

NLT (S) / LLT (S)

ULTRA HIGH
EFFICIENT COOLING
TOWER SPECIALLY
DESIGNED PUMPS



BZT PUMPS
the best solution



Its core competitiveness lies in its focus on pumps and green innovation. Our mission is to provide carbon neutral and Chinese wisdom to the world. Always focus on high efficiency, we gather an authoritative team dedicated to green innovation. With cutting- edge fluid dynamics CFD technology, excellent 30-year process sedimentation and world leading intelligent manufacturing innovation, we provide high-quality, green, and intelligent water pumps and system solutions.

Redefine energy saving pumps!

NLT(S)/LLT(S) ULTRA
HIGH EFFICIENT COOLING TOWER SPECIALLY
DESIGNED PUMPS



High efficiency hydraulic
model design

Superior performance and smooth
operation

Excellent reliability

Unique mechanical seal, good sealing effect
IP56 motor, High protection level



Big flow, Low head

NEARLY 100% RESTORED EFFICIENT
HYDRAULIC MODEL

Flow rate 35-300m³/h

Delivery head 2-9m

For big flow and low head applications

NLT(S) LLT(S)

ULTRA HIGH EFFICIENT COOLING TOWER SPECIALLY DESIGNED PUMPS

The NLT (S)/LLT (S) cooling tower specific pump is a non self-priming single-stage centrifugal pump with the same inlet and outlet diameter. Among them, NLT (S) is horizontally installed, with axial suction and radial discharge; LLT (S) is a vertical installation with horizontal suction and discharge. The core hydraulic components of the pump, the volute and impeller, adopt efficient hydraulic models with superior performance and smooth operation. They are equipped with fully enclosed IEC high-efficiency motors, which are more low-carbon and environmentally friendly.

NLT(S)/LLT(S)Product innovation

Adopting excellent hydraulic model, high pump efficiency, smooth operation. The standard SIC/WC knife-edge mechanical seal, the friction pair knife-edge design ,can cut cotton fiber and other impurities in the medium to increase the service life of the mechanical seal.

NLT/LLT adopts a customized shaft extension motor structure, small size, simple structure and easy to maintain.

NLTS/LLTS adopts a sleeve-shaft structure design ,NLTS can be configured with standard IEC B35 motors from various motor manufacturers, LLTS can be configured with standard IEC V1 motors, the motor options are more diverse to meet the needs of different customers.

The impeller adopts lost mold precision casting method, the blade profile is more precise, the surface is smoother and the operating efficiency is high.

The pump body and bracket adopt coated sand casting process, with high dimensional accuracy, smooth flow channel surface, small hydraulic loss and beautiful appearance.

Specifically designed for large flow and low head pumps, flow rate 35-300m³/h , head 2-9m, to meet the needs of large flow and low head pumps.



Make your system more sustainable!

WATER SUPPLY

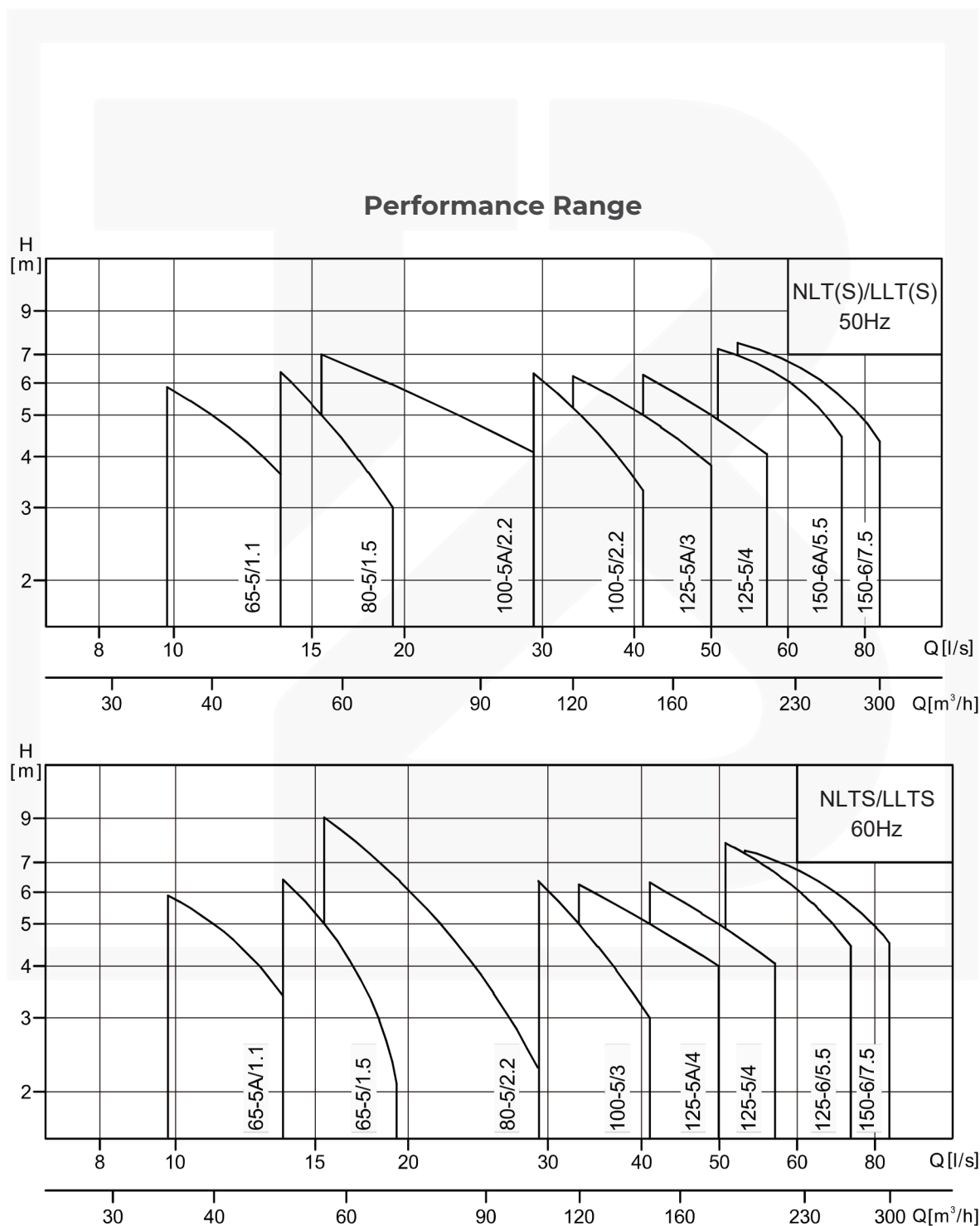
INDUSTRIAL BOOSTING

INDUSTRIAL LIQUID TRANSPORTATION

WATER TREATMENT

IRRIGATION

NLT(S)/LLT(S)



Product Range

NLT(S)/LLT(S) 50Hz

NO.	Model	Q (m³/h)	H (m)	Motor (kW)	n (r/min)
1	NLT(S)/LLT(S)65-5/1.1	40	5	1.1	2900
2	NLT(S)/LLT(S)80-5/1.5	55	5	1.5	
3	NLT(S)/LLT(S)100-5A/2.2	80	5	2.2	
4	NLT(S)/LLT(S)100-5/2.2	120	5	2.2	1450
5	NLT(S)/LLT(S)125-5A/3	150	5	3	
6	NLT(S)/LLT(S)125-5/4	180	5	4	
7	NLT(S)/LLT(S)150-6A/5.5	220	6	5.5	
8	NLT(S)/LLT(S)150-6/7.5	250	6	7.5	

NLTS/LLTS 60Hz

NO.	Model	Q (m³/h)	H (m)	Motor (kW)	n (r/min)
1	NLTS/LLTS 65-5A/1.1	40	5	1.1	3450
2	NLTS/LLTS 65-5/1.5	55	5	1.5	3500
3	NLTS/LLTS 80-5/2.2	80	5	2.2	
4	NLTS/LLTS 100-5/3	120	5	3	
5	NLTS/LLTS 125-5A/4	150	5	4	1750
6	NLTS/LLTS 125-5/4	180	5	4	1770
7	NLTS/LLTS 125-6/5.5	220	6	5.5	
8	NLTS/LLTS 150-6/7.5	250	6	7.5	

Product summary

NLT(S)/LLT(S) cooling tower pump is a non-self-priming single-stage centrifugal pump with the same inlet and outlet diameter. NLT(S) is a horizontal installation with axial suction and radial discharge. LLT(S) is a vertical installation with horizontal suction and horizontal discharge. The core hydraulic components of the pump, the casing and impeller, adopt a high-efficiency hydraulic model, with superior performance and smooth operation, and are equipped with a fully enclosed IEC high-efficiency motor as standard, which is more low-carbon and environmentally friendly.

Applications

- Water circulation cooling of various unit equipment.
- Water circulation of closed cooling tower and condenser.
- Air conditioning circulating water system, refrigeration circulating water system, HVAC circulating water system, home life hot water circulation system.
- Other various water circulation occasions with large flow and low head.

Working conditions

- Clean, thin, non-corrosive, non-flammable or non-explosive liquid without solid grain or fiber
- Max. ambient temperature: +40°C
- Max. altitude: 1000m
- Max. working pressure: 6 bar
- Liquid temperature: -15°C ~ 100°C

Features

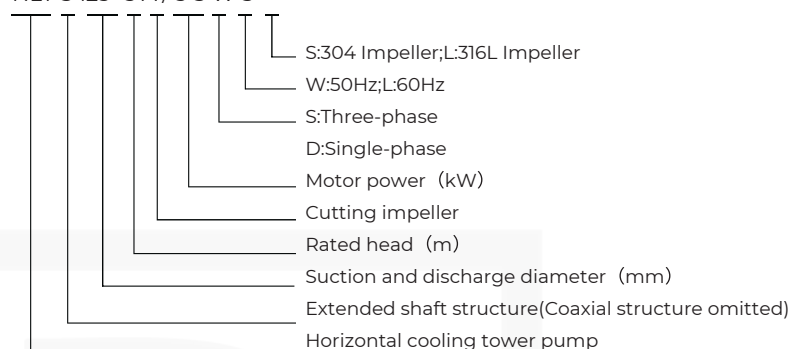
- Adopting excellent hydraulic model, high pump efficiency, smooth operation.
- The standard SIC/WC knife-edge mechanical seal, the friction pair knife-edge design, can cut cotton fiber and other impurities in the medium to increase the service life of the mechanical seal.
- The pump body and bracket adopt coated sand casting process, with high dimensional accuracy, smooth surface, and beautiful appearance.
- The stainless impeller adopts precision casting process, the shape is accurate, the flow path is smooth, and the hydraulic performance is good.
- NLT/LLT adopts a customized shaft extension motor structure, small size, simple structure and easy to maintain.
- NLTs/LLTs adopts standard motor+extended shaft structure design, NLTs can be configured with standard IEC B35 motors from various motor manufacturers, LLTs can be configured with standard IEC V1 motors, the motor options are more diverse.

