

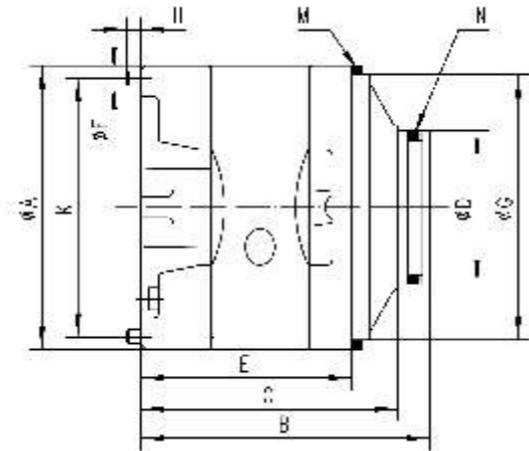
NV系列泵芯

NV Series-cartridge

○型号说明/Model Designation

(F3-) 前注 Note	PC- 泵芯标志 Cartridge mark	N25V 系列号 Series	19 排量代号 Flow code	R 旋转方向 Rotation	10 设计号 Design number
无标记No-marking: 石油系油Petroleum series oil 乳化液emulsification fluid 水-乙二醇water glycol-fluid F3:磷酸酯液phosphate ester fluid	PC-单泵泵芯 双联泵轴端泵芯 Cartridge kit of dingle pump double pump shaft end PCT-双联泵盖端泵芯 Cartridge kit of double pump cover end	N20V N25V N35V N45V	2、3、4、5、6、7、8、9、10、11、12、14 10、12、14、15、17、19、21、25 21、25、30、32、35、38、45 42、45、50、57、60、66、75	(从泵的轴端看) (Viewed form shaft end of pump) L-逆时针旋转 Left hand for counter clockwise R-顺时针旋转 Right hand for clockwise	10

▽在1200r/min和0.69MPa(100psi)下的额定排量USgpm Flow(USgpm) at 1200r/min and 0.69MPa与相应系列、规格的油泵性能参数一致,详见NV系列单泵的性能参数
The data of relevant series ,model are unanimous. Please see NV series-single pump data.



系列号 Series	ØA	B	C	ØD	E	ØF	ØG	H	K	M(挡圈Gasket)	M(O形圈O-Ring)
N20V	82.55	81.5	70.1	47	61.5	4.8	76.2	7	73.6	82.76x76.26x3.5	40x3.5
N25V	96.8	98.8	87	52.2	71.2	4.8	90.5	7	88.19	97x91x3.5	44x3.5
N35V	114.3	117.7	105	72.2	90.3	6.4	108	8	103.94	114.5x108.5x3.5	63.09x3.53
N45V	133.35	141.1	129.6	80.2	105.5	6.4	127	8	123.8	133.6x127.6x3.5	71x3.55
系列号 Series	转子内花键齿廓参数Inside spline tooth outline paramenter of rotor										
	齿数 Number of teeth	径节 Pitch	压力角 Pressure angle	大径 Major Diameter	小径 Minor Diameter						
N20V	30	48/96	45°	16.617	15.56						
N25V	40	48/96	45°	21.9	20.86						
N35V	37	40/80	45°	24.38	23.10						
N45V	14	12/24	30°	32.59	27.6						

安装、使用与维护

Installation,Applicatipn and Maintenance

○工作介质/Operating oil

- 为提高油泵性能,延长使用寿命,推荐使用抗磨液压油。粘度范围17-38cst (2.5-5° E),推荐粘度24 cst。Anti-wear hydraulic oil is recommended for better performance and longer life. Viscosity range: 17-38cst (2.5-5° E) .
- 液压油的污染会引起叶片泵的故障和降低其寿命,应对液压油液进行有效的污染控制,系统过滤精度不低于25µm。为防止吸入污物和杂质,应在吸油口处安装过滤精度70-150µm的滤油器,其额定流量不低于泵流量的两倍。Proper fluid condition is essential for long and satisfactory life of hydraulic components and systems.filtration: the filtration rating should not be lower than 25µm.filter of 70-150µm on the inlet port is recommended and its delivery should not be lower than 200% that of pump.
- 油泵正常工作油温: 10-60°C。Operating temperature: 10-60°C。

○泵的安装/Installation

- 油泵支架座结构要牢固,刚性好,并能充分吸收振动。Foot and frame for pump must be reliable,solid and good in vibration absorbence.
- 油泵可安装成任何方向(最好水平放置)。泵和电机轴必须对正,同轴度应控制在Ø0.1mm以内,尽量采用柔性联轴节,以避免因弯曲或侧向力引起的任何应力。Horizontal mounting is recommended to maintain necessary case fluid level,concentricity of shafts between pump and motor is important to pump life and should be within Ø0.1mm.It is better to use fiexible coupling to avoid harmful effects.
- 吸入阻力不应太高,以防产生空蚀现象。油泵允许吸入真空度为110mm水银柱。安装应尽量接近油箱,吸入高度不得大于500mm。The oil pump allows the inhalation vacuum as 110 mm column of mercury.Installation should near fuel tank, inhaling the height can not be big in 500 mms.
- 注意进油口处连接法兰、接头以及整个吸油管道必须严格密封,防止漏气,否则将会引起噪声、系统振动,并使油箱内产生大量泡沫,降低泵的寿命。To reduce noise and vibration of system caused by tropped air,attachment flange at inlet port,all fittings and piplines must be strictly sealed.
- 油泵的吸油管道通径不小于泵入口通径。The diameter of absorb pipeline should not smaller than that of inlet.
- 油箱应设有隔板,用来分隔回油带来的气泡与脏物。回油管应伸到油面以下(不得直接和泵的入口连接),防止回油飞溅引起气泡。There should be a plank in the tank to separate bubble and dirty thing from used oil. Return pipeline under oil is recommended(not connect with inlet) for avoid bubble.

○启动/Start

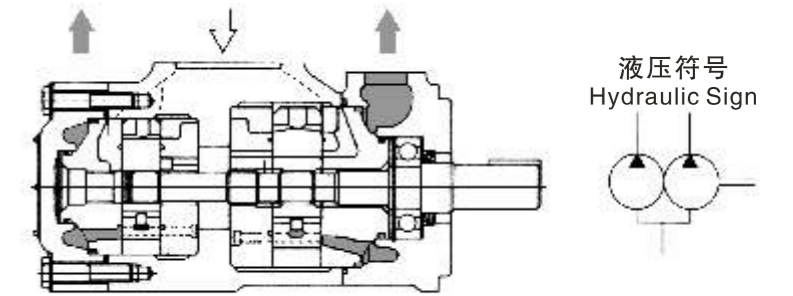
- 油泵启动前,应检查进、出油口,切勿搞错方向,泵旋转方向应与标牌指示方向一致(订货时未注明旋向者,一律按顺时针旋向供货)。初次启动应向泵里注满油,并用手转动联轴器,旋转力量应均匀、灵活。Before starting pump,please check up if the inlet and outlet have been correctly connected and the rotation of the pump is inline with the nameplate.(CW without notice).
- 启动时,应尽量在无负荷工况下经点动运转正常后再正式启动。After confirming it is able to work well without burthen,please start.
- 由于泵装配后或长时间停运再启动,会产生吸空现象,故应在排油口安装放气阀,或松动出口法兰、接头,以便放出空气。When initially starting the pump after long-time unused,removing all trapped air from the system can be accomplished by loosening flange or connections.

○维护/Maintenance

- 用户购回油泵后,如不及时使用,必须将内部注入防锈油,并将外露加工表面涂防锈油脂,然后盖好防尘盖,妥善保存。Please inject defend-rust oil in the pump,plaint the surface with defend rust grease and then cover ports,if you do not want to use it right now.
- 要定期检查油液性能,达不到规定要求时要及时予以更换,并清洗油箱。Please check up oil periodically,while if the oil can not meet the demand,replace it and clean up tank.
- 滤油器应经常清洗,以保证油液吸入通畅。Purging of filter regular is recommended.
- 保持油箱正常油面高度。配管和油缸的容量很大时,尽管最初已加入足够数量的油,在启动之后,油进入管道和油缸,也会发生油面下降使滤油器露出油面,因此必须再一次补油。在使用过程中,还会发生泄漏,应该在油箱中设置油面计,以便经常观察和补油。Keep the normal level of oil in the tank.When capability of tubing and tank are large,even if injected enough oil.Because when starting, the level of oil would fall,then please add some oil. Please observe the level of oil and add some oil when needed.
- 油泵工作一段时间后,(由于振动)安装螺钉或进出口法兰螺钉有可能松动,要注意检查,并拧紧防松。After a period of working,it is likely that the install bolt and flange of inlet and outlet would loose because of vibrating.please tight them.
- 由于NV、NVQ、SQP系列叶片泵内腔采用插装式结构,因此正常维修时只需要更换泵芯,更换时应检查密封圈是否平整,防止切边,拧紧壳体连接螺钉时,应按对角线方向逐渐拧紧,用力均匀。The cartridge design of NV,NVQand SQP series vane pumps offers fast and effcient field service ability,when replacing the catridge,seals inside the pump should be cheched to avoid them crimping;when tightening the fastening screws,they should be treated with even force in diagonal direction.

NV系列双联泵

NV Series-Double pumps



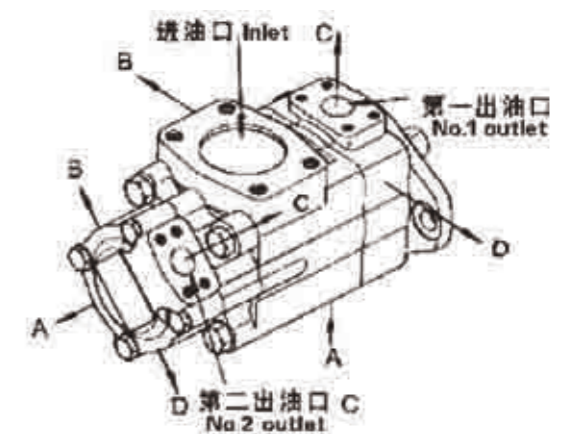
型号说明/Model Designation

(F3-)	N3525V	38	A	17	-1	AB	22	R
前注 Note	系列号 Series	▽ 轴端泵排量代号 Flow-Shaft end pump	油口连接 Port connection	▽ 盖端泵排量代号 Flow-cover end pump	轴伸形式 Shaft type	出油口位置 Outlet Positions	设计号 Design number	旋转方向 Rotation
无标记 No-marking: 石油系油 Petroleum series oil 乳化液 emulsification fluid 水-乙二醇 water glycol-fluid F3: 磷酸酯液 phosphate ester fluid	N2520V	10、12、14、15、17、19、21、25	A-SAE 4螺栓法兰 A-SAE 4-bolt flange	2、3、4、5、6、7、8、9、10、11、12、14	1-平键轴 Str key 151-花键轴 Spline	见下表 See below	22	(从泵的轴端看) (Views from shaft end of pump) R-顺时针旋转 Right hand for clockwise L-逆时针旋转 Left hand for counter clockwise
	N3520V	21、25、30、32、35、38、45		2、3、4、5、6、7、8、9、10、11、12、14	1-平键轴 Str key 86-重型平键轴 HD Str key 11-花键轴 Spline			
	N3525V	21、25、30、32、35、38、45		10、12、14、15、17、19、21、25				
	N4520V	42、45、50、57、60、66、75		2、3、4、5、6、7、8、9、10、11、12、14				
	N4525V	42、45、50、57、60、66、75		10、12、14、15、17、19、21、25				
	N4535V	42、45、50、57、60、66、75		21、25、30、32、35、38、45、				

▽在1200r/min和0.69MPa(100psi)下的额定排量。
Usqpm Flow (USgpm) at 1200r/min and 0.69MPa

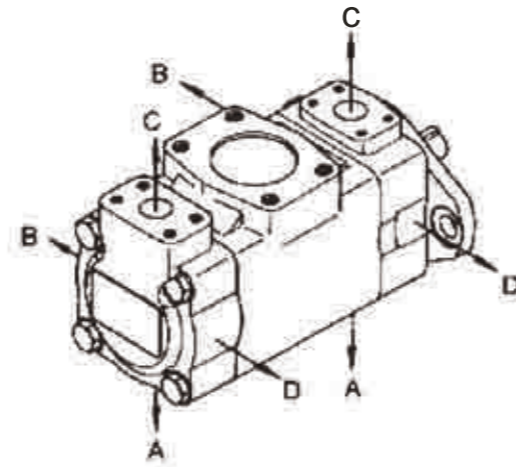
出油口位置 (从泵的盖端看) / Outlet Positions (Viewed from cover end of pump)

出油口位置 Outlet positions	除N4535V外的所有系列 All series except N4535V	N4535V
第一出油口 在进油口对面 No.1 outlet opposite inlet	AA 第二出油口在进油口逆时针转135° No.2 outlet 135° CCW from inlet	第二出油口在进油口对面 No.2 outlet opposite inlet
	AB 第二出油口在进油口逆时针转45° No.2 outlet 45° CCW from inlet	第二出油口在进油口逆时针转90° No.2 outlet 90° CCW from inlet
	AC 第二出油口在进油口顺时针转45° No.2 outlet 45° CW from inlet	第二出油口在进油口同侧 No.2 outlet inline with inlet
	AD 第二出油口在进油口顺时针转135° No.2 outlet 135° CW from inlet	第二出油口在进油口顺时针转90° No.2 outlet 90° CW from inlet
第一出油口 从进油口 逆时针转90° No.1 outlet 90° CCW from inlet	BA 第二出油口在进油口逆时针转135° No.2 outlet 135° CCW from inlet	第二出油口在进油口对面 No.2 outlet opposite inlet
	BB 第二出油口在进油口逆时针转45° No.2 outlet 45° CCW from inlet	第二出油口在进油口逆时针转90° No.2 outlet 90° CCW from inlet
	BC 第二出油口在进油口顺时针转45° No.2 outlet 45° CW from inlet	第二出油口在进油口同侧 No.2 outlet inline with inlet
	BD 第二出油口在进油口顺时针转135° No.2 outlet 135° CW from inlet	第二出油口在进油口顺时针转90° No.2 outlet 90° CW from inlet



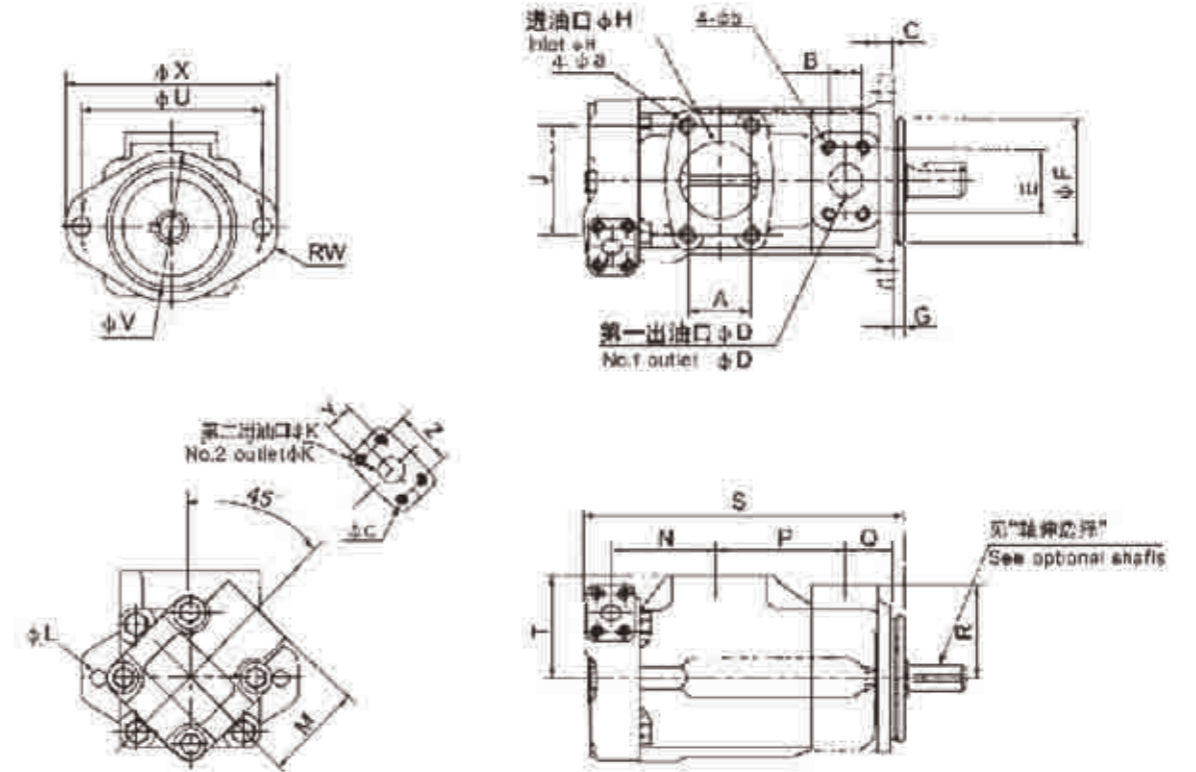
○ 出油口位置 (从泵的盖端看) / Outlet Positions (Viewed from cover end of pump)

