

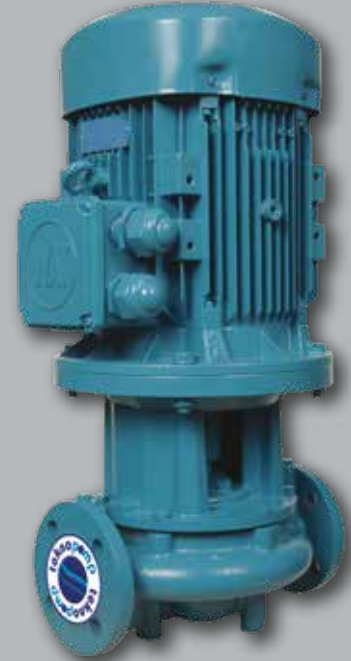
# teknopomp

Teknolojik Pompa ve Hidrofor Sistemleri

IN LINE CIRCULATION PUMPS

# TNL

Dry rotor In-Line circulation pump for HVAC, industrial fluid transfer, agricultural and garden application. capacity up to 0-360 m<sup>3</sup>h, total head up to 100 m. Power up to 45 kW working temperature up to 90 °C operating pressure up to 10 bar



Teknopomp Teknolojik Pompa ve Hidrofor Sistemleri

## IN LINE CENTRIFUGE PUMPS

### Fields of Application

- TNL pumps are for non-corrosive, not containing solid particles or fiber, clean or slightly dirty (solid particle rate is up to 0,02).
- In water transfer, heating and cooling systems, circulation and fluid transfer, industrial applications.
- 0-360 m<sup>3</sup>/h capacity, 100 m total head.
- Up to 45 kW motor power
- Up to 90°C operation temperature, 10 bar operation pressure

### Structure

- These are centrifugal pumps with single-stage, centrifugal, radial impeller, monoblock, attachable to straight line.
- Suction and discharge flanges are appropriate for TS EN 1092-2 / PN 16.
- It is used with STANDARD electric motors suitable for VDI standards and IEC structure sizes.
- Thanks to its design allowing to dismantle from the back, the motor, motor carrier, stuff bearing, and impeller can be removed without separating the scroll from the pipe installation.
- Axial force is balanced through back wear ring/balance holes system.

Shaft seals:

- Singular mechanical seals that are washed with the thrusted water, non- frigorific and out of balance type.

### Operation Limits

- Operating temperature between -10 and +90°C (please contact us for higher temperatures)
- Ambient temperature up to 40°C
- Max. suction elevation up to 7 m (please consult our firm for suction depth control)
- Maximum permissible operation pressure: 10 bar (16 bar)

### Pump-Motor Coupling

TNL pumps are coupled with a standard electric motor in B5 structure form via a special adaptor. They are in 380 V – 50 Hz. IE3 and IP 55 protection class. Electric motors are appropriate for running with frequency converter.

### Optional Qualities

- Special mechanical seal selection based on liquid type
- AISI 316 pump shaft
- Other motor protection classes
- Exproof motor (suitable for ATEX – 94/9 EEC instructions)
- Other motor voltages
- Operating at 60 Hz.

(Please consult our firm for other operating values controls.)

### Pump Flanges

Appropriate for DIN 2533

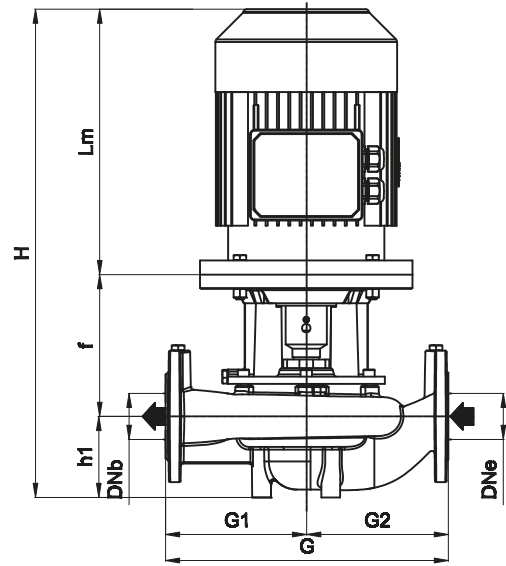
Pump Naming TNL 80 - 200  
 Pump type TNL  
 Outlet flange diameter (mm) DN 80  
 Nominal impeller diameter: 200

