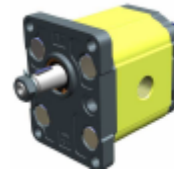


Additional Date/Spec Sheet

Group 2 XV-2M Vivoil Vivolo Aluminium Gear Motor – Reversible – External Drainage
 XM207 Series Standard European Motor Ø36.5 Flange – Taper Shaft



INTRODUCTION XV-2M



XM207

STANDARD EUROPEAN MOTOR
 ø36.5 FLANGE - TAPER SHAFT

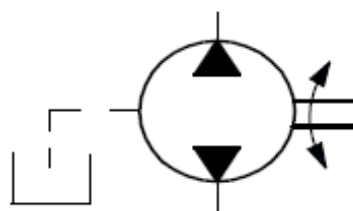
Summary: Displacements - Torque - Power - Pressures - Speeds

XV-2M/4	4.2 cm ³ /rev	5,68 Nm	0,60 KW	300 bar	6 bar	30 bar	700 rev/min	3500 rev/min
XV-2M/6	6.0 cm ³ /rev	8,12 Nm	0,85 KW	300 bar	6 bar	25 bar	700 rev/min	3500 rev/min
XV-2M/9	8.4 cm ³ /rev	11,36 Nm	1,19 KW	300 bar	6 bar	20 bar	700 rev/min	3500 rev/min
XV-2M/11	10.8 cm ³ /rev	14,61 Nm	1,53 KW	300 bar	6 bar	20 bar	700 rev/min	3500 rev/min
XV-2M/14	14.4 cm ³ /rev	19,48 Nm	2,04 KW	290 bar	6 bar	15 bar	700 rev/min	3500 rev/min
XV-2M/17	16.8 cm ³ /rev	22,73 Nm	2,38 KW	270 bar	6 bar	15 bar	700 rev/min	3500 rev/min
XV-2M/19	19.2 cm ³ /rev	25,97 Nm	2,72 KW	250 bar	6 bar	15 bar	700 rev/min	3000 rev/min
XV-2M/22	22.8 cm ³ /rev	30,84 Nm	3,23 KW	240 bar	6 bar	15 bar	700 rev/min	3000 rev/min
XV-2M/26	26.2 cm ³ /rev	35,44 Nm	3,71 KW	210 bar	6 bar	15 bar	700 rev/min	3000 rev/min
XV-2M/30	30.0 cm ³ /rev	40,58 Nm	4,25 KW	200 bar	6 bar	15 bar	700 rev/min	2500 rev/min
XV-2M/34	34.2 cm ³ /rev	46,27 Nm	4,85 KW	190 bar	6 bar	15 bar	700 rev/min	2500 rev/min

General technical data

Type of fluid to be used	Mineral-based hydraulic oil HLP HV (D IN 51524)
Minimum operating viscosity	10 mm ² /s
Maximum operating viscosity	100 mm ² /s
Maximum admissible viscosity at start-up	1500 mm ² /s
Recommended viscosity	20 mm ² /s - 100 mm ² /s
Ambient temperature	-20 °C - 60°C
Fluid operating temperature	-15°C - 80°C
Recommended fluid operating temperature	30°C – 50° C
For temperatures above 120°C	Request FKM seals (V iton)
Max. outlet fluid pressure (OUT)	0.3 - 0.5 bars (with internal drainage)
Inlet fluid filtering (IN)	30 - 60 Microns
Outlet fluid filtering (OUT)	10 - 25 Microns
Max. inlet fluid speed (IN)	0.5 - 1.5 m/s
Max. outlet fluid speed (OUT)	3.0 - 5.5m/s

