

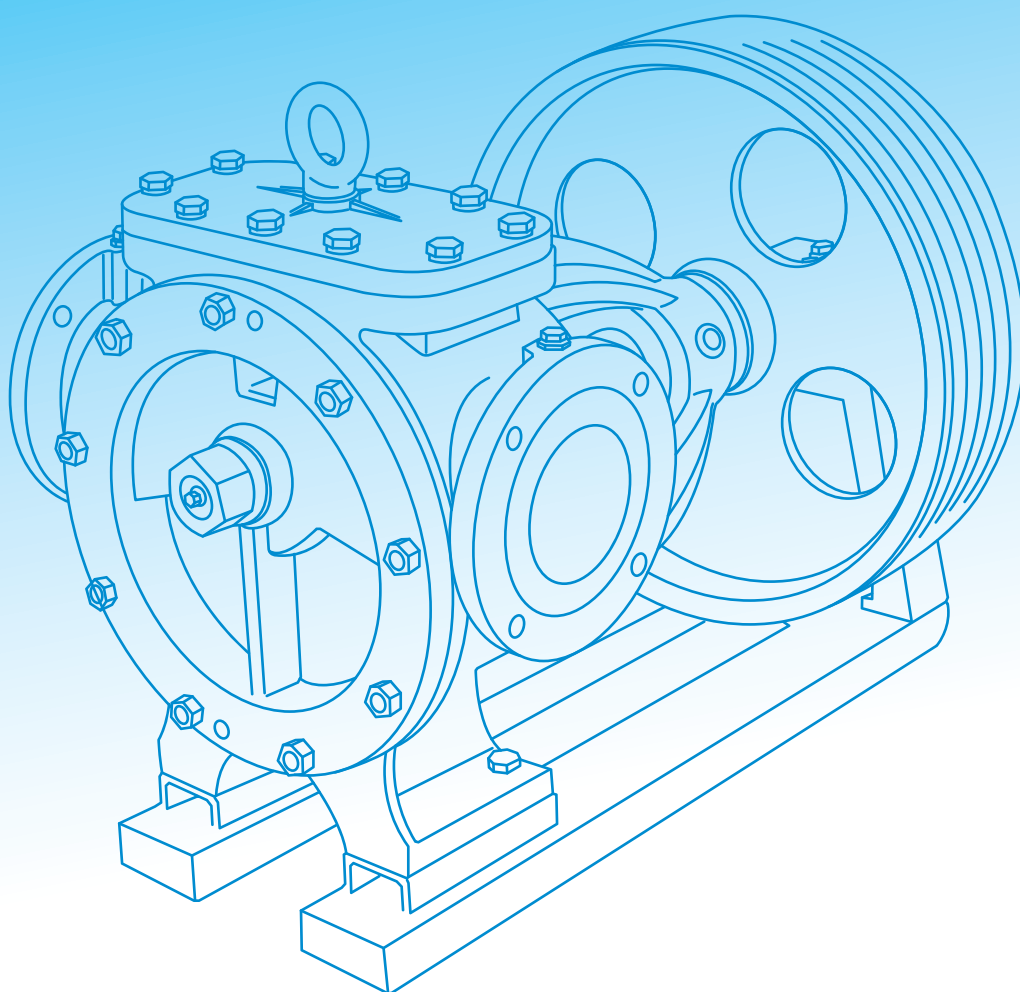


# TAKI PUMP

## Model **HD**

### FIELDS OF APPLICATION

- » Paint and lacquer Industry e.g. solvents, binders, pigmented goods, textile dye.
- » Sugar Industry e.g. molasses, syrup.
- » Petro chemical Industry e.g. asphalt, bitumen, liquid polymerics, emollients, Solvents, emulsions, glue filling paste.
- » Oil industry e.g. oil, oil products, grease, additives.
- » Chemical Industry e.g. bases, weak acids, soap, soya oil, freon.
- » Paper Industry e.g. sulphate soap, tall oil, water glass.
- » Fish Industry e.g. fish oil, press water, solubles.
- » Food Industry e.g. chocolate, yeast mayonnaise, brine, liquo, rice vinegar, egg yolk.





