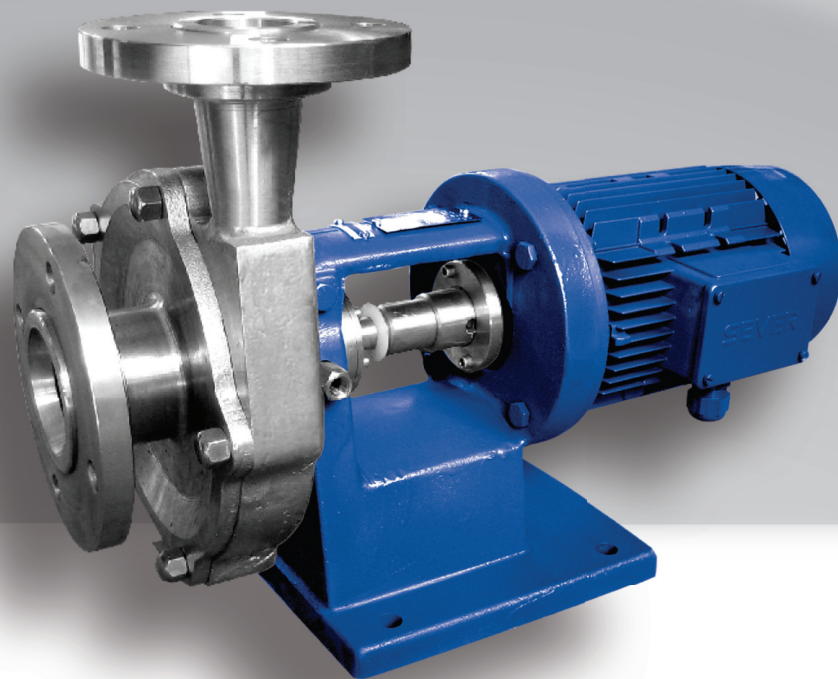


# PPK

## PROCESNE KONZOLNE PUMPE

*PROCESS CENTRIFUGAL PUMPS*



## KARAKTERISTIKE

Broj obrtaja : 2900 o/min  
 Max. protok: 0.5÷14 l/s  
 Visina dizanja: 10÷95 m  
 Temperatura: do 105 °C  
 Zaptivanje: mehaničkom zaptivkom

## PRIMENA

PPK pumpe sa svojom laganom i jednostavnom konstrukcijom nalaze primenu u prehrambenoj industriji (industiji sokova, mlekarskoj industriji, proizvodnji skroba...) i u procesnoj industriji. Jednostavan pristup radnom kolu otvorenog tipa omogućava lako čišćenje kod medija koji kristališu. Zaptivanje je predviđeno jednostrukom odnosno dvostrukom mehaničkom zaptivkom u zavisnosti od fluida koji se transportuje. Na taj način je obezbeđeno pouzdano zaptivanje vratila, a time i čist prostor oko pumpe, što je u prehrambenoj industriji jako važno. Dovođenje sveže vode u zaptivni prostor, kod dvostrukih zaptivki, omogućava ispiranje i pouzdan rad mehaničke zaptivke i kod fluida sa većom gustinom.

## OPIS IZVOĐENJA

Pumpa je izvedena kao jednostepena centrifugalna pumpa, sa otvorenim radnim kolom smeštenim u prohromskom kućištu pumpe. Na nosač pumpe, prirubnički je povezan elektromotor i produžno vratilo pumpe. Vratilo pumpe nosi radno kolo, a zaptiva se pomoću dvostruke mehaničke zaptivke koja je smeštena u zasebnom kućištu, koje je pomoću uskočnika povezano sa kućištem pumpe. Na kućištu mehaničke zaptivke postoje dva priključka za ulaz i izlaz čiste vode, koji služe za ispiranje i hlađenje mehaničke zaptivke. Za manje složene uslove rada ove pumpe mogu biti izvedene sa jednostrukom mehaničkom zaptivkom bez dovođenja vode za ispiranje. Poklopac kućišta pumpe se jednostavno demontira i time se omogućava pristup radnom kolu, što obezbeđuje jednostavno čišćenje, ili zamenu radnog kola. Prirubnice na usisnom i potisnom kućištu mogu biti izvedene kao fiksne i pokretne.

## POGONSKI PRITISCI

Maksimalno 16 bara.

## POLOŽAJ PRIKLJUČAKA

Usisni priključak je horizontalan, a potisni vertikalni, usmeren naviše.

## MATERIJALNO IZVOĐENJE

Obično se ove pumpe izrađuju od nerđajućeg čelika Č.4574, a u određenim slučajevima mogu biti izrađene i od drugih materijala kako je prikazano u tabeli "materijalno izvođenje".