出油口位置 Outlet positions		除N4535V外的所有系列 All series except N4535V	N4535V
第一出油口 在进油口同侧 No.1 outlet inline with inlet	CA	第二出油口在进油口逆时针转135° No.2 outlet 135° CCW from inlet	第二出油口在进油口对面 No.2 outlet opposite inlet
	CB	第二出油口在进油口逆时针转45° No.2 outlet 45° CCW from inlet	第二出油口在进油口逆时针转90° No.2 outlet 90° CCW from inlet
	CC	第二出油口在进油口顺时针转45° No.2 outlet 45° CW from inlet	第二出油口在进油口同侧 No.2 outlet inline with inlet
	CD	第二出油口在进油口顺时针转135° No.2 outlet 135° CW from inlet	第二出油口在进油口顺时针转90° No.2 outlet 90° CW from inlet
第一出油口 从进油口 顺时针转90° No.1 outlet 90° CW from inlet	DA	第二出油口在进油口逆时针转135° No.2 outlet 135° CCW from inlet	第二出油口在进油口对面 No.2 outlet opposite inlet
	DB	第二出油口在进油口逆时针转45° No.2 outlet 45° CCW from inlet	第二出油口在进油口逆时针转90° No.2 outlet 90° CCW from inlet
	DC	第二出油口在进油口顺时针转45° No.2 outlet 45° CW from inlet	第二出油口在进油口同侧 No.2 outlet inline with inlet
	DD	第二出油口在进油口顺时针转135° No.2 outlet 135° CW from inlet	第二出油口在进油口顺时针转90° No.2 outlet 90° CW from inlet



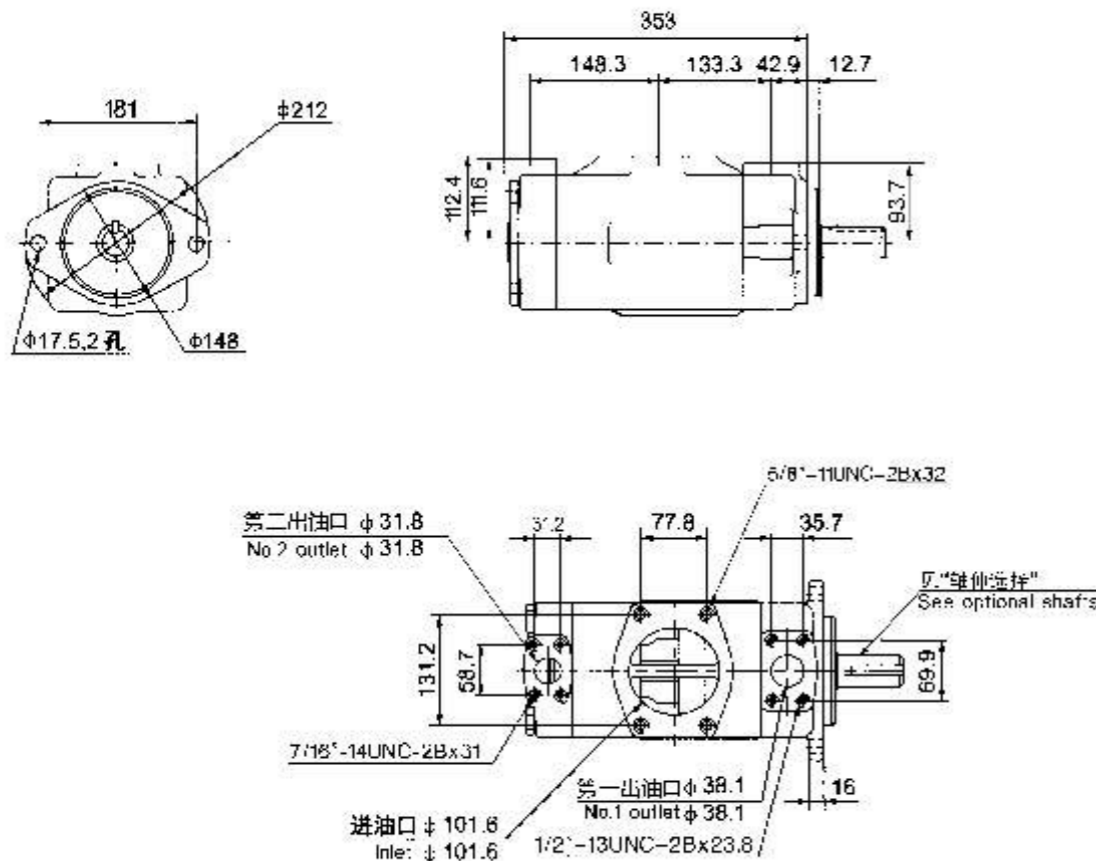
○ 安装连接尺寸/Installation Dimensions

N2520V、N3520V、N3525V、N4520V、N4525V



○ 安装连接尺寸/Installation Dimensions

N4535V



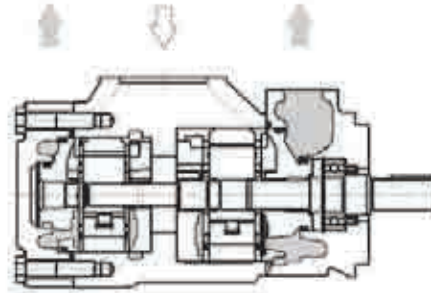
型号 Model	Øa x 螺纹深度、4孔 Øa x full thread depth, 4 holes	Øb x 螺纹深度、4孔 Øb x full thread depth, 4 holes	Øc x 螺纹深度、4孔 Øc x full thread depth, 4 holes
N2520V	1/2-13UNC-2Bx23.8	3/8-16UNC-2Bx19.1	3/8-16UNC-2Bx19.1
N3520V	5/8-11UNC-2Bx30.0	7/16-14UNC-2Bx22.3	3/8-16UNC-2Bx19.1
N3525V	5/8-11UNC-2Bx30.0	7/16-14UNC-2Bx22.3	3/8-16UNC-2Bx19.1
N4520V	5/8-11UNC-2Bx30.0	1/2-13UNC-2Bx23.8	3/8-16UNC-2Bx19.1
N4525V	5/8-11UNC-2Bx30.0	1/2-13UNC-2Bx23.8	3/8-16UNC-2Bx19.1

型号Model	A	B	C	ØD	E	ØF	G	ØH	J	ØK	ØL	M
N2520V	50.8	26.2	12.7	25.4	52.4	101.60/101.55	9.53	63.5	88.9	19.1	14.2	76.2
N3520V	62	30.1	15.9	31.7	58.7	127.00/126.95	9.53	76.2	106.3	19.1	17.5	76.2
N3525V	62	30.1	15.9	31.7	58.7	127.00/126.95	9.53	76.2	106.3	25.4	17.5	74.7
N4520V	69.9	35.7	15.9	38.1	69.9	127.00/126.95	12.7	88.9	120.6	19.1	17.5	76.2
N4525V	69.9	35.7	15.9	38.1	69.9	127.00/126.95	12.7	88.9	120.6	25.4	17.5	74.7

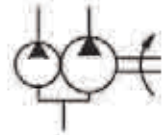
型号Model	N	P	Q	R	S	T	ØU	ØV	RW	ØX	Y	Z
N2520V	88.1	101.6	38.1	76.2	250	85.3	146.1	120.7	14	174.7	22.2	47.6
N3520V	99.6	114.3	38.1	82.6	273.3	88.9	181	148	16	213	22.2	47.6
N3525V	109.5	114.3	38.1	82.6	287.3	88.9	181	148	16	213	26.2	52.4
N4520V	102	119.4	42.9	93.7	303.5	102.4	181	148	16	213	22.2	47.6
N4525V	136	119.4	42.9	93.7	325	102.4	181	148	16	213	26.2	52.4

NVQ系列双联泵

NVQ Series double Pumps



○ 液压符号
Hydraulic Sign



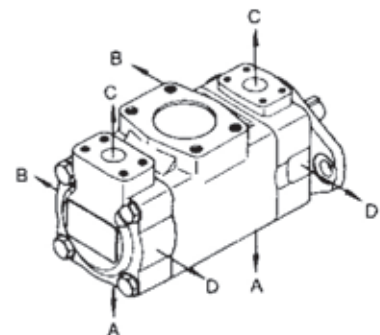
○ 型号说明/Model Designation

(F3-)	N3525VQ	38	A	17	-1	AB	20	R
前注 Note	系列号 Series	轴端泵排量代号 Flow-shaft end Pump	油口连接 Port connections	盖端泵排量代号 Flow-cover end Pump	轴伸形式 shaft type	出油口位置 Outlet Positions	设计号 Design number	旋转方向 Rotation
无标记: No-marking 石油系油 Petroleum series oil 乳化液 emulsification fluid 水-乙二醇 water glycol-fluid F3: 磷酸酯液 phosphate ester fluid	N2520VQ	10、12、14、15、 17、19、21	A-SAE 4螺栓法兰 A-SAE 4-bolt fange	2、3、4、5、6、 7、8、9、10、 11、12、14	1-平键轴 Str ey 151-花键轴 spline	见下表 See below	20	(从泵的轴端看) (Views from shaft end of pump) R-顺时针旋转 right hand for clock wise L-逆时针旋转 left hand for counter- clock wise
	N3520VQ	21、25、30、32、 35、38、45		2、3、4、5、6、 7、8、9、10、 11、12、14	1-平键轴 Str ey 86-重型平键轴 HD str ey 11-花键轴 Spline			
	N3525VQ	21、25、30、32、 35、38、45		10、12、14、 15、17、19、21				
	N4520VQ	42、45、50、57、 60、66、75		2、3、4、5、6、 7、8、9、10、 11、12、14				
	N4525VQ	42、45、50、57、 60、66、75		10、12、14、 15、17、19、21				
N4535VQ	42、45、50、57、 60、66、75	21、25、30、 32、35、38、45						

注：在1200r/min和0.69MPa(100psi)下的额定排量/ USgpm Flow (USgpm) at 1200r/min and 0.69MPa

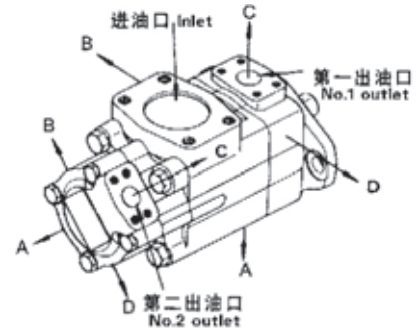
○ 出油口位置(从泵的盖端看) /Outlet positions(Viewes from cover end of pump)

出油口位置 Outlet positions	除N4535VQ外的所有系列 All series except N4535VQ	N4535VQ
第一出油口在进油口 对面 NO.1 outlet opposite inlet	AA 第二出油口在进油口逆时针转135° NO.2 outlet 135° CC from inlet	第二出油口在进油口对面 NO.2 outlet opposite inlet
	AB 第二出油口在进油口逆时针转45° NO.2 outlet 45° CC from inlet	第二出油口在进油口逆时针转90° NO.2 outlet 90° CC from inlet
	AC 第二出油口在进油口顺时针转45° NO.2 outlet 45° C from inlet	第二出油口在进油口同侧 NO.2 outlet inline with inlet
	AD 第二出油口在进油口顺时针转135° NO.2 outlet 135° C from inlet	第二出油口在进油口顺时针转90° NO.2 outlet 90° C from inlet
第一出油口从进油口 逆时针转90° NO.1 outlet 90° CC from inlet	BA 第二出油口在进油口逆时针转135° NO.2 outlet 135° CC from inlet	第二出油口在进油口对面 NO.2 outlet opposite inlet
	BB 第二出油口在进油口逆时针转45° NO.2 outlet 45° CC from inlet	第二出油口在进油口逆时针转90° NO.2 outlet 90° CC from inlet
	BC 第二出油口在进油口顺时针转45° NO.2 outlet 45° C from inlet	第二出油口在进油口同侧 NO.2 outlet inline with inlet
	BD 第二出油口在进油口顺时针转135° NO.2 outlet 135° C from inlet	第二出油口在进油口顺时针转90° NO.2 outlet 90° C from inlet



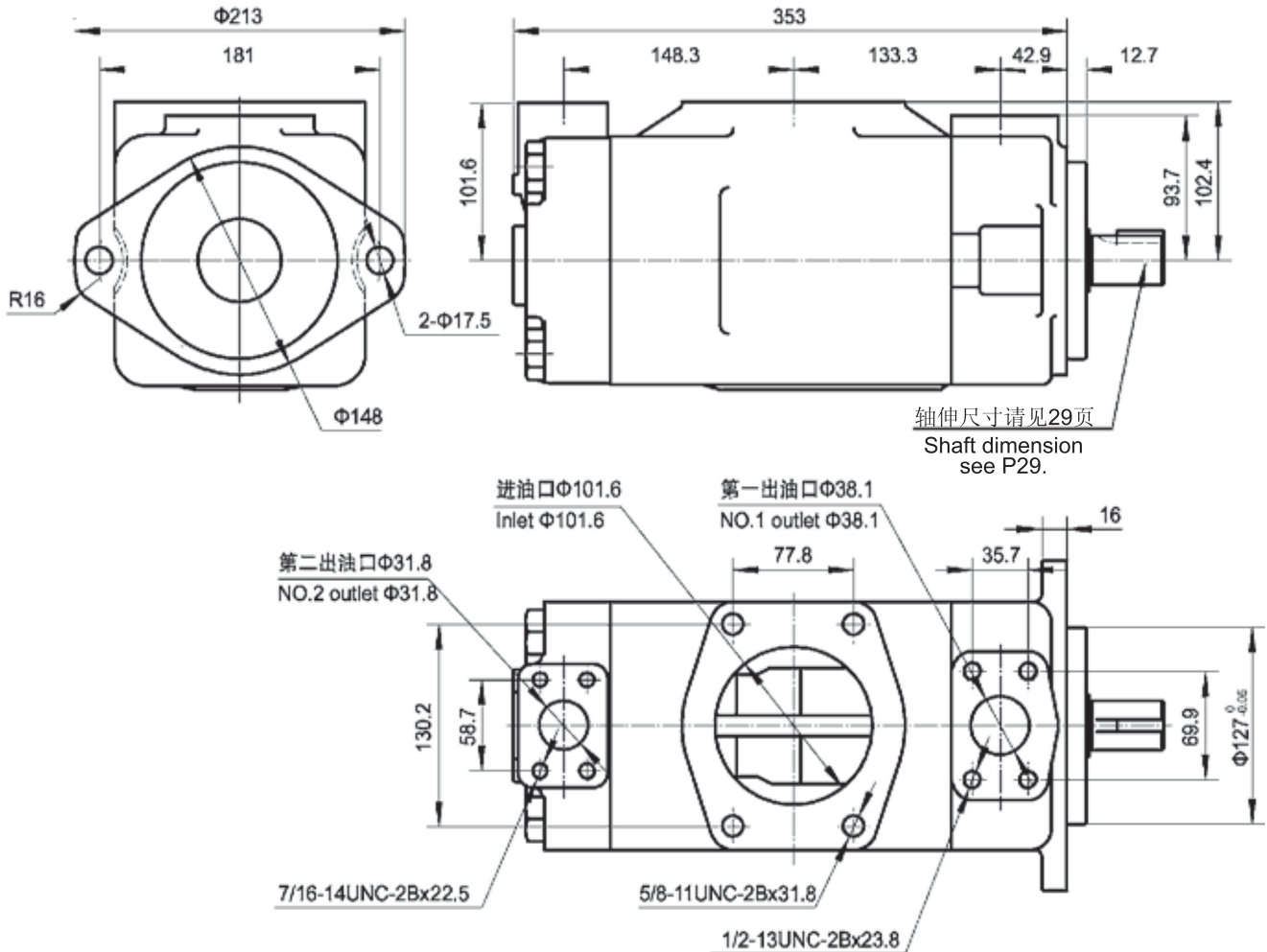
○ 出油口位置(从泵的盖端看) /Outlet positions(Viewes from cover end of pump)