NAME OF THE PART	MATERIAL			
	Standard Prod.	Bronze-Impeller Prod.	Full Bronze Production	Stainless Steel
Body	GG 25	GG 25	Bronze	AISI 304 - 316
Impeller	GG 25	Bronze	Bronze	AISI 304 - 316
Wear ring	Bronze	Bronze	Bronze	AISI 420
Pump shaft	AISI 420	AISI 420	AISI 420	AISI 304 - 316

## GENERAL DIMENSIONS

Specified dimension and weight may be change according to electric motor brand.

Teknopomp Ltd. Şti. has right to change and keep it secretly.



Pump Type	kW	DNb-DNe Outlet-Inlet	Dimension							Mec.Seal Diameter	Weight (kg.)
			Lm	G	H	G2	G1	h1	f		
TNL 40-160	0,55	DN 40-DN 40	252,5	320	492	160	160	80	160	20	35,6
	0,75		283,5		523				160		36,8
	1,1		316,5		556,5				160		41,8
	1,5		316,5		556,5				160		42,4
	2,2		344,5		584,5				160		42,8
	3		352		592				160		51,5
	4		395,5		655,5				180		59
	5,5		440,5		700,5				180		78
TNL 40-200	0,55	DN40-DN40	252,5	380	507,5	190	190	95	160	20	40,1
	0,75		283,5		538,5				160		41,2
	1,1		316,5		571,5				160		44,7
	1,5		316,5		571,5				160		45,7
	3		352		727				180		54,8
	4		395,5		670,5				180		62,7
	5,5		440,5		740,5				205		83,9
	7,5		475,5		775,5				205		89,9
11	576	876	230	131							
TNL 40-250	0,75	DN40-DN40	243,5	440	513,5	225	215	100	170	20	56
	1,1		266,5		533,5				170		60
	1,5		266,5		533,5				170		65
	2,2		292		580				190		70
	3		292		580				190		74
	5,5		360,5		675,5				215		140
	7,5		360,5		675,5				215		145
	11		466		806				240		162
15	466	806	240	180							
TNL 50-160	0,55	DN50-DN50	252,5	360	512,5	180	180	100	160	20	38,5
	0,75		283,5		543,5				160		39,6
	1,1		316,5		576,5				160		41,6
	1,5		316,5		576,5				160		42,7
	2,2		344,5		604,5				160		42,9
	3		352		632				180		54,4
	4		395,5		675,5				180		62,4
	5,5		440,5		720,5				200		80,1
7,5	475,5	755,5	200	81,2							
TNL 50-200	0,55	DN50-DN50	252,5	400	522,5	200	200	110	160	20	42,4
	0,75		283,5		553,5				160		42,7
	1,1		316,5		586,5				160		46,5
	1,5		316,5		586,5				160		47
	5,5		440,5		755				205		88,8
	7,5		475,5		790,5				205		89,3
	11		576		916				230		136,9
	15		576		916				230		137,1