External drainage



TYPE	cm ³ /rev	rpm								
		700	1000	1500	2000	2500	3000	3500		
XV 2M/4	4,2	Flow rate l/min	2,800	4,000	6,000	8,000	10,000	12,000	14,000	Flow rate l/min
XV 2M/6	6		4,200	6,000	9,000	12,000	15,000	18,000	21,000	
XV 2M/9	8,4		6,300	9,000	13,500	18,000	22,500	27,000	31,500	
XV 2M/11	10,8		7,700	11,000	16,500	22,000	27,500	33,000	38,500	
XV 2M/14	14,4		9,800	14,000	21,000	28,000	35,000	42,000	29,000	
XV 2M/17	16,8		11,900	17,000	25,500	34,000	42,500	51,000	59,500	
XV 2M/19	19,2		13,300	19,000	28,500	38,000	47,500	57,000		
XV 2M/22	22,8		15,400	22,000	33,000	44,000	55,000	66,000		
XV 2M/26	26,2		18,200	26,000	39,000	52,000	65,000	78,000		
XV 2M/30	30		21,000	30,000	45,000	60,000	75,000			
XV 2M/34	34,2		23,800	34,000	51,000	68,000	85,000			
XV 2M/40	39,6		28,000	40,000	60,000	80,000				

TORQUES ALLOWED ON SHAFT:

FORMULA FOR EVALUATING SHAFT	SHAFT [IDENTIFIER] - CODE - DESCRIPTION	T.2 [Nm]
$T.2 \leq \frac{v_i \times \Delta p \times \eta_m}{20 \times \pi}$	XV-2M [E] - CO001 - Tapered 1:8 - ø17,4 - M12x1,5 - key thk.4	233.2

T.2 = max. torque allowed by shaft [Nm]

Useful calculation formulas

SYMBOL	UNIT OF MEASUREMENT	DESCRIPTION
qv	l/min	Flow rate
v _i	cm ³ /rev.	Displacement (volume of oil displaced per complete revolution of the shaft)
n	rpm	Shaft rotation speed
p ₁	bar	inlet pressure
p ₂	bar	outlet pressure
Δp	bar	Δp=p ₂ - p ₁ difference between outlet (OUT) and inlet (IN) pressure
P _h	kW	Hydraulic power delivered
P _m	kW	Mechanical power absorbed
T	Nm	Torque absorbed by shaft
η _v	-	0.91 – 0.96 volumetric efficiency (volumetric ratio between operation under load and loadless operation)
η _m	-	0.85 – 0.90 mechanical efficiency
η _t	-	η _t = η _v x η _m total efficiency

Basic Formulas	Derived Formulas	
$qv = \frac{vi \times n}{1000} \times \eta v$	$vi = \frac{qv \times 1000}{n \times \eta v}$	$n = \frac{qv \times 1000}{vi \times \eta v}$
$T = \frac{vi \times \Delta p \times \eta m}{20 \times \pi}$	$vi = \frac{T \times 20 \times \pi}{\Delta p \times \eta m}$	$\Delta p = \frac{T \times 20 \times \pi}{vi \times \eta m}$
$Ph = \frac{qv \times \Delta p}{600}$	$qv = \frac{Ph \times 600}{\Delta p}$	$\Delta p = \frac{Ph \times 600}{qv}$
$Pm = \frac{vi \times \Delta p \times n \times \eta m}{600000}$	$vi = \frac{Pm \times 600000}{\Delta p \times n \times \eta m}$	$\Delta p = \frac{600000 \times \eta m}{vi \times n \times \eta m}$