Motor

- Fully enclosed, air-cooled 2-pole, 4-pole motor
- NLT motor is customized shaft extension B34 installing structure, NLTs motor is standard B35 installing structure. LLT motor is customized shaft extension V18 installing structure, LLTs motor is standard V1 installing structure.
- Protection level: IP56
- Insulation level: F
- Standard voltage: 50Hz: 1×220V 3×380V
60Hz: 3×460V

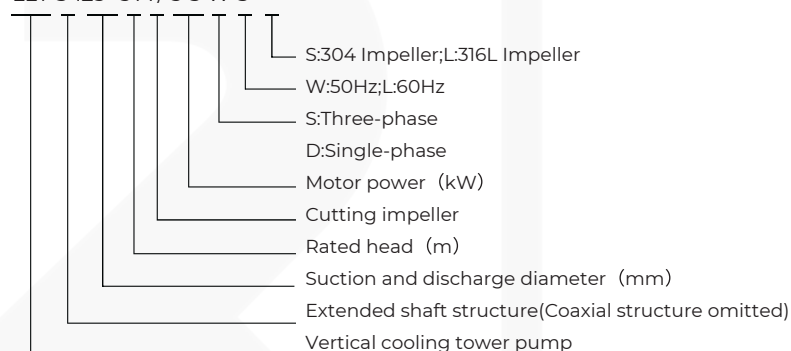
Model definition

NLT S 125 -5 A / 3 S W S



Model definition

LLT S 125 -5 A / 3 S W S



Performance curve

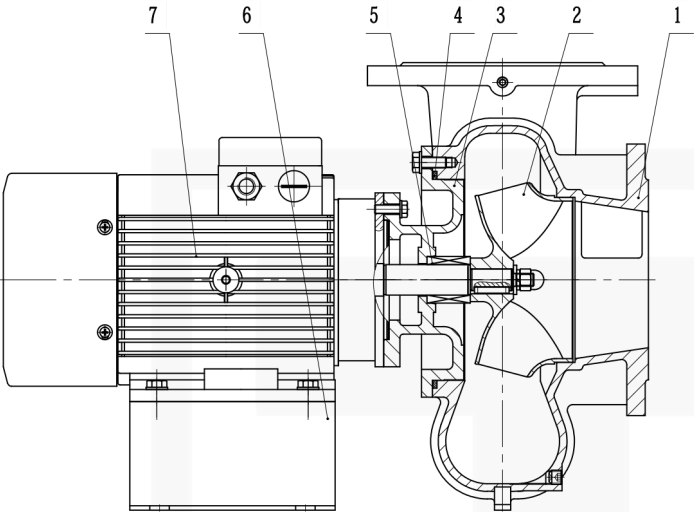
Following conditions are suitable for performance curve

- All curves are based on the measured values of 50Hz(3×380V): constant motor speed 2900rpm、1450rpm., All curves are based on the measured values of 60Hz(3×460V): constant motor speed 3450rpm、3500rpm、1750rpm、1770rpm.
- Curve tolerance in conformity with ISO9906:2012,3B.
- Test medium is clean water with temperature of 20 °C without any solid impurity.
- The operation of pump should refer to the performance range of curve shown in boldface to prevent overheating due to too small flow rate or overloading due to too large flow rate.
- If the density and viscosity of the conveyed liquid are different from water, the motor power needs to be adjusted accordingly.

Installation condition

- The pump should be installed in a well-ventilated and freeze-proof place.
- When installing the pump, the weight and stress of the pipeline are not concentrated on the pump.
- In order to facilitate inspection and maintenance, sufficient space should be left around the unit.
- The electrical wiring device should be protected from missing items, unstable voltage, overload and leakage.
- The pump inlet and outlet flanges comply with GB/T 17241.6 standards, and the pressure level is PN10.

Sectional Drawing

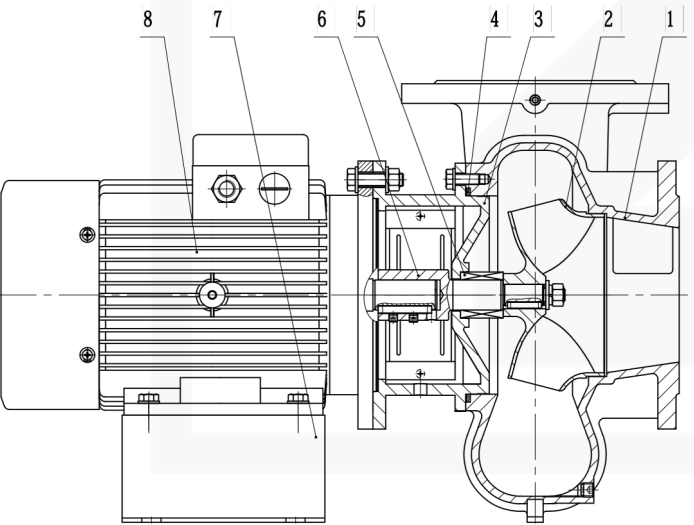


NLT

NLT Material

No.	Name	Material	AISI/ASTM
1	Casing	HT200	ASTM25B
2	Impeller	ZG07Cr19Ni10	AISI304
3	Bracket	HT200	ASTM25B
4	O ring	NBR	
5	Blade mechanical seal	Silicon carbide/ tungsten carbide	
6	Base	Q235-A	AISIA570
7	Motor		

Sectional Drawing

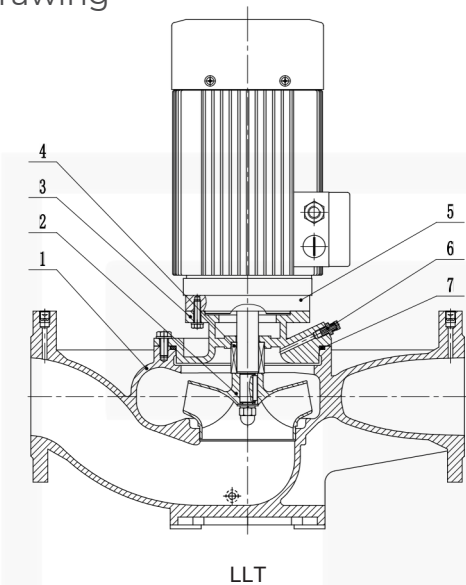


NLTS

NLTS Material

No.	Name	Material	AISI/ASTM
1	Casing	HT200	ASTM25B
2	Impeller	ZG07Cr19Ni10	AISI304
3	Bracket	HT200	ASTM25B
4	O ring	NBR	
5	Blade mechanical seal	Silicon carbide/ tungsten carbide	
6	Shaf t	20Cr13	AISI420
7	Base	Q235-A	AISIA570
8	Motor		

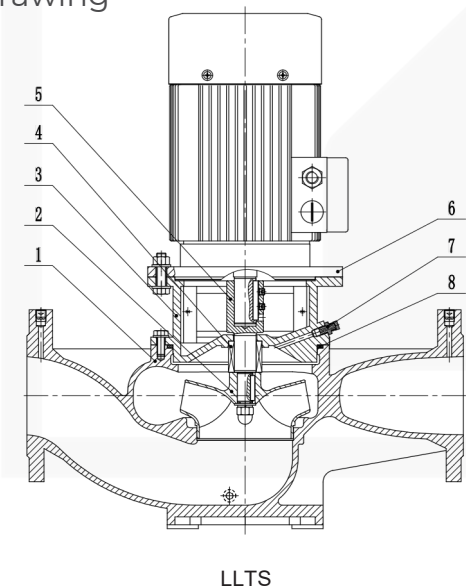
Sectional Drawing



LLT Material

No.	Name	Material	AISI/ASTM
1	Casing	HT200	ASTM25B
2	Impeller	ZG07Cr19Ni10	AISI304
3	Bracket	HT200	ASTM25B
4	Blade mechanical seal	Silicon carbide/ tungsten carbide	
5	Motor		
6	Air vent assembly		
7	O ring	NBR	