# INFORMATION

Rotan industrial pumps internal tooth gear pumps have been manufactured in Denmark by Myhrwold & Rasmussen A/S since 1921. From the beginning this company has devoted the main part of its resources to the development and production of these pumps. The specialization resulting from these efforts means that mass-produced Rotan pumps are now available in many sizes, designs and with many material combinations, meeting the requirements of almost all liquids.

## General information

	SI Units	Other Units	British Units	American Units
Max. capacity	170 m³/h 0,047 m³/s	2800 l/min	625 IGPM	750 USGPM
Max. differential pressure HD 101 - HD 201	10 bar ~ 1000 kPa	10 kp/cm²	140 PSI	140 PSI
Max. priming vacuum	0,6 bar ~ 60 kPa	0,6 kp/cm²	450 mm Hg ~ 18 inches Hg	450 mm Hg ~ 18 inches Hg
Max. vacuum during operation	0,9 bar ~ 90 kPa	0,9 kp/cm²	680 mm Hg ~ 27 inches Hg	680 mm Hg ~ 27 inches Hg
Max. viscosity	7,5 x 10 <sup>-2</sup> m²/s	75.000 cSt.	310.000 R1	350.000 SSU
Max. temperature: Standard features Special tolerances Special tolerances + water - cooling	150 °C 200 °C 300 °C	150 °C 200 °C 300 °C	300 °F 400 °F 570 °F	300 °F 400 °F 570 °F
Max. heating jacket pressure: Water/oil Steam	6 bar ~ 600 kPa 4 bar ~ 400 kPa	6 kp/cm² 4 kp/cm²	87 PSI 58 PSI	87 PSI 58 PSI

## Fields of application



### Paint and lacquer industry

e.g. solvents, binders, pigmented goods, textile dye



### Sugar industry

e.g. molasses, syrup



### Petro chemical industry

e.g. asphalt, bitumen, liquid polymeric, emollients, solvents, emulsions, glue filling paste.



### Oil industry

e.g. oil, oil products, grease, additives.



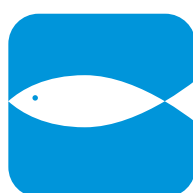
### Chemical industry

e.g. bases, weak acids, soap, soya oil, freon.



### Paper industry

e.g. sulphate soap, tall oil, water glass.



### Fish industry

e.g. fish oil, press water, solubles.

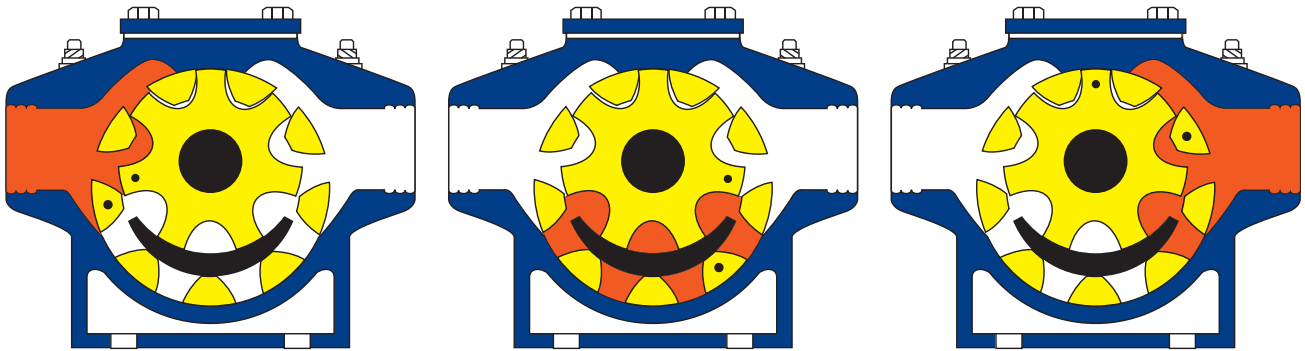


### Food industry

e.g. chocolate, yeast mayonnaise, brine, liquorice, vinegar, egg yolk.