## PRIRUBNICE

DIN 2633 NP16 kiselo otporno izvođenje od ČL.4574 i Bronze. Na poseban zahtev kupca prirubnice mogu biti fiksne ili navojne.

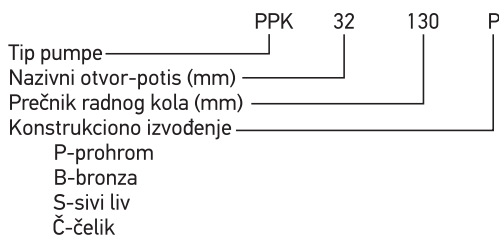
## ULEŽIŠTENJE

Pomoću produžnog vratila produženo je vratilo elektromotora, pa time ležajevi elektromotora postaju i ležajevi pumpe.

## ZAPTIVANJE

Zaptivanje vratila vrši se pomoću dvostrukog ili jednostrukog mehaničkog zaptivača, gde je kod dvostrukog zaptivača potrebno obezbediti ispiranje čistom vodom.

## NAČIN OZNAČAVANJA



## FEATURES

Speed: 2900 r.p.m.  
 Capacity: 0.5÷14 l/s  
 Total head: 10÷95 m  
 Temperature: up to 105 °C  
 Sealing: by mechanical seal

## USES

PPK pumps with its lightweight and simple design are used in the food industry (industry of juices, dairy industry, the manufacture of starch ...) and in the process industry. Easy access to the open impeller allows easy cleaning with the media that crystallize. Sealing is provided by a single or double mechanical seal depending on the fluid that is being transported. This provides reliable sealing of shaft and thereby cleans the area around the pump, which is in the food industry very important. Bringing fresh water to the sealing space, for double mechanical seals, allows flush and reliable work of mechanical seal with a fluid with higher density.

## PERFORMANCE

The pump is constructed as a single-stage centrifugal pump with open impeller located in a stainless steel pump casing. On the bracket of the pump, electric motor and extended shaft are connected with the flange. Pump shaft carries the impeller, and is sealed with a double mechanical seal which is located in a separate casing, which is by retaining ring connected to the pump casing. On mechanical seal casing there are two connections for input and output of pure water, which serves for flushing and cooling of mechanical seal. For less difficult working conditions these pumps can be performed with a single mechanical seal without bringing water for flushing. The cover of the pump casing is removed easily and thus provides access to the impeller, which ensures easy cleaning, or replacement of the impeller. Flanges on the suction and delivery casing can be performed as fixed and mobile.

## OPERATING PRESSURE

Maximum 16 bar

## POSITION OF CONNECTION

Suction connection is horizontal, and delivery is vertical directed upward.

## MATERIALS

Usually these pumps are made of stainless steel AISI 316, and in some cases can be made from other materials as it is shown in the table "materials"

## FLANGES

DIN 2633 NP16 at sour resistant performance of AISI 316 and bronze. On special request flanges can be fixed or threaded.

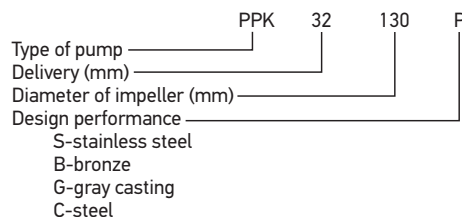
## BEARING

By using an extended shaft, the shaft of electric motor is extended too, therefore bearings of electric motor became pump bearings as well.

