

RADIO CONTROL MODEL

INDEX '92

HELICOPTERS

OPTIONAL PARTS



HIROBO



60 TOW COBRA AH-1SII

- Metal machining rotor head SSR-III.
- New frame for 60 to 80 size scale series helicopters.
- Compatible with SST series helicopters.
- Realistically detailed with Tow launcher, gun sight, wipers, door handles, and other accessories.
- Shaft starter.
- Body frame members already built in.
- Main Rotor dia./1,550mm
- Body length/1,490mm
- Overall weight/5,800g
- Engine/60 - 80 class

0404-944



60 BELL 222

- Metal machining rotor head SSR-III.
- Detailed scale cockpit area.
- Realistically detailed with wiper, door handles, and other accessories.
- Requires 60-80 size engine.
- Including retractable landing gear.
- Shaft starter.
- Body frame members already built in.
- Main Rotor dia./1,550mm
- Body length/1,590mm
- Overall weight/5,600g
- Engine/60 - 80 class.

0404-945



Most realistic scale model closest to fullsize.

Every inch of details and feelings of the materials are represented in the cockpit. Laying of a seat can be seen at glance. Reality of a pilot is felt beyond the wiper. Hirobo scale series sophisticates one by one the completeness and a scene of air is created, minutely. Knowledge of people paid to flying objects has been taken into account, and a beautiful form can be reproduced. Dream is put to a real expression. All technologies possessed are used in perfecting this kit. In your room, it maintains its existence. The world of a scale kit realized in your fingers will deliver adult's tastes. Besides, it will deliver a new R/C life and stimulation, too.

MRBIII Rotor Head Conversion Set 0402-135
Cockpit Accessory Parts Set for 30 Lama 0402-342
Exterior Accessory Parts Set for 30 Lama 0402-345

★ The photograph shows 30 Lama SA-315B having a full range of optional extras.



VERTOL KV-107II 32/46

- Multi Rotor BladeFly-barless head bring realistic smooth flight.
- Tooth belt drive system brings an excellent mechanism of light-weight and high rigidity.
- Fuselage is made of F.R.P.
- Decal for U.S. MARINE and Japan Self-defense Forces are included.
- You can use any Radio sets for Heli. by mechanical mixing system.
- Rear mast has a tensioner for drive belt.
- Gear ratio/Engine: F. rotor :R. rotor/9.625:1:1
- Direction of main rotor/F. rotor---Clock wise, R. rotor---Counter clock wise
- Gyro/1~3 (Elevator, Rudder, Aileron)
- ※ It's necessary to use "Gyro" for elevator (pitch control)
- Rotor dia./Front 1,050mm·Rear 1,050mm
- Body length/970mm ● Body width/320mm
- Height/400mm
- Overall weight/4,350 - 4,800g
- Engine/32 - 46 class ● Radio/5ch. 5s

0406-902

lama SA-315B

- Compatible with Shuttle series.
- Shaft driven tail rotor system.
- Utilizes main frame for new scale series helicopters.
- Scale tail truss assembly.
- Accommodates optional MRB-III (3 Blade) rotor head, available separately.
- Engine standard 32-35 class, but up to 46.
- Main Rotor dia./1,240mm
- Body length/1,110mm
- Overall weight/3,100g
- Engine/32 - 46 class

0402-991



★ The photograph shows a cockpit having optional extras.

BELL 222

- Main frame for scale series helicopters.
- Realistic FRP Body.
- Injection molded tail fin.
- Including retractable landing gear.
- Engine standard 32-35 class, but up to 46.
- Main Rotor dia./1,240mm
- Body length/1,210mm
- Overall weight/3,300g
- Engine/32 - 46 class

0402-992



NEW CONCEPTION MH-10
BK117



NEW CONCEPTION MH-10
écureuil 2

- Almost ready to fly factory assembled with OS. MAX-CZ-H engine installed with muffler.
- Average assembly time is only 2 hours including radio gyro installation.
- Light weight ABS scale fuselage.
- Main rotor dia./900mm
- Tail rotor dia./185mm
- Body length/850mm (BK117), 930mm (écureuil 2)
- Body width/190mm
- Overall height/300mm
- Gear ratio/9.7:1:5
- Overall weight/1,900g
- Radio/4ch. 5s (Mini size)

0408-902 (MH-10/BK117) 0408-903 (MH-10/ÉCUREUIL2)

**SST-EAGLE**

- Hirobo's top-of-the-line F3C competition machine.
 - 1989-1990 Worldchampionship & 1989 Japanese Nationals Winner SSR-II standard equipped.
 - S-Type: Tail shaft drive system.
 - B-Type: Tail belt drive system.
 - Newly modified higher strength main side frames.
 - Large size 500cc fuel tank standard equipped.
 - New high precision light weight tail gear system.
 - Various high precision option parts available.
- Tail Drive Set Saft Type** 0404-939
Tail Drive Set Belt Type 0404-940

