DJK - Energy Houston Master Distributor of UNP

# Torque Values & Actuator Model of Valves

| Type of Valve | Size | 1/2" | 3/4" | 1" | 1-1/2" | 2" | 2-1/2" | 3" | 4" | 6" | 8" | 10" | 12" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ball Valve Full Port, Centre Split Design | Actual Torque | 15 | 20 | 20 | 25 | 35 | 50 | 50 | 85 | 220 | 280 | 350 | 500 |
| | Factor of Safety | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Air Supply Pressure 4 KG/SQ.CM | Design Torque | 19.5 | 26 | 26 | 32.5 | 45.5 | 65 | 65 | 110.5 | 286 | 364 | 455 | 650 |
| | Single Acting Model No. | ES-100 | ES-100 | ES-100 | PE-150 | ES-200 | ES-200 | ES-200 | ES-350 | ES-950 | ES-1600 | ES-1600 | PS-2500 |
| | | (3) | (3) | (3) | (10) | (3) | (3) | (3) | (3) | (3) | (3) | (3) | (8) |
| | Double Acting Model No. | ED-25 | ED-40 | ED-40 | ED-40 | PD-60 | ED-100 | ED-100 | PD-150 | ED-350 | PD-500 | ED-600 | ED-950 |
| Air Supply Pressure 5 KG/SQ.CM. | Single Acting Model No. | PE-60 | ES-100 | ES-100 | ES-100 | PE-150 | ES-200 | ES-200 | ES-350 | ES-950 | PE-1100 | ES-1600 | PS-2500 |
| | | (10) | (4) | (4) | (4) | (12) | (4) | (4) | (4) | (4) | (12) | (4) | (12) |
| | Double Acting Model No. | ED-25 | ED-40 | ED-40 | ED-40 | PD-60 | ED-100 | ED-100 | PD-150 | PD-280 | ED-350 | PD-500 | PD-750 |
| Ball Valve Reduced Port-side Split Design | Actual Torque | 15 | | 15 | 20 | 28 | 35 | 35 | 60 | | | | |
| | Factor of Safety | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | | | | |
| | Design Torque | 19.5 | 0 | 19.5 | 26 | 36.4 | 45.5 | 45.5 | 78 | | | | |
| Air Supply Pressure- 4 KG/SQ.CM | Single Acting Model No. | ES-100 | | ES-100 | ES-100 | PE-150 | ES-200 | ES-200 | ES-350 | | | | |
| | | (3) | | (3) | (3) | (10) | (3) | (3) | (3) | | | | |
| | Double Acting Model No. | ED-25 | | ED-25 | ED-40 | ED-40 | PD-60 | PD-60 | PD-150 | | | | |
| Air Supply Pressure- 5 KG/SQ.CM | Single Acting Model No. | PE-60 | | PE-60 | ES-100 | ES-100 | PE-150 | PE-150 | PE-280 | | | | |
| | | (10) | | (10) | (4) | (4) | (12) | (12) | (10) | | | | |
| | Double Acting Model No. | ED-25 | | ED-25 | ED-40 | ED-40 | PD-60 | PD-60 | PD-150 | | | | |
| | MOR Model No. | MOR 60 | MOR 60 | MOR 100 | MOR 100 | MOR 100 | MOR-250 | MOR-250 | MOR-450 | MOR-750 | MOR-1000 | MOR-1500 | MOR-1500 |
| Installation Cost Bracket & Couplers Considered are MS Galvanised | | | | | | | | | | | | | |

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# Torque Values & Actuator Model of Valves

| Type of Valve | Size | 2" | 2-1/2" | 3" | 4" | 5" | 6" | 8" | 10" | 12" | 14" | 16" | 18" | 20" | 24" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lined Butterfly Valves | Actual Torque | 30 | 30 | 30 | 60 | 110 | 125 | 180 | 360 | 480 | 800 | 1200 | 2018 | 2460 | 3075 |
| | Factor of Safety | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Air Supply Pressure – 4 KG/SQ.CM | Design Torque | 39 | 39 | 39 | 78 | 143 | 162.5 | 234 | 468 | 624 | 1040 | 1560 | 2600 | 3200 | 4000 |
| | Single Acting | PE-150 | PE-150 | PE-150 | ES-350 | ES-600 | ES-600 | ES-950 | ES-1600 | PS-2500 | PS-4000 | | | | |
| | Model No. | (10) | (10) | (10) | (3) | (3) | (3) | (3) | (4) | (10) | (10) | | | | |
| | Double Acting | PD-60 | PD-60 | PD-60 | ED-100 | ED-200 | ED-200 | ED-350 | ED-600 | ED-950 | ED-1600 | PD-2500 | PD-4000 | PD-4000 | PD-4000 |
| | Model No. | | | | | | | | | | | | | | |
| Air Supply Pressure – 5 KG/SQ.CM. | Single Acting Model No. | ES-100 | ES-100 | ES-100 | ES-200 | ES-600 | ES-600 | ES-600 | ES-1600 | ES-1600 | PS-4000 | | | | |
| | | (10) | (4) | (4) | (4) | (4) | (4) | (4) | (4) | (5) | (10) | | | | |
| | Double Acting | ED-40 | ED-40 | ED-40 | ED-100 | PD-150 | ED-200 | PD-280 | PD-500 | PD-750 | PD-1100 | ED-1600 | PD-4000 | PD-4000 | PD-4000 |
| | Model No. | | | | | | | | | | | | | | |
| | Mor Model No. | MOR-100 | MOR-100 | MOR-100 | MOR-100 | MOR-450 | MOR-450 | MOR-450 | MOR-750 | MOR-1000 | MOR-1500 | MOR-1500 | MOR-3500 | MOR-3500 | MOR-3500 |
| Installation Cost Bracket & Coup. in MS Galvanised | | | | | | | | | | | | | | | |

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# Torque Values & Actuator Model of Valves

| Type of Valve | Size | 1/2" | 3/4" | 1" | 1-1/2" | 2" | 3" | 4" | 6" |
|---|---|---|---|---|---|---|---|---|---|
| Lined Plug Valves | Actual Torque | 20 | 25 | 35 | 50 | 75 | 140 | 235 | 525 |
| | Factor of Safety | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| Air Supply Pressure – 4 KG/SQ.CM | Design Torque | 28 | 35 | 49 | 70 | 105 | 196 | 329 | 735 |
| | Single Acting Model No. | ES-100 | PE-150 | ES-200 | PE-280 | ES-350 | ES-950 | ES-1600 | PS-4000 |
| | | (3) | (10) | (3) | (8) | (3) | (3) | (3) | (8) |
| | Double Acting Model No | ED-40 | ED-40 | ED-100 | ED-100 | PD-150 | PD-280 | PD-500 | ED-950 |
| | | | | | | | | | |
| Air Supply Pressure – 5 KG/SQ.CM. | Single Acting Model No. | ES-100 | ES-100 | PE-150 | ES-200 | ES-350 | ES-600 | PE-1100 | PS-2500 |
| | | (4) | (4) | (10) | (4) | (4) | (4) | (12) | (12) |
| | Double Acting Model No | ED-40 | ED-40 | PD-60 | ED-100 | PD-150 | ED-200 | ED-350 | PD-750 |
| | | | | | | | | | |
| | Mor Model No. | MOR 100 | MOR 100 | MOR 100 | MOR 250 | MOR 250 | MOR 450 | MOR 450 | MOR 1000 |
| Installation Cost Bracket & Coup. MS Galvanised | | | | | | | | | |