDRAULIC PERFORMANCE JRN 2 POLE

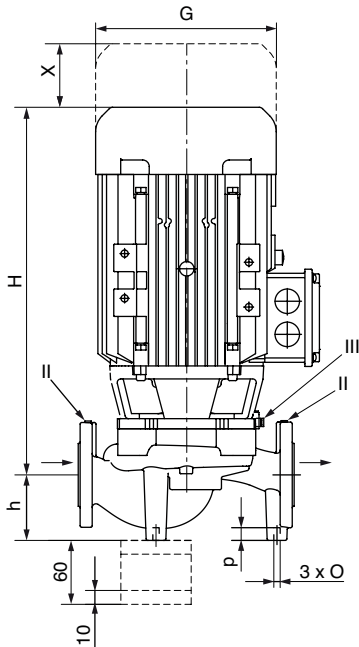


HYDRAULIC PERFORMANCE JRN 4 POLE

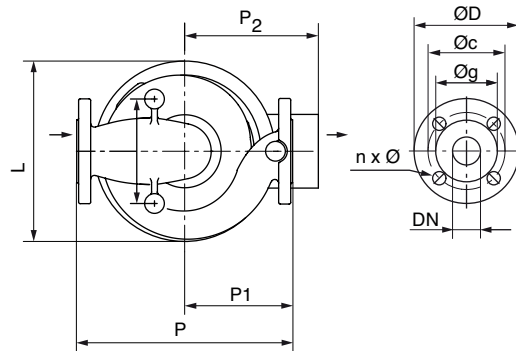


LRN - JRN

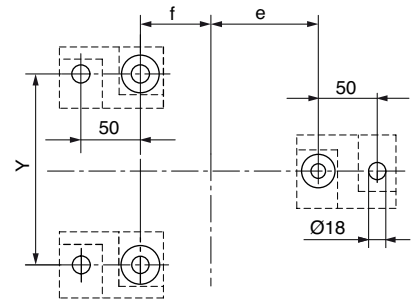
LRN - ELECTRICAL CHARACTERISTICS AND SIZES



II: pressure port G1/8
III: drain port G1/8



DN	ØD	Øg	Øc	n x Ø
	mm	mm	mm	n x mm
32	140	76	100	4 x 19
40	150	84	110	4 x 19
50	165	99	125	4 x 19
65	185	118	145	4 x 19
80	200	132	160	8 x 19
100	220	156	180	8 x 19

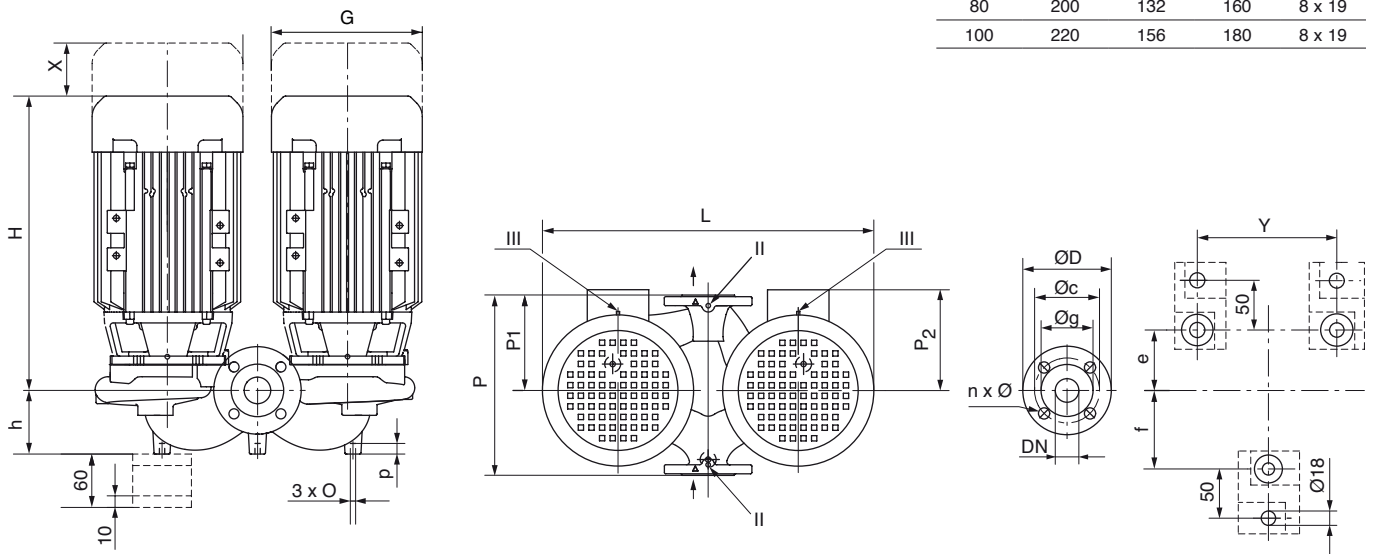


*Check the information plate on the motor when setting the thermal overload level.