**SST-CONDOR**

- HIROBO'S Newest metal type rotor head, the SSR-III
 - Now has the same frame and servo mount as the new SST-EAGLE, also available with shaft drive tail rotor.
 - A 60 size helicopter for the beginner to the expert flier.
 - There are 3 to choose from, so pick the one you like.
- ① New SST-CONDOR Shaft Type SSR-III Rotor Head
 - ② New SST-CONDOR Shaft Type FFZ Rotor Head
 - ③ New SST-CONDOR Belt Type FFZ Rotor Head

Model	JESS	NOVA(M)
SST-EAGLE(S)(B)	(S)○ (B)△	○
SST-CONDOR(S)(B)	(S)○ (B)△	(S)○ (B)△
BBZ-STORK	×	△

○ : OK, × : will not fit, △ : need modification

0404-931 **JESS**

- Wider & broad opening for easy maintenance.
- Storing tail boom pipe reducing rudder vibration.
- Use for: SST-EAGLE, *SST-CONDOR, *BBZ-STORK
- * Exclude skid foot Assy.

Model	SST-CONDOR	SST-EAGLE
Main rotor dia.	1,500mm	1,500mm
Tail rotor dia.	280mm	280mm
Body length	1,340mm	1,330mm
Overall weight	4,500g	4,600g
Engine	60-61 class	60-61 class
R/C unit (for heli)	4ch. 5 servo	4ch. 5 servo
Part No.	0404-041 Shaft Type SSR-III R/H 0404-942 Shaft Type FFZ R/H 0404-943 Belt Type FFZ R/H	0404-936 Shaft drive 0404-937 Belt drive 0404-938 Mechanical kit

0404-903 **NOVA(M)**

- Use for: SST-EAGLE, *SST-CONDOR, *BBZ-STORK
- * Exclude skid foot Assy.

**FFZ Rotor Head Assy**

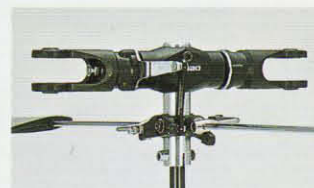
0402-215
This new resin-made rotor head has been accomplished a high performance with low cost.

**SSZ Rotor Head** 0404-224

Quick & sharp response. Applicable to all Hirobo helicopter with 10φ main mast.

**Shuttle NS Rotor Head Assy**

0402-122
For standard Shuttle & XX, Floating Type. Higher stability.

**Shuttle FZ Rotor Head Assy**

0402-214
This mechanism contributes to enhancing the flying performance and the stant ability. It is available in all the conventional types of SHUTTLE.



- Fully completed ready to fly.
- High power O.S. MAX 32F-H engine.
- New one piece feathering spindle, easy replacing for maintenance.
- XX model: All ball bearings (18 pcs) in control linkage part.
- New modified higher impact strength side frames.
- New open type tail drive unit case.

*SHUTTLE

Shuttle. Shuttle XX



- New FZ rotorhead increase both aerobatic performance and stability.
- Includes Shuttle option parts Weighted Long Main Blades, Long tail boom and Long tail drive belt as standard equipment.
- New modified higher impact strength side frames.
- New open type tail drive unit case.
- Enlarged fuel tank now holds 230 c.c. instead of 190 c.c.
- Includes C.G. balanced stabilizer paddle for extra aerobatic performance.
- ZX model includes 20 ball bearings for precise and smooth operation.
- ZX model includes All-Metal clutch as standard equipment.
- ZX model includes slanted engineering plastic landing gear and tail boom brace.
- Shuttle ZX Assembly kit 0402-968

*SHUTTLE Z

Shuttle Z.ZX



- Fully completed kit with R/C system installed.
- High power O.S. 32-FHX recoil starter engine included.
- ZX model includes O.S. 32-FH.
- 1000mAh receiver nicad battery with charger included.

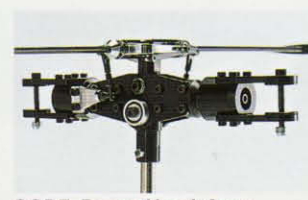
Shuttle ZX SUPREME

*SHUTTLE ZX SUPREME

MODEL	Radio	Servo	Gyro	Engine Starting accessories
SHUTTLE SUPREME	FUTABA challenger FM5NH	FP-S148	FP-G154	Included-Mars 1.5V battery, battery cord, fuel pump.
SHUTTLE ZX SUPREME	FUTABA FF7	FP-S3001	FP-G154	—



SSR-II Rotor Head Assy
0404-220
New seesaw type with large size damper rubbers interchangeable to DDF and/or SSR-II rotorhead. 1989 world champion winner.