Sectional Drawing



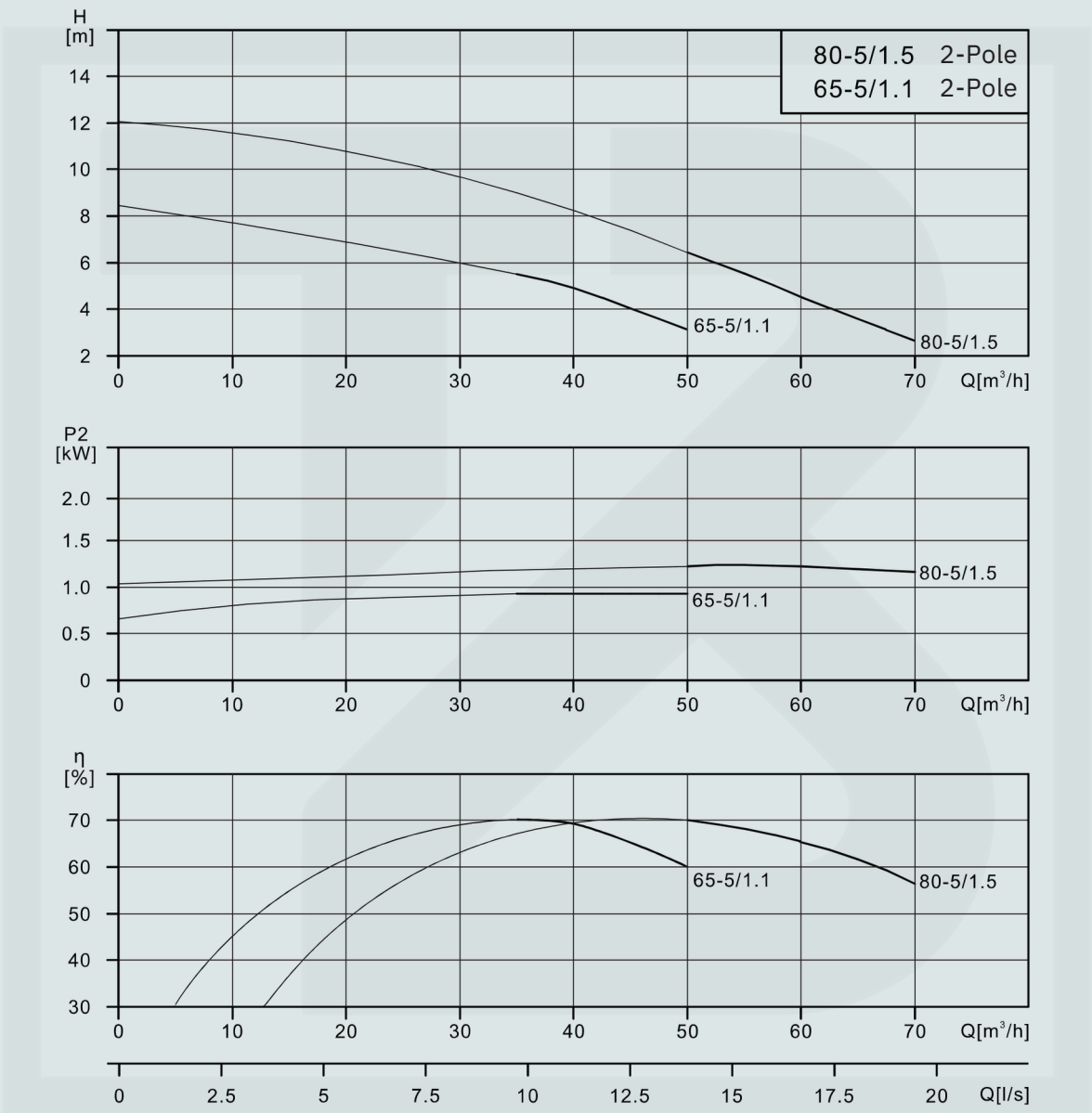
LLTS Material

No.	Name	Material	AISI/ASTM
1	Casing	HT200	ASTM25B
2	Impeller	ZG07Cr19Ni10	AISI304
3	Bracket	HT200	ASTM25B
4	Knife-edge mechanical seal	Silicon carbide/ tungsten carbide	
5	Shaft	20Cr13	AISI420
6	Motor		
7	Air-vent assembly		
8	O ring	NBR	

65-5/80-5

50Hz

Performance Curve



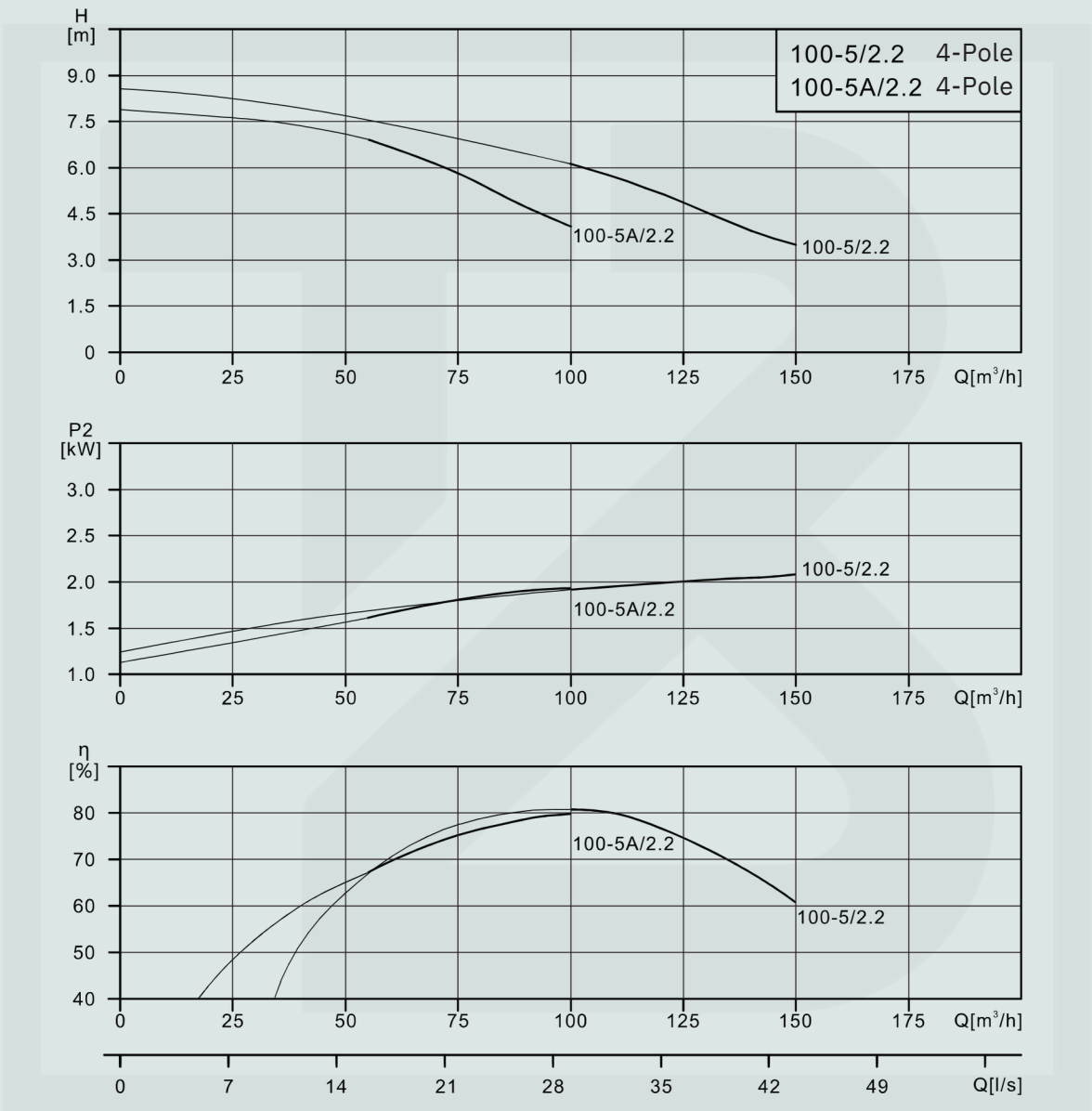
Performance Table

Model	Motor (kW)	Q (m³/h)	35	40	45	50	55	60	65	70
NLT(S)/LLT(S)65-5/1.1	1.1	H (m)	5.8	5	4.6	3.6				
NLT(S)/LLT(S)80-5/1.5	1.5					6.4	5	4.5	3.2	3

100-5/100-5A

50Hz

Performance Curve



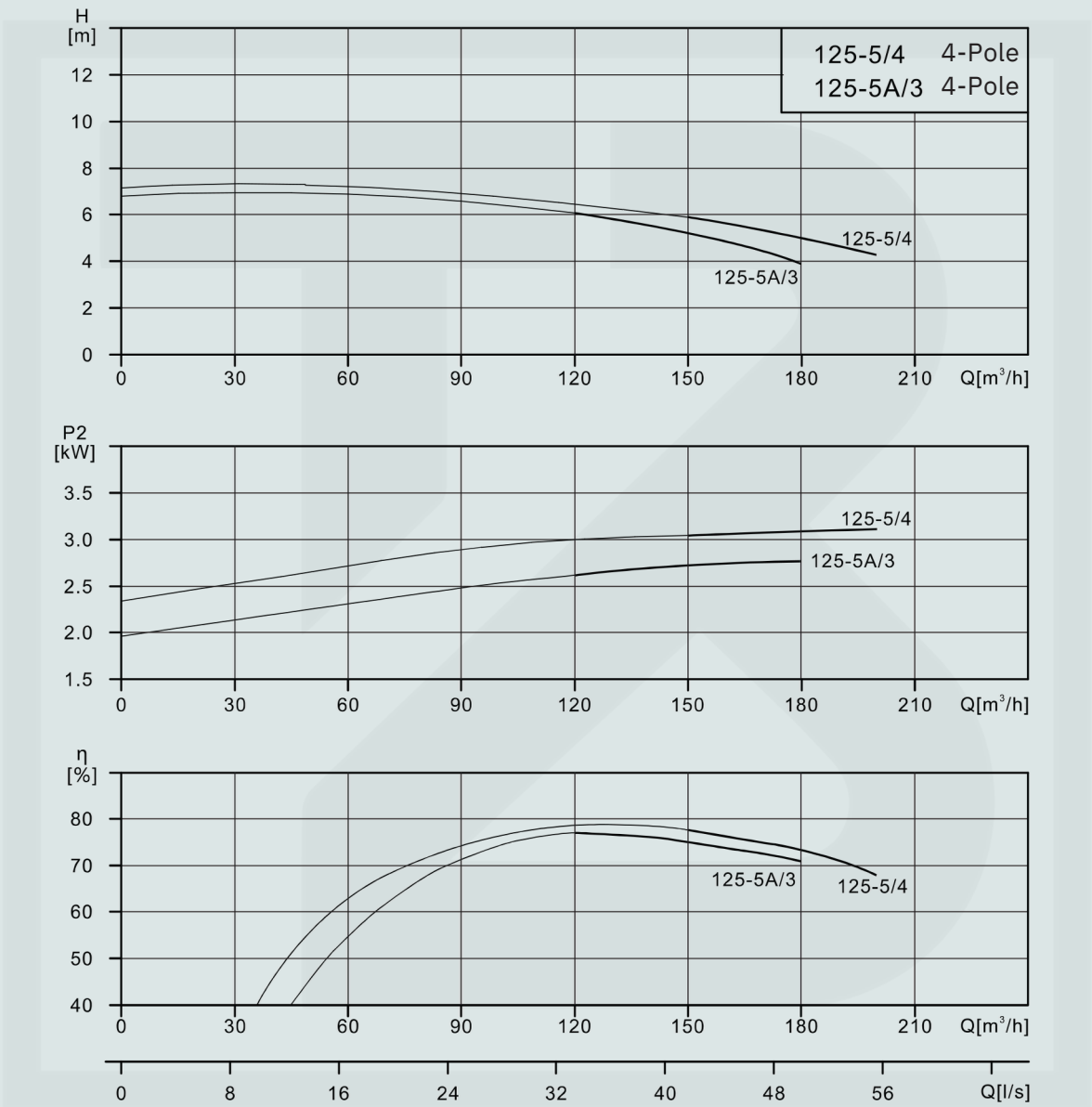
Performance Table

Model	Motor (kW)	Q (m³/h)	55	60	70	80	90	100	110	120	130	140	150
NLT(S)/LLT(S)100-5A/2.2	2.2	H (m)	7	6.8	6.5	5	4.5	4.3					
NLT(S)/LLT(S)100-5/2.2	2.2							6.2	5.7	5	4.5	3.9	3.5

