

MACHINE MANUAL

OBS SERIES

(OBS150)

 **KOMATSU LTD.**
TOKYO, JAPAN

	CONTENTS	0201-1
A. SPECIFICATIONS		
1. Specifications and accuracy		A101
2. Limit on working capacity		A201
2.1. Limit on capacity		
2.2. Allowable stroke capacity		
2.3. Allowable eccentric load capacity		
2.4. Slide speed per minute in an intermittent operation		
2.5. Allowable working torque		
2.6. Precautions for working capacity		
2.7. Allowable working capacity curves		A202
3. Specifications of accessories		
3.1. Standard accessories		A301
4. Press dimensions		A401
5. Arrangement of press equipment		A501
B. ACCESSORIES		
1. Die cushion (optional)		B101
2. Slide knockout (optional)		B102
3. Foot switch (optional)		B501
4. Portable push button panel (optional)		B502
5. Press tonnage meter (optional)		B503
6. HITACHI HC Control equipment OBS60 ~ OBS200		B508
7. HITACHI Inverter OBS25 ~ OBS45		B520
C. SAFETY		
1. Safety precautions		C101
2. Safety device		C201
2.1. Overrun detector		
2.2. Motion detector		
2.3. Dual valve		
2.4. Pressure switch for clutch and balancer		
2.5. Safety control circuit		
2.6. Key lock		

OBS-21

	CONTENTS	0201-2
2.7.	Two-hand operated safety device	
2.8.	Safety block (optional)	
2.9.	Safety plug (optional)	
2.10.	Detector of clutch valve fault	
2.11.	Side guard (optional)	
2.12.	Light guard safety device (optional)	C202
3.	Stopping time & safety distance	C301
3.1.	Stopping time (Ts)	
3.2.	Max. stopping time (Tl + Ts)	
3.3.	Safety distance (D)	
3.3.1.	In operator's-panel for two-hand engagement	
3.3.2.	In light guard safety device	
D.	INSTALLATION	
1.	Installation of the press	D101
1.1.	Installation with anchor bolts	
1.2.	Installation with girder type foundation	
1.3.	Installation of shock absorber (optional)	D102
1.3.1.	Rubber cushion	
1.3.2.	Cushion mount	
1.3.3.	Cushion MAV	
2.	Preparations for press operation	D201
2.1	oil supply	
2.1.1.	Clutch box oil bath	
2.1.2.	Slide adj	
2.1.3.	Overload protector	
2.1.4.	Oil pump for gibs	
2.1.5.	Die cushion (optional)	
2.1.6.	P.T.O. Gear box (optional)	
2.2.	Connection of the shop air line	
2.3.	Connection of electric power line	
3.	Check at test operation	
	(Before shipping out of the factory)	D301

	CONTENTS	0201-3
E. OPERATION		
1. Arrangement of operating controls		E101
Fig. E-1 Arrangement of operating panel and push button		
Fig. E-2 Arrangement of air operated		E102
2. Press operation control		
2.1. Types of operation control		E201
2.2. Preparations and checks prior to press operation		E202
2.3. Emergency stop during operation		E203
3. Adjustment control		E301
3.1. Die height adjustment (Manual adjustment)		
3.2. Die height adjustment (Electrical adjustment)		
3.3. Rotary cam limit switch adjustment		
3.4. Air pressure adjustment		
3.5. Restoring the hydraulic overload protector to its original (not actuated) condition		E302
F. MAINTENANCE		
1. Daily servicing cares		F101
1.1. Servicing cares before operation		
1.2. Periodic servicing		
2. Trouble shooting guide		F201
3. Constructions and functions		F301
3.1. Press driving unit		
3.2. Clutch and brake		
3.3. Slide and hydraulic overload protector		
3.4. Balancer		
3.5. Overrun and motion detectors		
3.6. Rotary cam limit switches		

	CONTENTS	0201-4
Fig. F-1	Press drive reduction gearing	F390
Fig. F-2	Construction of Clutch and Brake	
Fig. F-3	Construction of Slide	
Fig. F-4	Construction of Balancer	
Fig. F-5	Construction of Rotary cam	
4.	Servicing	F401
4.1.	Change of lubricating oil in the gear box	
4.2.	V-belt replacement	
4.3.	Clutch and brake inspection	
4.4.	Disassembly and reassembly of clutch-brake unit	
4.5.	Disassembly and reassembly of the press driving unit	
4.6.	Gib adjustment	
5.	Piping diagram	F501
	How to read electrical circuit diagram	
6.	Electric circuit diagram	F601
8.	List of commercially available lubricants	F801
9.	Major purchased units and parts	F901
10.	List of major electric components	
11.	LIST OF RECOMMENDED SPARE PARTS	G101