



翔暉企業有限公司
SHINE WEI ENT CO., LTD.



2017

高精密減速機
High Precision Reducers

WF-H 系列

WF-H SERIES



Overview

- Type : WF42H ~ WF180H
- Backlash : $\leq 3-8$ Arc.min
- Ratio : $1/3 \sim 1/1000$
- Capacity : 0.05KW ~ 11KW

- 型 式 : WF42H ~ WF180H
- 背 隙 : $\leq 3-8$ 弧分
- 減速比 : $1/3 \sim 1/1000$
- 容 量 : 0.05KW ~ 11KW

■ 内部構造介紹—WF42H—WF180H



- 行星齒內孔使用滿針滾針軸, 高精度
- Use full arrange needle pin for anti-abrasion and higher precision.



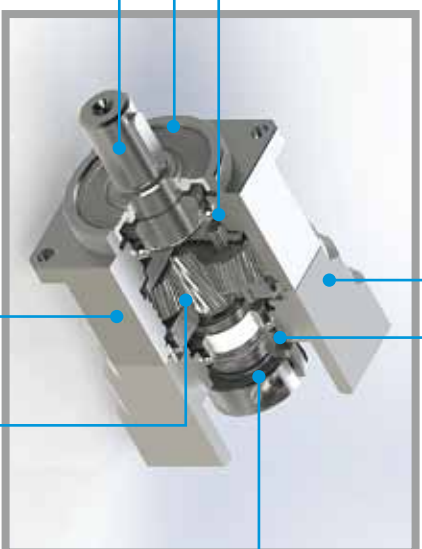
- 輸入法蘭
 1. AL-6061-T6, 表面鍍陽極氧化膜, 高質感, 高防蝕能力
 2. 輸入法蘭一體式設計, 使得伺服馬達軸心與太陽齒有極佳的同心度
 3. 可與各品牌的伺服馬達與步進馬達搭配組合
- Input Flange
 1. Material is AL-6061-T6, Surface is Eloxal to improve the antioxidant capacity and high quality.
 2. Input flange is One-Piece design for sun gear and servomotor shaft get excellent concentricity.
 3. Use to any brand servomotor or step motor.



- 입력축 베어링
저모터의 고속운행에 대응해
고속저부하 베어링 사용.
- Input shaft Bearing
Using high speed and low
loading type bearing, it is
excellent design for high
speed input of servomotor.



- 輸入法蘭與內齒環
輸入法蘭與內齒環使用高精度齒軸承為組裝時的引導,
能使輸入到輸出端有最佳的同心度, 降低震動
- Input Flange and Inner Gear Box
The input flange using high precision bearing to lead
assembly. Let the input to output shaft center has excellent
concentricity for reduce vibration.



- 선기어와 입력축
1 : 고정밀 아답타로 다양한 서보모터 출력축에 적용.
- 2 : 뛰어난 동적평형 디자인.
- 3 : 최적화 한 관성모멘트.
- 4 : 모듈화 디자인으로 고객의 다양한 감속비 요구에 신속 대응.
- Sun Gear and Input Shaft
1 : With high precision bushing is easy to set up with any brand servomotor.
- 2 : Excellent dynamic balance
- 3 : Optimum mass moment of inertia.
- 4 : To modularize assembly design for rapid reaction customers all gear
ratio requirement.



- 출력축
일체형 설계로 유성기가 운행정도 확보, 입력 베어링의
간격 확대와 큰 베어링의 사용으로 베어링 수명을
연장하고 레이디얼 하중 및 축하중 용량 극대화.
- Output Shaft
Shaft is One-Piece design, for ensure the
planetary gears could accurate
transmission. Enlarge the front bearing
and larger span to rear bearing for largest
radial and axial loading.



- 링기어
고강도 합금강 재질, 헬리컬기어 디자인으로 정도가
뛰어나고 내마모성이 강하며 소음이 적음.
- Inner Gear Box
High strength alloy steel, Gear is Helical gear
design for high-precision, high abrasion and
lower noise.