125-5/125-5A

50Hz

Performance Curve



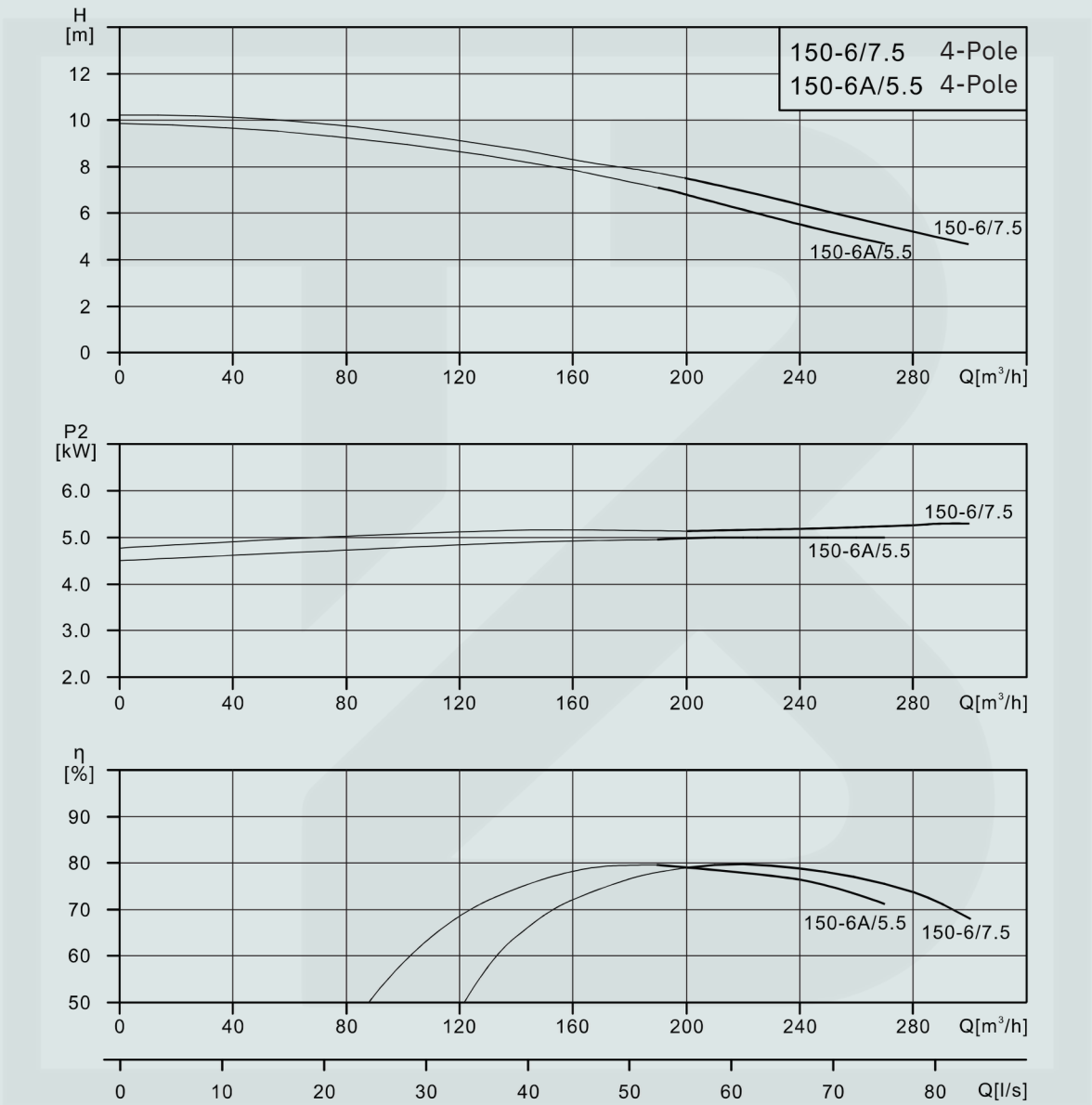
Performance Table

Model	Motor (kW)	Q (m³/h)	120	130	140	150	160	170	180	190	200
NLT(S)/LLT(S)125-5A/3	3	H (m)	6.2	5.8	5.4	5	4.7	4.4	3.9		
NLT(S)/LLT(S)125-5/4	4					5.9	5.6	5.3	5	4.6	4.1

150 - 6/ 150 - 6A

50Hz

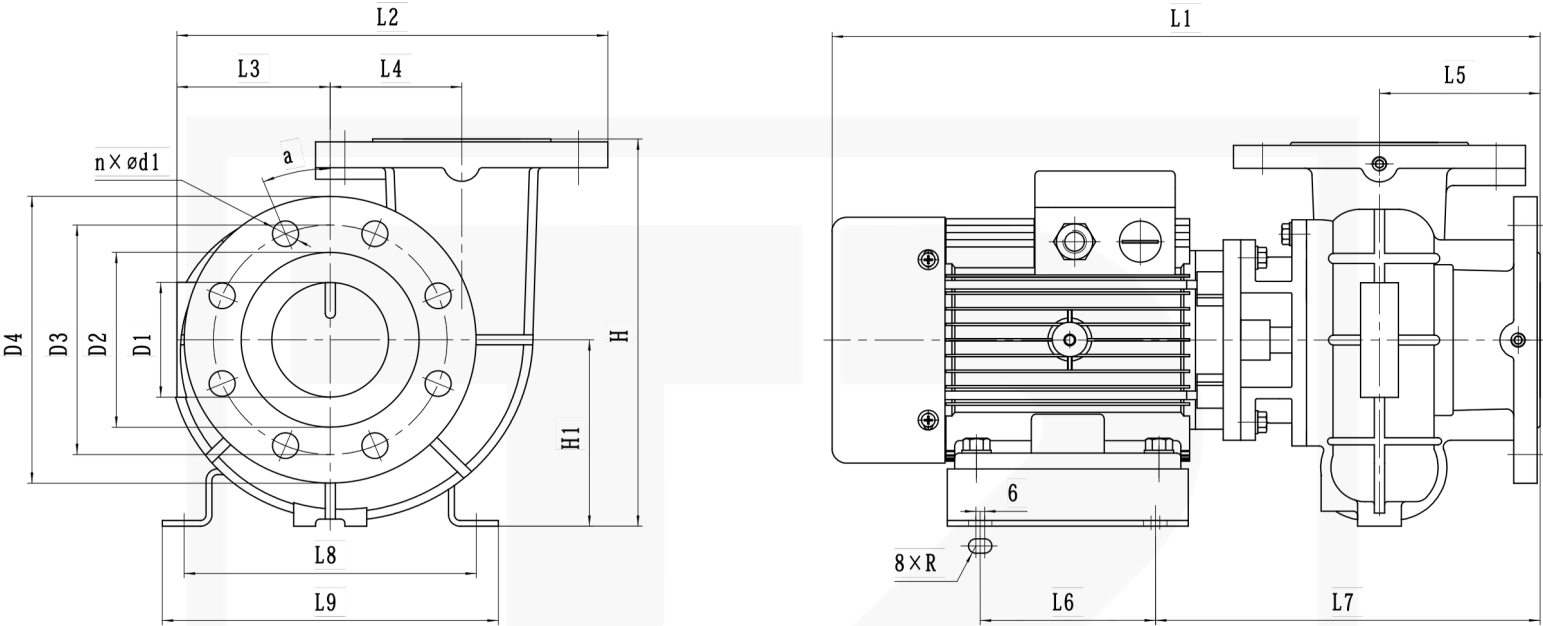
Performance Curve



Performance Table

Model	Motor (kW)	Q (m³/h)	190	200	210	220	230	250	270	290	300
NLT(S)/LLT(S)150-6A/5.5	5.5	H (m)	7.2	7	6.6	6	5.6	5.1	4.8		
NLT(S)/LLT(S)150-6/7.5	7.5			7.4	7.2	6.7	6.5	6	5.4	4.7	4.5