出油口位置Outlet positions		除N4535VQ外的所有系列 All series except N4535VQ	N4535VQ
第一出油口在进油口同侧 NO.1 outlet inline with inlet	CA	第二出油口在进油口逆时针转135° NO.2 outlet 135° CC from inlet	第二出油口在进油口对面 NO.2 outlet opposite inlet
	CB	第二出油口在进油口逆时针转45° NO.2 outlet 45° CC from inlet	第二出油口在进油口逆时针转90° NO.2 outlet 90° CC from inlet
	CC	第二出油口在进油口顺时针转45° NO.2 outlet 45° C from inlet	第二出油口在进油口同侧 NO.2 outlet inline with inlet
	CD	第二出油口在进油口顺时针转135° NO.2 outlet 135° C from inlet	第二出油口在进油口顺时针转90° NO.2 outlet 90° C from inlet
第一出油口从进油口顺时针转90° NO.1 outlet 90° C from inlet	DA	第二出油口在进油口逆时针转135° NO.2 outlet 135° CC from inlet	第二出油口在进油口对面 NO.2 outlet opposite inlet
	DB	第二出油口在进油口逆时针转45° NO.2 outlet 45° CC from inlet	第二出油口在进油口逆时针转90° NO.2 outlet 90° CC from inlet
	DC	第二出油口在进油口顺时针转45° NO.2 outlet 45° C from inlet	第二出油口在进油口同侧 NO.2 outlet inline with inlet
	DD	第二出油口在进油口顺时针转135° NO.2 outlet 135° C from inlet	第二出油口在进油口顺时针转90° NO.2 outlet 90° C from inlet



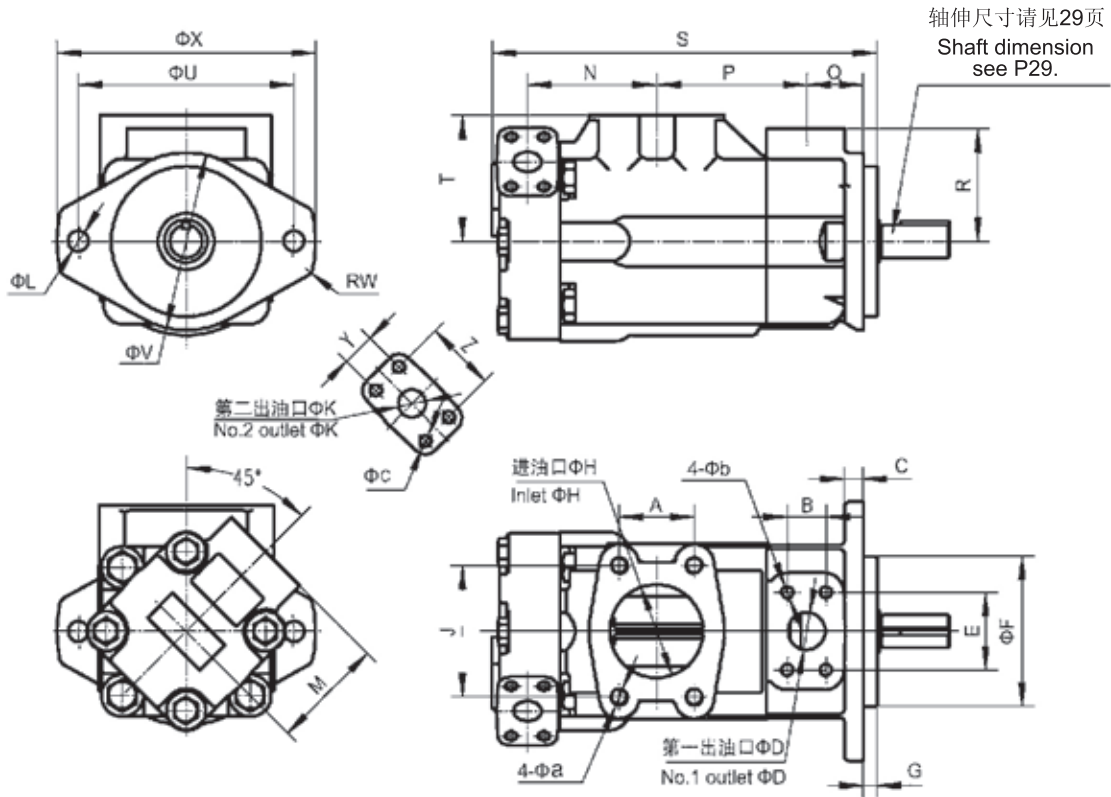
○ 安装连接尺寸/Installation Dimensions

◇ N4535VQ



○ 安装连接尺寸/Installation Dimensions

◇ N2520VQ、N3520VQ、N3525VQ、N4520VQ、N4525VQ



型号 Model	a 螺纹深度、4孔 a full thread depth, 4 holes	b 螺纹深度、4孔 b full thread depth, 4 holes	c 螺纹深度、4孔 c full thread depth, 4 holes
N2520VQ	1/2-13UNC-2B 23.8	3/8-16UNC-2B 19.1	3/8-16UNC-2B 19.1
N3520VQ	5/8-11UNC-2B 28.6	7/16-14UNC-2B 22.3	3/8-16UNC-2B 19.1
N3525VQ	5/8-11UNC-2B 28.6	7/16-14UNC-2B 22.3	3/8-16UNC-2B 19.1
N4520VQ	5/8-11UNC-2B 31.8	1/2-13UNC-2B 23.8	3/8-16UNC-2B 19.1
N4525VQ	5/8-11UNC-2B 31.8	1/2-13UNC-2B 23.8	3/8-16UNC-2B 19.1

型号 Model	A	B	C	D	E	F	G	H	J	L	M	
N2520VQ	50.8	26.2	12.7	25.4	52.4	101.60/101.55	9.53	63.5	88.9	19.1	14.2	76.2
N3520VQ	62	30.1	15.9	31.7	58.7	127.00/126.95	9.53	76.2	106.3	19.1	17.5	76.2
N3525VQ	62	30.1	15.9	31.7	58.7	127.00/126.95	9.53	76.2	106.3	25.4	17.5	74.7
N4520VQ	69.9	35.7	15.9	38.1	69.9	127.00/126.95	12.7	88.9	120.6	19.1	17.5	76.2
N4525VQ	69.9	35.7	15.9	38.1	69.9	127.00/126.95	12.7	88.9	120.6	25.4	17.5	74.7

型号 Model	N	P	Q	R	S	T	U	V	R	Y	Z	
N2520VQ	88.1	101.6	38.1	76.2	250	85.3	146.1	120.7	14	174.7	22.2	47.6
N3520VQ	99.6	114.3	38.1	82.6	273.3	88.9	181	148	16	213	22.2	47.6
N3525VQ	109.5	114.3	38.1	82.6	287.3	88.9	181	148	16	213	26.2	52.4
N4520VQ	120	119.4	42.9	93.7	303.5	102.4	181	148	16	213	22.2	47.6
N4525VQ	136	119.4	42.9	93.7	325	102.4	181	148	16	213	26.2	52.4

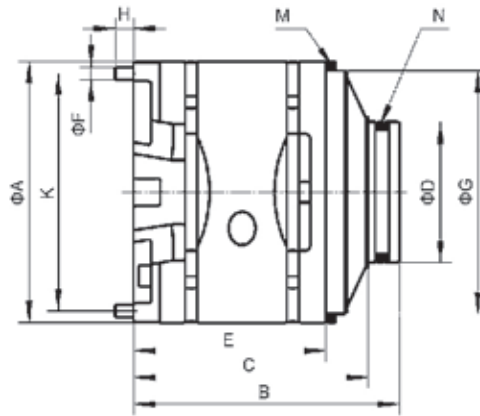
NVQ系列泵芯

NVQ Series cartridge

○ 型号说明/Model Designation

(F3-)	PC-	N25VQ	19	R	10
前注 Note	泵芯标记 Cartridge mar	系列号 Series	排量代号 Flow code	旋转方向 Rotation	设计号 Design number
无标记: No-marking 石油系油 Petroleum series oil 乳化液 emulsification fluid 水-乙二醇 water glycol-fluid F3: 磷酸酯液 phosphate ester fluid	PC-单泵泵芯、双联泵轴端泵芯 Cartridge of single pump double pump shaft end PCT-双联泵盖端泵芯 Cartridge of double pump cover end	N20VQ	2、3、4、5、6、7、 8、9、10、11、12、 14	(从泵的轴端看)(Views form shaft end of pump) R-顺时针旋转right hand for cloc wise L-逆时针旋转left hand for counter-cloc wise	10
		N25VQ	10、12、14、15、 17、19、21		
		N35VQ	21、25、30、32、 35、38、45		
		N45VQ	42、45、50、57、 60、66、75		

注: 在1200r/min和0.69MPa(100psi)下的额定排量/ USgpm Flow (USgpm) at 1200r/min and 0.69MPa
与相应系列、规格的油泵性能参数一致, 详见NVQ系列单泵的性能参数
The data of relevant series ,model are unanimous.Please see NVQ series-single pumps data



○ 技术规格/Specifcations

系列号 Series	A	B	C	D	E	F	G	H		M(挡圈 Gas et)	N(O形圈 O-Ring)
N20VQ	82.55	81.5	70.1	47.2	61.5	4.8	76.2	7	73.8	82.76 76.26 3.5	40 3.5
N25VQ	96.8	98.8	87	52.2	71.2	4.8	90.5	7	88.19	97 91 3.5	44 3.5
N35VQ	114.3	117.7	105	72.2	90.3	6.4	108	7	103.94	114.5 108.5 3.5	63.09 3.53
N45VQ	133.35	141.1	129.6	80.2	105.5	6.4	127	11	123.8	133.6 127.6 3.5	71 3.55

系列号 Series	转子内花键齿廓参数 Inside spline tooth outline parameter of rotor				
	齿数 Number of teeth	径节 Pitch	压力角 Pressure angle	大径 Major diameter	小径 Minor diameter
N20VQ	30	48/96	45°	16.617	15.56
N25VQ	40	48/96	45°	21.9	20.86
N35VQ	37	40/80	45°	24.38	23.10
N45VQ	14	12/24	30°	32.59	27.6

NVQ系列叶片泵

NVQ Series vane Pumps

o 产品简介/Products Introduction

适用于工程机械的高压高性能子母叶片泵。

主要特点为:

- 1、采用液压平衡的子母叶片结构及10叶片制的设计，压力更高，最高达到21MPa。
- 2、采用浮动侧板结构，可自动补偿端面间隙，使泵在高压下能保持高的容积效率。
- 3、侧板采用双金属材料，提高了抗咬合性能，使泵的使用寿命更长。

The high-pressure and high-performance Intra-vane pumps for Mobile Equipment.

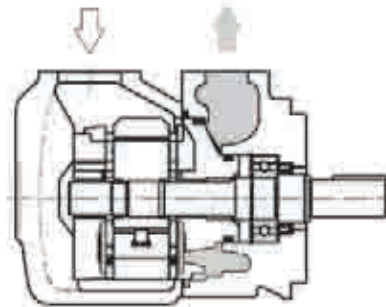
Features:

1. To adopt balanced hydraulic for the struction of Intra-vane and ten-Vane design,higher pressure,top to 21MPa.
2. To adopt floating structure for side plate,it will do a compensation for end-face clearance by automatic,so that even the pump under high pressure it can maintain a high volumetric efficiency.
3. The side plate is made of dual-metal material,it improved the seizure resistance,and so that the life of pump will be longer

NVQ系列单泵

NVQ Series single Pumps

o 液压符号/Hydraulic Sign



o 型号说明/Model Designation

(F3-)	N25VQ	19	A	-1	A	30	R
前注 Note	系列号 Series	排量代号 Flow code	油口连接 Port connections	轴伸形式 shaft type	出油口位置 Outlet Positions	设计号 Design number	旋转方向 Rotation
无标记 No-marking 石油系油 Petroleum series oil 乳化液 emulsification fluid 水-乙二醇 water glycol-fluid F3: 磷酸酯液 phosphate ester fluid	N20VQ	2、3、4、5、6、 7、8、9、10、 11、12、14	A- SAE 4螺栓法兰/ A- SAE 4-bolt fange	1-平键轴Str ey 151-花键轴Spline	(从泵的盖端看) (Viewed from cover end of pump) A-进油口对面Opposite inlet port	30	(从泵的轴端看) (Viewes form shaft end of pump) R-顺时针旋转 right hand for cloc wise L-逆时针旋转 left hand for counter-cloc wise
	N25VQ	10、12、14、15、 17、19、21		1-平键轴Str ey 86-重型平键轴HD str ey	B-从进油口逆时针90° 90° CC from inlet C-进油口同侧 Inline with inlet	20	
	N35VQ	21、25、30、32、 35、38、45		11-花键轴Spline	D-从进油口顺时针90° 90° C from inlet		
	N45VQ	42、45、50、57、 60、66、75					

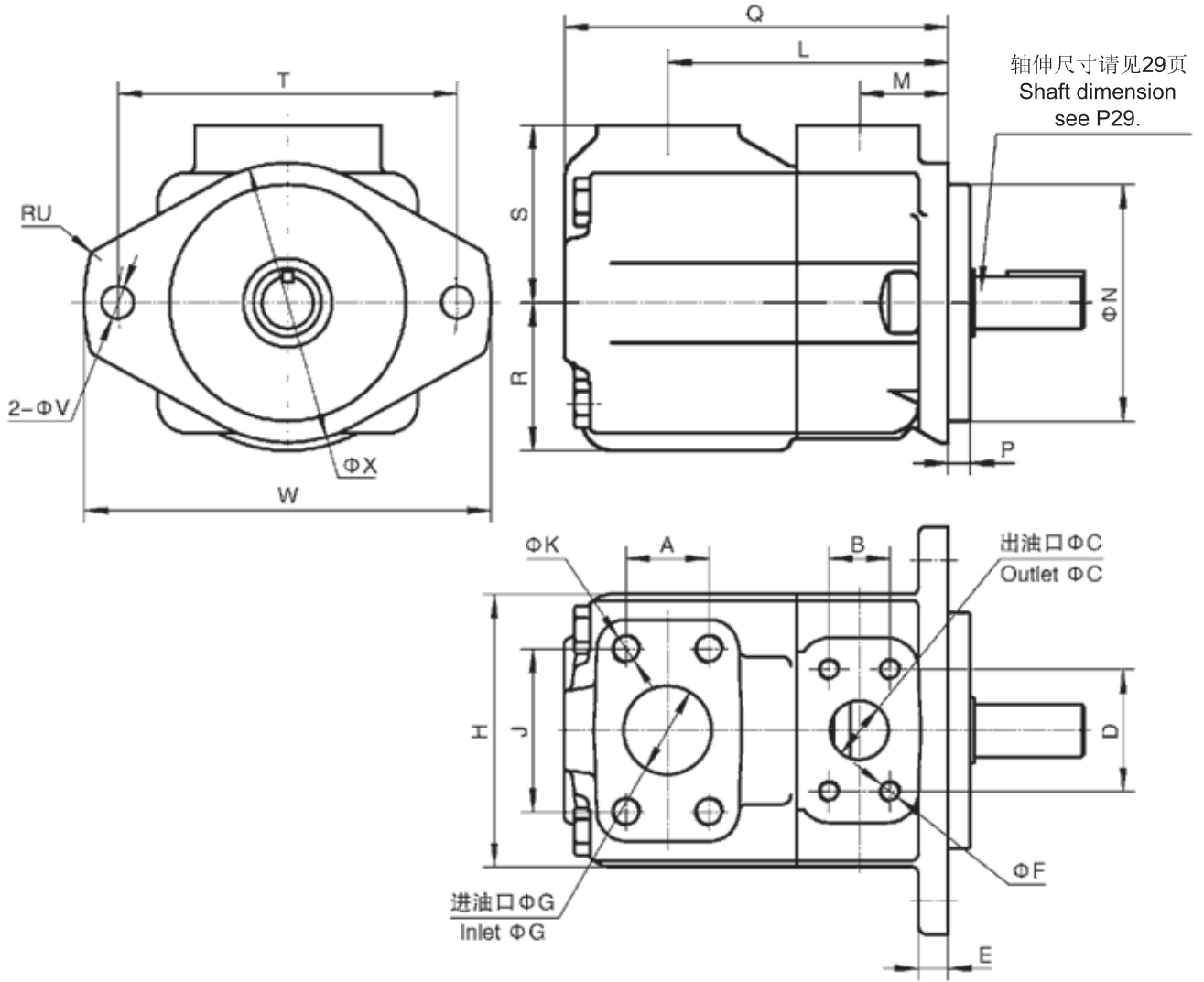
注：在1200r/min和0.69Mpa(100psi)下的额定排量 USgpm Flow (USgpm) at 1200r/min and 0.69MPa