- 선기어/유성기어
1 : 고정밀 합금강 재질, 표면 경도가 높고
내마모성, 내충격성이 뛰어남.
- 2 : 헬리컬 디자인으로 동력 전달능력이
뛰어나고 소음과 진동을 최소화.
- Sun/Planetary Gear
1 : High strength alloy steel, high
hardness of surface,
anti-abrasion and high impact.
- 2 : Gear is Helical gear design,
high efficiency, lower noise
and lower vibration.

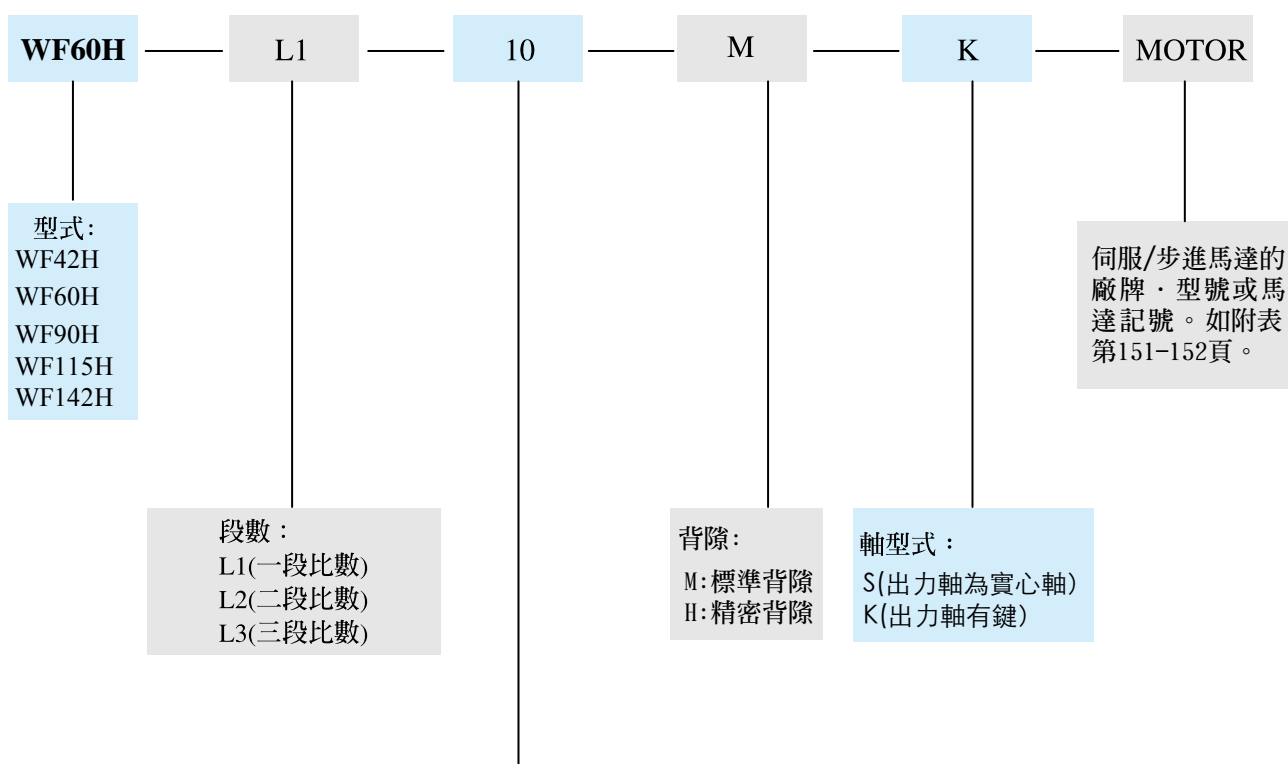
WF-H 系列-性能表

	段數	減速比 (i)	WF42H	WF60H	WF90H	WF115H	WF142H	WF180H
額定輸出力矩 T_{2N} (Nm)	一段 (L1)	3	14.1	36.0	116	238	571	1050
		4	12.0	38.0	122	250	599	1103
		5	14.0	36.0	117	240	575	1058
		6	13.2	34.0	108	229	533	983
		7	11.9	34.0	110	225	538	992
		8	12.9	33.0	103	212	506	936
		10	10.8	31.0	102	208	496	918
	二段 (L2)	15	14.1	36.0	116	238	571	1050
		20	12.0	38.0	122	250	599	1103
		25	14.0	36.0	117	240	575	1058
		30	13.2	36.0	116	238	571	1050
		35	11.9	34.0	110	225	538	992
		40	12.9	38.0	122	250	599	1103
		50	10.8	36.0	117	240	575	1058
		60	—	34.0	108	229	533	983
		70	—	34.0	110	225	538	992
		80	—	33.0	103	212	506	936
		100	—	31.0	102	208	496	918
急停力矩 (Nm)	L1, L2	3~100	3倍額定輸出力矩 (Nm)					2.5倍額定輸出力矩 (Nm)
額定輸入轉速 n_{1N} (rpm)	L1, L2	3~100	3000	3000	3000	3000	2500	2500