Installation Sketch

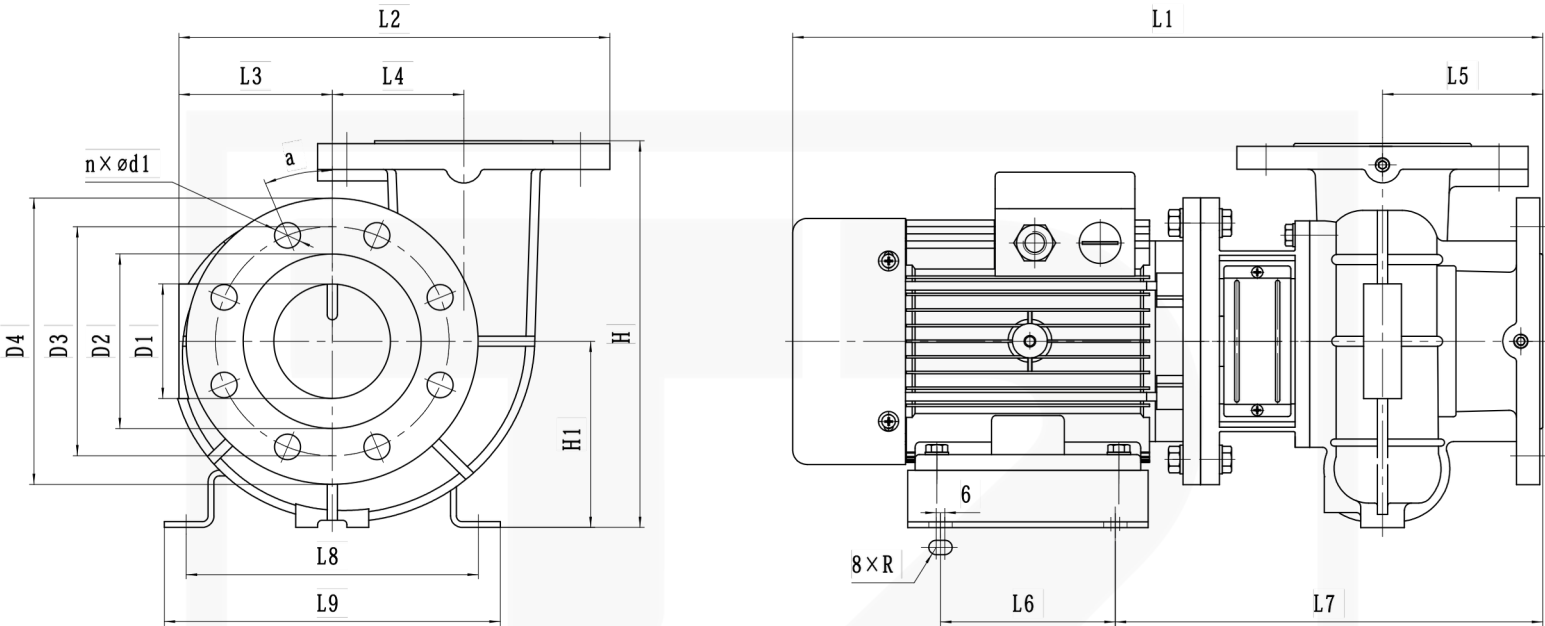


※NLT 50Hz

Dimensions and weight

Model	External dimension (mm)					Installation dimension (mm)								Inlet and outlet flange dimension(mm)							Weight (kg)
	L1	H	H1	L2	L3	L4	L5	L6	L7	L8	L9	R		D1	D2	D3	D4	n	a	d1	
NLT65-5/1.1	445	240	120	278	100	85	100	95	248	185	215	5		65	118	145	185	4	45	19	29
NLT80-5/1.5	502	270	130	295	105	90	110	120	264	200	230	5		80	122	160	200	8	22.5	19	37
NLT100-5A/2.2	605	380	180	400	155	135	120	135	296	225	250	6		100	156	180	220	8	22.5	19	60
NLT100-5/2.2	605	380	180	400	155	135	120	135	296	225	250	6		100	156	180	220	8	22.5	19	60
NLT125-5A/3	620	412	212	450	175	150	135	135	311	225	250	6		125	184	210	250	8	22.5	19	72.5
NLT125-5/4	630	412	212	450	175	150	135	135	318	255	280	6		125	184	210	250	8	22.5	19	83
NLT150-6A/5.5	650	462	232	508	195	170	150	135	362	310	350	6		150	211	240	285	8	22.5	23	108
NLT150-6/7.5	690	462	232	508	195	170	150	135	362	310	350	6		150	211	240	285	8	22.5	23	117

Installation Sketch

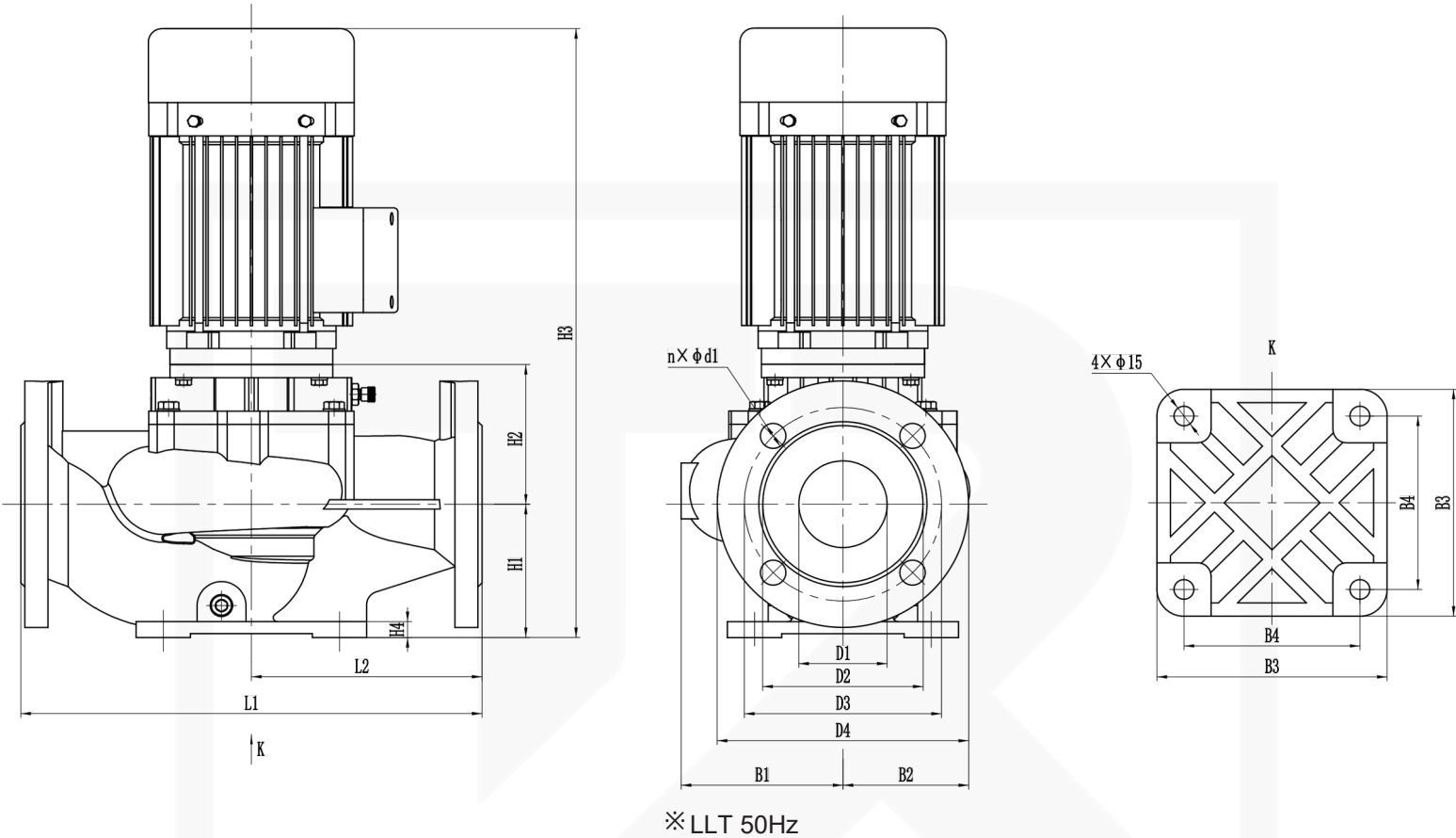


※NLTS 50Hz

Dimensions and weight

Model	External dimension （mm）					Installation dimension （mm）							Inlet and outlet flange dimension(mm)									Weight (kg)
	L1	H	H1	L2	L3	L4	L5	L6	L7	L8	L9	R	D1	D2	D3	D4	n	a	d1			
NLTS65-5/1.1	469	240	120	278	100	85	100	95	278	185	215	5	65	118	145	185	4	45	19	33.5		
NLTS80-5/1.5	522	270	130	295	105	90	110	120	294	200	230	5	80	122	160	200	8	22.5	19	41		
NLTS100-5A/2.2	609	380	180	400	155	135	120	135	338	225	250	6	100	156	180	220	8	22.5	19	66		
NLTS100-5/2.2	609	380	180	400	155	135	120	135	338	225	250	6	100	156	180	220	8	22.5	19	66		
NLTS125-5A/3	624	412	212	450	175	150	135	135	353	225	250	6	125	184	210	250	8	22.5	19	79		
NLTS125-5/4	636	412	212	450	175	150	135	135	360	255	280	6	125	184	210	250	8	22.5	19	90		
NLTS150-6A/5.5	698	462	232	508	195	170	150	135	407	310	350	6	150	211	240	285	8	22.5	23	123		
NLTS150-6/7.5	736	462	232	508	195	170	150	173	407	310	350	6	150	211	240	285	8	22.5	23	132.5		