## ADVANTAGES



- Pumps difficult liquids
  - Viscosities up to 75.000 cSt.
  - Non-lubricating as well as lubricating liquids
  - With contents of abrasives
- Self – priming with large suction capability
  - Self – priming up to a vacuum of 60 kPa ( 18 inches Hg)
  - Max. operating vacuum of 90 kPa ( 27 inches Hg)
- Reversible pumping function
  - Efficient two – way pumping which allows emptying of the discharge pipe after the pumping operation
- Gentle liquid handling
  - Does not stir the liquid
  - No pressure pulsations
- Long life
  - Robust, uncomplicated construction with outrigger ball bearing support.
  - Only two rotating parts and one shaft seal.
  - Low rotating speed.
- Capable of short time dry operation.
- Can be fitted with relief valve.
  - Ensures that no damage occurs on pump or pipes if the pipe line is blocked.
- Easy to inspect and maintain.
- Front cover and bearing support can easily be dismantled for inspection of rotating parts without dismounting pipe connections or power unit.
- Axial readjustment of rotor and shaft.

The **TAKI HD** type pump is a gear pump with an internal idler gear meshing a main power rotor. This construction provides more favourable flow conditions than those obtained in other types of gear pump. The direction of liquid flow is changed only slightly through the pump. Thus large selfpriming ability and gentle liquid handling are achieved, and also high viscous liquids may be pumped.



Examples of liquids (Extract from M & R's liquid list)				Possible liquid characteristics												CODE					Configuration			
				°C			cSt		Lubricating	Not lubricating	pH			Abrasive										
				150 -	200 150-	300 200-	2500 - 2500	7500 2500-7500			3,5 - 6	6 - 8	8 - 14	Rubber aggressive	not							moderately	strongly	
Primers, lye, aqueous solutions				○			○	○			○	○		○	○		1	M	1	1	A			
Paint with pigments and/or aromates				○			○			○	○		○	○		1	M	1	B	2				
Paint with or without pigments, sugar syrup, molasses				○			○	○			○			○	○		1	M	2	2	A			
Asphalt, bitumen				○			○	○			○	○		○	○		1	M	1	1	B			
Molasses, asphalt and bitumen with filler, glucose				○			○	○			○			○	○		1	M	2	2	B	DK		
Paint with of without pigments and/or aromates				○			○			○			○	○		1	M	2	B	2				
Sulphate soap				○			○	○			○	○		○	○		1	M	B	1	B	X		
Sulphate soap				○			○	○			○	○		○	○		1	M	B	1	B	DKX		
Molasses				○			○	○			○			○	○		1	M	B	2	B	X		
Colourless lacquer, synthetic resin, animal and vegetable fat and oil				○			○	○			○	○		○			1	U	1	1	A			
Oil, oil sludge				○			○	○			○			○			1	U	2	2	A			
Asphalt, bitumen				○			○	○			○			○			1	U	2	2	B	DK		
Fuel oil				○			○				○			○			1	U	2	B	1			
Solvents, pure animal and vegetable fat and oil				○			○	○			○	○		○	○		1	U	3	3	B			
Heat transfer oil				○	○	○	○	○	○			○	○	○	○			1	U	3	3	B	KT	
Fat, phenol, paraffin wax				○			○	○			○	○		○	○			1	U	3	3	B	DK	
Petrol, alcohol, gas oil, diesel oil				○			○				○			○				1	U	3	B	1		
LPG, freon, frigen, solvents				○			○				○	○	○	○				1	U	3	B	2		
Paint with pigments, molasses				○			○	○			○			○		○	○		1	U	4	2	B	
Paint with pigments, molasses				○			○	○			○	○		○		○	○		1	U	4	B	2	
Toluol, textile dye				○			○	○			○			○	○			2	M	2	2	B		
Vinegar, weak acids, mustard				○			○	○			○			○	○			2	U	3	3	B		
Vinegar, weak acids, wine, spirits				○			○				○			○	○			2	U	3	B	1		
Textile dye				○			○				○			○		○			2	U	4	2	B	
Plastic emulsion, vegetable oil, sulphate soap, mustard				○			○	○			○	○	○	○	○			3	U	3	3	B	T	