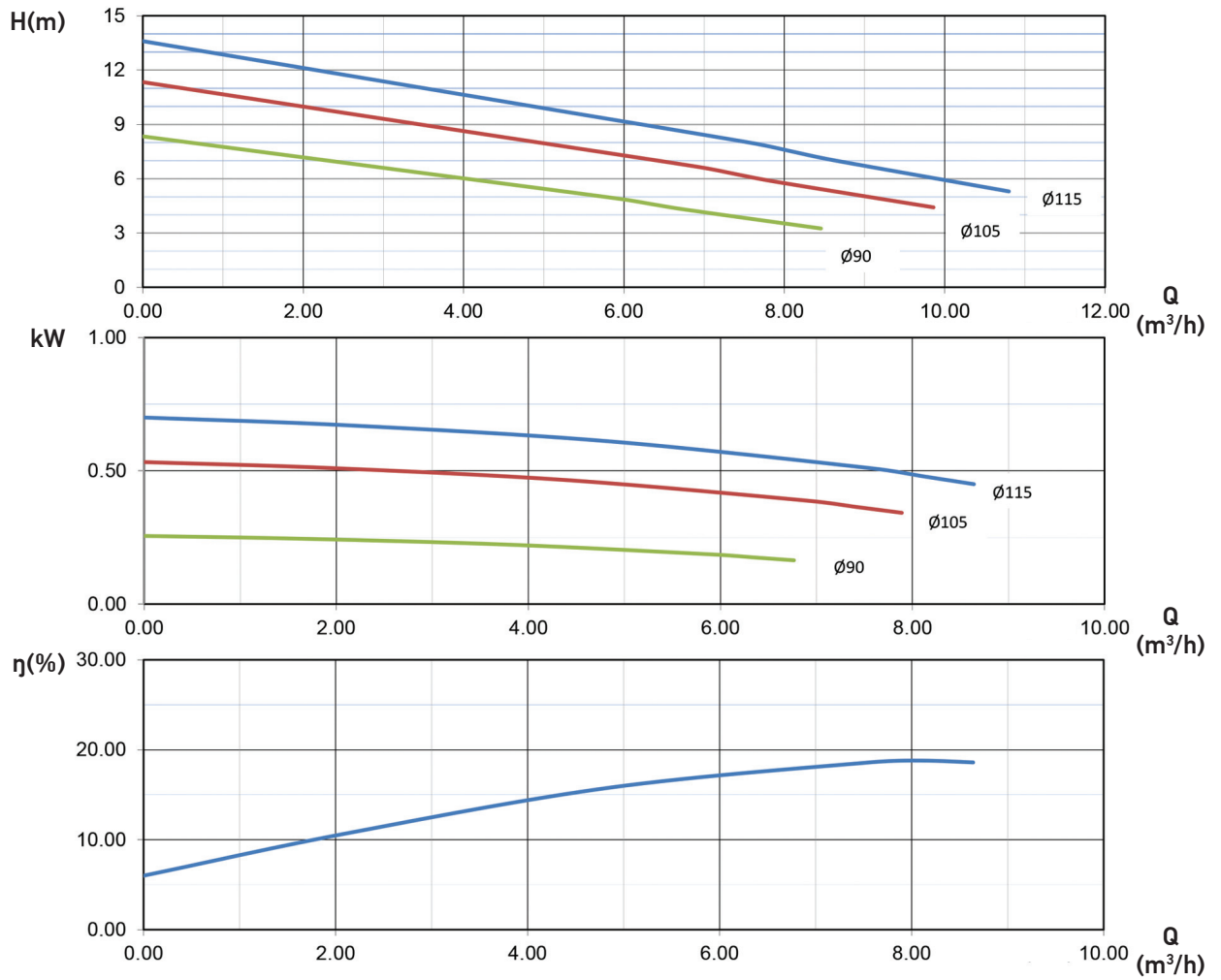
## SEALING

Shaft sealing is performed by a single or double mechanical seal, where is necessary with double seal to provide clean water rinse.

