

MF Eco Machine Certification System Registry (Press Machines) Registered: December 11, 2012  
 Revised: March 12, 2013  
 Revised: December. 2, 2014  
 Revised: June. 2, 2015  
 Revised: December 1, 2015  
 Revised: December 4, 2018  
 Revised: December 10, 2021

|  |   |                   |   |
|--|---|-------------------|---|
| Certified registration no. & registered product name | MF-P007<br>Mechanical Servo   | Product Scope     | Hybrid AC Servo Press<br>H1F35,45,60,80,110-2,150-2,200-2 |
| Registered name of corporation                       | Komatsu Industries Corp.  | Certified product | H1F35/45/60/80/110-2/150-2/200-2                          |
| Reference model & Production time                    | OBS35(-),OBS45 (-),OBS60(-) OBS80 (-), OBS110-2 (-), OBS150 (-), OBS200 (-) |                   |   |

| Requirements & environment factors | Evaluation item | Evaluation criteria | Evaluation result and/or remarks |
|------------------------------------|-----------------|---------------------|----------------------------------|
|------------------------------------|-----------------|---------------------|----------------------------------|

|                           |                    |                 |                      |                |                |                |                    |                    |                    |            |
|---------------------------|--------------------|-----------------|----------------------|----------------|----------------|----------------|--------------------|--------------------|--------------------|------------|
| (1) Essential requirement |                    | H1F vs OBS      | H1F35 vs OBS35       | H1F45 vs OBS45 | H1F60 vs OBS60 | H1F80 vs OBS80 | H1F110-2 vs OBS110 | H1F150-2 vs OBS150 | H1F200-2 vs OBS200 |            |
| Energy saving             | Energy consumption | Reduction ratio | Reduce more than 20% | <b>58%</b>     | <b>43%</b>     | <b>25%</b>     | <b>33%</b>         | <b>57%</b>         | <b>37%</b>         | <b>49%</b> |
| based on JFMA criteria    |                    |                 |                      |                |                |                |                    |                    |                    |            |

|                               |                  |                               |                         |                |                |                |                    |                    |                    |          |
|-------------------------------|------------------|-------------------------------|-------------------------|----------------|----------------|----------------|--------------------|--------------------|--------------------|----------|
| (2) Selective requirement     |                  | H1F vs OBS                    | H1F35 vs OBS35          | H1F45 vs OBS45 | H1F60 vs OBS60 | H1F80 vs OBS80 | H1F110-2 vs OBS110 | H1F150-2 vs OBS150 | H1F200-2 vs OBS200 |          |
| Resources saving              | Compactification | Number of air/hydraulic parts | 10% or more reduced     | <b>X</b>       | <b>X</b>       | <b>X</b>       | <b>X</b>           | <b>X</b>           | <b>X</b>           | <b>X</b> |
|                               | Air              | Total consumption             | 10% or more reduced     | <b>X</b>       | <b>X</b>       | <b>X</b>       | <b>X</b>           | <b>X</b>           | <b>X</b>           | <b>X</b> |
| Environment conservation      | Safety           | Safety standard               | Applicable set standard | <b>X</b>       | <b>X</b>       | <b>X</b>       | <b>X</b>           | <b>X</b>           | <b>X</b>           | <b>X</b> |
| Minimum selective requirement |                  | <b>3 items or more</b>        |                         |                | <b>3 items</b> |                |                    |                    |                    |          |

|   |                             |   |  |
|---|-----------------------------|---|--|
| (3) Recommendation requirement  |                             | Names of equipped devices/functions                                 | Summary of effects on environmental burden reduction |
| Environment factor<br>(Energy saving, durability, long life, display/management of environment info., vibration/noise, emission (atmosphere, soil)) | Stop monitor function       | Constantly monitors inclination at the time of stop by the brake.   |  |
|   | Powerful mechanical brake   | holds brake torque, exceeding the maximum torque of main motor.     |  |
|   | Small capacity servo motor  | Adoption of link mechanism enables smaller capacity of servo motor. |  |
|   | Photoelectric safety device | Equipped as the standard equipment                                  |  |
|   | Elimination of clutches     | No wear and tear of lining enables longer life.                     |  |
| Minimum requirement   |                             | 3 items or more   | <b>5 items</b>                                       |

Remarks;

(1) Revised on March 12, 2013: additon of 2 items (H1F35,60)

(2) Revised on December 8, 2014: change of 1 items (H1F200-2)