SSR-III Rotor Head Assy
0404-236
From the SSR-II blood line comes a high quality metal Rotor Head at a lower price.



Mast Housing With Thrust Brg 0404-053
Main mast housing with thrust bearing. Especially good for smooth autorotation descending. For BBZ Stork; SST Condor SST Eagle.



EX Main Gear
EX main gear, drive
95T 0404-056, 97T 0404-057,
99T 0404-058
For SST Condor & Eagle.



EX-W Type Washout Set
0404-055
High precision machining with 4pcs bearings. Good for FAI patterns. Applicable to SST Condor; SST Eagle; BBZ Stork.



Shuttle MRB-III Rotor Head Conversion Set 0402-135
This conversion set includes MRB rotor head, main blade, swash plate, etc. which are used for remodelling SHUTTLE to three-rotor type.



Shuttle SZ Rotorhead Assy
0402-242
An all metal rotorhead with trust bearing for the ultimate in quick, precise and repeatable control.



Shuttle XX & ZX Bearing Set 0402-123
Complete set of 18pcs bearing and shims for conversion of standard Shuttles to XX specification.



SE Clutch Set 0402-126
One-piece all metal construction provides excellent durability, improved alignment, and smooth engagement.



Metal Swash Plate 0402-140
Inline, high precision, all metal construction with 8mm center sliding bushing.



Shuttle G

- SE CLUTCH BELL
 - Machined Aluminum for precision and strength.
- SE AUTOROTATION TAIL DRIVE
 - Autorotation clutch is included to drive the tail during autorotation, making it easier to land in the wind.
- SE RADIUS ARM ASSY
 - Removes torque-induced motion from the swash.
- SE DOUBLE WASHOUT
 - Metal control arms for quick response.
- SYMMETRICAL BLADES
 - Fully symmetrical for dynamic and inverted flight.
- SE GUIDE PULLEY
 - For precision and long life.
- SE BEARING AILERON LEVER
 - Metal Bell Cranks for sharp control.
- SE ROTOR HEAD
 - Metal Head with thrust bearings for high rpm and quick control.
- SE MAIN GEAR
 - Machine cut main gear and aluminum autorotation housing.
- 8mm DIA SWASH PLATE
 - Metal for long life and precision.
- SE MUFFLER
 - Extremely quiet and delivers more power
- SE MAIN FRAME AND SERVO MOUNT
 - Metal Frame is stiffer for better control response, also better cooling.
- SE SHAFT START
 - No more need for a belt making it easier to start the engine inside scale bodies.
- SE TAIL UNIT AND TAIL LEVER
 - Machine cut aluminum parts for long life and sharper response.

Model	SHUTTLE	SHUTTLE WITH RECOIL STARTER	SHUTTLE XX	SHUTTLE XX WITH RECOIL STARTER	SHUTTLE Z	SHUTTLE Z WITH RECOIL STARTER	SHUTTLE ZX	SHUTTLE ZX WITH RECOIL STARTER	SHUTTLE SUPREME	SHUTTLE ZX SUPREME
Lenght with rotor	1,320mm	1,320mm	1,320mm	1,320mm	1,458mm	1,458mm	1,458mm	1,458mm	1,320mm	1,458mm
Overall lenght	1,005mm	1,005mm	1,005mm	1,005mm	1,070mm	1,070mm	1,070mm	1,070mm	1,005mm	1,070mm
Overall width (at skid)	220mm	220mm	220mm	220mm	220mm	220mm	198mm	198mm	220mm	198mm
Overall height	395mm	395mm	395mm	395mm	395mm	395mm	385mm	385mm	395mm	385mm
Main rotor dia.	1,100mm	1,100mm	1,100mm	1,100mm	1,240mm	1,240mm	1,240mm	1,240mm	1,100mm	1,240mm
Tail rotor dia.	215mm	215mm	215mm	215mm	215mm	215mm	215mm	215mm	215mm	215mm
Rotordisk area	Main rotor	95dm ²	95dm ²	95dm ²	95dm ²	120dm ²	120dm ²	120dm ²	120dm ²	95dm ²
	Tail rotor	3.8dm ²	3.8dm ²	3.8dm ²	3.8dm ²	3.8dm ²	3.8dm ²	3.8dm ²	3.8dm ²	3.8dm ²
Gear ratio	Main rotor: Engine	1:9.625	1:9.625	1:9.625	1:9.625	1:9.625	1:9.625	1:9.625	1:9.625	1:9.625
	Main rotor: Tail rotor	1:5.5	1:5.5	1:5.5	1:5.5	1:5.5	1:5.5	1:5.5	1:5.5	1:5.5
Overall weight	2,300g	2,300g	2300g	2,300g	2,300g	2,300g	2,350g	2,350g	2,300g	2,350g
Engine	OS.MAX32F-H	OS.MAX32F-HX	OS.MAX32F-H	OS.MAX32F-HX	OS.MAX32F-H	OS.MAX32F-HX	OS.MAX32F-H	OS.MAX32F-HX	OS.MAX32F-HX	OS.MAX32F-H
Part No.	0402-953	0402-958	0402-956	0402-963	0402-959	0402-972	0402-961	0402-973	0402-955	0402-986



Cone Starter Clutch Assembly 0404-110
For converting SST Eagle's belt start system into cone start.