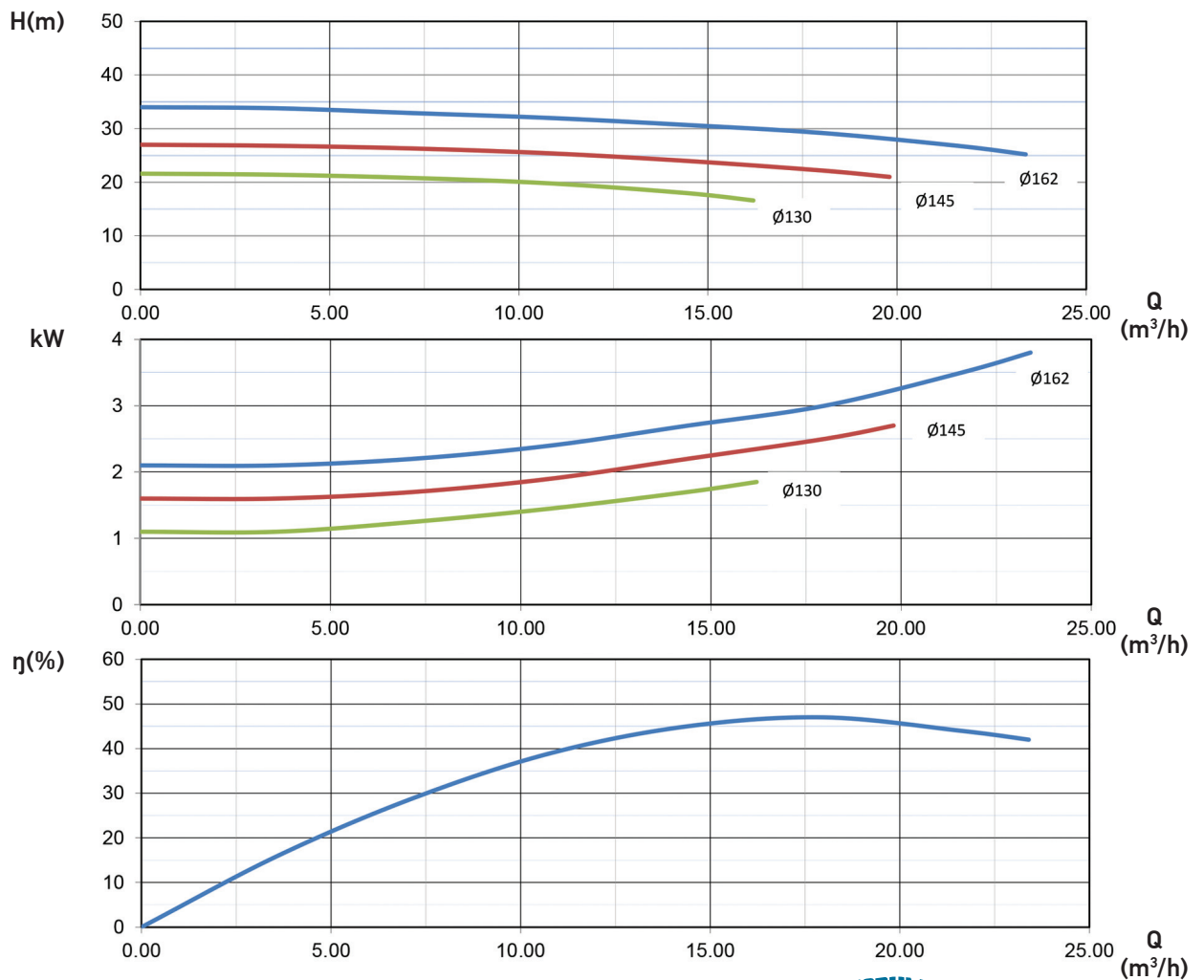
## METHOD OF MARKING



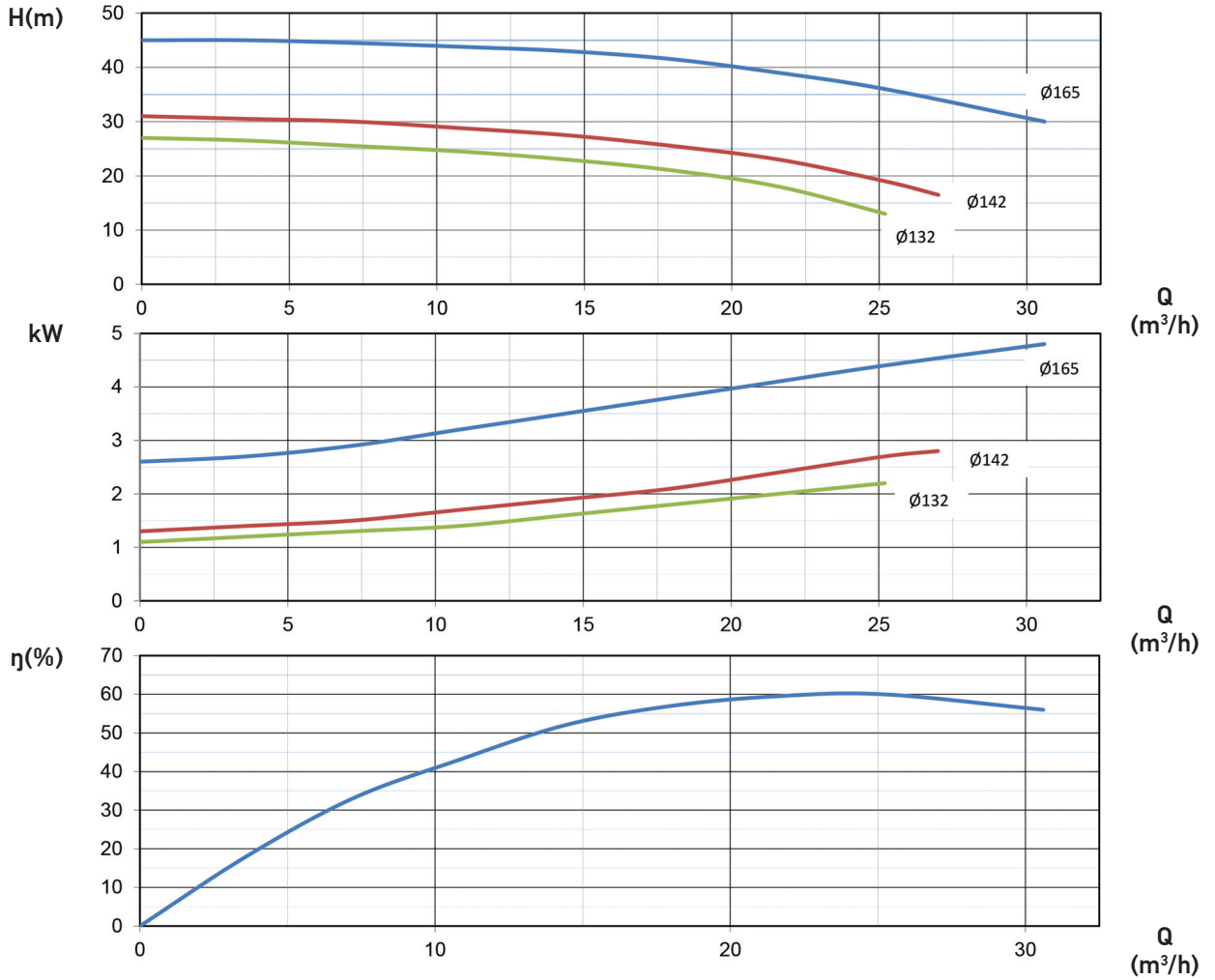
**TIP PUMPE**  
TYPE OF PUMP  
**PPK 32-90**