最大輸入轉速 (rpm)	L1, L2	3~100	6000	6000	6000	6000	5000	5000
精密背隙 (arcmin)	L1	3~10	≤ 4	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3
	L2	15~100	≤ 6	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
標準背隙 (arcmin)	L1	3~10	≤ 6	≤ 5	≤ 5	≤ 5	≤ 5	≤ 5
	L2	15~100	≤ 8	≤ 7	≤ 7	≤ 7	≤ 7	≤ 7
扭轉剛性 (Nm/arcmin)	L1	3~10	2.13	4.3	11	32	65	145
	L2	15~100	1.28	2.6	6.5	19	39	87
最大容許徑向力 F_{2rB} (N)	L1, L2	3~100	640	1200	2400	4000	6100	11500
最大容許軸向力 F_{2aB} (N)	L1, L2	3~100	320	600	1200	2000	3050	5750
使用壽命 (hrs)	L1, L2	3~100	20000					
使用溫度 (°C)	L1, L2	3~100	-10°C+90°C					
潤滑	L1, L2	3~100	合成潤滑油脂					
安裝方向	L1, L2	3~100	任意方向					
噪音值 (dB(A))	L1, L2	3~100	≤ 56	≤ 58	≤ 60	≤ 63	≤ 68	≤ 68
效率 (%)	L1	3~10	≥ 97%					
	L2	15~100	≥ 94%					
重量 (kg)	L1	3~10	0.43	1.26	3.7	8.0	14.2/15.2	26.0
	L2	15~100	0.7	1.72	4.1/5.2	8.8/10.5	16/20	30.6
防護	L1, L2	3~100	IP65					

- 1: 減速比=伺服馬達輸入轉速(rpm)/減速機輸出軸轉速
- 2: 背隙值為在 2% 額定扭力的扭力定義下測得
- 3: 徑向力/軸向力與壽命,是在輸出轉速100rpm,且作用力在輸出軸中心位置
- 4: 連續運轉時,壽命為一半
- 5: 噪音為伺服馬達輸入轉速3000rpm,減速機速比10比,無負載,距減速機 1M 的情況下所測得
- 6: 如有特殊規格請洽各區域的代理/經銷商