**GENERAL DIMENSIONS**

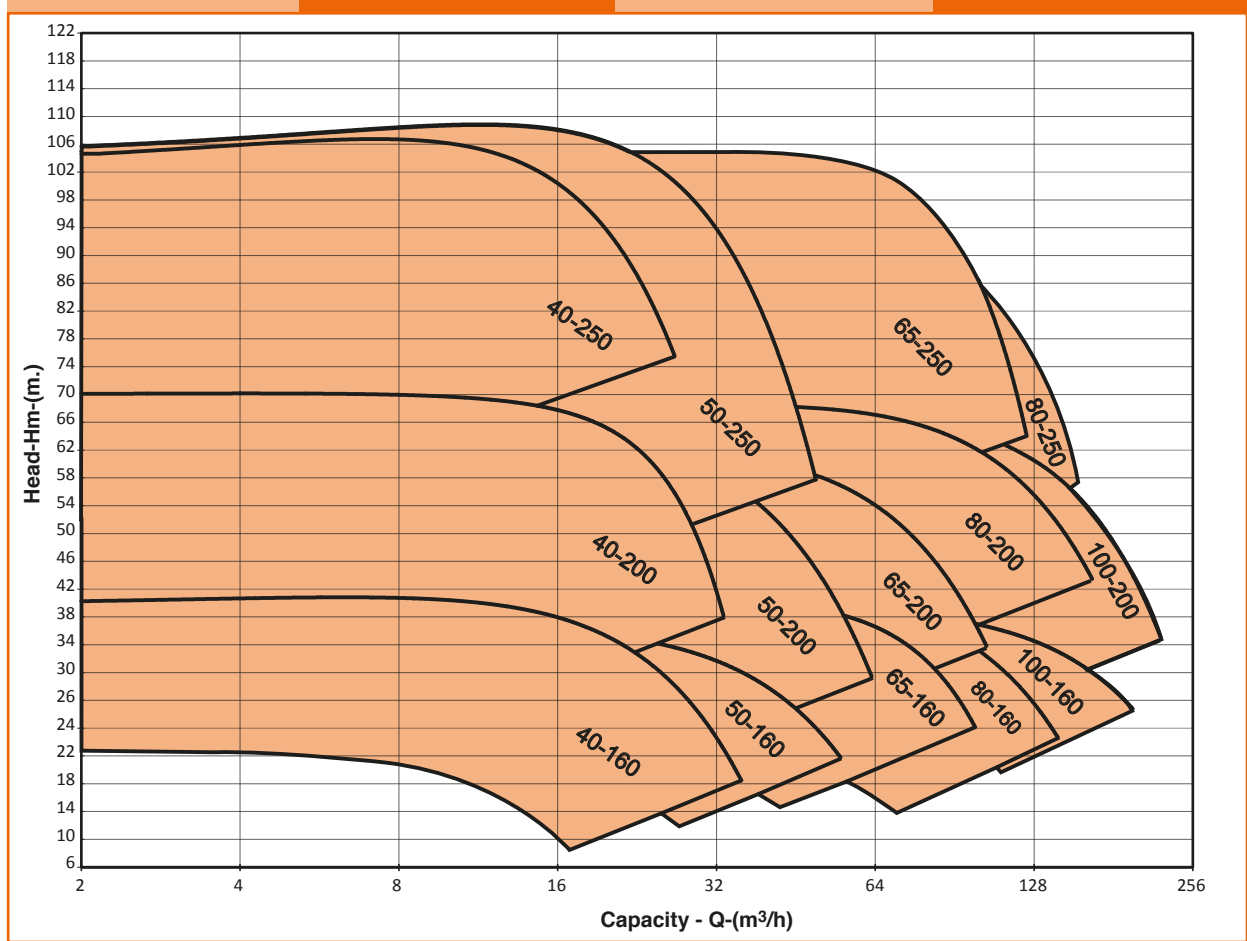
Pump Type	kW	DNb-DNe Outlet-Inlet	Dimension							Mec.Seal Diameter	Weight (kg.)
			Lm	G	H	G2	G1	h1	f		
TNL 50-250	0,75	DN50-DN50	243,5	440	518,5	225	215	115	160	20	60
	1,1		266,5		541,5				160		65
	1,5		266,5		541,5				160		69
	2,2		292		587				180		71,3
	3		292		587				180		75
	11		466		811				230		165
	15		466		811				230		182
	18,5		519		864				230		198
	22		519		864				230		235
TNL 65-160	0,75	DN65-DN65	283,5	400	558,5	200	200	115	160	20	42
	1,1		316,5		591,5				160		45,3
	1,5		316,5		591,5				160		46,5
	3		352		647				180		58,07
	4		395,5		670,5				180		58,9
	5,5		440,5		755,5				200		84,6
	7,5		475,5		790,5				200		85,05
	11		576		821				230		133,5
	TNL 65-200		1,1		DN65-DN65				316,5		460
1,5		316,5	591,5	160		52,88					
2,2		305	600	180		63,2					
3		352	647	180		63,2					
7,5		475,5	795,5	205		95,8					
11		576	921	230		142,1					
15		576	921	230		142,5					
18,5		576	921	230		142,9					
TNL 65-250		15	DN 65 - DN 65	484		480	849	235	245	135	
	18,5	528		893	230		208				
	22	544		909	230		218,5				
	30	637		1032	260		266				