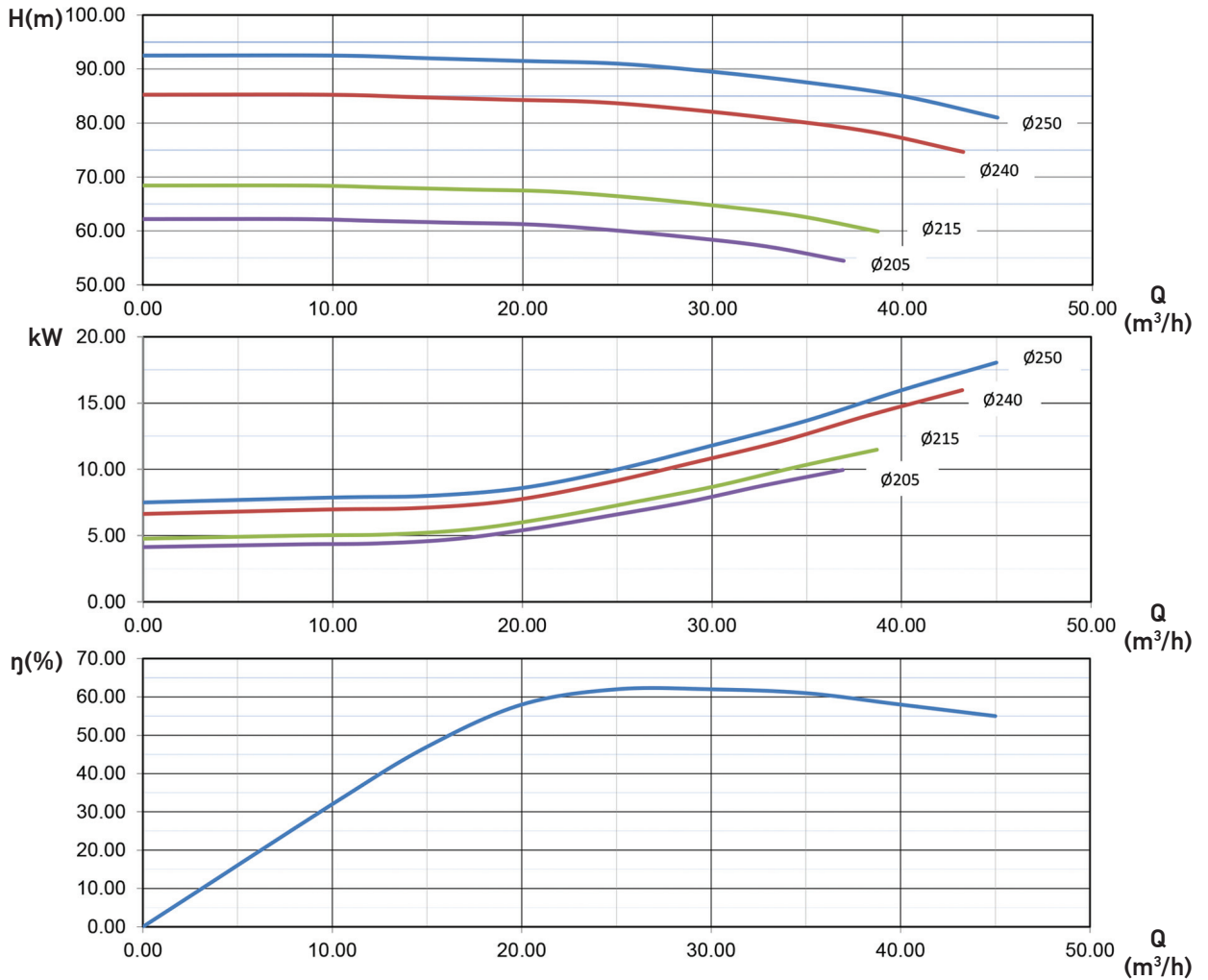
**TIP PUMPE**  
TYPE OF PUMP  
**PPK 35-130**