Standard	CASING 01	COVER 02	ROTOR 04	IDLER 05	SHAFT 20	PIN 21	CODE Materials	Main Parts	Lubrication of bearings	Idle bearing	Main bearing	Shaft seal
JIS	FC 25	FC 25	FC 25	FC 25	SCM 4	SCM 4	1 Cast Iron					
JIS	BC 6	BC 6	BC 6	BC 6	SUS 304	SUS 304	2 Bronze					
JIS	SCS 13	SCS 13	SCS 13	SCS 13	SUS 304	SUS 304	3 Stainless					
Special design:							S Special					

Lubricated \_\_\_\_\_ M

Not lubricated \_\_\_\_\_ U

Ball or roller bearing \_\_\_\_\_ B

Slide bearing of \_\_\_\_\_

cast iron \_\_\_\_\_ 1

bronze \_\_\_\_\_ 2

carbon \_\_\_\_\_ 3

ceramic \_\_\_\_\_ 4

Packing cord, graphite impregnated asbestos or cotton \_\_\_\_\_ A

Packing cord, teflon-impregnated \_\_\_\_\_ B

Mechanical shaft seal, seal rings of carbon/ceramic, synthetic rubber bellows, stainless steel spring, other parts of phosphor-bronze \_\_\_\_\_ 1

Mechanical shaft seal, seal rings of carbon/ceramic, viton O-rings, spring and other parts of stainless steel \_\_\_\_\_ 2