Constructive features

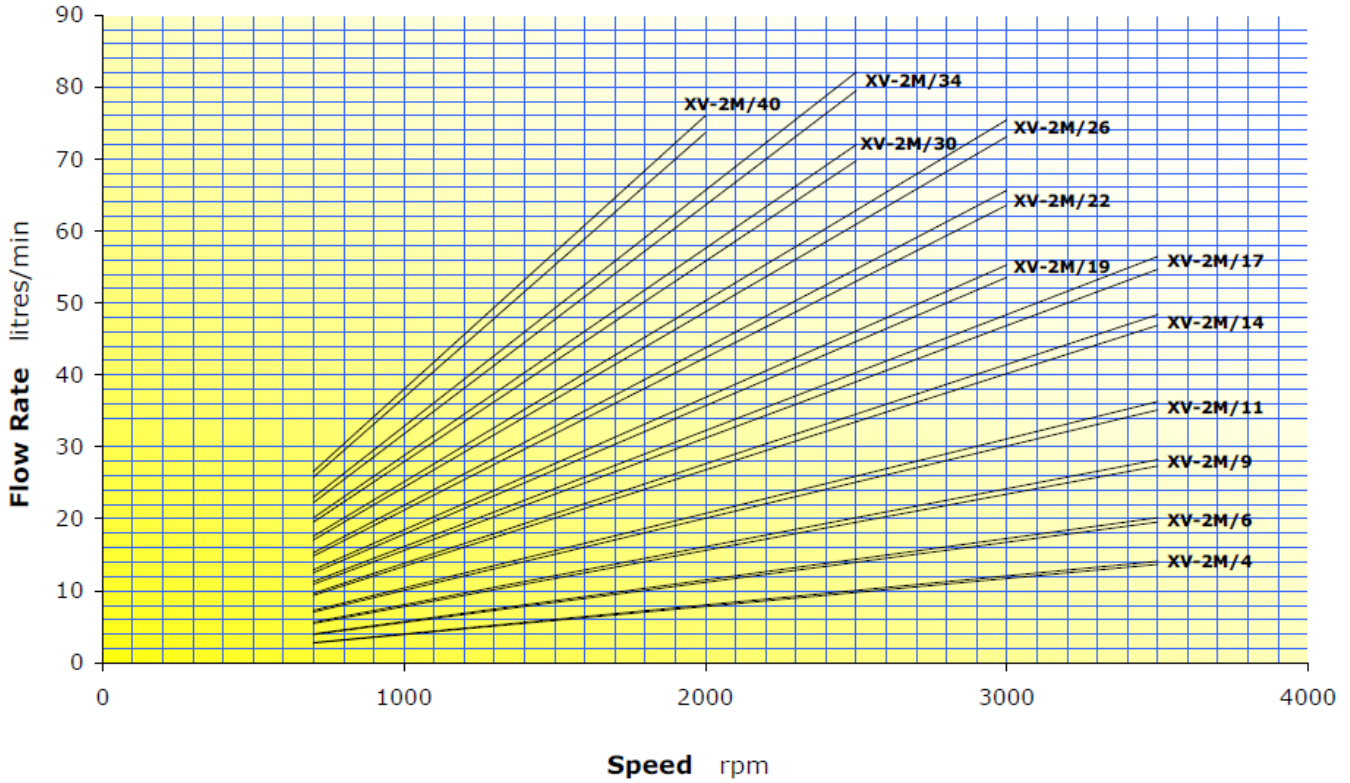
PART	MATERIAL	MECHANICAL FEATURES
MOTOR BODY	Extruded alloy Series 7000, heat treated and anodised	Rp = 345 N/mm ² (Yield strength) Rm = 382 N/mm ² (Breaking strength)
FLANGE AND COVER	Die-cast aluminium alloy with excellent mechanical features, heat treated and anodised	Rp = 310+350 N/mm ² (Yield strength) Rm = 350+400 N/mm ² (Breaking strength)
GEAR BUSH BEARINGS	Special heat-treated tin alloy with excellent mechanical features and high anti-friction capacity. Self-lubricating bushes DU	Rp = 350 N/mm ² (Yield strength) Rm = 390 N/mm ² (Breaking strength)
GEARS	Steel UNI 7846	Rs = 980 N/mm ² (Yield strength) Rm = 1270+1570 N/mm ² (Breaking strength)
SEALS	A 727 Standard Acrylonitrile F 975 Viton FKM	70 Shore, thermal resistance 120°C 80 Shore, thermal resistance 200°C
BACK-UP RINGS	Virgin PTFE Tecnil Q3	