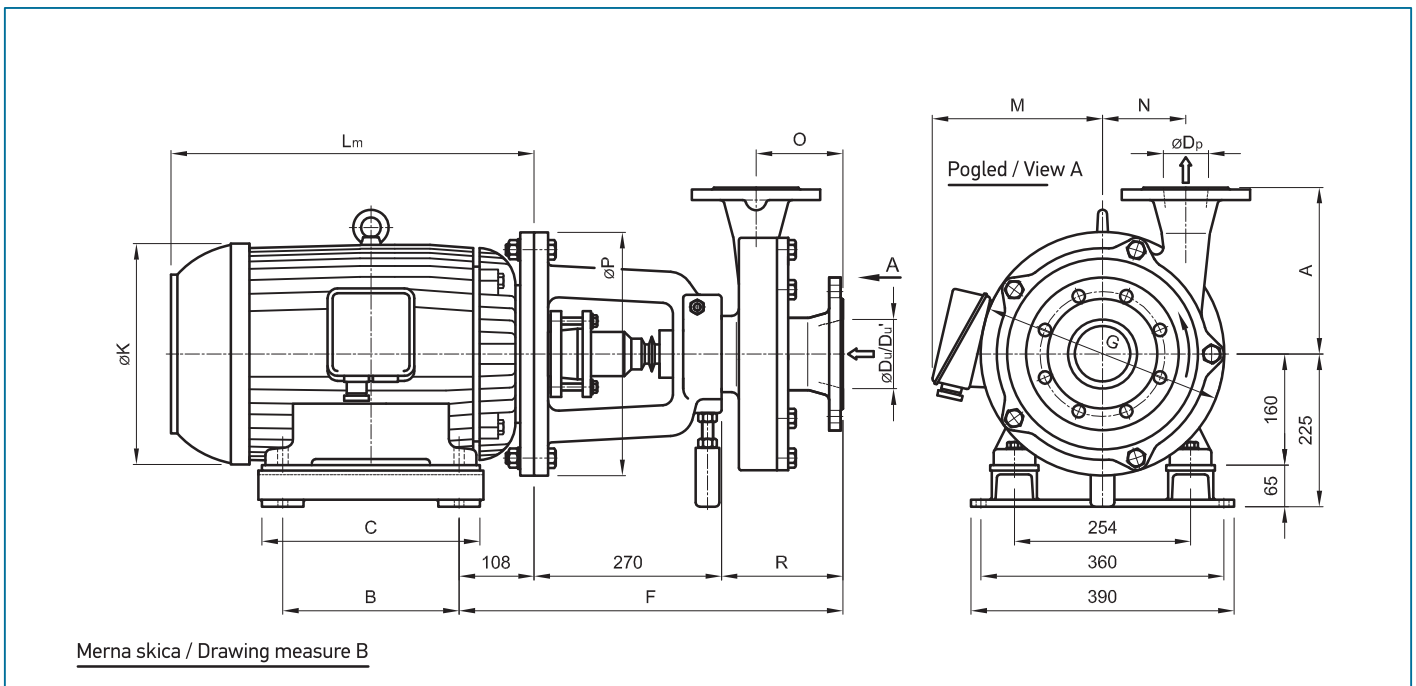
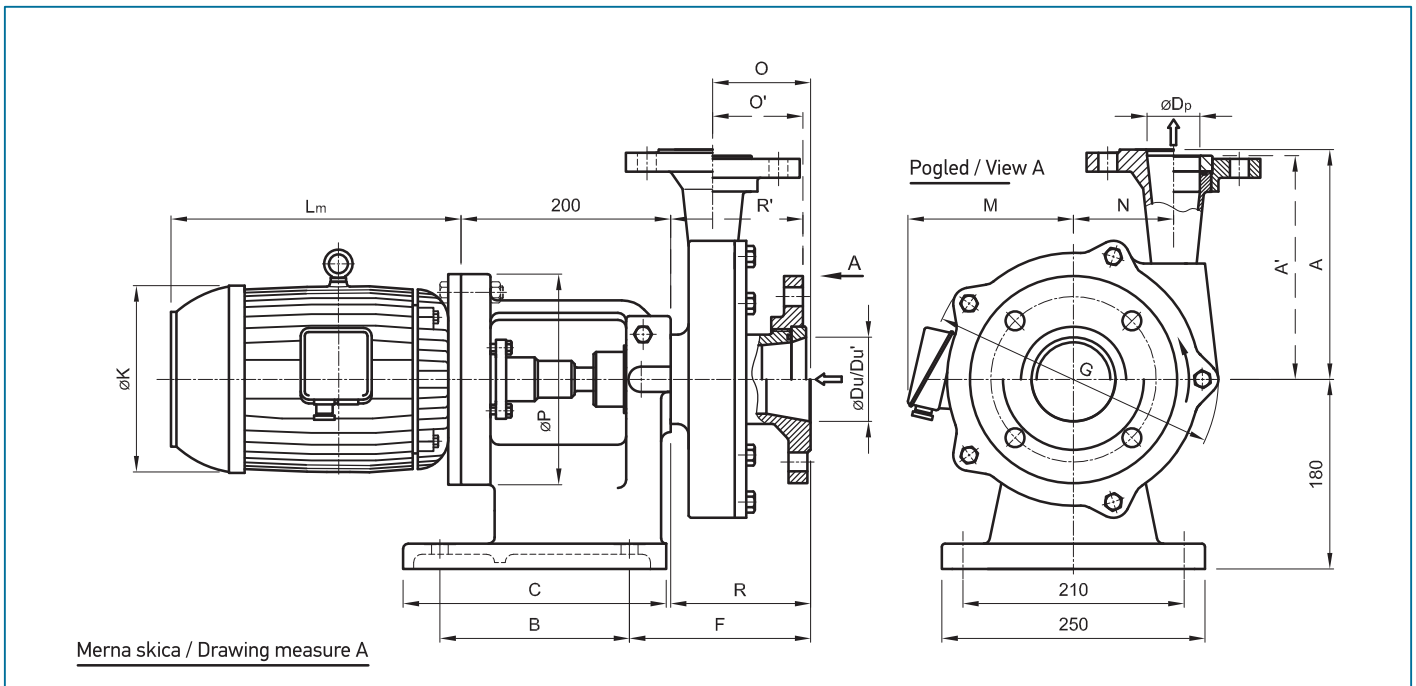