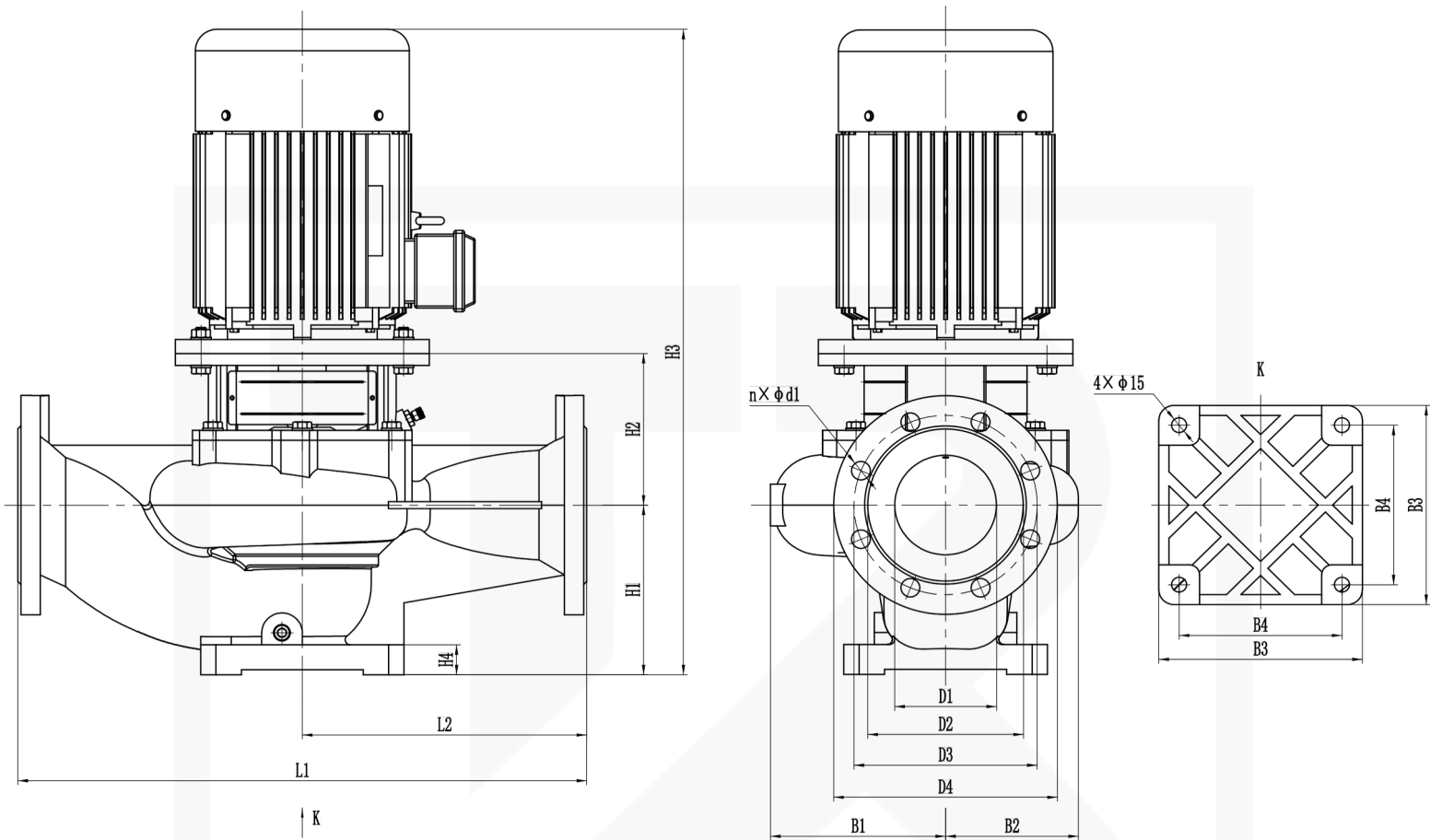
Installation Sketch



Dimensions and weight

Model	External dimension(mm)					Installation dimension(mm)					Inlet and outlet flange dimension (mm)						Weight (kg)
	L1	L2	B1	B2	H3	B3	B4	H1	H2	H4	D1	D2	D3	D4	n	d1	
LLT65-5/1.1	340	170	119	94	455	170	130	100	105	12	65	118	145	185	4	19	32
LLT80-5/1.5	390	195	123	100	505	190	150	112	98	12	80	132	160	200	8	19	39
LLT100-5A/2.2	560	280	169	131	655	200	160	170	110	30	100	153	180	220	8	19	66
LLT100-5/2.2	560	280	169	131	655	200	160	170	110	30	100	153	180	220	8	19	66
LLT125-5A/3	560	280	195	145	685	240	200	170	140	30	125	183	210	250	8	19	72
LLT125-5/4	560	280	195	145	695	240	200	170	140	30	125	183	210	250	8	19	83
LLT150-6A/5.5	720	360	235	178	738	300	260	200	155	18	150	210	240	285	8	23	133
LLT150-6/7.5	720	360	235	178	775	300	260	200	155	18	150	210	240	285	8	23	145

Installation Sketch



※ LLTS 50Hz

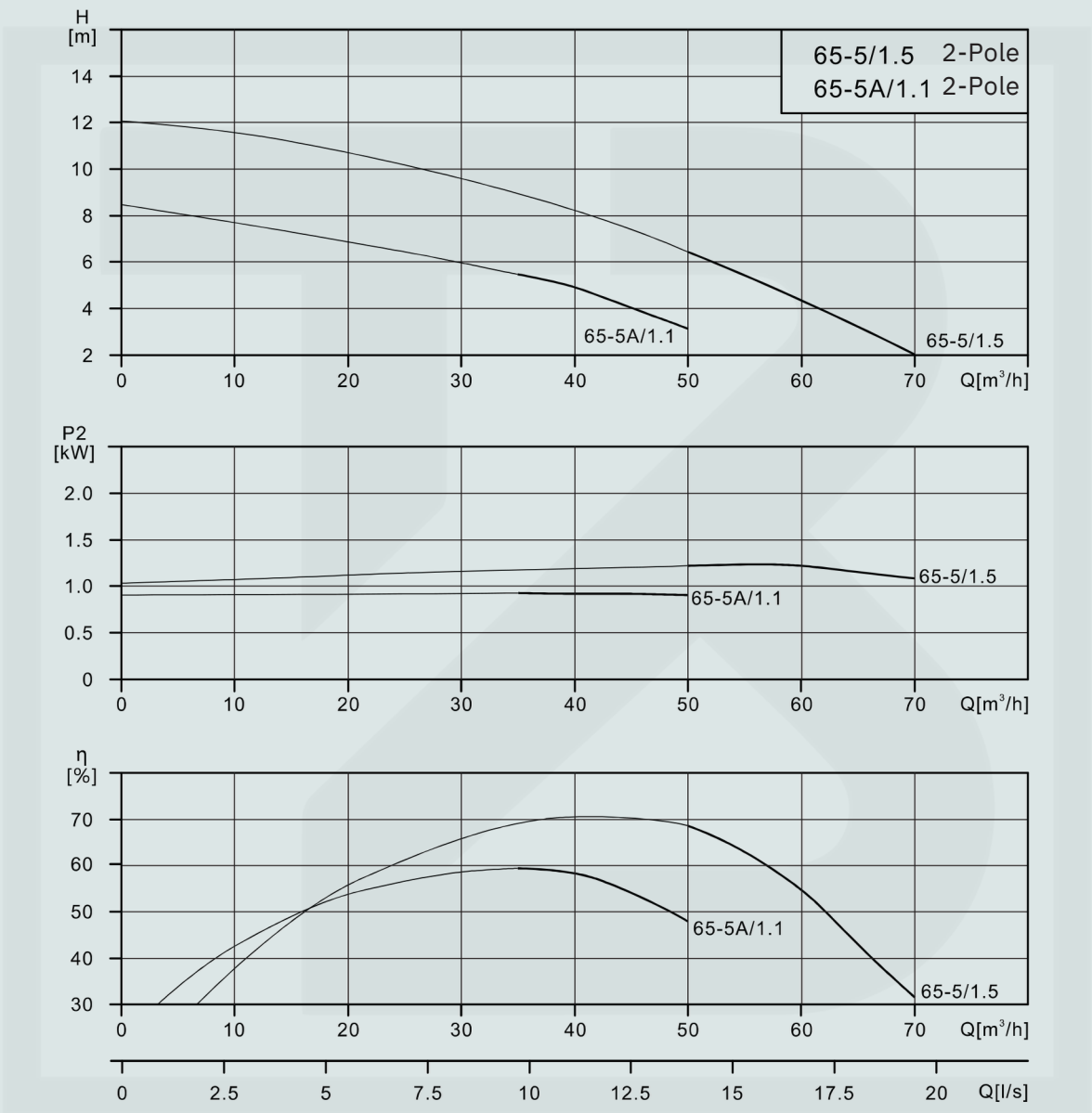
Dimensions and weight

Model	External dimension(㎜)					Installation dimension(㎜)					Inlet and outlet flange dimension (mm)						Weight (kg)
	L1	L2	B1	B2	H3	B3	B4	H1	H2	H4	D1	D2	D3	D4	n	d1	
LLTS65-5/1.1	340	170	119	94	479	170	130	100	135	12	65	118	145	185	4	19	35
LLTS80-5/1.5	390	195	123	100	527	190	150	112	128	12	80	132	160	200	8	19	41
LLTS100-5A/2.2	560	280	169	131	659	200	160	170	152	30	100	153	180	220	8	19	70
LLTS100-5/2.2	560	280	169	131	659	200	160	170	152	30	100	153	180	220	8	19	70
LLTS125-5A/3	560	280	195	145	689	240	200	170	182	30	125	183	210	250	8	19	82
LLTS125-5/4	560	280	195	145	701	240	200	170	182	30	125	183	210	250	8	19	93
LLTS150-6A/5.5	720	360	235	178	783	300	260	200	200	18	150	210	240	285	8	23	140
LLTS150-6/7.5	720	360	235	178	830	300	260	200	200	18	150	210	240	285	8	23	152