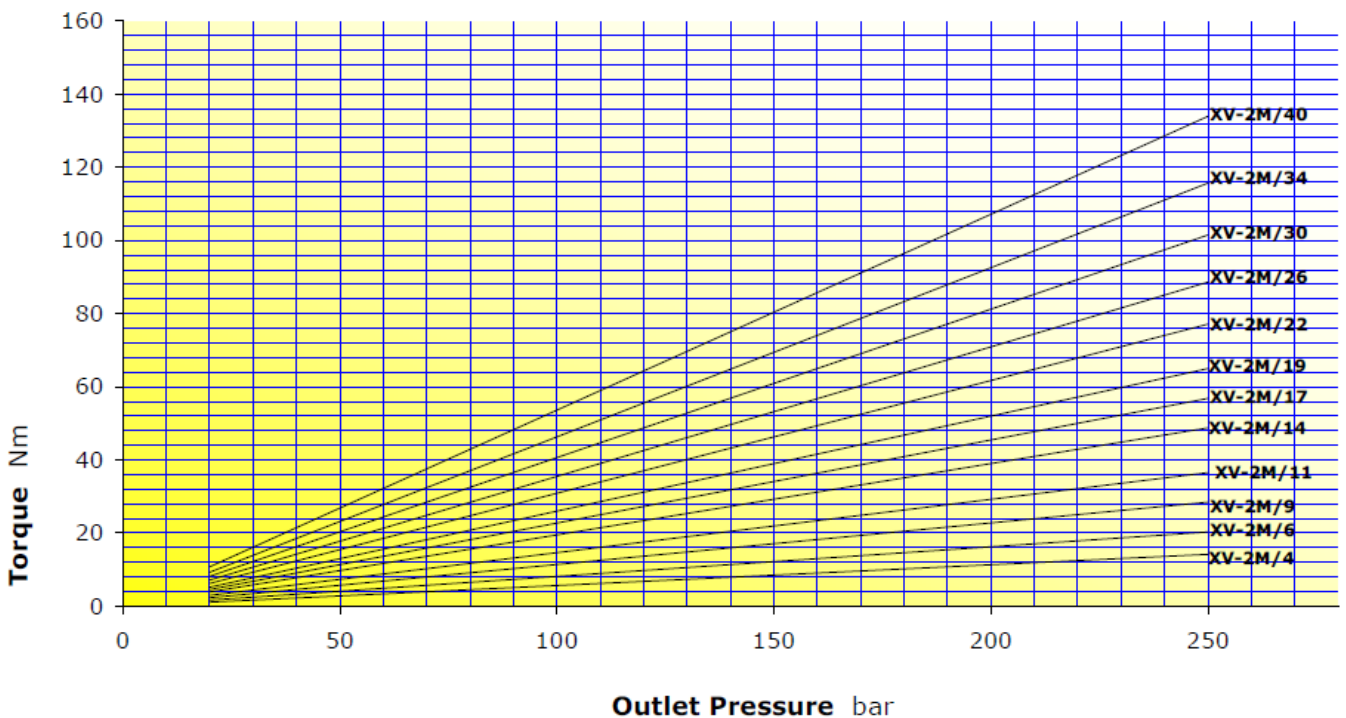
CHARACTERISTIC CURVES

XV-1M

XV-2M CHARACTERISTIC FLOW RATE CURVES



XV-2M MOTOR TORQUE



Outlet Pressure bar

reversible motor - series XV

STANDARD EUROPEAN MOTOR
ø36.5 FLANGE - TAPER SHAFT

XV-2M

X 2 M 51 01 E C C E

Series	X	series XV
Group	2	group 2
Category	M	reversible motor
Displacement	51	17
Flange	01	Ø36.5 STANDARD EUROPEAN reversible rotation
Shaft	E	CO001 - Tapered 1:8 - ø17.4 - M12x1.5 - key thk.4
Body	IN	inlet - 3/4" GAS
	OUT	outlet - 3/4" GAS
Cover	E	with external drainage