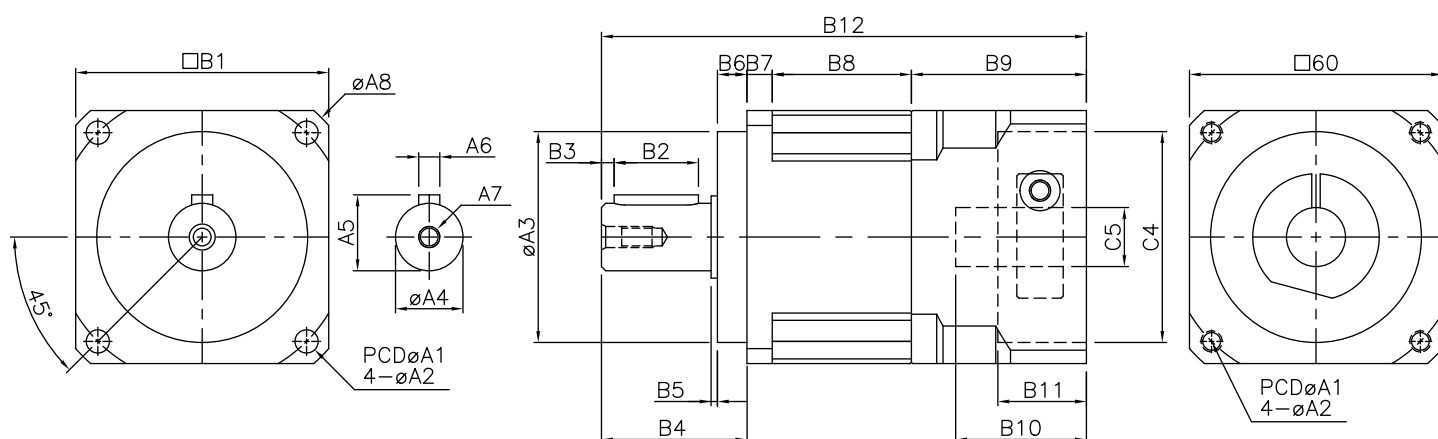
WF-H 系列

型號開立：



規 格 \ 段 數	一段減速比數	二段減速比數	三段減速比數
WF42H	3,4,5,6,7,8,10	15,20,25,35,40,50	150,200,250,350,400,500
WF60H	3,4,5,6,7,8,10	15,20,25,30,35,40,50,60,70,80,90,100	150,200,250,300,350,400,450,500,600,700,800,900,1000
WF90H	3,4,5,6,7,8,10	15,20,25,30,35,40,50,60,70,80,90,100	150,200,250,300,350,400,450,500,600,700,800,900,1000
WF115H	3,4,5,6,7,8,10	15,20,25,30,35,40,50,60,70,80,90,100	150,200,250,300,350,400,450,500,600,700,800,900,1000
WF142H	3,4,5,6,7,8,10	15,20,25,30,35,40,50,60,70,80,90,100	150,200,250,300,350,400,450,500,600,700,800,900,1000
WF180H	3,4,5,6,7,8,10	15,20,25,30,35,40,50,60,70,80,90,100	150,200,250,300,350,400,450,500,600,700,800,900,1000