○ 技术规格/Specifcations

系列号 Series	排量代号 Flow code (USgpm)	理论排量 Grometric displacement mL/r (in ³ /r)	最高使用压力 Max. operating pressure (Mpa)	最高转速 Max.speed (r/min)	最低转速 Min.speed (r/min)	重量 eight (G)
N20VQ	2	7(0.43)	21	2700	600	11.8
	3	10(0.61)				
	4	13(0.79)				
	5	16.5(1.01)				
	6	19(1.16)				
	7	22(1.40)				
	8	27(1.67)				
	9	30(1.85)				
	10	31.5(1.92)				
	11	35(2.14)				
		12	40(2.44)	16		
	14	45(2.78)	14			
N25VQ	10	32(1.95)	21	2700	600	14.5
	12	38(2.32)				
	14	43.5(2.65)				
	15	47(2.89)		2500		
	17	54(3.30)				
	19	60(3.66)				
	21	67(4.13)				
N35VQ	21	67(4.13)	21	2500	600	22.7
	25	81(4.94)				
	30	95(5.80)				
	32	101(6.16)				
	35	109(6.65)				
	38	119(7.26)				
		45	143(8.72)	14		
N45VQ	42	134(8.17)	17.5	2400	600	34.1
	45	143(8.72)				
	50	159(9.70)				
	57	181(11.05)				
	60	189(11.53)				
	66	210(12.81)				
		75	237(14.46)	14		

○ 安装连接尺寸/Installation Dimensions

◇ N25VQ、N35VQ、N45VQ

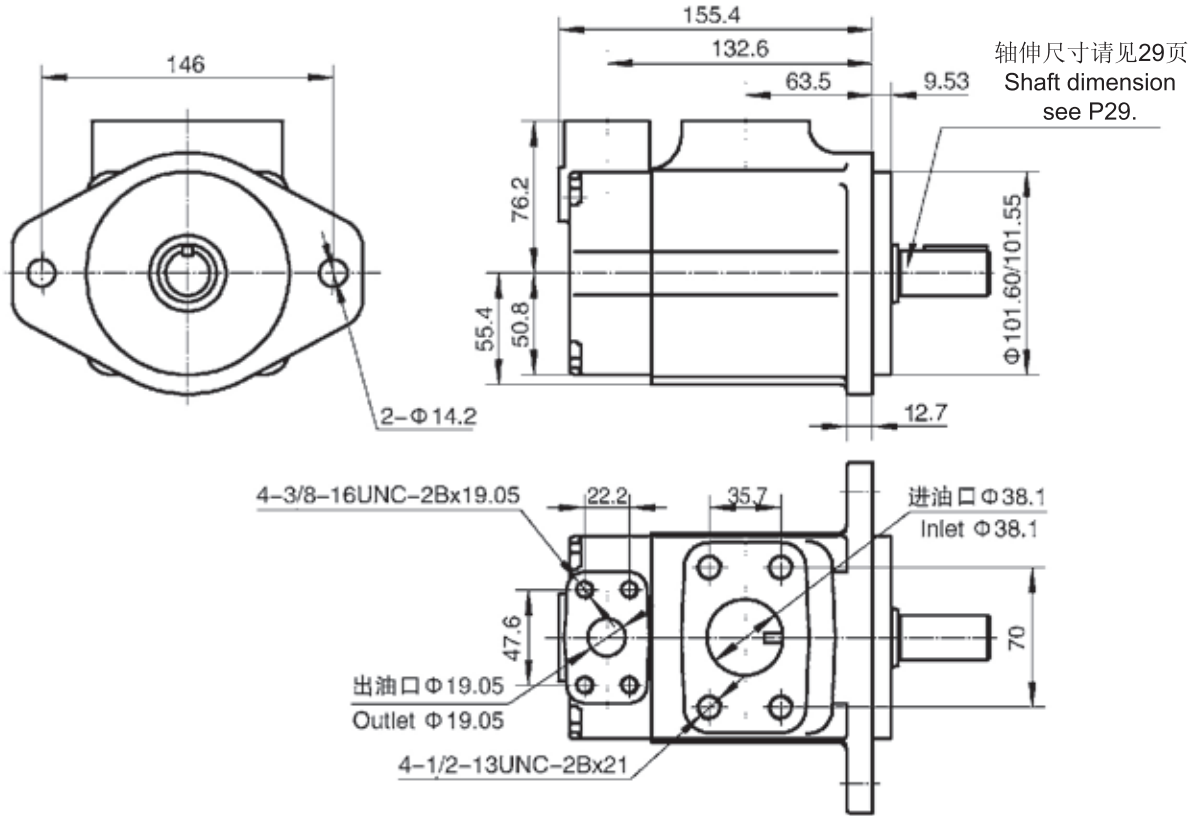


型号 Model	A	B	C	D	E	G	H	J	L	M	N	P	Q	R
N25VQ	35.7	26.2	25.4	52.4	12.7	38.1	118	69.9	121	38.1	101.60/101.55	9.53	162.1	63.5
N35VQ	42.9	30.2	31.8	58.7	16	50.8	140	77.8	125.5	38.1	127.00/126.95	9.53	185	69.9
N45VQ	61.9	35.7	38.1	69.9	16	76.2	159	106.4	153	43	127.00/126.95	12.7	216	82.6

型号 Model	S	T	RU	V		F 螺纹深度, 4孔 F full thread depth, 4 holes	螺纹深度, 4孔 full thread depth, 4 holes	
N25VQ	76.2	146	14	14.2	175	121	3/8-16UNC-2B 19.1	1/2-13UNC-2B 22.3
N35VQ	82.6	181	16	17.5	213	148	7/16-14UNC-2B 22.3	1/2-13UNC-2B 22.3
N45VQ	93.7	181	16	17.5	213	148	1/2-13UNC-2B 23.8	5/8-11UNC-2B 25.4

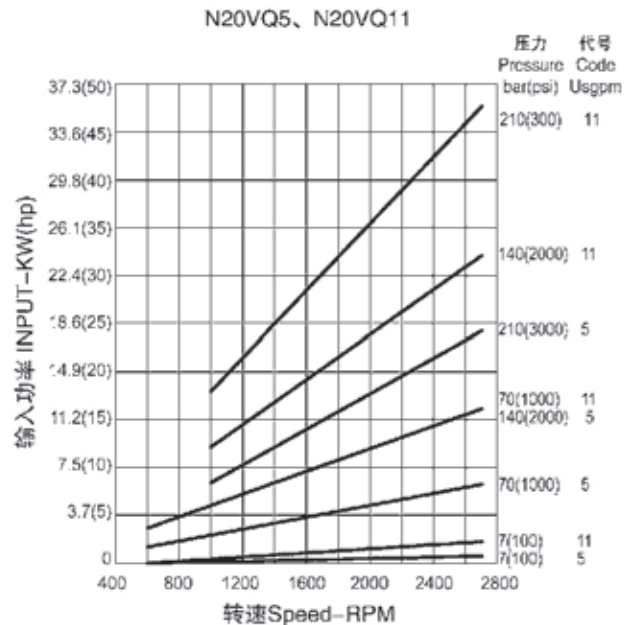
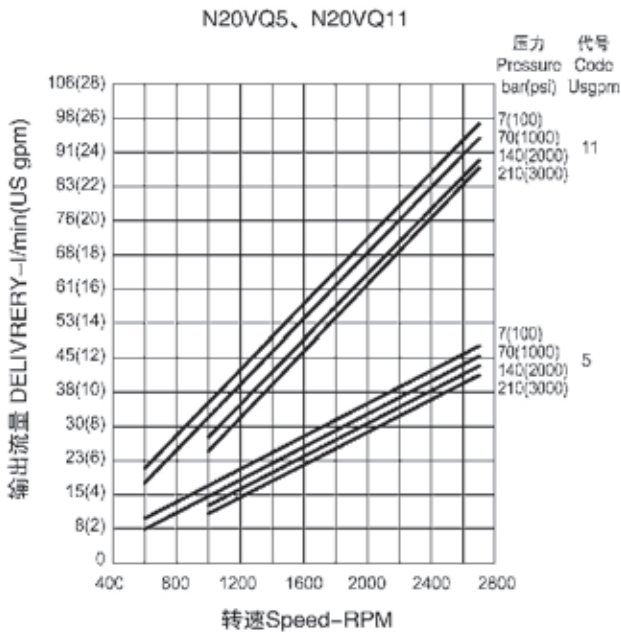
○ 安装连接尺寸/Installation Dimensions

◇ N20VQ



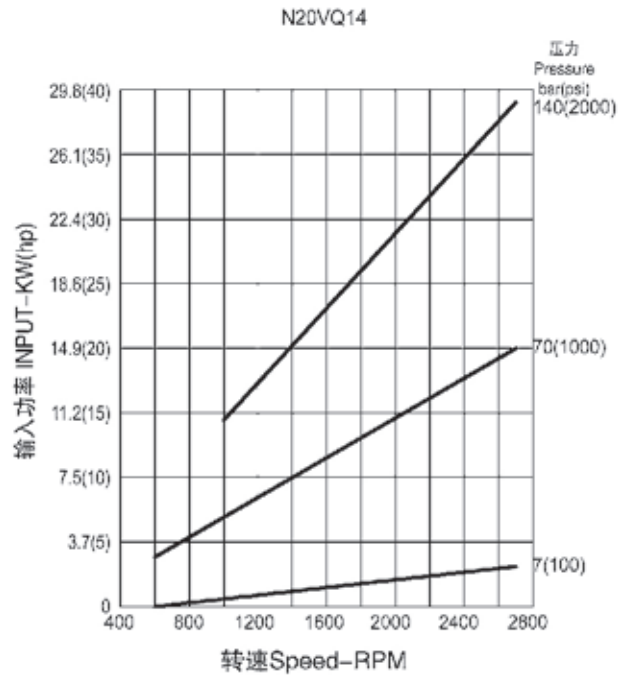
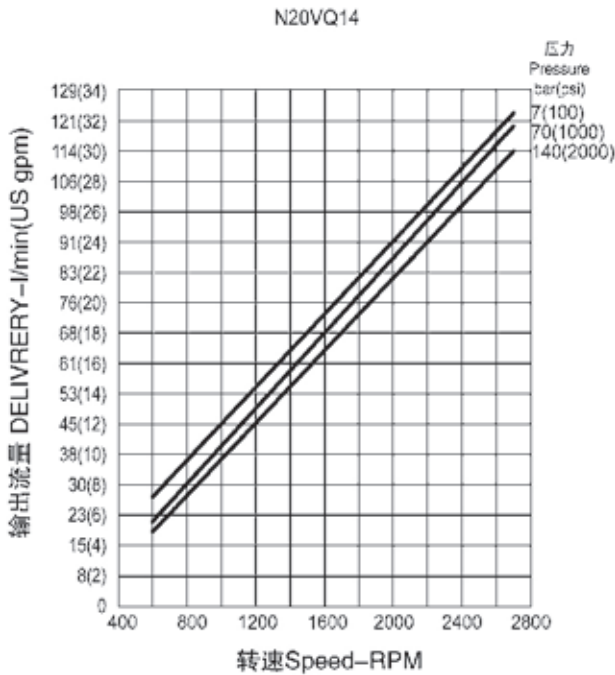
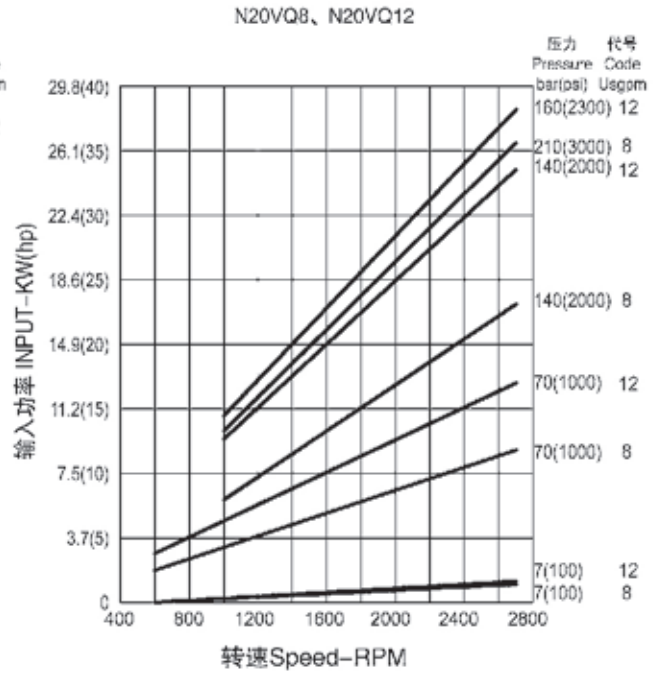
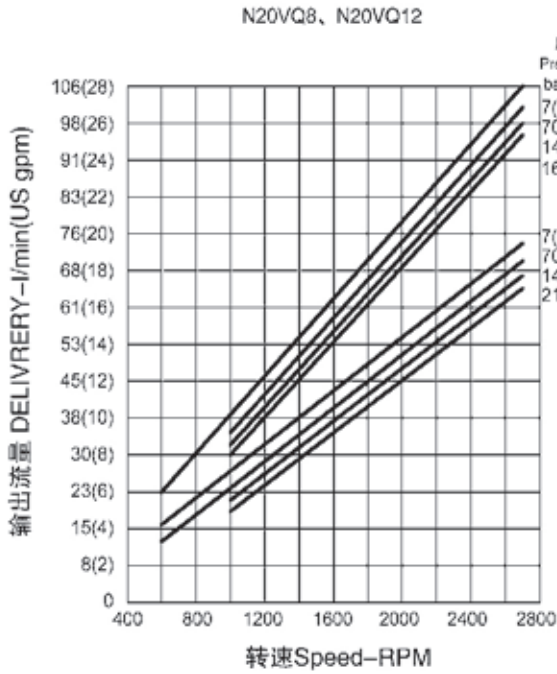
○ 泵芯特性曲线/Cartridge performance

在50℃(120°F), 10 油(26cSt)-(128SUS), 进油口压力0MPa, 规定转速下的测定值
Typical flows at 50 °C (120°F), 10 oil (26cSt)-(128SUS), 0 psi inlet at specified speeds