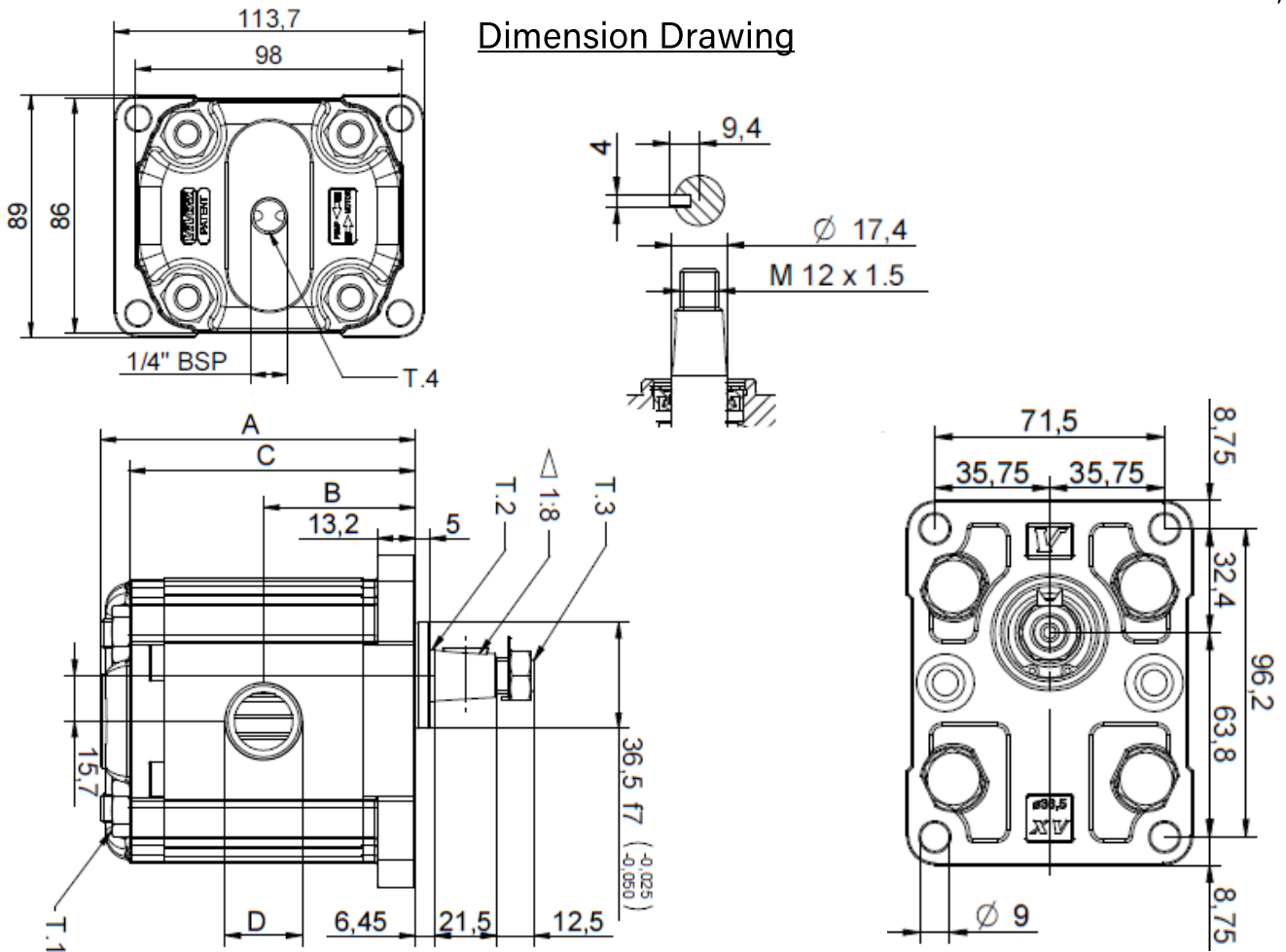
XM207

Technical data table																					
TYPE	Displacement	Max. Pressure		CODE																	
		cm3/rev	P1 bar	P3 bar	External drainage			Internal drainage													
XV-2M/04	4,20	260	300	X	2	M	41	01	E	B	B	E	X	2	M	41	01	E	B	B	F
XV-2M/06	6,00	260	300	X	2	M	43	01	E	B	B	E	X	2	M	43	01	E	B	B	F
XV-2M/09	8,40	260	300	X	2	M	45	01	E	B	B	E	X	2	M	45	01	E	B	B	F
XV-2M/11	10,80	260	300	X	2	M	47	01	E	B	B	E	X	2	M	47	01	E	B	B	F
XV-2M/14	14,40	250	290	X	2	M	49	01	E	C	C	E	X	2	M	49	01	E	C	C	F
XV-2M/17	16,80	230	270	X	2	M	51	01	E	C	C	E	X	2	M	51	01	E	C	C	F
XV-2M/19	19,20	210	250	X	2	M	53	01	E	C	C	E	X	2	M	53	01	E	C	C	F
XV-2M/22	22,80	200	240	X	2	M	55	01	E	C	C	E	X	2	M	55	01	E	C	C	F
XV-2M/26	26,20	170	210	X	2	M	57	01	E	D	D	E	X	2	M	57	01	E	D	D	F
XV-2M/30	30,00	160	200	X	2	M	59	01	E	D	D	E	X	2	M	59	01	E	D	D	F
XV-2M/34	34,20	150	190	X	2	M	61	01	E	D	D	E	X	2	M	61	01	E	D	D	F
XV-2M/40	39,60	140	180	X	2	M	63	01	E	D	D	E	X	2	M	63	01	E	D	D	F

