

# PT ECM OILFIELD SERVICES

## UNIVERSAL<sup>®</sup> VH 25 / 40 / 60 / 80 / 100 HP

## PCP DRIVE HEAD

### General

The “UNIVERSAL”<sup>®</sup> drive head is designed to handle the higher rod string loadings and power requirements associated with today’s high volume Progressing Cavity Pumps (PCP).

The “UNIVERSAL”<sup>®</sup> design accommodates a wide range of pumps sizes and down-hole string loading. It is rated for 15 Ton (33,000 lbs) sucker rod axial load, 750 Rpm maximum speed and up to 75 Kw (100 HP) electrical motor power (for higher power contact ECM).

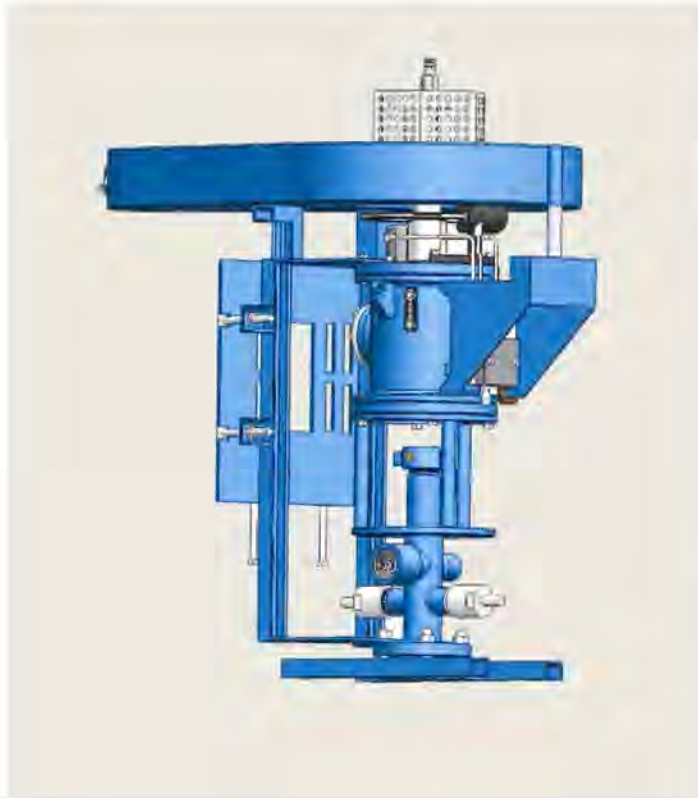
The hollow drive shaft allows either 1-1/4” or 1-1/2” diameter polished rods to be pulled through to allow pump back wash.

It is equipped with 3 high capacity, self aligning bearings which are oil lubricated.

Maximum standard thrust bearing load is 15 Ton (33,000 lbs) and 18 Ton (39,683 lbs) for optional high capacity bearing.

Stuffing boxes is also available for both sizes polished rods and equipped with a **NO LEAK SEAL**<sup>®</sup> for low friction coefficient that are factory dynamically tested, at 700 PSI, 80 Deg C. (176 Deg. F).

Pump Back Spin control is provided by external a self-contained automatic hydraulic operated disc brake.



Drive Head VH				
Motor Speed	Pulley Diameter		Pump Speed	Belt Size
	Motor	Pump		
970 RPM 6 pole 50Hz	100	710	135	SPB 2410
	125	710	165	SPB 2410
	140	710	189	SPB 2410
	160	710	216	SPB 2410
	100	630	152	SPB 2360
	125	630	190	SPB 2360
	140	630	213	SPB 2360
	160	630	243	SPB 2360
	100	560	171	SPB 2240
	125	560	214	SPB 2240
	140	560	240	SPB 2300
	160	560	274	SPB 2300
	170	560	291	SPB 2300
	180	560	308	SPB 2300
190	560	325	SPB 2300	
200	560	342	SPB 2300	
224	560	384	SPB 2300	
1160 RPM 6 pole 60Hz	100	710	163	SPB 2410
	125	710	204	SPB 2410
	140	710	229	SPB 2410
	160	710	261	SPB 2410
	100	630	184	SPB 2360
	125	630	230	SPB 2360
	140	630	257	SPB 2360
	160	630	294	SPB 2360
	100	560	207	SPB 2240
	125	560	259	SPB 2240
	140	560	290	SPB 2300
	160	560	331	SPB 2300
	170	560	352	SPB 2300
	180	560	372	SPB 2300
190	560	393	SPB 2300	

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## DRIVE HEAD

- Torque is transferred to the drive string by a hollow shaft equipped with a hexagonal slip shaft connected to the polish rod, thus allowing safe maximum power transmission to the polish rod. The hexagonal profile allows vertical adjustment of the sucker rod string (Similar to a Kelly bushing).
- The weight of the rod string is suspended from a hexagonal profile 6-bolt clamp. The clamp only suspends the rod string weight and does not transmit the torque. Therefore there is no risk of breaking the friction grip on the polished rod.
- Lip seals run on cemented ring for long seal and shaft life.
- Lifting lugs on each side of the drive head are rated to handle the maximum string weight.
- The “**UNIVERSAL**”<sup>®</sup> electrical motor support allows motor sizes from 25 HP to 100 HP.

## LUBRICATION SYSTEM

- Gear driven hydraulic pump directly mounted onto the drive head bearing housing, provide pressure to operate the disc brake.
- Filtration spin-on (10 micron) oil cartridge, easily changeable during field maintenance.
- Breather / fill point is conveniently located on the bearing housing. Two (2) drain plugs are located below the bearing housing to allow full oil drainage.
- Large ball type oil level gauge.
- Large oil reservoir, allow cooler running and longer lubricating oil life.