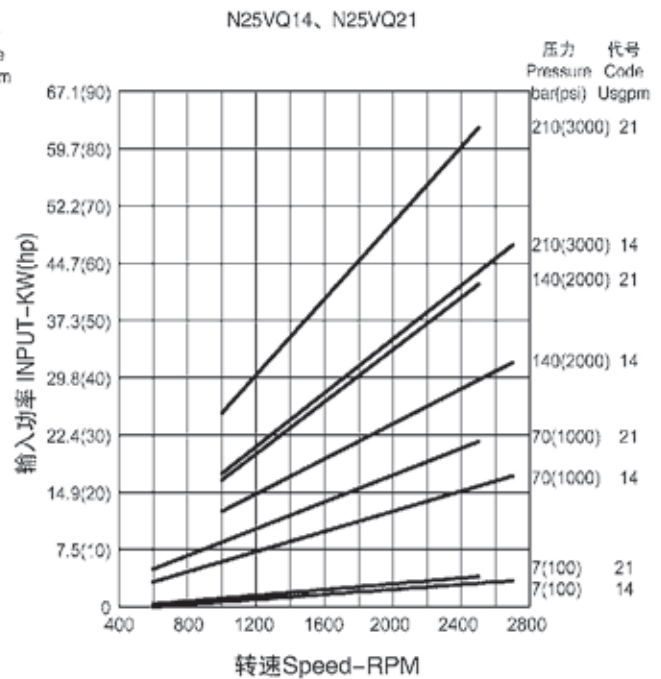
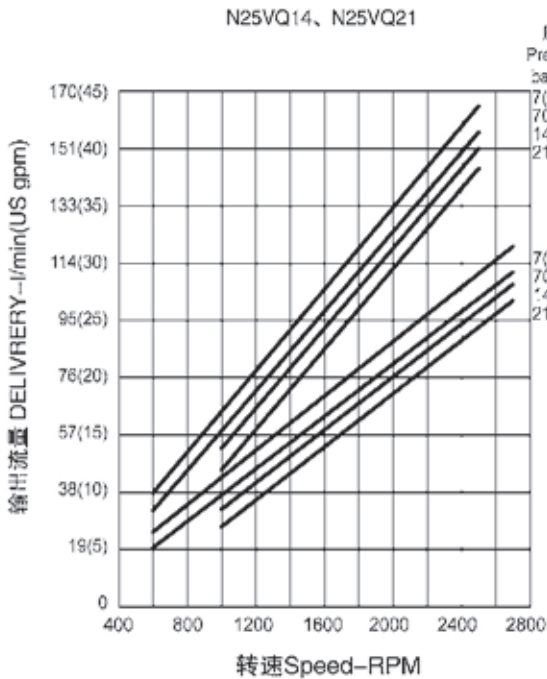
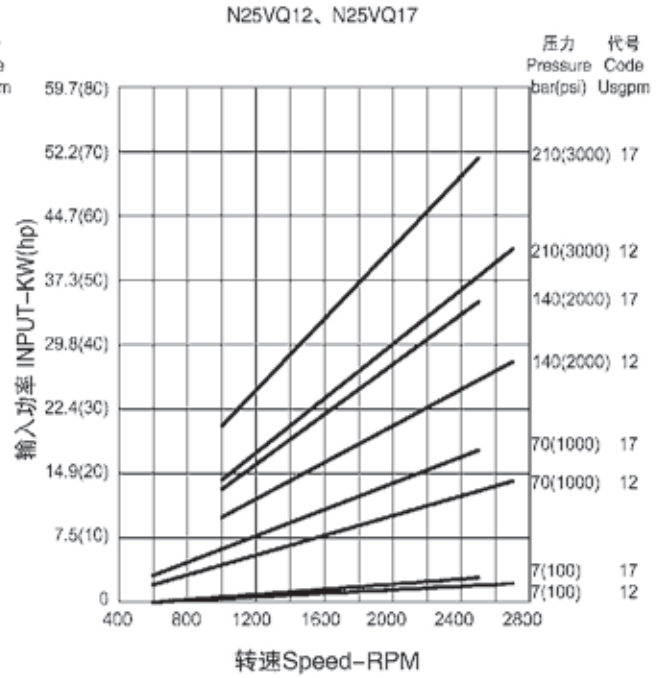
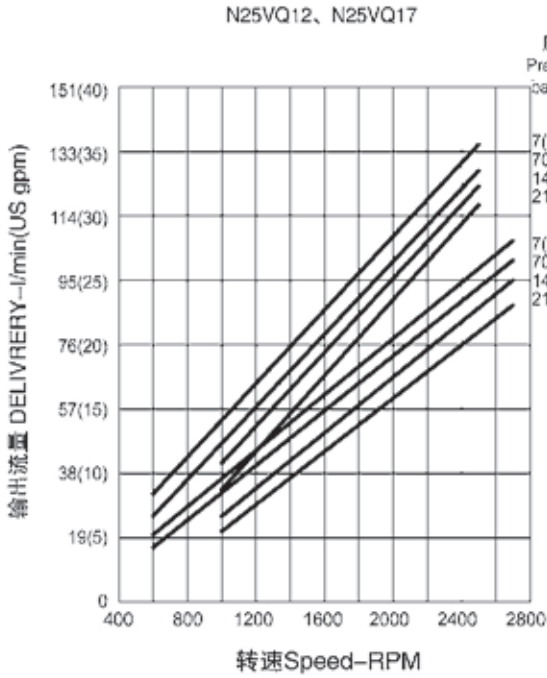
o 泵芯特性曲线/Cartridge performance

在50℃(120°F), 10 油(26cSt)-(128SUS), 进油口压力0MPa, 规定转速下的测定值
 Typical fows at 50 °C(120°F),10 oil(26cSt)-(128SUS),0 psi inlet at specified speeds



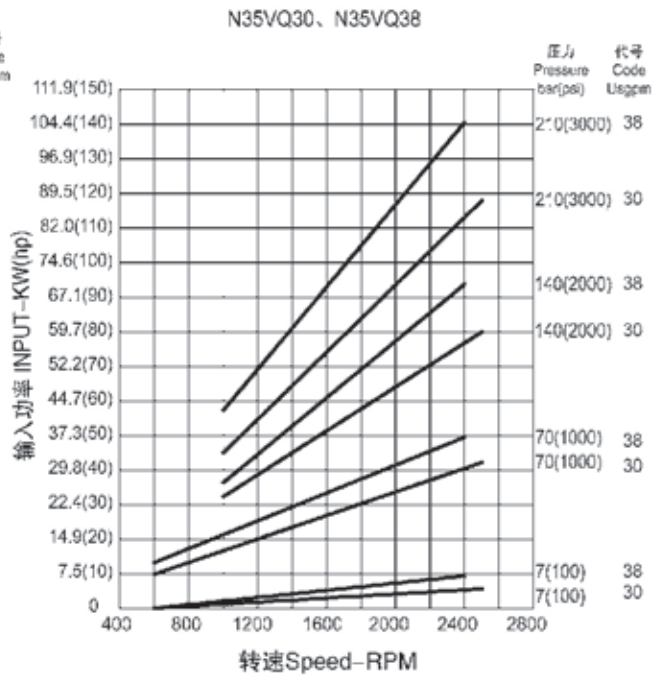
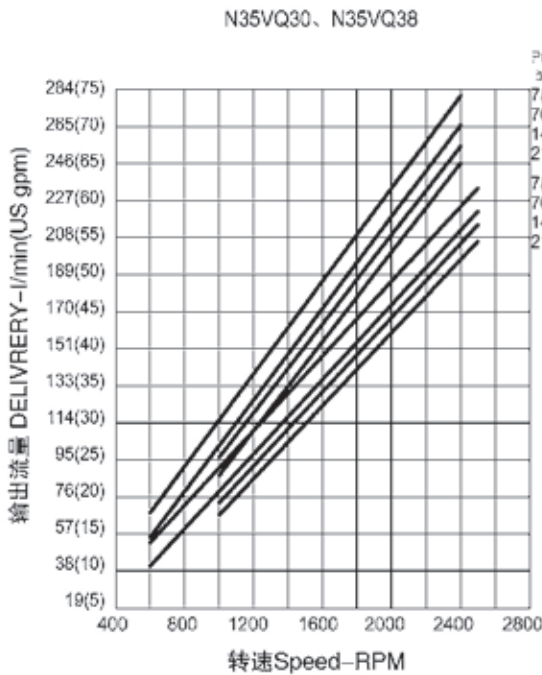
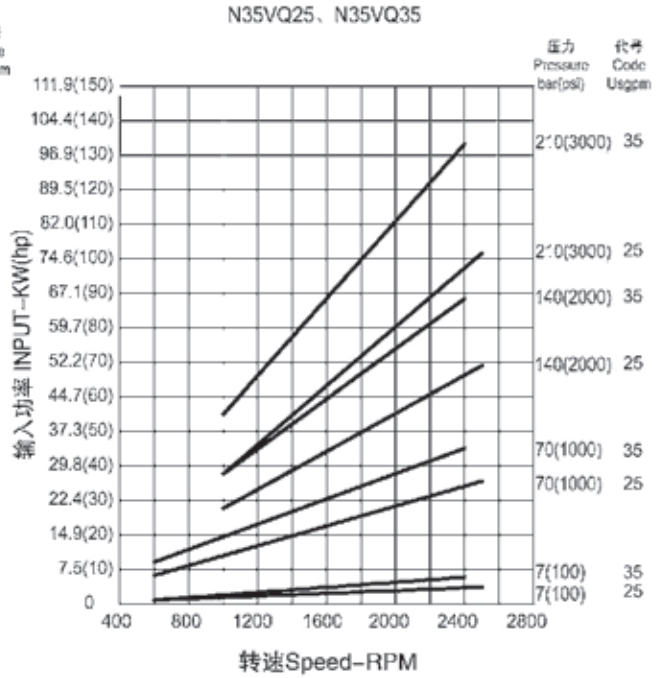
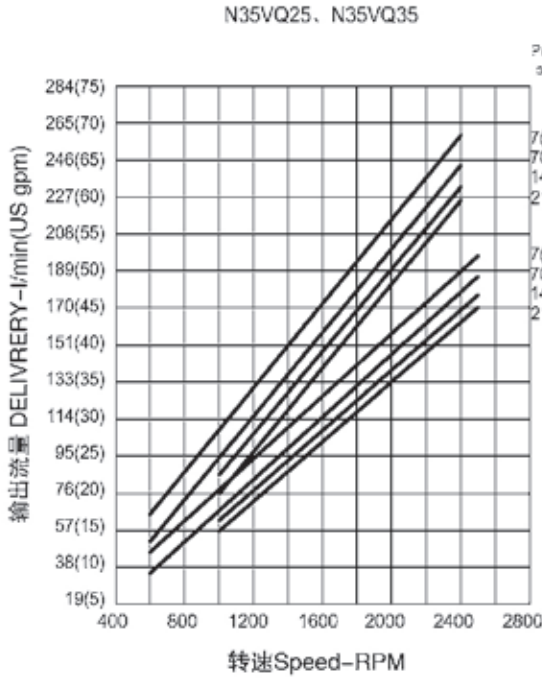
○ 泵芯特性曲线/Cartridge performance

在50℃(120°F), 10 油(26cSt)-(128SUS), 进油口压力0MPa, 规定转速下的测定值
 Typical flows at 50 °C (120°F), 10 oil(26cSt)-(128SUS), 0 psi inlet at specified speeds



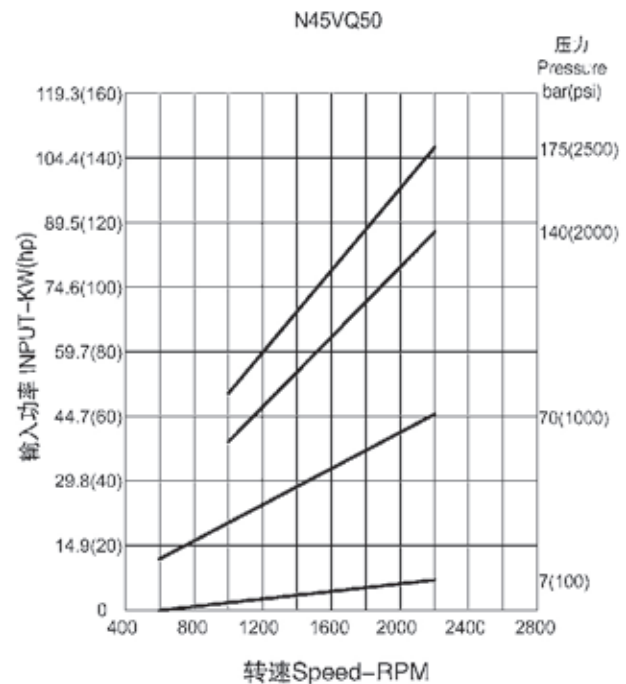
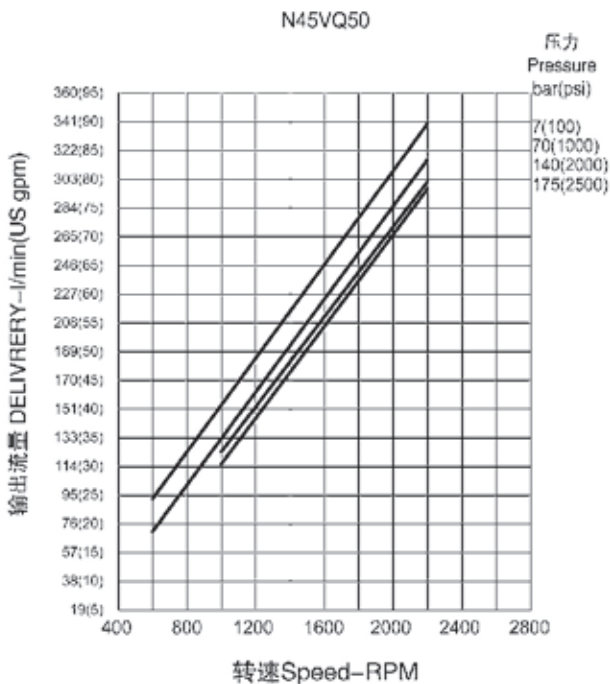
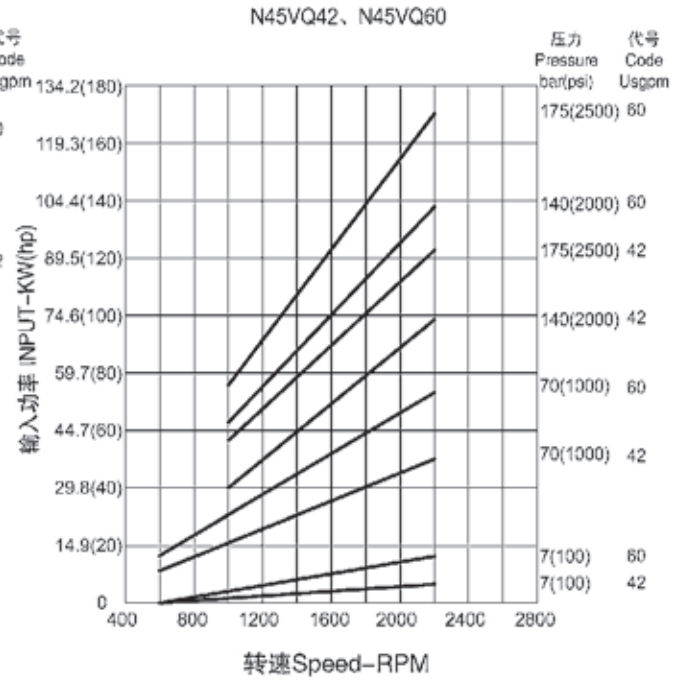
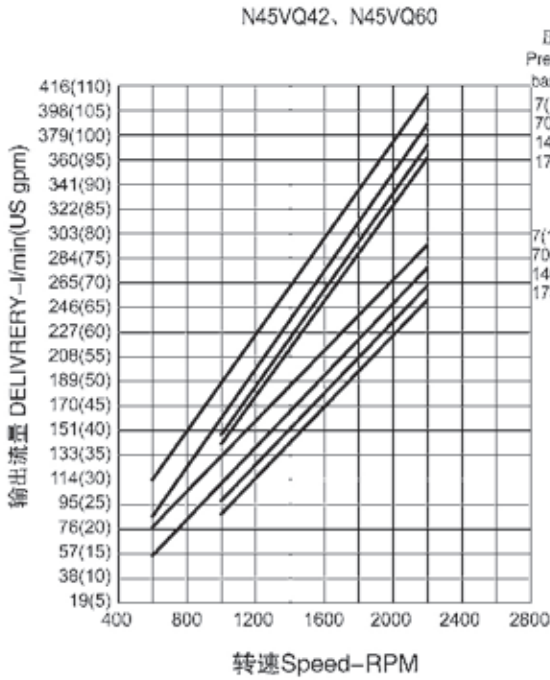
o 泵芯特性曲线/Cartridge performance

在50℃(120°F), 10 油(26cSt)-(128SUS), 进油口压力0MPa, 规定转速下的测定值
 Typical flows at 50 °C(120°F), 10 oil(26cSt)-(128SUS), 0 psi inlet at specified speeds



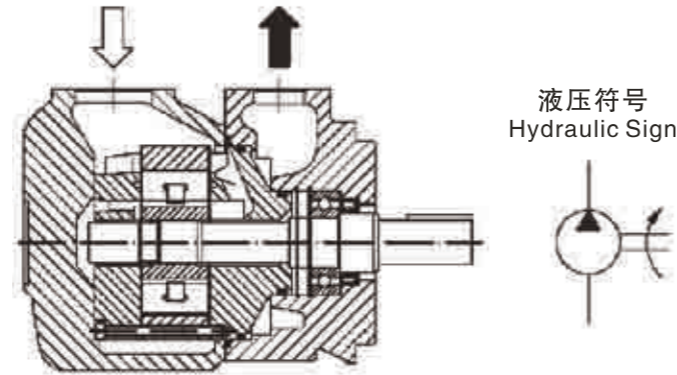
○ 泵芯特性曲线/Cartridge performance

在50℃(120°F), 10 油(26cSt)-(128SUS), 进油口压力0MPa, 规定转速下的测定值
 Typical fows at 50 °C (120°F), 10 oil (26cSt)-(128SUS), 0 psi inlet at specified speeds



NV系列单泵

NV Series-single pumps



适用于塑胶机械、鞋革机械、机床、压铸及冶金设备的高性能子母叶片泵。

主要特点为:

- 1、采用子母叶片及液压平衡的结构，减少了叶片对定子的压力，其性能更稳定，寿命更长。
- 2、12叶片制减小了流量脉动的振幅，系统噪声特性低。
- 3、多排量、多轴伸及进出油口四种不同的相对位置，使用户使用更灵活。
- 4、泵芯的插装式结构，现场维修更方便。

High Performance Intravane Pumps for plastic injection machine, Shoe machine, Tool machine, Die casting machine and Metallurge equipment.