EX Starter Pulley Set
OS engine type: 0404-113
YS engine type: 0404-114
latest design for accurate engine shaft alignment. Eliminate engine vibrations.



EX Autorotation Clutch 0404-119
Tail rotating controllable in autorotation descending. Necessary to FAI rule.



SST Tail Drive Set-S 0404-939
For converting SST's belt tail drive system into shaft system.



SST Tail Drive Set-B 0404-940
For converting SST's shaft tail drive system into belt system.



Cooling Fan 0404-118



Shuttle SE Radius Arm Assy 0402-232
Called an anti rotation link, this part reduces torque-induced motion of the swash plate for more accurate control.

Shuttle SE W Type Wash Out 0402-233
An all metal washout assembly that permits quick input response to the flybars.



Shuttle SE Main Frame Assy 0402-245

Shuttle SE Servo Mount Assy 0402-246
Grade up the effective of cooling for engine to grade up the strength of servo mount contributes controlling exactly. (Using full set)



Shuttle SE Shaft Starter with Bell 0402-247
Better starting power transfer and for use with scale bodies.



Shuttle Tail Boom 0402-267
Light weight and high rigidity. Carbon FRP made.

OPTIONAL BODY



Shuttle NOVA 0402-943
Painted body

* Exclude this skid foot Assy.
* Main blade L-550, Tail boom pipe L-617, and timing belt are necessary to install.



Shuttle JetRanger 0402-911
Painted body

* Exclude this skid foot Assy.
* Main blade L-550, Tail boom pipe L-617, and timing belt are necessary to install.

10 CLASS HELICOPTER



NEW CONCEPTION
MH-10

- Easy controllable bell-hiller combination main rotor head.
- Totally new innovative power transmission mechanism and washplate control system.
- High strength engineering plastic main side frames.
- Cocked belt tail drive.
- World smallest handy size glow engine helicopter.
- Almost ready to fly factory assembled with OS MAX-CZ-H engine installed with muffler. Average assembly time is only 2 hours including radio gyro installation.
- High strength landing skids stands for hard landing.
- Light weight ABS scale fuselage.
- Main rotor dia./900mm
- Tail rotor dia./185mm
- Body length/850mm
- Body width/190mm
- Overall height/300mm
- Gear ratio/9.7:1:5
- Overall weight/1,700g
- Radio/4ch. 5s(Mini size)

0408-901

* Tail housing set showing in this picture is optional parts 0408-052



Side Exhaust Muffler

Round type high efficiency and low noise. With nipple for muffler pressure. For OS61: 0404-340
For ENYA, YS: 0404-341



Tail Drive Pipe 0404-338

Super light weight enables efficient, power-up of Gyro. Carbon FRP made. 60 class.



Tail Boom Pipe 0404-339

Light weight and high rigidity. Carbon FRP made. 60 class.



Tail Control Shaft 2523-008

Good for accurate and smooth control. High rigidity, less resistance. Carbon FRP. 30 - 60 class.



Shrinkable Tube

Tail rotor shrink tube. 36mm width for 40- 60 class heli. Black: 2400-014 Red: 2400-015 White: 2400-016
Main rotor shrink tube. 62mm width for 40- 60 class heli. Black: 2400-011 Red: 2400-012 White: 2400-013
50mm width for Shuttle White: 2400-017



Air Cushion Skid 2513-015

For beginners training aid. Yellow/black two tone. Applicable to all types Shuttle and others.



Z- Starter 2400-002

Powered by 72/8.4V Nicad packs and/or 12V. With one-way bearing. .10 to .61 size engines. For most handy helicopter engine start.

Z- Starter(Revers-Type) For VERTOL 2400-010
Revers Gear Set 2400-009



12V Adaptor cord 2400-001

12V Adapter Cord for Z- Starter .46- .61 engine start. Please use 12V battery to start. .46 - .61 class engine.



Mars Battery 1.5V 2401-004

Long life 1.5V dry battery for plug heat (with plug checker)



One touch booster cord 0402-065

One Touch Plug Heat Booster Cord. For all types side frame helicopters also scale fuselages.



CYCLIC PRACTICE PLATE

- Indoor table top simulator for aileron and elevator control.
- Available both for 10mm, 8mm size mast of helicopters.
- Easy to handle; utilizes Shuttle, Eagle, Condor, in common.

0402-993



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*Specifications are subject change without notice improvement and modification.