ORDER REFERENCE	MOTOR				PUMP														mass
	P2	Intensity*	Efficiency	Cos φ	DN	h	L	Y	e	f	P	H	P1	O	p	P2	X	G	
	kW	A			mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
LRN203-16/3	3	5.8	84.6	0.88	32	100	236	120	132	68	320	396	155	M10	20	160	150	217	46,1
LRN203-17/4	4	7.7	85.8	0.87	32	100	236	120	132	68	320	412	155	M10	20	168	150	232	53,4
LRN204-16/4	4	7.7	85.8	0.87	40	82	242	130	149	58	340	426	170	M10	20	168	150	232	57,3
LRN204-17/5,5	5,5	10.2	87.0	0.87	40	82	242	130	149	58	340	446	170	M10	20	168	150	279	68,6
LRN204-20/7,5	7,5	13.7	88.1	0.89	40	110	294	180	172	78	440	520	190	M10	20	188	150	279	80,6
LRN205-14/4	4	7.7	85.8	0.87	50	105	232	140	130	40	340	463	150	M10	20	168	150	232	63,2
LRN205-16/5,5	5,5	10.2	87.0	0.87	50	103	279	164	143	48	340	526	170	M10	20	188	150	279	74
LRN205-17/5,5	5,5	10.2	87.0	0.87	50	103	279	164	143	48	340	526	170	M10	20	188	150	279	74,2
LRN205-17/7,5	7,5	13.7	88.1	0.89	50	103	279	164	143	48	340	526	170	M10	20	188	150	279	76,2
LRN205-18/7,5	7,5	13.7	88.1	0.89	50	120	295	160	170	70	440	521	190	M10	20	188	150	279	83
LRN206-13/5,5	5,5	10.2	87.0	0.87	65	120	279	140	140	60	340	531	160	M12	20	188	150	279	74,2
LRN206-14/5,5	5,5	10.2	87.0	0.87	65	120	279	140	140	60	340	531	160	M12	20	188	150	279	74,4
LRN206-14/7,5	7,5	13.7	88.1	0.89	65	120	279	140	140	60	340	531	160	M12	20	188	150	279	82,4
LRN206-15/5,5	5,5	10.2	87.0	0.87	65	110	279	180	195	60	430	532	215	M12	20	188	150	279	78,2
LRN206-16/5,5	5,5	10.2	87.0	0.87	65	110	279	180	195	60	430	532	215	M12	20	188	150	279	78,5
LRN206-16/7,5	7,5	13.7	88.1	0.89	65	110	279	180	195	60	430	532	215	M12	20	188	150	279	84,5
LRN208-13/5,5	5,5	10.2	87.0	0.87	80	105	279	180	173	57	400	548	200	M12	20	188	150	279	81,1
LRN208-14/7,5	7,5	13.7	88.1	0.89	80	105	279	180	173	57	400	548	200	M12	20	188	150	279	89,3
LRN410-14,5/1,1	1,1	2.45	81.4	0.8	100	120	356	200	226	60	500	398	250	M12	20	147,5	150	177	68,3
LRN410-15/1,5	1,5	3.3	82.8	0.79	100	120	356	200	226	60	500	423	250	M12	20	147,5	150	177	70,8
LRN410-16/2,2	2,2	4.7	84.3	0.8	100	120	356	200	226	60	500	450	250	M12	20	154,5	150	196	76,7
LRN410-17/3	3	6.1	85.5	0.83	100	120	356	200	226	60	500	450	250	M12	20	154,5	150	196	84,1

JRN - ELECTRICAL CHARACTERISTICS AND SIZES

DN	ØD	Øg	Øc	n x Ø
	mm	mm	mm	n x mm
32	140	76	100	4 x 19
40	150	84	110	4 x 19
50	165	99	125	4 x 19
65	185	118	145	4 x 19
80	200	132	160	8 x 19
100	220	156	180	8 x 19



*Check the information plate on the motor when setting the thermal overload level.