	37	637		1032	260		295				
	45	275		570	160		70,5				
	1,5	305		620	180		72,5				
	2,2	205		620	180		73				
	3	324		639	180		85				
	4	375		715	205		107				
	5,5										
TNL 80-160	0,75	DN80-DN80	283,5	440	588,5	220	220	135	170	20	46,8
	1,1		316,5		621,5				170		48,8
	1,5		316,5		621,5				170		50,8
	2,2		344,5		669,5				190		65
	4		324		649				190		70,8
	5,5		440,5		785,5				210		89,9
	7,5		475,5		820,5				210		91,4
	11		576		951				240		137,5
	15		576		951				240		159
	18,5		576		951				240		184
TNL 80-200	1,1	DN80-DN80	316,5	500	716,5	250	250	140	160	20	56,8
	1,5		316,5		716,5				160		57,2
	2,2		344,5		689,5				205		66,6
	3		352		697				205		67,06
	4		395,5		740,5				205		75,5
	11		576		946				230		145,7
	15		576		946				230		146
	18,5		576		946				230		146,3
	22		629		999				230		179,68
	TNL 80-250		15		DN80-DN80				484		550
18,5		544	929	240		151					
22		544	929	240		183					
30		637	1052	270		220					
37		637	1052	270		220					
45		305	630	180		89					
2,2		305	630	180		90					
3		324	649	180		99					
4		375	735	215		119					
5,5		413	773	215		125					
7,5											