Features

1. Intravane pumps with hydraulic balancing structure provide more stable performance and longer life since less pressure from vane on stator.
2. Twelve vane system provide low amplitude flow pulsation resulting in low system noise characteristics.
3. Various displacement and shafts with 4 different outlet opposite position make operation more flexible.
4. The cartridge is independent of the drive shaft, allowing for easy servicing without remove the pump from its mounting.

型号说明/Model Designation

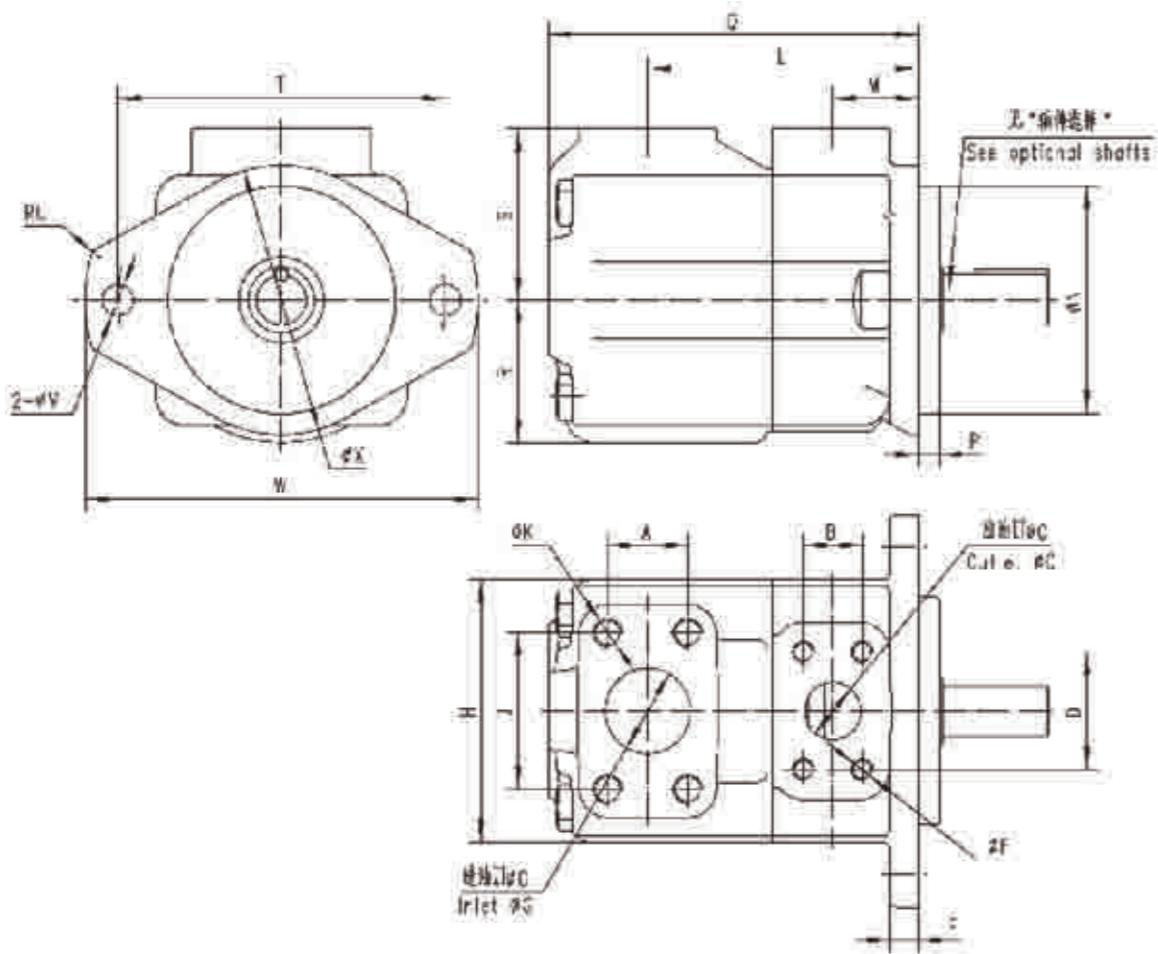
(F3-)	N25V	19	A	-1	A	22	R
前注 Note	系列号 Series	▽ 排量代号 Flow code	油口连接 Port connections	轴伸形式 Shaft type	出油口位置 Outlet Positions	设计号 Design number	旋转方向 Rotation
无标记 No-marking: 石油系油 Petroleum series oil 乳化液 emulsification fluid 水-乙二醇 glycol-fluid F3: 磷酸酯液 phosphate ester fluid	N20V	2、3、4、5、6、7、8、 9、10、11、12、14	A-SAE 4螺栓法兰 A-SAE 4- bolt flange	1-平键轴 Str key 151-花键轴 Spline	(从泵的盖端看) (Viewed from cover end of pump) A-进油口对侧 Opposite inlet B-从进油口逆时针90° 90° CCW from inlet C-进油口同侧 Inline with inlet D-从进油口顺时针90° 90° CW from inlet	22	(从泵的轴端看) (Viewed from shaft end of pump) L-逆时针旋转 Left hand for counter clockwise R-顺时针旋转 Right hand for clockwise
	N25V	10、12、14、15、17、 19、21、25		1-平键轴 Str key 86-重型平键轴 HD Str key 11-花键轴 Spline			
	N35V	21、25、30、32、35、 38、45					
	N45V	42、45、50、57、60、 66、75					

▽ 在1200r/min和0.69MPa(100psi)下的额定排量USgpm Flow(USgpm)at 1200r/min and 0.69MPa

技术参数/Technical Date

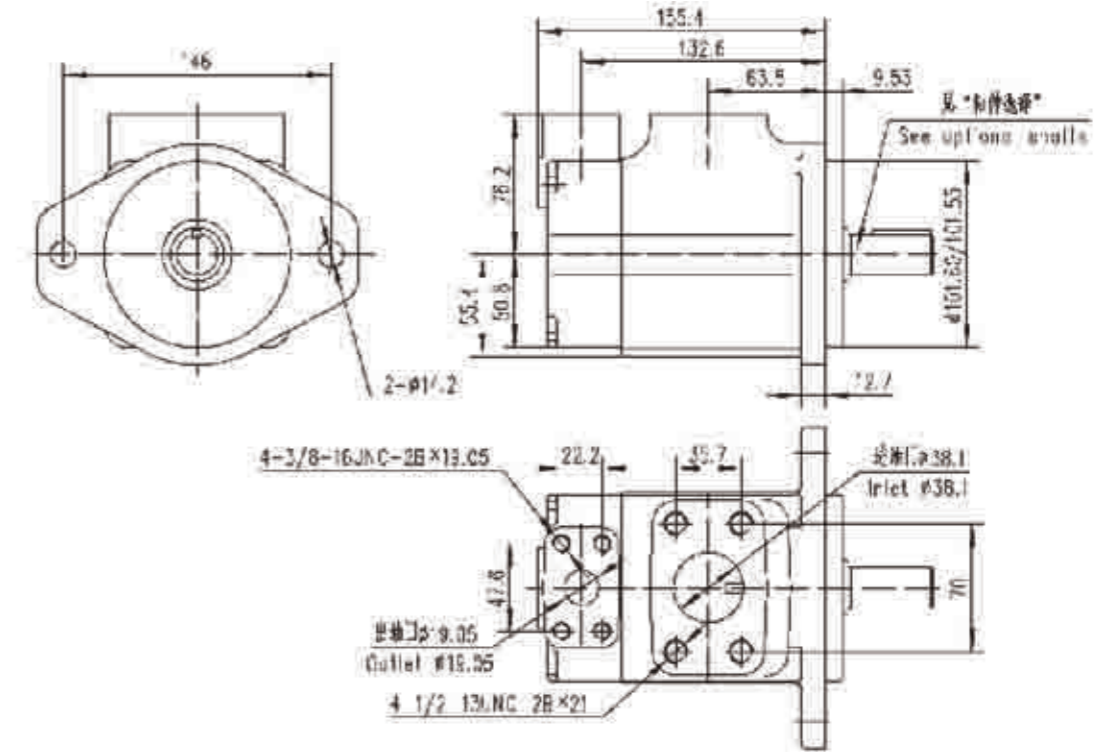
系列号 Series	排量代号 Flow code (USgpm)	理论排量 Geometric displacement mL/r(in ³ /r)	使用抗磨液压油或磷酸酯 With antiwear hydraulic oil or phosphate ester fluid		使用水-乙二醇 With water glycol fluid		使用油包水乳化液 With water-oil emulsions		最低转速 Min.speed							
			最高使用压力 Max.operating pressure MPa	最高转速 Max.speed r/min	最高使用压力 Max.operating pressure MPa	最高转速 Max.speed r/min	最高使用压力 Max.operating pressure MPa	最高转速 Max.speed r/min								
N20V	2	7.5(0.46)	13.8	1800	13.8	15.9	1500	6.9	1200	600						
	3	10(0.61)														
	4	13(0.79)														
	5	16.5(1.01)														
	6	19(1.16)														
	7	23(1.40)														
	8	27(1.67)														
	9	30(1.85)														
	10	32(1.95)														
	11	36(2.20)														
	12	40(2.44)	15.9													
	14	45(2.78)	13.8													
	N25V	10	32.5(1.98)		17.2						1800	15.9	1500	6.9	1500	600
		12	39(2.38)													
14		45(2.78)														
15		47(2.89)														
17		55(3.36)														
19		60(3.66)														
21		67(4.13)														
25		81(4.94)														
N35V	21	67(4.13)	17.2	1800	15.9	1500	6.9	1500	600							
	25	81(4.94)														
	30	97(5.91)														
	32	101(6.16)														
	35	112(6.83)														
	38	121(7.37)														
	45	147(8.95)														
	N45V	42								138(8.41)	17.2	1800	15.9	1500	6.9	1500
45		147(8.95)														
50		162(9.85)														
57		181(11.05)														
60		193(11.75)														
66		212(12.93)														
75	237(14.46)	13.8														

○ 安装连接尺寸/Installation Dimensions
N25V、N35V、N45V



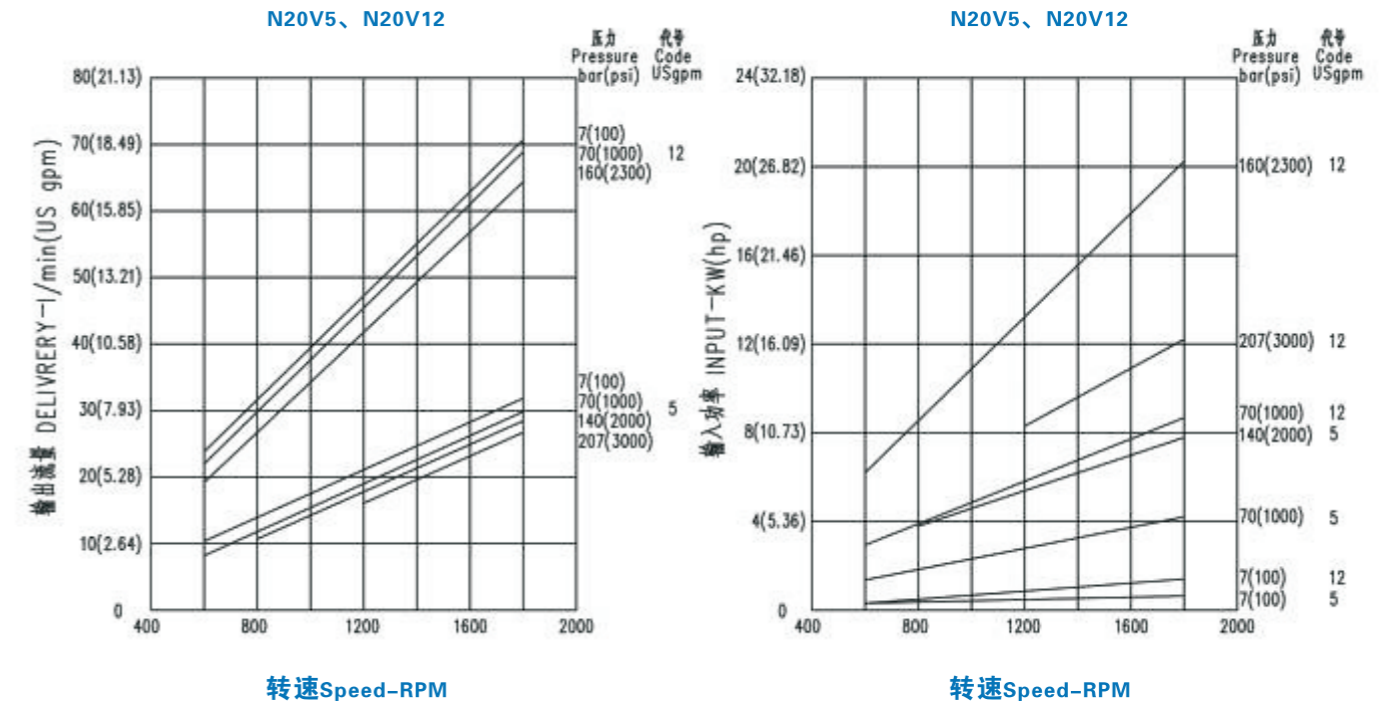
型号 Model	A	B	ØC	D	E	ØG	H	J	L	M	N	P	Q	R
N25V	35.7	26.2	25.4	52.4	12.7	38.1	118	69.9	121	38.1	101.60/101.55	9.53	162.1	63.5
N35V	42.9	30.2	31.8	58.7	16	50.8	140	77.8	125.5	38.1	127.00/126.95	9.53	185	69.9
N45V	61.9	35.7	38.1	69.9	16	76.2	159	106.4	153	43	127.00/126/95	12.7	216	82.6
型号 Model	S	T	RU	ØV	W	ØX	ØFX螺纹深度,4孔 ØFx full thread depth,4 holes		ØKX螺纹深度,4孔 ØKx full thread depth,4 holes					
N25V	76.2	146	14	14.2	175	121	3/8-16UNC-2BX19.1		1/2-13UNC-2BX23.8					
N35V	82.6	181	16	17.5	213	148	7/16-14UNC-2BX22.3		1/2-13UNC-2BX22.3					
N45V	93.7	181	16	17.5	213	148	1/2-13UNC-2BX23.8		5/8-11UNC-2BX25.4					

○ 安装连接尺寸/Installation Dimensions
N20V



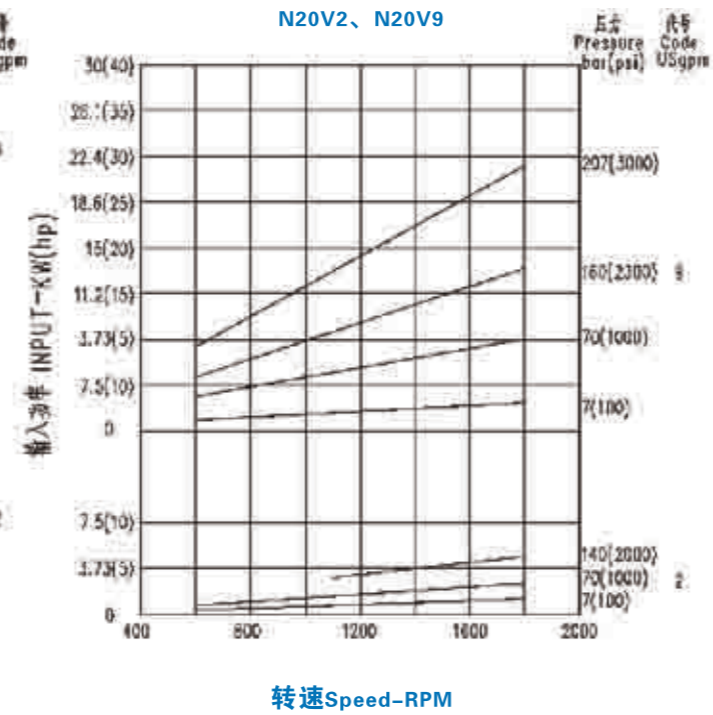
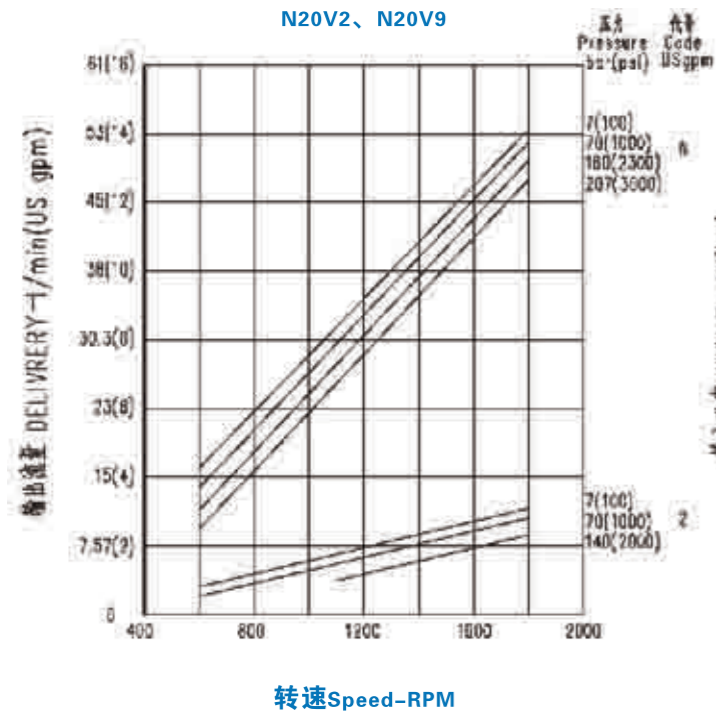
○ 泵芯特性曲线/Cartridge performance