65-5/65-5A

60Hz

Performance Curve



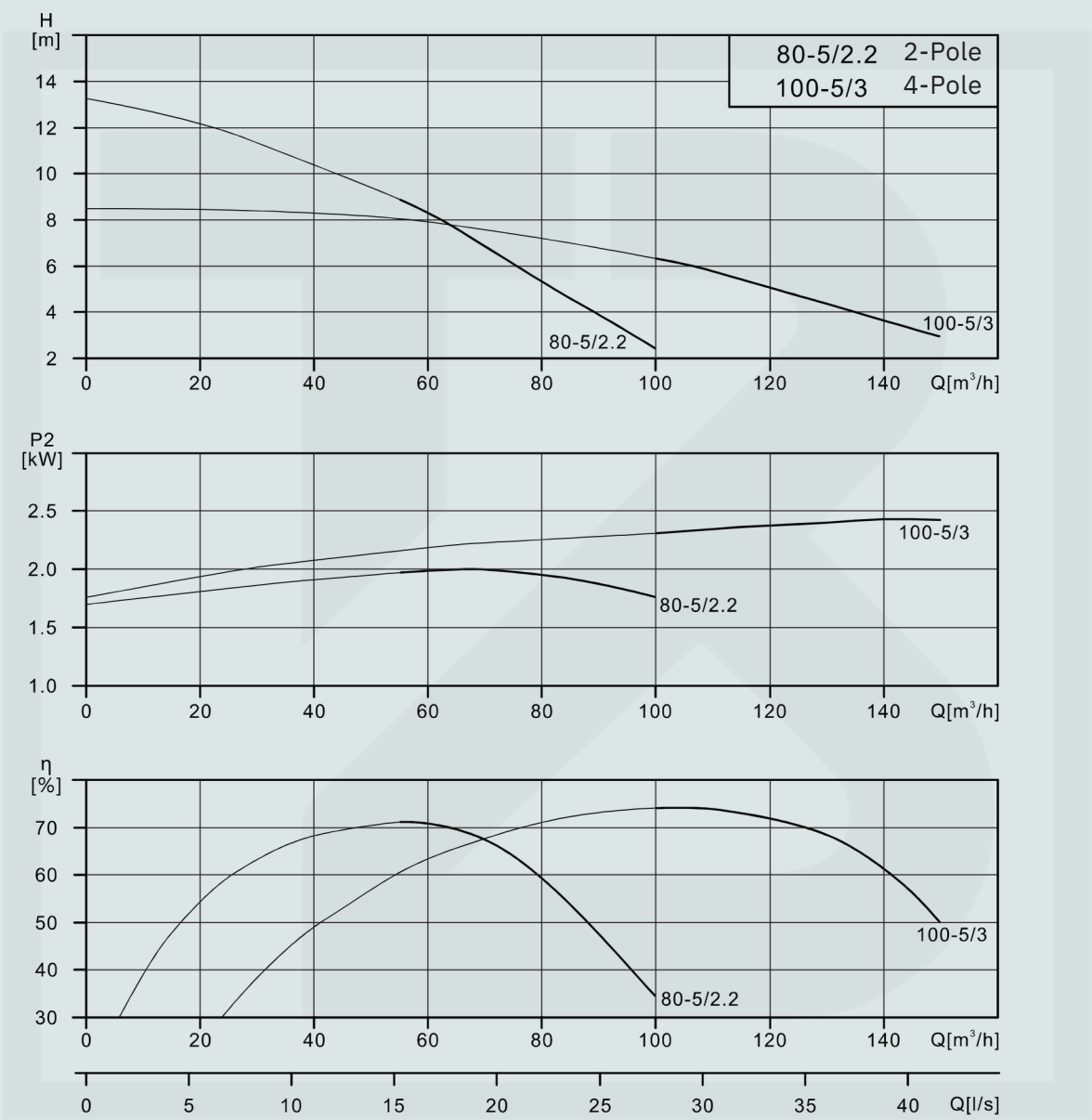
Performance Table

Model	Motor (kW)	Q (m³/h)	35	40	45	50	55	60	65	70
NLTS/LLTS65-5A/1.1	1.1	H (m)	5.8	5	4.4	3.4				
NLTS/LLTS65-5/1.5	1.5					6.4	5	4.5	3.2	2

80 -5/ 100 -5

60Hz

Performance Curve



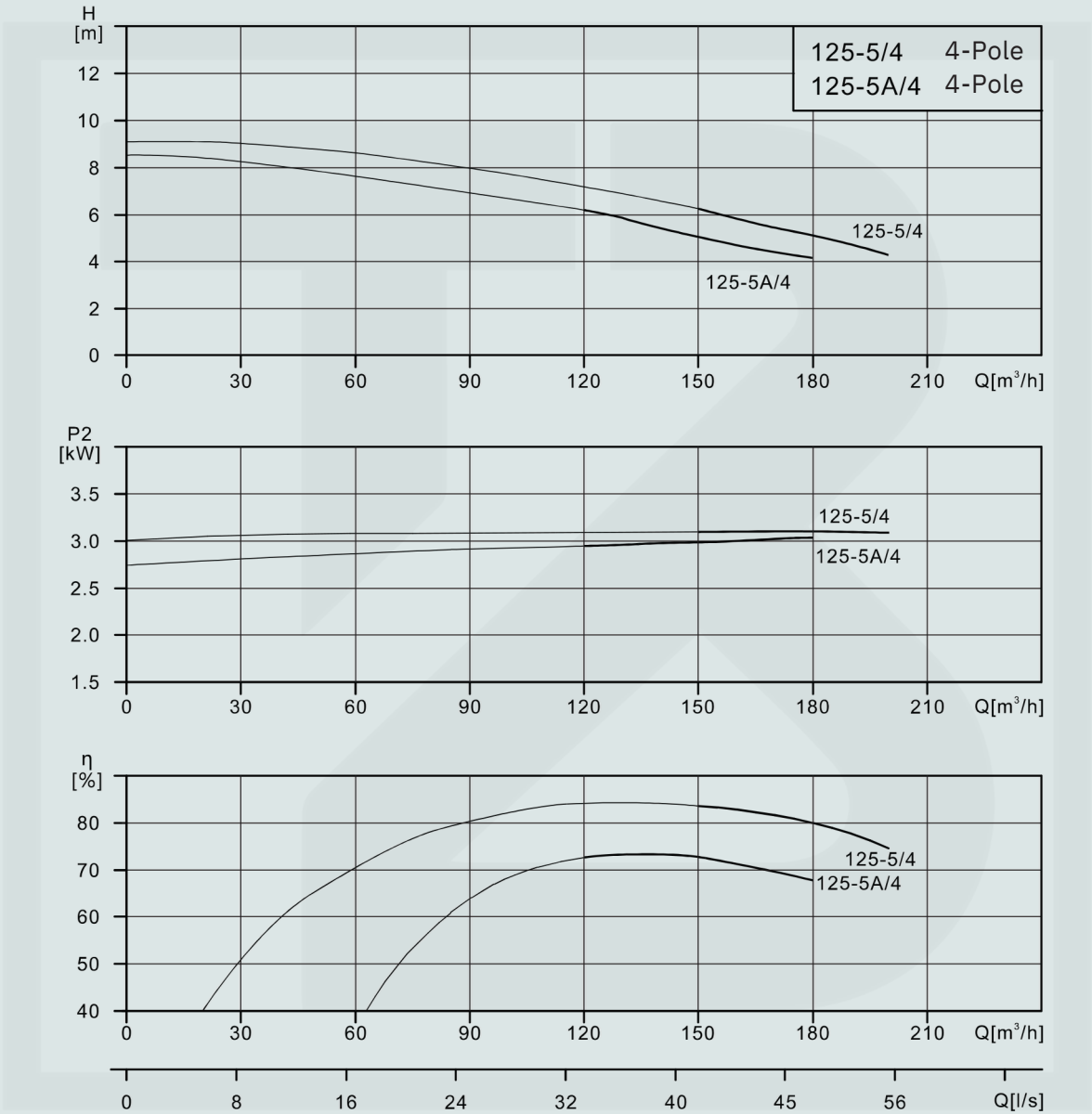
Performance Table

Model	Motor (kW)	Q (m³/h)	55	60	70	80	90	100	110	120	130	140	150
NLTS/LLTS80-5/2.2	2.2	H (m)	9	8.5	7.4	5	3.6	2.3					
NLTS/LLTS100-5/3	3							6.3	5.7	5	4.1	3.4	3

125-5/125-5A

60Hz

Performance Curve



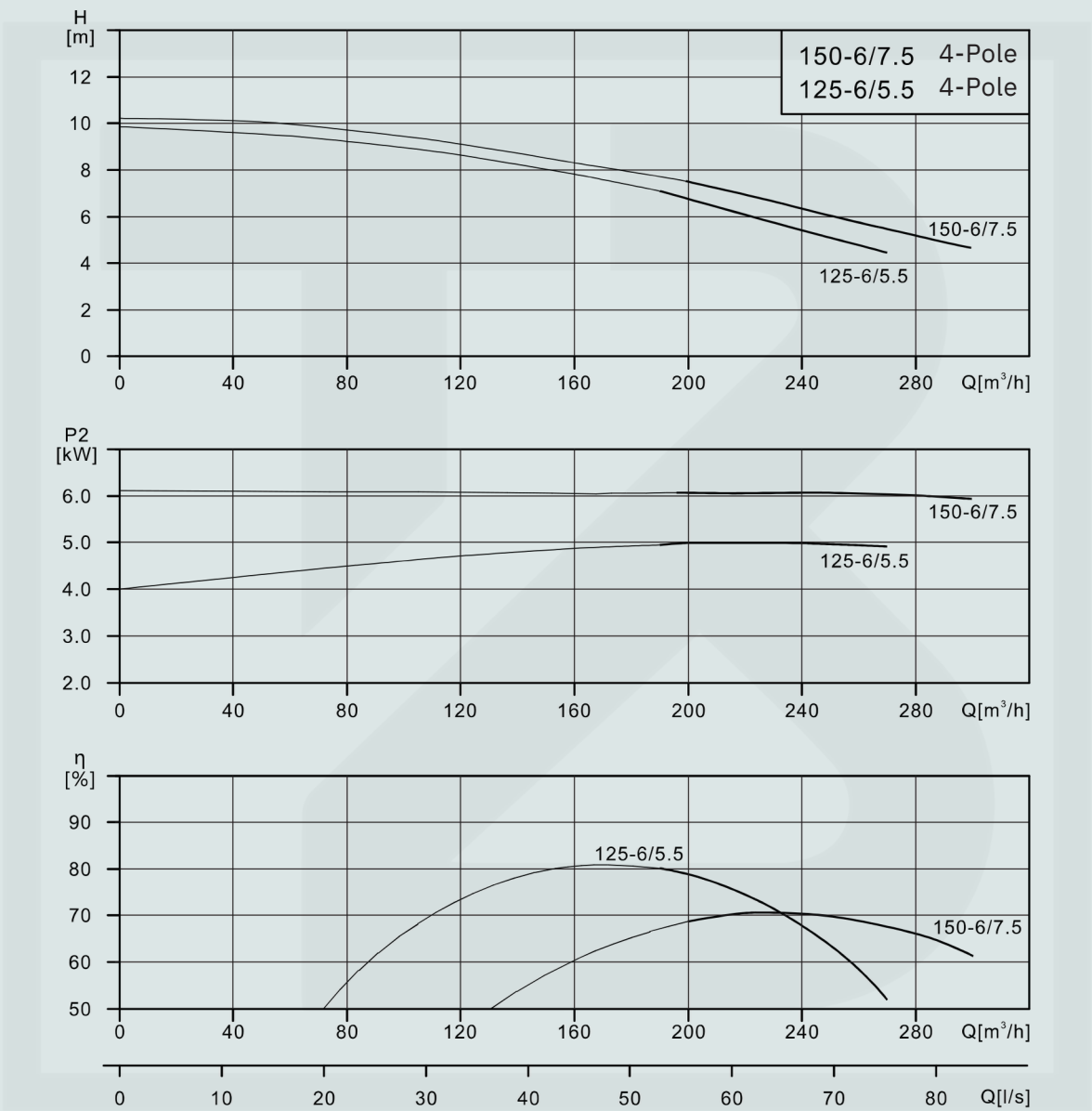
Performance Table

Model	Motor (kW)	Q (m³/h)	120	130	140	150	160	170	180	190	200
NLTS/LLTS125-5A/4	4	H (m)	6.2	6	5.4	5	4.7	4.4	4.1		
NLTS/LLTS125-5/4	4					6.6	6.1	5.6	5	4.7	4.4