**GENERAL DIMENSIONS**

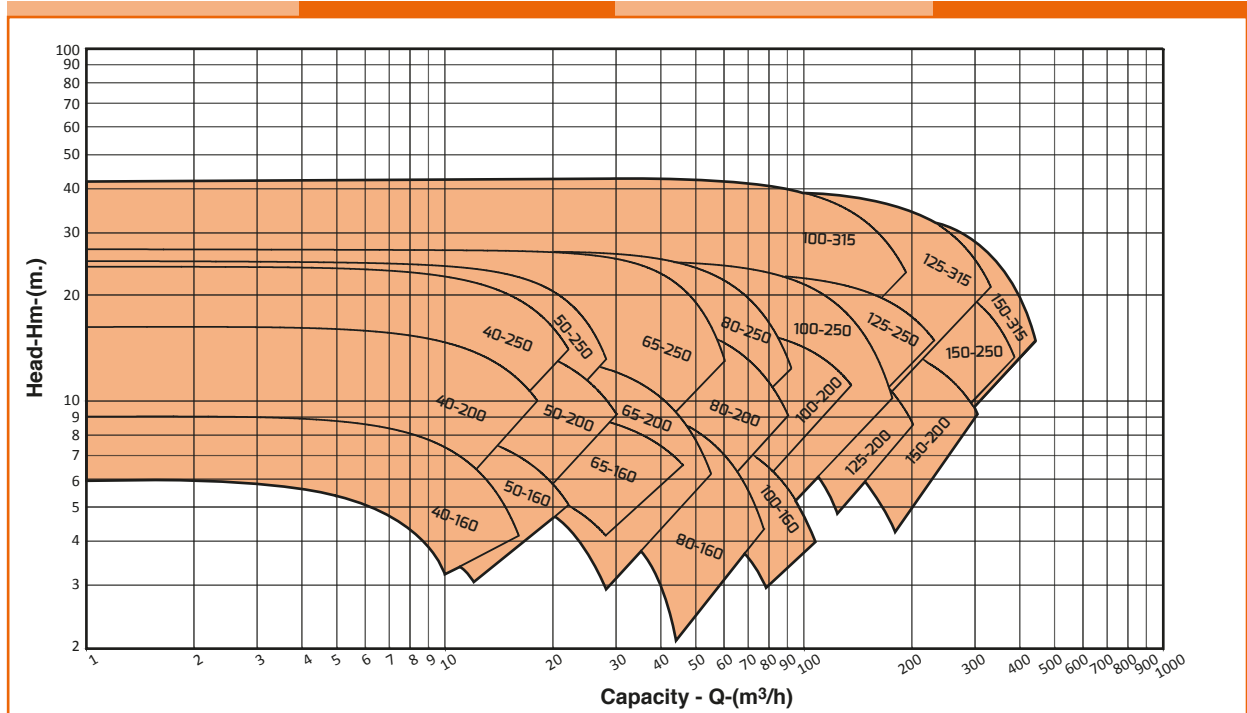
Pump Type	kW	DNb-DNe Outlet-Inlet	Dimension							Mec.Seal Diameter	Weight (kg.)
			Lm	G	H	G2	G1	h1	f		
TNL 100-160	1,1	DN100-DN100	250	500	565	250	250	155	160	20	61
	1,5		275		590				160		63
	2,2		205		640				180		74
	3		205		640				180		77
	7,5		375		740				240		100
	11		484		879				240		165
	15		484		879				240		175
	18,5		528		923				240		190
	22		544		923				240		233
TNL 100-200	2,2	DN100-DN100	305	550	675	275	275	180	190	20	77
	3		305		675				190		84,3
	4		324		694				190		91
	5,5		375		770				215		114
	7,5		413		808				215		122
	22		544		947				250		246
	30		637		1097				280		312
	37		637		1907				280		332
	45C		637		2097				280		355
TNL 100-250	3	DN100-DN100	305	600	675	280	320	190	189	30	105
	4		324		694				180		115
	5,5		375		780				215		135
	7,5		413		818				215		140
	11		484		914				240		220
TNL 100-315	11	DN100-DN100	466	650	896	315	335	190	240	30	225
	15		466		896				30		258
	18,5		519		949				30		278
	22		519		949				30		303
TNL 125-200	3	DN125-DN125	272	600	672	300	300	210	190	30	99
	4		335,5		735,5				190		107
	5,5		395,5		820,5				215		130
	7,5		395,5		820,5				215		137
TNL 125-250	5,5	DN125-DN125	395,5	650	820,5	300	350	210	215	30	138
	7,5		395,5		820,5				215		146
	11		466		916				240		220
	15		466		916				240		254
	18,5		519		969				240		274
TNL 125-315	11	DN125-DN125	466	700	946	330	370	210	270	30	245
	15		466		946				270		251
	18,5		519		999				270		285
	22		519		999				270		312
	30		555		1065				300		393
	37		555		850				85		413
TNL 150-200	4	DN150-DN150	335,5	650	755,5	315	335	190	230	30	142
	5,5		395,5		840,5				255		157
	7,5		395,5		865,5				280		167
	11		466		936				280		232
	15		466		936				280		264
TNL 150-250	11	DN150-DN150	466	670	946	355	315	180	300	30	238
	15		466		946				300		273
	18,5		519		999				300		294
	22		519		999				300		316
	30		555		1065				330		383
TNL 150-315	15	DN150-DN150	466	380	981	380	390	210	305	30	275
	18,5		519		1034				305		318
	22		519		1034				305		345
	30		555		1100				335		419
	37		625		955				120		451