**TIP PUMPE**  
TYPE OF PUMP  
**PPK 50-165**



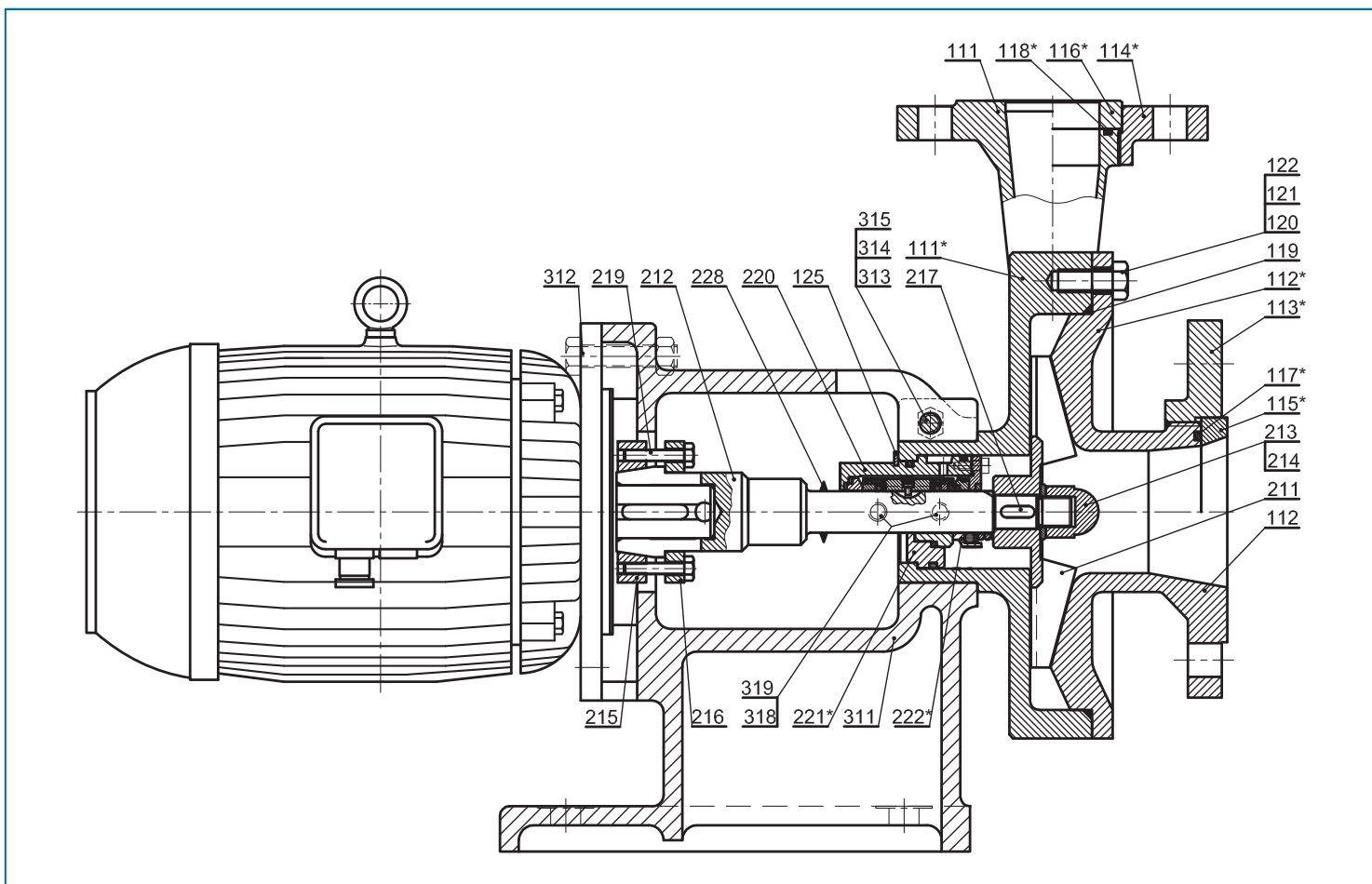
**TIP PUMPE**  
TYPE OF PUMP  
**PPK 65-215**