125 - 6/ 150 - 6

60Hz

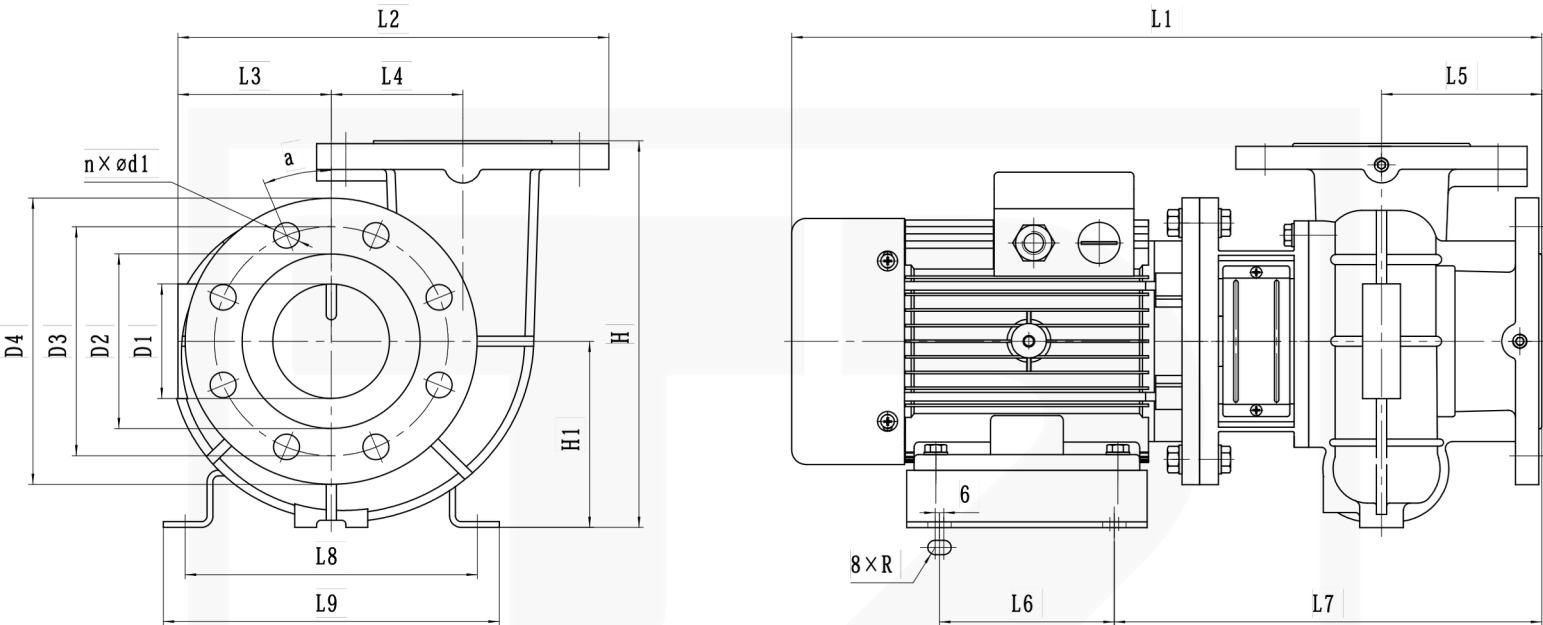
Performance Curve



Performance Table

Model	Motor (kW)	Q (m³/h)	190	200	210	220	230	250	270	290	300
NLTS/LLTS125-6/5.5	5.5	H (m)	7.8	7.3	6.7	6	5.6	4.8	4.6		
NLTS/LLTS150-6/7.5	7.5			7.4	7.3	7.2	6.8	6	5.4	5.1	4.6

Installation Sketch

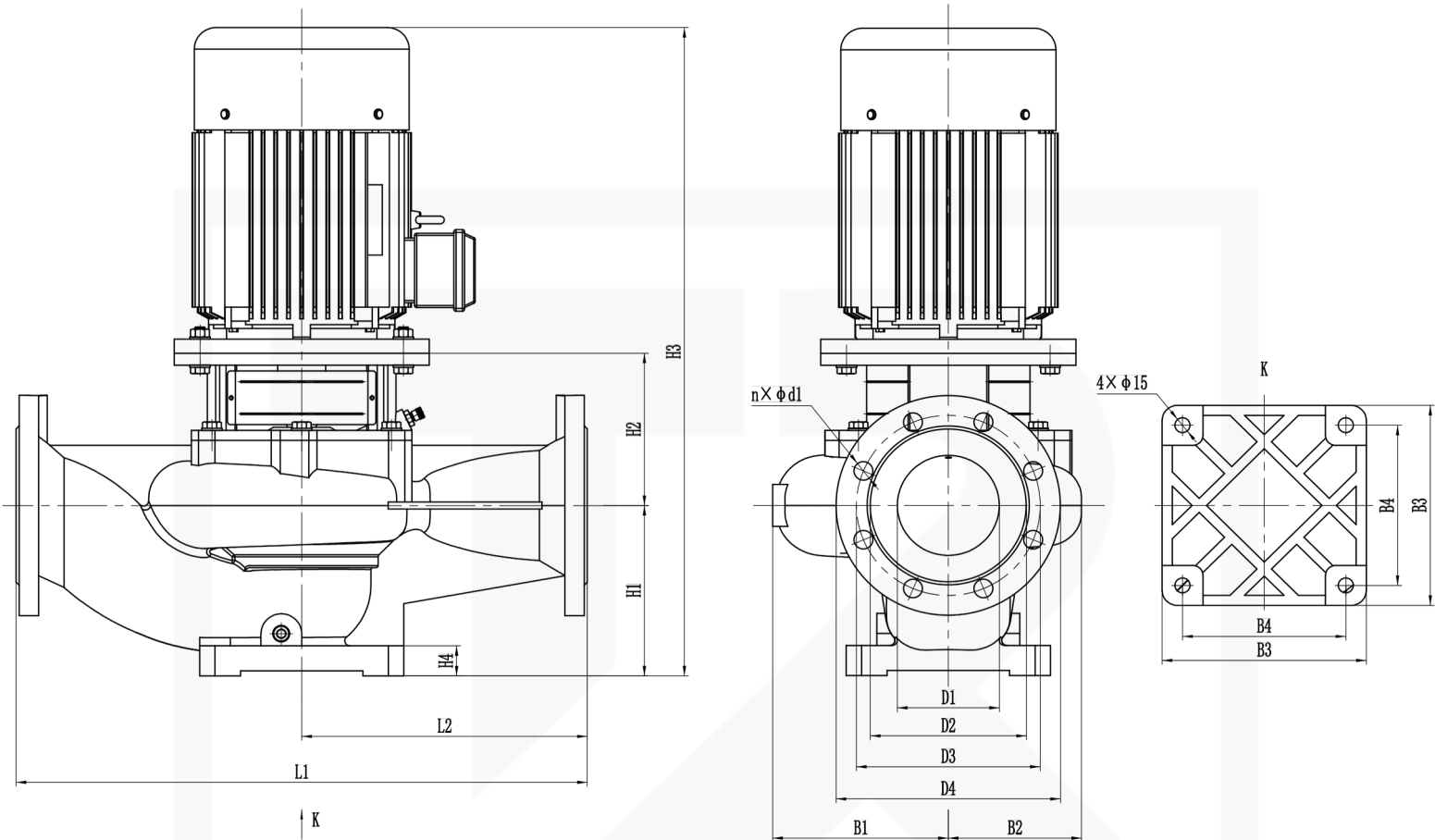


※NLTS 60Hz

Dimensions and weight

Model	External dimension （mm）					Installation dimension （mm）								Inlet and outlet flange dimension(mm)									Weight (kg)
	L1	H	H1	L2	L3	L4	L5	L6	L7	L8	L9	R	D1	D2	D3	D4	n	a	d1				
NLTS65-5A/1.1	460	240	120	278	100	85	100	95	278	185	215	5	65	118	145	185	4	45	19	35			
NLTS65-5/1.5	480	240	120	278	100	85	100	120	283	200	230	5	65	118	145	185	4	45	19	42			
NLTS80-5/2.2	492	270	130	295	105	90	110	120	294	200	230	5	80	122	160	200	8	22.5	19	53			
NLTS100-5/3	588	380	180	400	155	135	120	135	338	225	250	6	100	156	180	220	8	22.5	19	76			
NLTS125-5A/4	620	412	212	450	175	150	135	135	360	255	280	6	125	184	210	250	8	22.5	19	91			
NLTS125-5/4	620	412	212	450	175	150	135	135	360	255	280	6	125	184	210	250	8	22.5	19	91			
NLTS125-6/5.5	686	412	212	450	175	150	135	135	404	310	350	6	125	184	210	250	8	22.5	19	112			
NLTS150-6/7.5	725	462	232	508	195	170	150	173	407	310	350	6	150	211	240	285	8	22.5	23	138			

Installation Sketch



※ LLTS 60Hz

Dimensions and weight

Model	External dimension(㎜)					Installation dimension(㎜)					Inlet and outlet flange dimension (㎜)						Weight (kg)
	L1	L2	B1	B2	H3	B3	B4	H1	H2	H4	D1	D2	D3	D4	n	d1	
LLTS65-5A/1.1	340	170	119	94	470	170	130	100	135	12	65	118	145	185	4	19	36.5
LLTS65-5/1.5	340	170	119	94	490	170	130	100	135	12	65	118	145	185	4	19	43.5
LLTS80-5/2.2	390	195	123	100	495.5	190	150	112	128	12	80	132	160	200	8	19	53
LLTS100-5/3	560	280	169	131	638	200	160	170	152	30	100	153	180	220	8	19	80
LLTS125-5A/4	560	280	195	145	690	240	200	170	182	30	125	183	210	250	8	19	84
LLTS125-5/4	560	280	195	145	690	240	200	170	182	30	125	183	210	250	8	19	84
LLTS125-6/5.5	560	280	195	145	756	240	200	170	207	30	125	183	210	250	8	19	105
LLTS150-6/7.5	720	360	235	178	810	300	260	200	200	18	150	210	240	285	8	23	173