**TECHNICAL DATA**

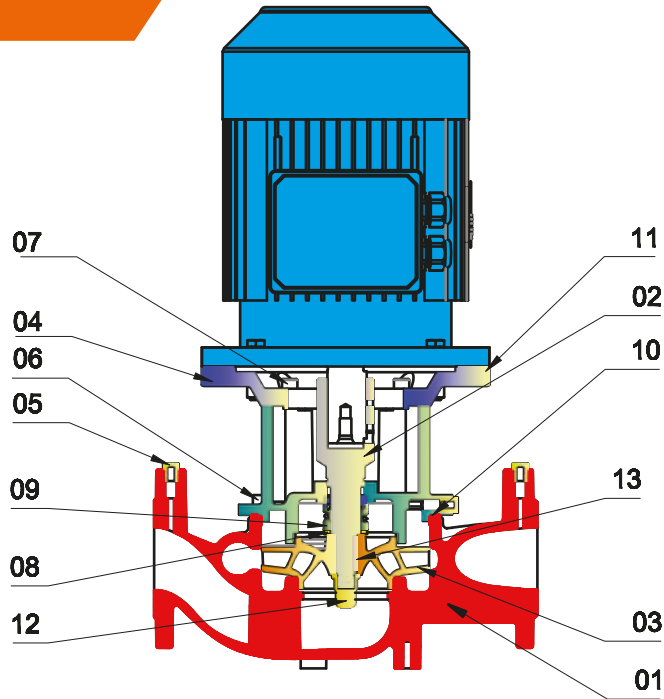
**PERFORMANCE FIELD - TNL (2900 RPM) - 4 POLES**



**PERFORMANCE FIELD - TNL (1450 RPM) - 2 POLES**



**GENERAL DIMENSION**

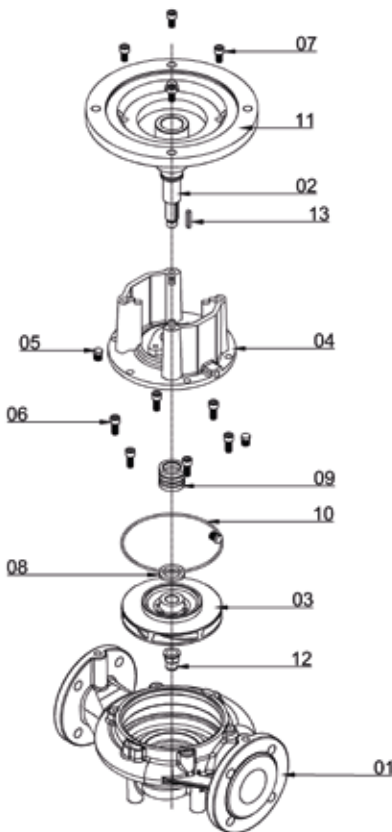


**Part List**

- 1- CASING
- 2- SHAFT
- 3- IMPELLER
- 4- MOTOR PEDESTAL
- 5- AIR VENT. PLUG

- 6- IMBUS BOLT
- 7- IMOTOR FLANGE BOLT
- 8- MEC. SEAL RING
- 9- MEC. SEAL

- 10- O-RING
- 11- MOTOR FLANGE
- 12- IMPELLER BOLT
- 13- IMPELLER KEY



NO	Part Name	NO	Part Name
1-	ICASING	7-	IMBUS FLANGE BOLT
2-	SHAFT	8-	MEC. SEAL RING
3-	IMPELLER	9-	MEC. SEAL
4-	MOTOR PEDESTAL	10-	O-RING
5-	AIR VENT. PLUG	11-	MOTOR FLANGE
6-	IMBUS BOLT	12-	IMPELLER BOLT
		13-	IMPELLER KEY