Tip pumpe Type of pump	Elektromotor Electric motor			Dimenzija agregata Dimension of pump set																	
	Tip Type	Kw	min <sup>-1</sup>	Oblik Shape	ØDu/Du'	ØDp	O	R	F	M	N	A	ØP	ØK	G	Lm	B	C	/		
32-90	80 A	0.75	2900	B5	50	32	103	137	176	110	52	130	200	154	175	234	180	250	Merna skica A Drawing measure A		
	80 B	1.1																			
90 S	1.5																				
35-130	90 L	2.2		B14/FT165	65/60	35	132	181	121	79	170	170	193	235	257	282	310	310		320	
	100 L	3																			
50-165	90 L	2.2		B5	80/65	50	95	174	121	95	218	218	193	275	320	361	479	210		290	M. sk. B Dr. meas. B
	100 L	3																			
	112 M	4																			
	132 Sk	5.5																			
	132 S	7.5																			
65-215	160 Mk	11		B3+B5	100/80	65	125	175	553	246	120	240	350	350	350	523	254	330			
	160 M	15																			
	160 L	18.5																			





- Poz Naziv
- 111 Kućište pumpe
  - \*111 Kućište pumpe sa navojnom priрубnicom
  - 112 Poklopac kućišta
  - \*112 Poklopac kućišta sa navojnom priрубnicom
  - \*113 Navojna priрубnica
  - \*114 Navojna priрубnica
  - \*115 Zaptivni prsten
  - \*116 Zaptivni prsten
  - \*117 O-prsten
  - \*118 O-prsten
  - 119 O-prsten
  - 120 Vijak
  - 121 Navrtka
  - 122 Podloška
  - 125 Uskočni prsten
  - 211 Radno kolo
  - 212 Vratilo
  - 213 Navrtka radnog kola

- Poz Naziv
- 214 Podloška
  - 215 Stezna priрубnica
  - 216 Stezna priрубnica
  - 217 Klin
  - 219 Vijak
  - 220 Dvostruka mehanička zaptivka
  - \*221 Čaura stacionara
  - \*222 Jednostruka mehanička zaptivka
  - 228 Centrifugalni odvaјač
  - 311 Nosač pumpe
  - 312 Vijak
  - 313 Vijak
  - 314 Navrtka
  - 315 Podloška
  - 318 Priključak za hlađenje mehaničke zaptivke
  - 319 Priključak za hlađenje mehaničke zaptivke

- Item Part Name
- 111 Casing
  - \*111 Casing with threaded flange
  - 112 Casing cover
  - \*112 Casing cover with threaded flange
  - \*113 Threaded flange
  - \*114 Threaded flange
  - \*115 Sealing ring
  - \*116 Sealing ring
  - \*117 O ring
  - \*118 O ring
  - 119 O ring
  - 120 Bolt
  - 121 Nut
  - 122 Washer
  - 125 Retaining ring
  - 211 Impeller
  - 212 Shaft
  - 213 Impeller nut

- Item Part Name
- 214 Washer
  - 215 Clamping flange
  - 216 Clamping flange
  - 217 Insert spring
  - 219 Bolt
  - 220 Double mechanical seal
  - \*221 Stationary sleeve
  - \*222 Single mechanical seal
  - 228 Centrifugal separator
  - 311 Pump bracket
  - 312 Bolt
  - 313 Bolt
  - 314 Nut
  - 315 Washer
  - 318 Connection for cooling of mechanical seal
  - 319 Connection for cooling of mechanical seal

Naziv pozicije	Materijalno izvođenje			
Kućište pumpe				
Usisni poklopac	ČL.4574	PCuSn10	ČL.0500	SL250
Radno kolo				
Vratilo	Č.4574		Č.4570	
Nosač pumpe				SL250

Part name	Materials			
Casing				
Suction cover	AISI316	GCuSn10	GS-52	GJL250
Impeller				
Shaft	AISI316		AISI431	
Pump bracket			GJL250	



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