WF-H 螺旋齒系列外型 尺寸圖／表 L1

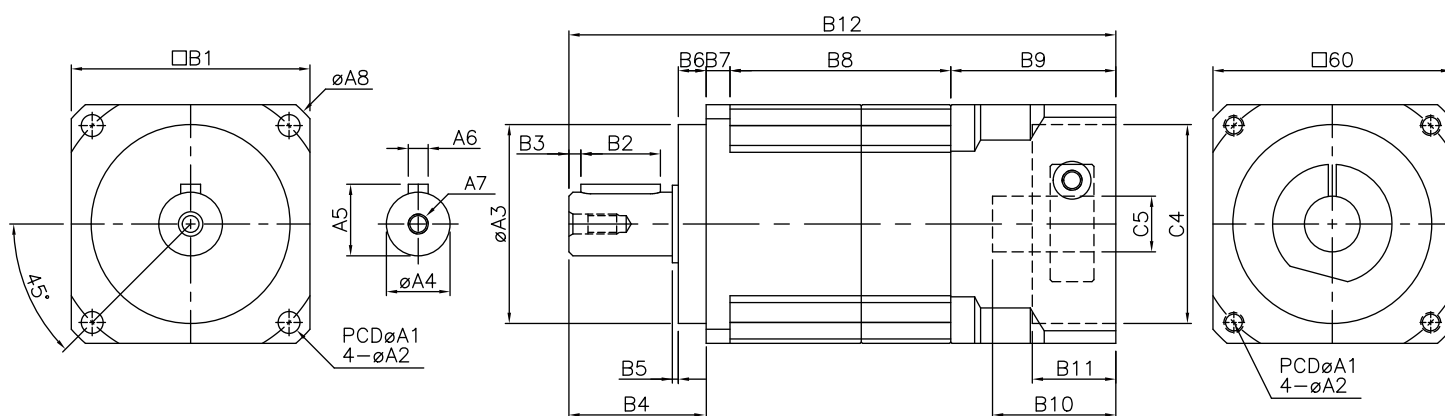


(單位:mm)

	Model Code	WF42H	WF60H	WF90H	WF115H	WF142H	WF180H
A	A1	50	70	100	130	165	215
	A2	3.5	5.5	6.8	8.6	11	13
	A3	35	50	80	110	130	160
	A4	13	16	22	32	40	55
	A5	15	18	24.5	35	43	60
	A6	5	5	6	10	12	16
	A7	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M16x2.0P	M20x2.5P
	A8	56	80	116	152	185	240
B	B1	42	60	90	115	142	180
	B2	15	20	30	40	65	70
	B3	2	3	3	5	5	6
	B4	25.5	34.5	51.5	66	97	105
	B5	1	1.5	1.5	2	3	3
	B6	5.5	7	10	12	15	20
	B7	4	6	8	10	12	15
	B8	22.5	33	39	47	56	63
	B9	33	41.5	55	70	98.5	108
	B10	26	31	43.5	56	83	87
	B11	17	21	30	8	20	8
	B12	85	115	153.5	193	263.5	291
C	C1	42	60	90	120	176	176
	C2	46	70	90	145	200	200
	C3	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M12x1.75P
	C4	30	50	70	110	114.3	114.3
	C5	5~8	6~14	14~24	16~24	24~42	24~42

1. B9~C5為標準的連接法蘭尺寸，實際尺寸會因馬達型號不同而變動，入力馬達記號如附表第151-152頁
 2. B12尺寸也會因所搭配伺服馬達不同而有改變，如需詳細外型尺寸請連絡本公司

WF-H 螺旋齒系列外型 尺寸圖／表 L2



(單位:mm)

	Model Code	WF42H	WF60H	WF90H	WF115H	WF142H	WF180H
A	A1	50	70	100	130	165	215
	A2	3.5	5.5	6.8	8.6	11	13
	A3	35	50	80	110	130	160
	A4	13	16	22	32	40	55
	A5	15	18	24.5	35	43	60
	A6	5	5	6	10	12	16
	A7	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M16x2.0P	M20x2.5P
	A8	56	80	116	152	185	240
B	B1	42	60	90	115	142	180
	B2	15	20	30	40	65	70
	B3	2	3	3	5	5	6
	B4	25.5	34.5	51.5	66	97	105
	B5	1	1.5	1.5	2	3	3
	B6	5.5	7	10	12	15	20
	B7	4	6	8	10	12	15
	B8	39.5	55.5	70.5	47	102.5	115
	B9	33	41.5	55	70	98.5	98.5
	B10	26	31	43.5	56	83	87
	B11	17	21	30	8	20	8
	B12	102	137.5	185	193	310	333.5
C	C1	42	60	90	120	176	176
	C2	46	70	90	145	200	200
	C3	M4x0.7P	M5x0.8P	M6x1.0P	M8x1.25P	M12x1.75P	M12x1.75P
	C4	30	50	70	110	114.3	114.3
	C5	5~8	6~14	14~24	16~24	24~42	24~42

1. B9~C5為標準的連接法蘭尺寸，實際尺寸會因馬達型號不同而變動，入力馬達記號如附表第151-152頁
2. B12尺寸也會因所搭配伺服馬達不同而有改變，如需詳細外型尺寸請連絡本公司



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