Shaft seal of special type \_\_\_\_\_ S

Heating jacket \_\_\_\_\_ D

Water-cooled stuffing box \_\_\_\_\_ K

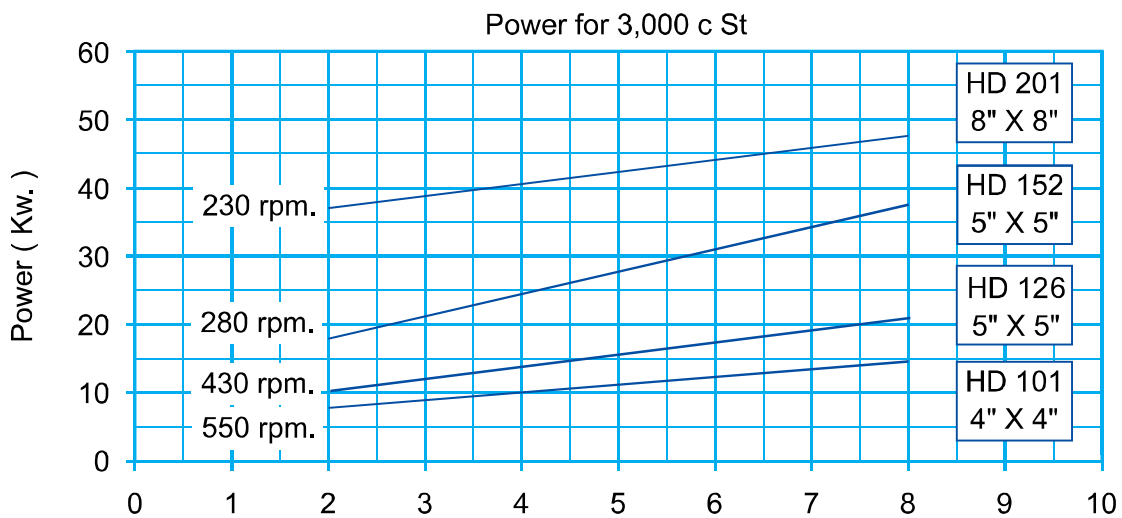
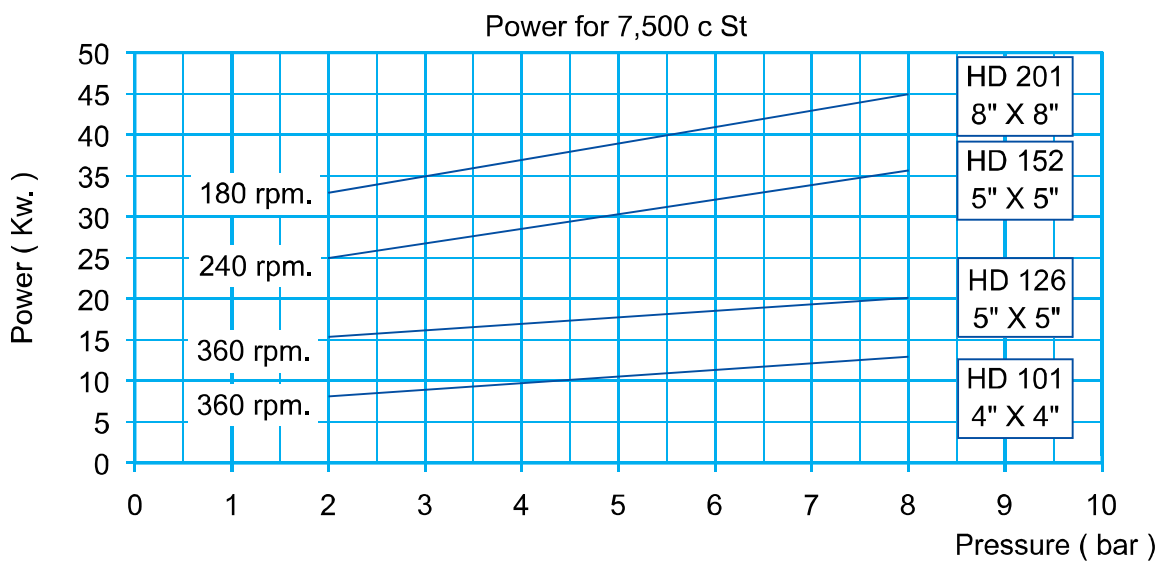
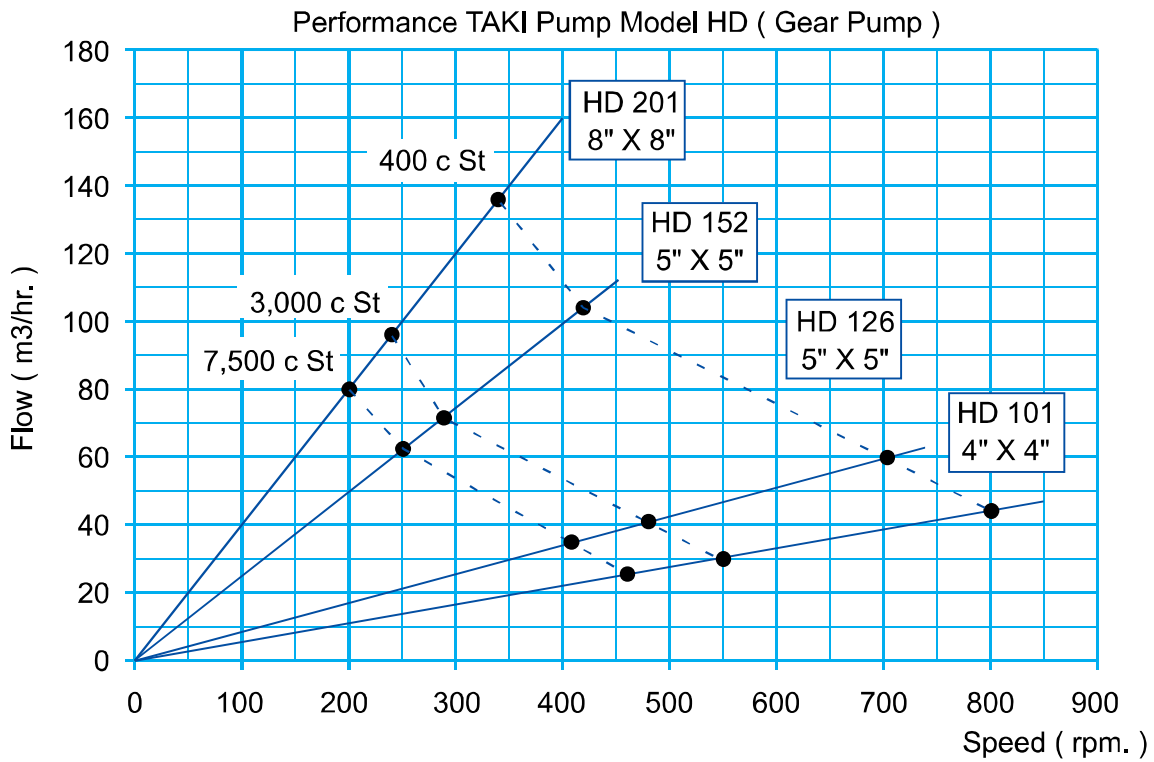
Special features \_\_\_\_\_ S

