# **MODULR SLIDING DESIGN PULLERS**

## MODULR SLIDING DESIGN PULLERS FOR REMOVING BEARINGS, PULLEYS AND COUPLINGS.





Ref. Fig. 1(a)

Ref. Fig. 1(b)

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These are heavy duty Sliding design mechanical pullers both in 2 jaw & 3 jaw configuration. Ref. Fig 1(a) & 1(b). Sliding design offers the following advantages:-

- a) Jaws are always Parallel Ref. Fig.-2. This means uniform load on the item being dismounted, hence they can be removed without damage & REUSED. In conventional design pull-Load is at an angle. Ref. Fig 3(a)
- b) The LOAD is always co-linear to the Spindle this reduces any chance of Spindle bending under HIGH-LOAD. Ref. Fig 3(b). In Conventional puller there is a chance. Ref. Fig 3(a) ii.



c) Zero Slippage:- Once Puller jaw are adjusted for diameter & locked (Locking bolt) there is nearly zero Slippage. Ref. Fig - 2

Since All parts are made from Forged High grade Alloy steel, duly hardened & precision ground, the LOAD capacity is Excellent, also ensuring Excellent Reliability & long life. Moreover we provide a Rotating Center, Tommy to exert extra Force to dismount machinery elements and G.M. Ring to protect Spindle. (You need to lock puller rotation by putting a rod. Ref. fig. 4.)



Ref. Fig. 4

### Advantages of Modular Design:-

1) Optional Accessories like Chisel type Jaws, to extract Bearings having very low backside clearance, extra holder to increase reach, Fan jaws to remove Motor Fans, can be easily fixed & removed. THIS MAKES THE **PRODUCT VERSATILE**.

2) Any individual component can be individually replaced, whereas in many other pullers no replacement of individual components is possible.

# ACCESSORIES

CHIISEL JAW



EXTRA HOLDER



JAWS FOR MOTOR FANS

#### 1) CHISEL JAWS :

Many a times there is not enough space behind bearing, gears etc. to accommodate jaws of existing pullers. We offer chisel type jaws which are fully interchangable with standard jaws. These Chisel jaws are common for all models except P01, P20. Chisel jaws are not required for model P01 & P20. Two jaw pullers would require 02 chisel jaws, whereas three jaw pullers would require 03 chisel jaws. Load carrying capacity of these chisel jaws would be **50**% of standard jaws.

#### 2) EXTRA HOLDERS :

In many applications reach of standard puller is insufficient since distance between edge of shaft and bearing etc. is large. We can offer extra holders to extend reach. (two holders for 02 jaw puller and three holders for 03 jaw puller). Along with extra holders a rotating distance piece is given to extend length of spindle. These extra holders are available for 100mm, 150mm & 200mm length. We can thus get a maximum reach of 500mm.

#### 3) JAWS FOR MOTOR FANS :

These are specially made to dismount fans of motors. Normally motor fans have two slots. These slots can be square, round or triangular. The tip of the jaw can accommodate slot size of 8mmx8mm. These fan jaws are totally interchangeable with standard jaws. These jaws have low load carrying capacity and should only be used for removing motor fans. These fan jaws are suitable for only two jaw pullers since motor fans have only 02 slots. Fan jaws are separate for P01 & common for all other two jaw models.



EXTRA HOLDER

**Bisection Plates:** They can be used to dismount bearings having very low clearance behind them. Ask for literature on Jacking Extractors for more details. Ref. Fig. 5(a)

**Trisections Plates:**- They can also be used for dismounting bearings having very low clearance behind them. Ref. fig. 5(b) The Trisection Plate has to be put behind the bearing & Jaws have to be put behind the Trisection Plate. Trisection plates have a higher capacity.