在50°C(120° F),10W油(26cSt)-(128SUS),进油口压力0MPa,规定转速下的测定值
Typical flows at 50°C(120° F),10W oil(26cSt)-(128SUS), 0 psi inlet at specified speeds



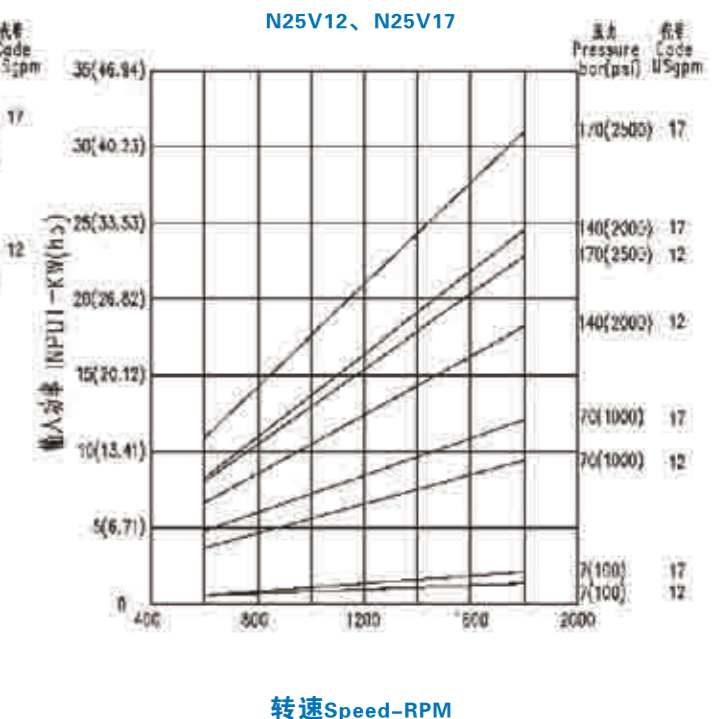
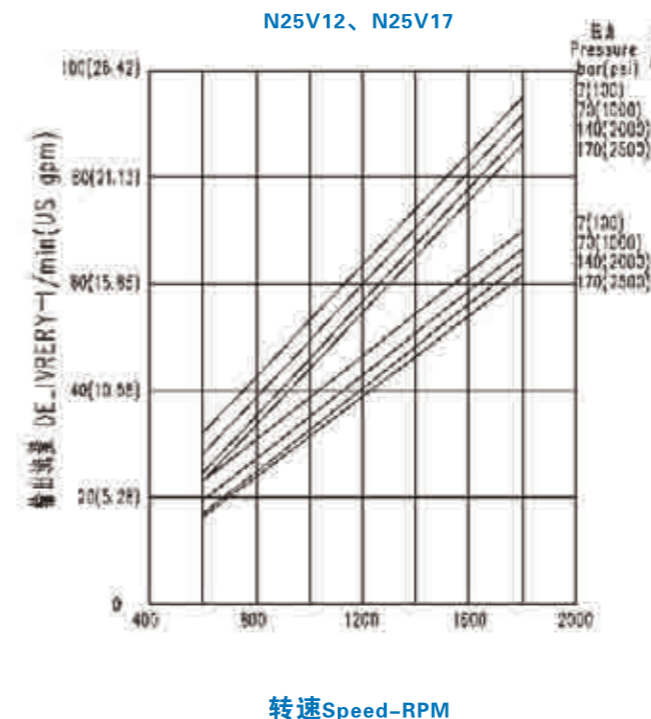
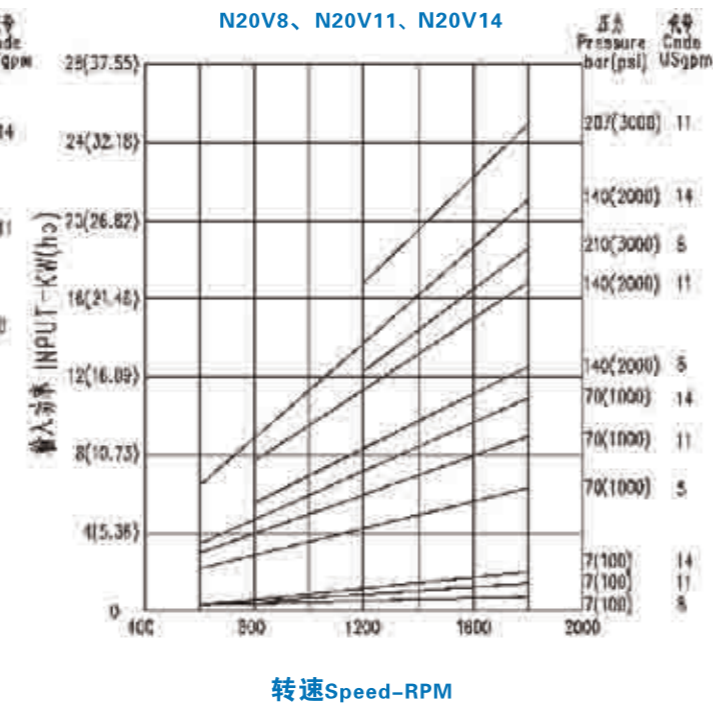
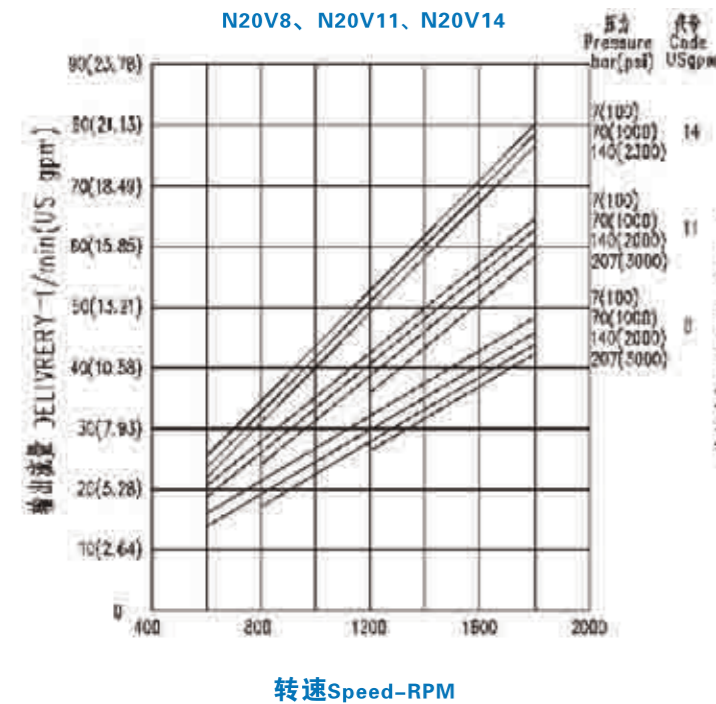
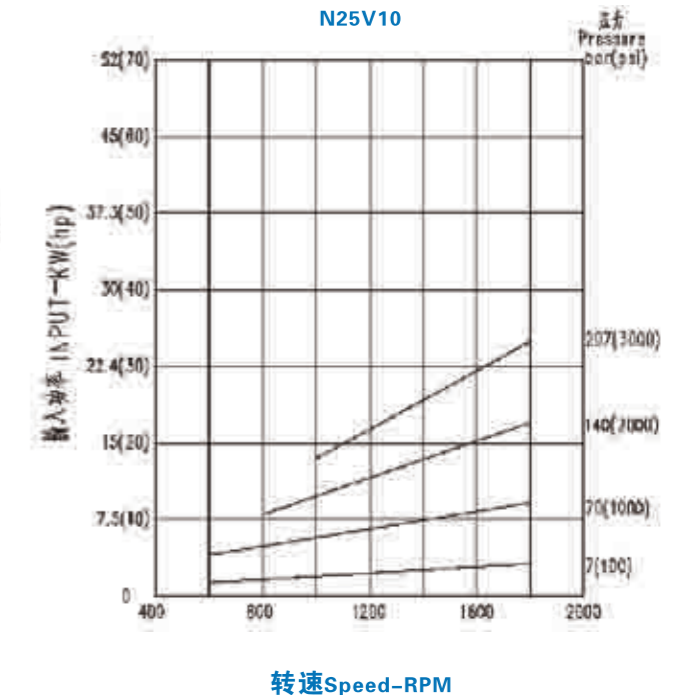
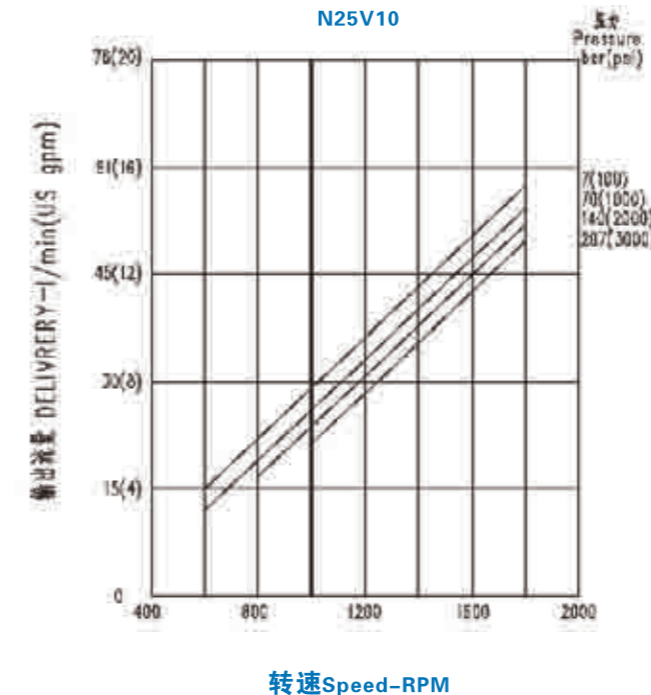
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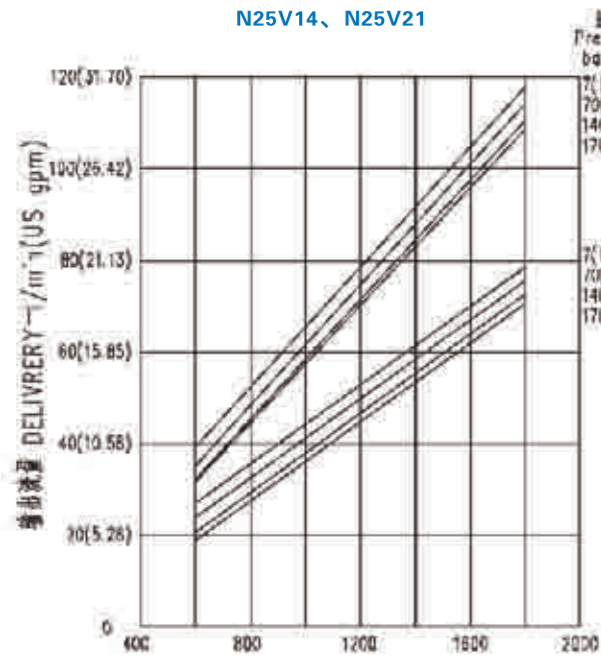
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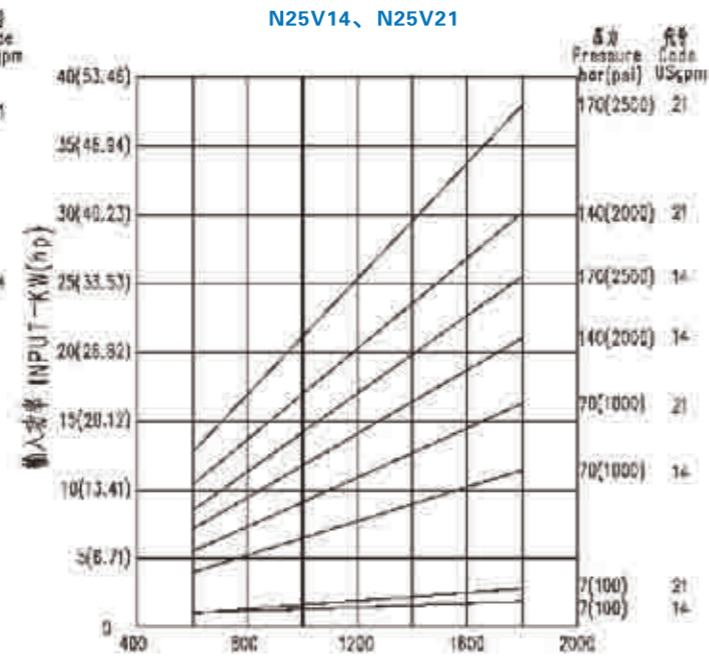


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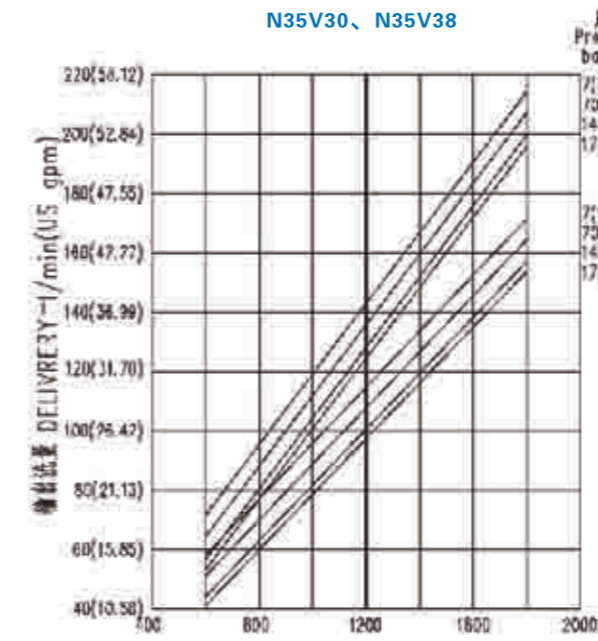
转速Speed-RPM