ORDER REFERENCE	MOTOR					PUMP													
	P2	Intensity* tri 400	Efficiency	Cos φ	DN	h	L	Y	e	f	P	H	P1	O	p	P2	X	G	mass
	kW	A			mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
JRN203-16/3	3	5.8	84.6	0.88	32	100	539	360	43	137	320	393	155	M10	20	160	150	217	95
JRN203-17/4	4	7.7	85.8	0.87	32	100	539	360	43	137	320	409	155	M10	20	168	150	232	105,4
JRN204-16/4	4	7.7	85.8	0.87	40	100	587	400	52	145	340	413	170	M10	20	168	150	232	109,6
JRN204-17/5,5	5,5	10,2	87,0	0,87	40	100	587	400	52	145	340	433	170	M10	20	168	150	279	132
JRN204-20/7,5	7,5	13,7	88,1	0,89	40	110	692	500	38	192	440	515	220	M10	20	188	150	279	169,1
JRN205-14/4	4	7.7	85.8	0.87	50	105	532	360	52	148	340	463	170	M10	20	168	150	232	107,3
JRN205-16/5,5	5,5	10,2	87,0	0,87	50	120	619	360	50	130	340	503	180	M10	20	188	150	279	143,8
JRN205-17/5,5	5,5	10,2	87,0	0,87	50	120	619	360	50	130	340	503	180	M10	20	188	150	279	144,2
JRN205-17/7,5	7,5	13,7	88,1	0,89	50	120	619	360	50	130	340	503	180	M10	20	188	150	279	148,2
JRN205-18/7,5	7,5	13,7	88,1	0,89	50	120	693	500	50	200	440	521	200	M10	20	188	150	279	165,9
JRN206-13/5,5	5,5	10,2	87,0	0,87	65	120	619	400	50	150	340	521	170	M12	20	188	150	279	145,3
JRN206-14/5,5	5,5	10,2	87,0	0,87	65	120	619	400	50	150	340	521	170	M12	20	188	150	279	145,8
JRN206-14/7,5	7,5	13,7	88,1	0,89	65	120	619	400	50	150	340	521	170	M12	20	188	150	279	162
JRN206-15/5,5	5,5	10,2	87,0	0,87	65	152	679	440	55	185	430	521	215	M12	20	188	150	279	164,8
JRN206-16/5,5	5,5	10,2	87,0	0,87	65	152	679	440	55	185	430	521	215	M12	20	188	150	279	165,4
JRN206-16/7,5	7,5	13,7	88,1	0,89	65	152	679	440	55	185	430	521	215	M12	20	188	150	279	177
JRN208-13/5,5	5,5	10,2	87,0	0,87	80	155	630	400	62	178	400	528	200	M12	20	188	150	279	159,8
JRN208-14/7,5	7,5	13,7	88,1	0,89	80	155	630	400	62	178	400	528	200	M12	20	188	150	279	176
JRN410-14,5/1,1	1,1	2,45	81,4	0,8	100	180	801	580	80	250	500	397	226	M12	20	147,5	150	177	132,6
JRN410-15/1,5	1,5	3,3	82,8	0,79	100	180	801	580	80	250	500	407	226	M12	20	147,5	150	177	137,6
JRN410-16/2,2	2,2	4,7	84,3	0,8	100	180	801	580	80	250	500	423	226	M12	20	154,5	150	196	149,4
JRN410-17/3	3	6,1	85,5	0,83	100	180	801	580	80	250	500	465	226	M12	20	154,5	150	196	164,2

LRN - JRN

LRN - JRN OPTIONS

Sealing cap: For double pump. Blocks the opening left by the removal of the hydraulics section and the motor.

Backflange: Round to be soldered nominal press. 10/16 (sold individually).

Set of legs: Used when fixing to a concrete support.

Models of pumps by family	Sealing cap Part reference	Backflange Part reference	Set of legs Part reference
203-17	2040971	82243	2040967
204-17	2040971	82244	2040967
204-22	2042861	82244	2040967
205-14	2040970	82245	2040967
205-17	2040971	82245	2040967
205-22	2042861	82245	2040967
206-14	2040970	82246	2040968
206-17	2040971	82246	2040968
208-14	2040970	82247	2040968
410-17	2040971	82248	2040968

Special mechanical seal for 20 to 50% antifreeze if temperature is above 40°C: contact us for further details

PARTICULARITIES

a) Electrical

P2 = 3 kW : three-phase 400 V **Y** 50 Hz
three-phase 230 V **Δ** 50 Hz

P2 ≥ 4 kW : three-phase 400 V **Δ** 50 Hz

b) Installation

Mounted directly onto horizontal or vertical pipework or on massif.

The system must provide protection of the pump against bad weather and frost (do not expose to direct sunlight or rain).

c) Packaging

Pumps delivered with backflange gaskets.

d) Maintenance

Repair: see the list of spare parts available on the plan and cross-section.

ACCESSORIES

Sealing cap

Round backflanges to solder on

Set of support legs

Pressure measurement kit

Slave switch of protection motor (LRN)

Control and protection box (JRN)

Shut-off valves

Anti-vibration sleeves

Non-return valves

MGP CONTROL BOX FOR JRN

- Controls motors and provides thermal protection.
- Safeguards operation by automatically starting the backup pump, if there is a fault on the pump in service.

For further information, see specific manual for MGP boxes.

