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HI-TECH HYDRAULICS

DETAIL CATALOGUE

AI0VSO

Variable Displacement Pump
Axial piston swashplate design
Sizes: 18... 140
Series: 31
Nominal pressure up to 280bar



Features

- Variable displacement axial piston pump of swashplate design for hydrostatic open circuit systems.
- Flow is proportional to drive speed and displacement.
- It can be infinitely varied by adjustment of the swashplate.
- ISO mounting flange
- Flange connections to SAE metric
- 2 case drain ports
- Good suction characteristics
- Permissible continuous pressure 280bar
- Low noise level
- Long service life
- Axial and radial loading of drive shaft possible
- High power-weight ratio
- Wide range of controls
- Short response times
- Through drive option for multi-circuit system

Specifications

Size			18	28	45	71	100	140
Displacement	$V_{g \max}$	cm ³	18	28	45	71	100	140
Rotational speed	at $V_{g \max}$	n_{nom}	rpm	3300	3000	2600	2200	2000
maximum ¹⁾	at $V_g < V_{g \max}^{2)}$	$n_{\text{max perm}}$	rpm	3900	3600	3100	2600	2400
Flow	at n_{nom} and $V_{g \max}$	$Q_{V \max}$	L/min	59	84	117	156	200
	at $n_E = 1500$ rpm and $V_{g \max}$	$Q_{VE \max}$	L/min	27	42	68	107	150
Power	at n_{nom} and $V_{g \max}$	P_{\max}	kW	28	39	55	73	93
at $\Delta p = 280$ bar	at $n_E = 1500$ rpm and $V_{g \max}$	$P_{E \max}$	kW	12.6	20	32	50	70
Torque	$\Delta p = 280$ bar	T_{\max}	Nm	80	125	200	316	445
at $V_{g \max}$ and	$\Delta p = 100$ bar	T	Nm	30	45	72	113	159
Rotary stiffness	S	c	Nm/rad	11087	22317	37500	71884	121142
of drive shaft	R	c	Nm/rad	14850	26360	41025	76545	-
	P	c	Nm/rad	13158	25656	41232	80627	132335
Moment of inertia for rotary group		J_{rw}	kgm ²	0.00093	0.0017	0.0033	0.0083	0.0167
Case volume	V	l		0.4	0.7	1.0	1.6	2.2
Weight without through drive (approx.)	m	kg		12.9	18	23.5	35.2	49.5
Weight with through drive (approx.)				14	19.3	25.1	38	55.4



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