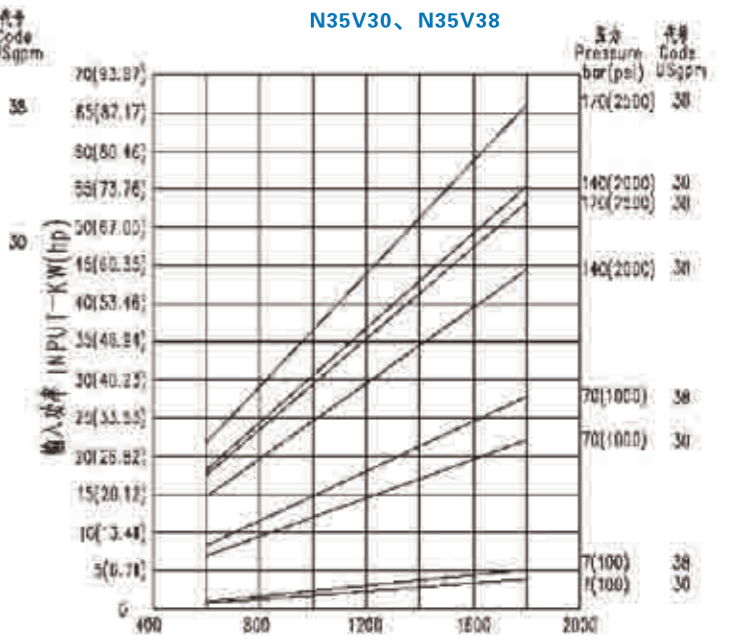
转速Speed-RPM

○ 泵芯特性曲线/Cartridge performance

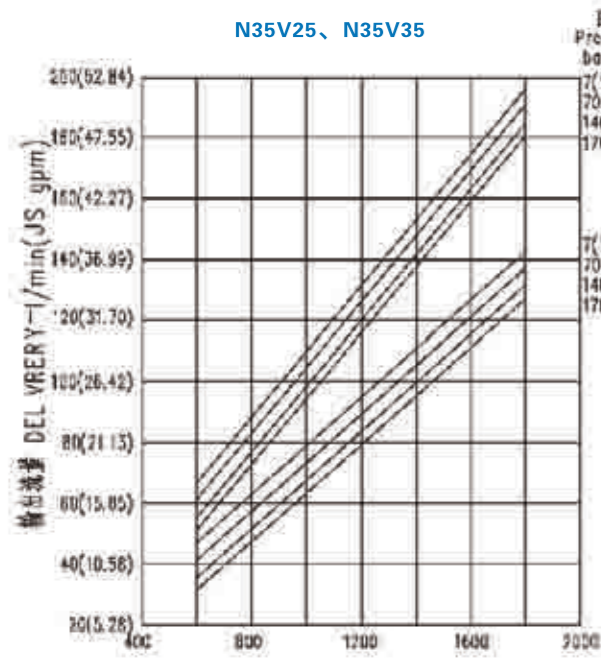
在50°C(120° F),10W油(26cSt)-(128SUS),进口压力0MPa,规定转速下的测定值
Typical flows at 50°C(120° F),10W oil(23cSt)-(128SUS), 0 psi inlet at specified speeds



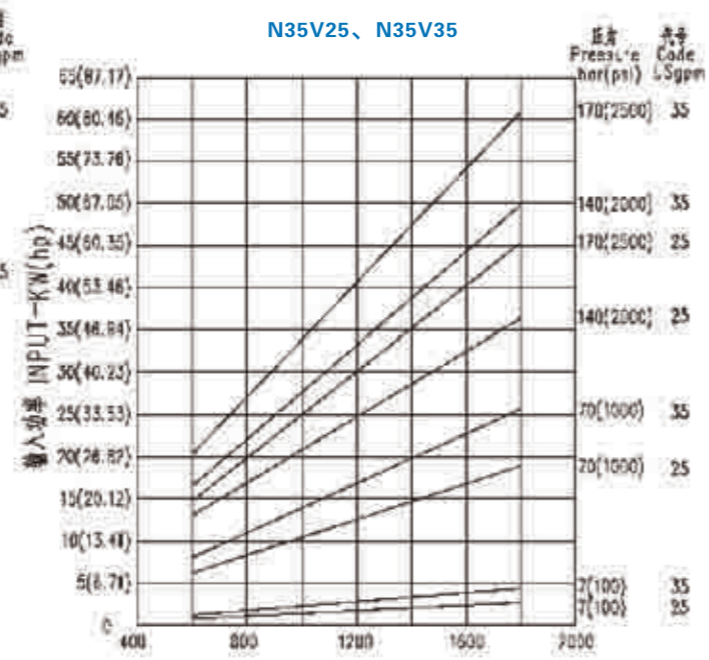
转速Speed-RPM



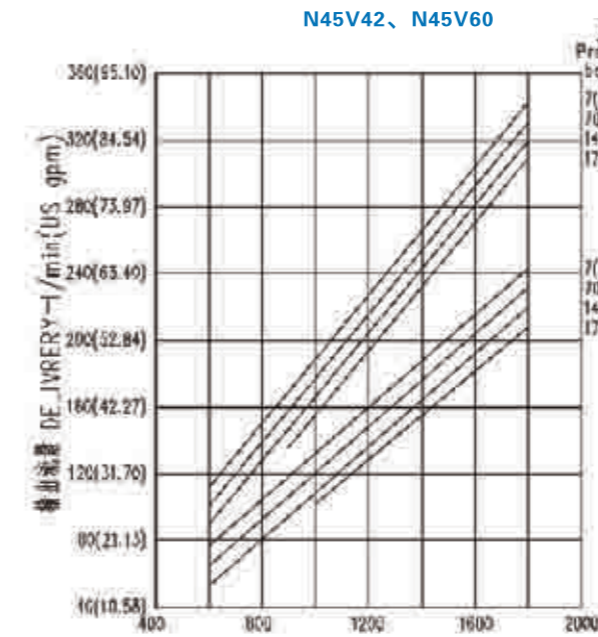
转速Speed-RPM



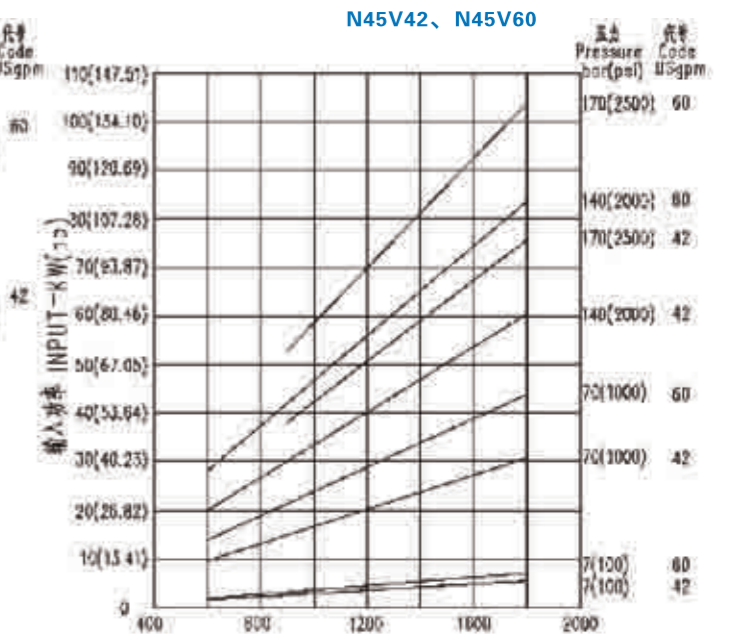
转速Speed-RPM



转速Speed-RPM



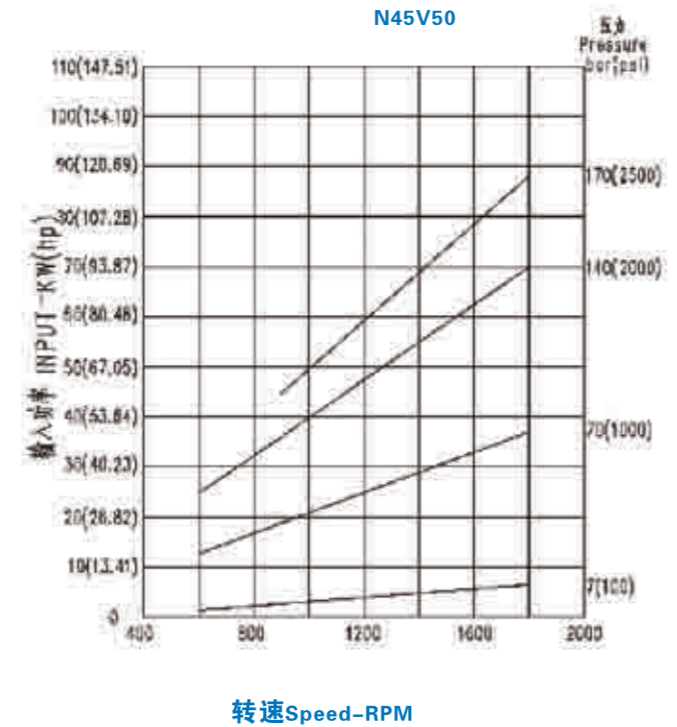
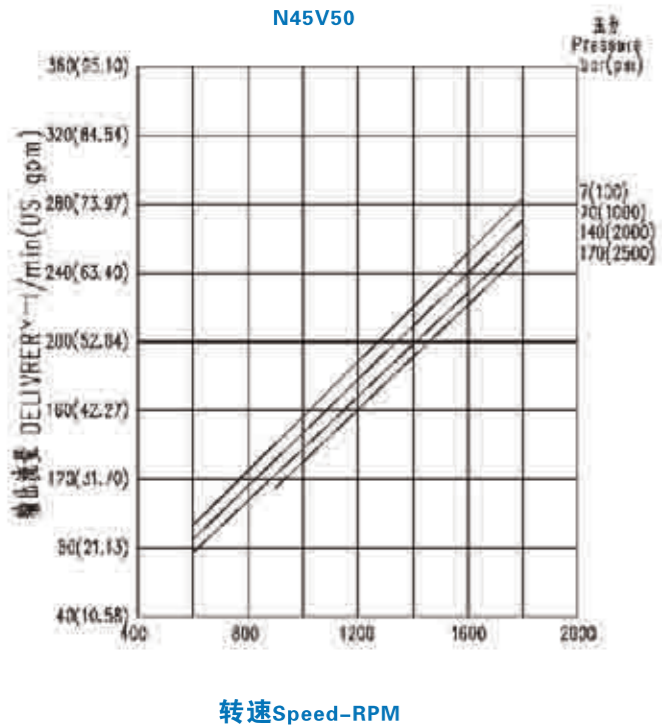
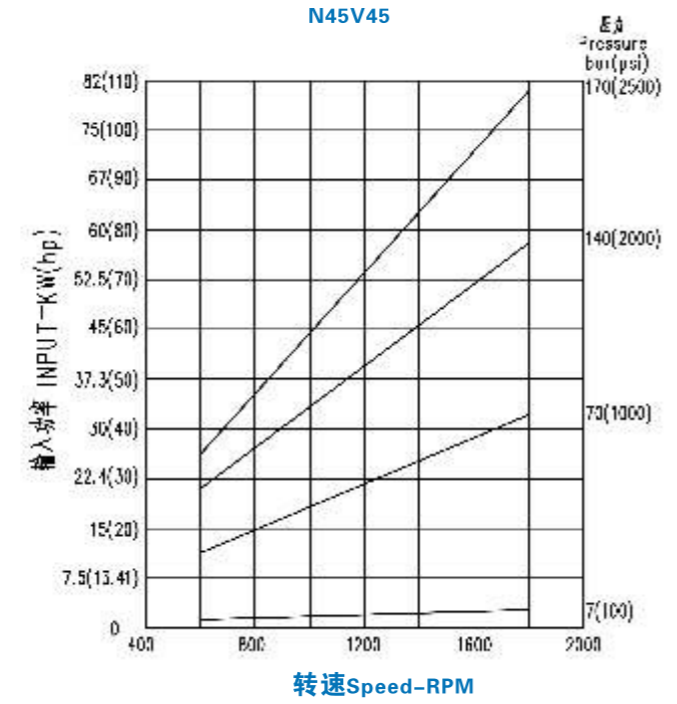
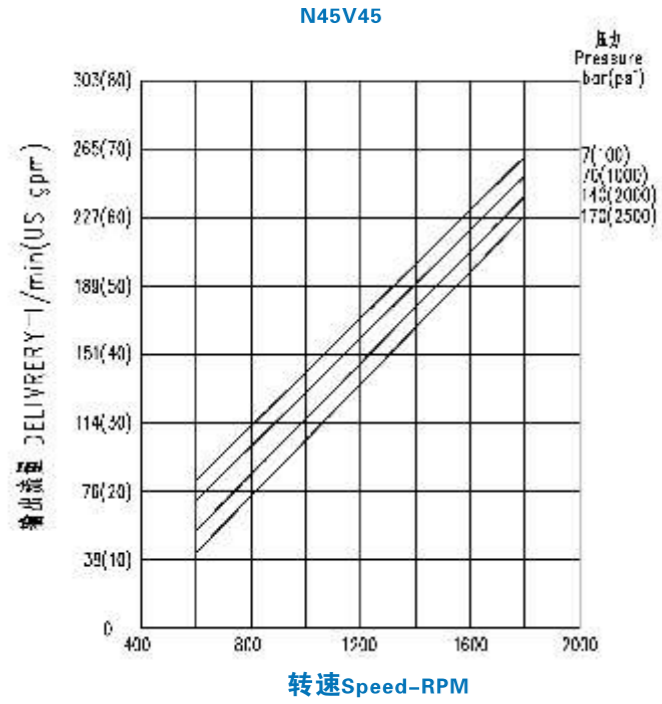
转速Speed-RPM



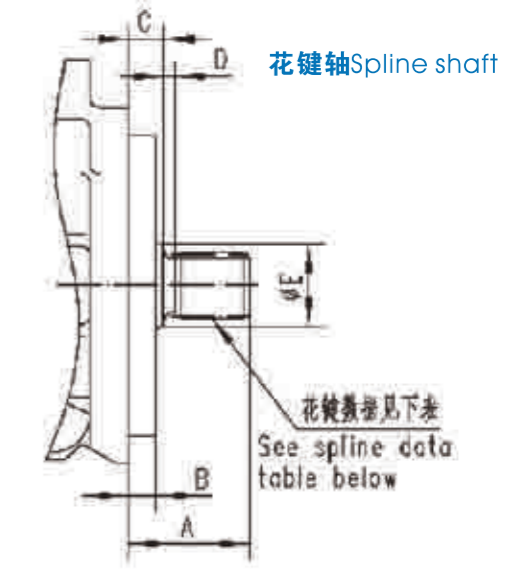
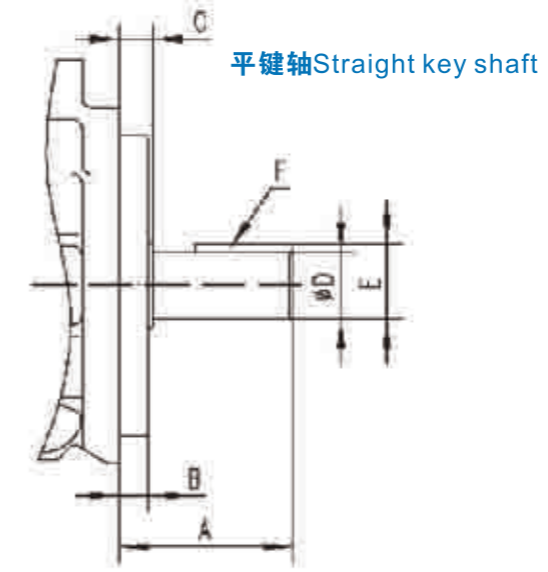
转速Speed-RPM

泵芯特性曲线/Cartridge performance

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轴伸选择/Optional shafts



平键轴/Straight Key shaft

型号 Model	轴伸代号 Shaft code	A	B	C	ΦD	E	F键宽*长 F key width x length
N20V, N20VQ, SQP1	1	59	9.53	12.1	22.23/22.20	24.5/24.4	4.76*32
N25V, N2520V N25VQ, N2520VQ SQP2, SQP21	1	59	9.53	11.1	22.23/22.20	24.5/24.4	4.76*32
	86	78	9.53	11.1	25.37/25.35	28.3/28.1	6.36*50.8
N35V, N35※V N35VQ, N35※VQ SQP3, SQP3※	1	73.2	9.53	11.1	31.75/31.70	35.36/35.10	7.94*38.1
	86	86	9.53	11.1	34.90/34.87	38.6/38.3	7.94*54
N45V, N45※V N45VQ, N45※VQ SQP4, SQP4※	1	62	12.7	14.22	31.75/31.70	35.36/35.10	7.94*28.5
	86	87.4	12.7	14.22	38.07/38.05	42.4/42.1	9.54*50.8

花键轴/Spline shaft

型号 Model	轴伸代号 Shaft code	A	B	C	ΦD	E	花键数据(见下表) Spline data (see below)
N20V, N20VQ	151	41.1	9.53	11.1	3.9	27.8	A
N25V, N2520V N25VQ, N2520VQ	11	44.5	9.53	11.1	3.9	27.8	A
N35V, N35※V N35VQ, N35※VQ	11	58.7	9.53	11.1	6.35	35.1	C
N45V, N45※V N45VQ, N45※VQ	11	61.9	12.7	14.3	9.7	39.6	C

花键数据表(渐开线花键)/Spline Data Table(Involute spline)

花键数据标记 Spline Data Reference	齿数 Number of teeth	径节 Pitch	大径 Major Diameter	成形直径 Form Diameter	小径 Minor Diameter	平齿根配合 Minor Diameter
A	13	16/32	22.17/22.15	19.03	18.63/18.35	大径配合 Major diameter fit
C	14	12/24	31.70/31.67	27.2	26.99/26.64	