## STUFFING BOX FRAME

- Provides good access to the stuffing box **No Leak Seal**<sup>®</sup>.

## OPTIONAL

- IBOP Flow (T) Integrated with stuffing box.
- Electrical Motor.



## SPECIFICATIONS

Axial load capacity: (Frame 4:1 safety factor)	16 Ton (35,274 lbs), 18 Ton (39,683 lbs) (Optional)
Rated maximum speed	750 rpm
Axial thrust bearing Ca 90 Ratings at 500 rpm	33,500 lbs - 17,800 lbs
Maximum Output	100 HP
Maximum Electrical Motor Size	75 kw
Upper radial bearing	267,000 hrs at normal belt tension
Lower radial bearing	2,890,000 hrs at normal belt tension
Ambient conditions	- 50° C to + 50° C (- 60° F to + 130° F)
Lubrication reservoir capacity	8 liters (2.1 gal) c/w level view
Hydraulic Anti Back Spin capacity	3,500 N-m (2,581 ft.-lbs)
Wellhead Connections	2-7/8" PIN EUE or 3-1/2" PIN EUE 3-1/8" or 7-1/16" Flange
Lifting lugs are rated to handle the full string weight.	
NO LEAK SEAL static condition	1,500 psi / 80°C
NO LEAK SEAL operating condition	700 psi / 150°C at 300 rpm
Dimensions	L : 1,306 mm, W : 804 mm, H : 1,562 mm
Weight	298 kg



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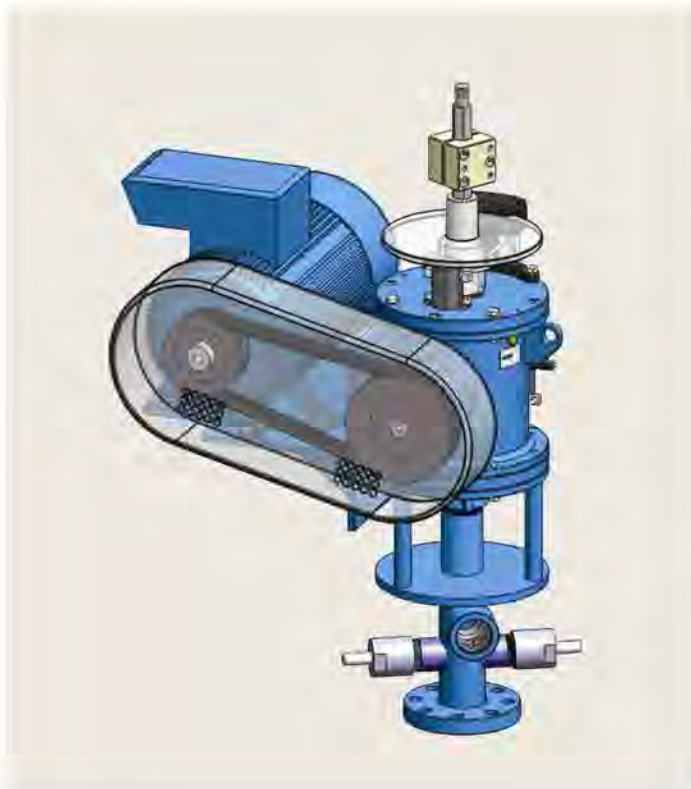
The hollow drive shaft allows either 1-1/4" or 1-1/2" diameter polished rods to be pulled through to allow pump back wash.

It is equipped with 3 high capacity, self aligning bearings which are oil lubricated and with a right angle bevel gear providing 3:1 speed reduction ratio.

Maximum standard thrust bearing load is 15 Ton (33,000 lbs) and 18 Ton (39,683 lbs) for optional high capacity bearing.

Stuffing boxes is also available for both sizes polished rods and equipped with a **NO LEAK SEAL**<sup>®</sup> for low friction coefficient that are factory dynamically tested, at 700 PSI, 80 Deg C. (176 Deg. F).

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Drive Head RH				
Motor Speed	Pulley Diameter		Pump Speed	Belt Size
	Motor	Pump		
970 RPM 6 pole 50Hz	100	335	95	SPB.1500
	125	335	120	SPB.1600
	125	250	160	SPB.1500
	180	335	172	SPB.1600
	170	236	230	SPB.1500
	170	200	272	SPB.1500
	250	250	320	SPB.1600
	250	212	377	SPB.1600
1160 RPM 6 Pole 60Hz	100	335	115	SPB.1500
	125	335	144	SPB.1600
	125	250	193	SPB.1500
	180	335	208	SPB.1600
	170	236	278	SPB.1500
	170	200	328	SPB.1500
	250	250	386	SPB.1600

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- Lip seals run on cemented ring for long seal and shaft life.
- Lifting lugs on each side of the drive head are rated to handle the maximum string weight.
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Wellhead Connections	2-7/8" PIN EUE or 3-1/2" PIN EUE 3-1/8" or 7-1/16" Flange
Lifting lugs are rated to handle the full string weight.	
NO LEAK SEAL static condition	1.500 psi / 80°C
NO LEAK SEAL operating condition	700 psi / 150°C at 300 rpm
Dimensions	L : 980 mm, W : 680 mm, H : 1.371 mm
Weight	328 kg

We are in constant research and development on product improvement. Specification may change without notice.