Special tolerances \_\_\_\_\_ T

By-pass valve \_\_\_\_\_ R

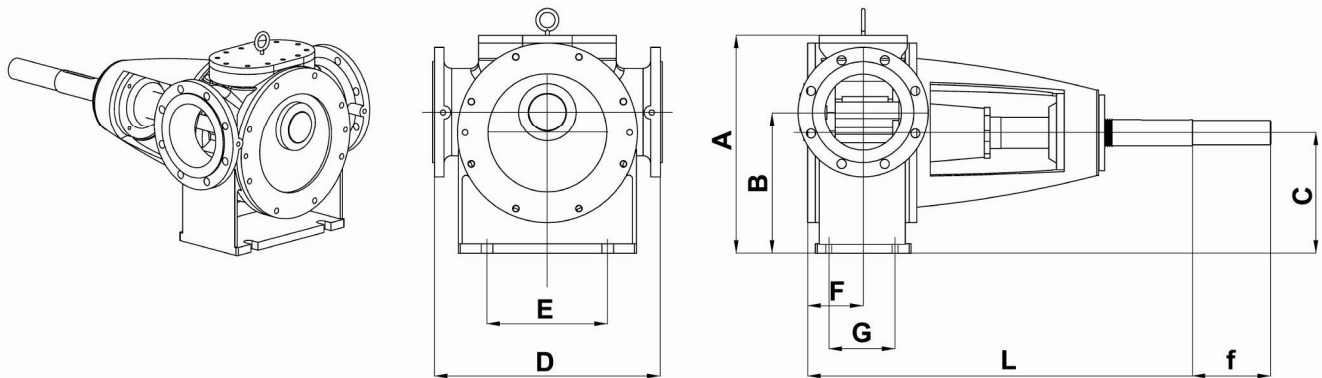
Two-way by-pass valve \_\_\_\_\_ RR

Idle bearing arrangement \_\_\_\_\_ X





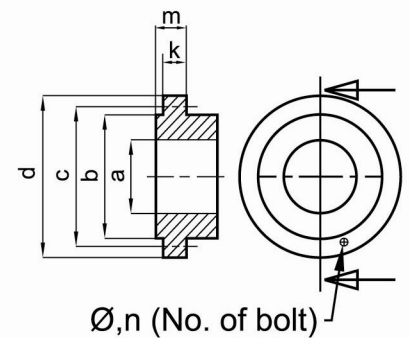
## DIMENSIONS



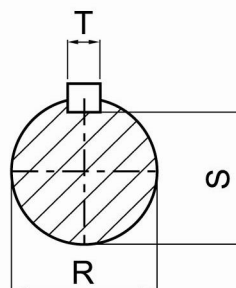
Dimension in mm.

PUMP Model	HP.	A	B	C	D	E	F	G	L	f extend length for bearing support
HD 101	20	315	185	160	360	160	85	110	530	115
HD 126	30	370	231	200	400	190	105	120	670	140
HD 152	50	560	342.5	287	552	240	160	135	790	190
HD 201	75	570	369	315	600	315	210	200	1017	205

	Bore.A	b	c	d	Ø	k	m	n	bolt
HD 101	100	155	180.0	220	3/4"	2.5	22.5	8	M18
HD 126	125	185	222.5	260	11/16"	2.5	28	8	M16
HD 152	200	265	295.0	340	15/16"	5	30	8	M22



	R	S	T
HD 101	32	27	10
HD 126	42	37	12
HD 152	45	40	12
HD 201	70	64	16



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