P1) Max. working pressure - P3) Max. peak pressure

For heavy-duty applications, it is recommended to check the admissible torque of the shaft

Dimension Drawing



Dimensions table						
TYPE	Weight	A	B	C	D	D
	kg	mm	mm	mm	IN	OUT
XV-2M/04	2,200	87,2	41,7	77,2	1/2" BSPP	1/2" BSPP
XV-2M/06	2,300	90,2	43,2	80,2	1/2" BSPP	1/2" BSPP
XV-2M/09	2,400	94,2	45,2	84,2	1/2" BSPP	1/2" BSPP
XV-2M/11	2,500	98,2	47,2	88,2	1/2" BSPP	1/2" BSPP
XV-2M/14	2,700	104,2	50,2	94,2	3/4" BSPP	3/4" BSPP
XV-2M/17	2,800	108,2	52,2	98,2	3/4" BSPP	3/4" BSPP
XV-2M/19	2,900	112,2	54,2	102,2	3/4" BSPP	3/4" BSPP
XV-2M/22	3,050	118,2	57,2	108,2	3/4" BSPP	3/4" BSPP
XV-2M/26	3,150	122,2	59,2	112,2	1" BSPP	1" BSPP
XV-2M/30	3,400	130,2	63,2	120,2	1" BSPP	1" BSPP
XV-2M/34	3,600	137,2	66,7	127,2	1" BSPP	1" BSPP
XV-2M/40	3,800	146,2	71,2	136,2	1" BSPP	1" BSPP

T.1 = 54±58.9 [Nm] - screw tightening torque M10

T.3 = 40 [Nm] - torque wrench setting 19


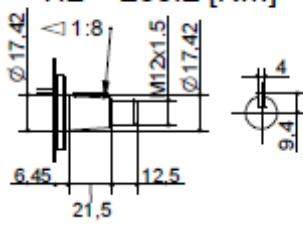
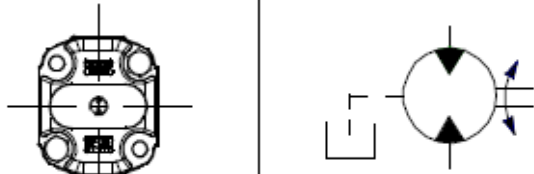
T.2 = 233.2 [Nm] - admissible shaft torque (N.B. When choosing a shaft, always check the admissible torque).

T.4 = 0.3±0,5 bar - max. drainage pressure

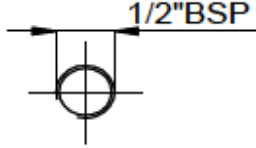
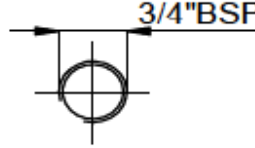
Table of variations

XV-2M

ø36.5 FLANGE

ø36.5 FLANGE		Shaft		Cover	
	01	CO001 - Tapered $T.2 = 233.2$ [Nm] 	E		E
				External drainage	

Displacement	
TYPE	CODE
XV-2M/04	41
XV-2M/06	43
XV-2M/09	45
XV-2M/11	47
XV-2M/14	49
XV-2M/17	51
XV-2M/19	53
XV-2M/22	55
XV-2M/26	57
XV-2M/30	59
XV-2M/34	61
XV-2M/40	63

Body (threads/flanges)	
	B
	C