Ref. Fig. 5



Ref. Fig. 5 (a)



Ref. Fig. 5(b)

The product thus offers the maintenance engineers a **RELIABLE**, **HEAVY DUTY COST EFFECTIVE product** to dismount Bearing, Gears, Pulleys & couplings. To decide the load capacity **ESTIMATED LOAD CALCULATION** of **Mechanical/Hydraulic puller**, Proceed as below:-

1) TYPE OF INDUSTRY

2) TYPE OF APPLICATION

Generally pulleys & couplings require 1.5 TO 2 times HIGHER LOAD because of Atmospheric, corrosion between Shaft/Couplings or Shaft/Pulley.

1) TYPE OF INDUSTRY : (ENGINEERING)

a) Bearing = 0.1/0.12 of Shaft Ø Ex-1 Shaft Ø60=Load  $0.12 \times 60=6/7$  Tons. Min. 5 Tons.

b) Pulley/ Coupling = 0.15 Shaft Ø E.g Shaft Ø80=Load 0.15 X 80=12 Tons. Min. 10 Tons.

#### 2) CHEMICAL /PROCESS:-

a) Bearing 0.15 of shaft  $\emptyset$  E.g Shaft  $\emptyset$ 80=Load 0.15 X 80 =12 Tons. MIN.

b) Pulley/Coupling 0.25 X Shaft Dia E.g Shaft Ø80=Load 0.25 X 80 =20 Tons. MIN.

Hence it is imperative to identify all machine elements which need to be dismounted, to select a puller. In short you need 2/3 Pullers a) 3-5 Tons b) 8-12 Tons c) 20 Tons OR above. Hydraulics have an advantage in this case. **MOREOVER UNLESS PULLEY/COUPLING IS DISMOUNTED, YOU CANNOT DISMOUNT BEARINGS.** Hence you need a high capacity puller to dismount these.

To decide the model please determines the following:-1) Min dia of items 2) Max. dia of items 3) Max. Reach (Length) Capacity i.e. withdrawal load.

# MODEL SELECTION CHART TABLE I TWO JAW EXTRACTORS

Part No.	MODEL	MIN. DIA (mm) →←	MAX. DIA (mm)	REACH (mm)	WITHDRAWAL LOAD (kg.)				
MPU-01	P01	20	100	130	1500				
MPU-02	P02	30	150	200	5000				
MPU-03	P03	30	150	250	5000				
MPU-04	P04	30	150	300	5000				
MPU-05	P05	30	200	200	5000				
MPU-06	P06	30	200	250	5000				
MPU-07	P07	30	200	300	5000				
MPU-08	P08	40	250	200	8000				
MPU-09	P09	40	250	250	8000				
MPU-10	P10	40	250	300	8000				
MPU-11	P11	40	300	200	10000				
MPU-12	P12	40	300	250	10000				
MPU-13	P13	40	300	300	10000				
MPU-14	P14	50	450	200	10000				
MPU-15	P15	50	450	250	10000				
MPU-16	P16	50	450	300	10000				

# MODEL SELECTION CHART TABLE II THREE JAW EXTRACTORS

Part No.	MODEL	MIN. DIA (mm)	MAX. DIA (mm)	REACH (mm)	WITHDRAWAL LOAD (kg.)				
MPU-20	P20	20	120	135	3000				
MPU-21	P21	40	150	200	7500				
MPU-22	P22	40	150	250	7500				
MPU-23	P23	40	150	300	7500				
MPU-24	P24	50	200	200	10000				
MPU-25	P25	50	200	250	10000				
MPU-26	P26	50	200	300	10000				
MPU-27	P27	60	250	200	12000				
MPU-28	P28	60	250	250	12000				
MPU-29	P29	60	250	300	12000				
MPU-30	P30	75	300	200	15000				
MPU-30	P31	75	300	250	15000				
MPU-32	P32	75	300	300	15000				
MPU-33	P33	100	450	200	20000				
MPU-34	P34	100	450	250	20000				
MPU-35	P35	100	450	300	20000				

HEAVY DUTY LONG LASTING, HIGH PERFORMANCE PULLERS FOR BEARINGS, PULLEYS, GEARS AND COUPLINGS.



AUTHORISED DEALER :