Tips to Prepare for a New Eddy Current Chassis Dyno Installation

Air cooled eddy current chassis dynos are waterless, so it eliminates the need for expensive water-cooling equipment, they're environmentally friendly, have less moving parts than water brake chassis dynos, and fewer potential maintenance / repair issues

New Pit - New Construction Test Cell/Converting Service Bay

- Working with your local contractor – PTI does offer turn-key solutions
  - Room layout
    - So footprint of equipment is known
      - Careful not to pour pit shallow – better to be a little deeper than shallow
    - So suggested test cell size is known – we recommend a 50' x 20' room for colder climates
    - Control room or not?
      - Customer will need to purchase a rolling work station desk to house PC equipment if no control room
    - Rear tie down – needs to be installed pre-concrete pour – PTI can sell rear tie down
      - If testing coach buses and fire trucks w/ low rear exhaust, 2 rear ties downs will be needed.
      - Rear exhaust kit will be needed for bus and fire truck testing (see below)
- DCI Print-set for tradesmen – electrical, concrete, etc.
  - Includes on-site install support – these items will need to be done by customer if print-set not purchased – SEE PTI INSTALL MANUAL
    - Make sure dyno strapped properly for removal from truck
    - Prep dyno before it goes in pit – install jacking bolts and plates
    - Ensure dyno is in pit evenly
    - Level dyno – 4 corners first
    - There should be 2 conduits from the pit to the floor by the wall where the control boxes get mounted. Feed power cable in conduit separate from signal cable. Air lines share one conduit w/ signal cable and Eddy Current power cables thru separate conduit
- Exhaust hood highly recommended, as it not only removes exhaust, but also removes heat from the air cooled eddys
  - If you're testing longer vehicles like a coach bus, fire truck, etc., we have a rear exhaust collector option to capture exhaust that would otherwise build up outside the hood
    - Keep in mind the distance the dyno is to the rear wall and where the rear tie down is placed when testing vehicles with long rear overhang. Let Power Test know the distance from the center of the rear axle to the rear of the vehicle to help determine where pit and rear tie down are placed.
  - Overhead door ideally is lowered about half open when running a dyno test (for increased airflow to ATAAC and radiator) – Be sure to double check overhead door doesn't obstruct hood. A roll up door may be a better option.
  - Typically the hood centers on where the trucks exhaust stack would be with the truck in place on the dyno
  - We offer 230V 3-ph and 460V 3-ph hood options – PTI will need to know which voltage you have available
  - The exhaust fan for the hood is roof mounted, weighs approx. 1200 lbs. Recommended roof opening should be 56.5" x 56.5".

Existing Pit

- PTI has Left or Right configured eddy current designs for retro fitting a chassis dyno in an existing pit. We can also custom fit L shaped pits and add a ramp and gap kit for slightly shallow pits.
- To ensure proper fit, it would be best to submit a facility drawing of the test cell and pit to PTI
- If no drawings are available, you will need to take measurements. When taking measurements:
  - The foot print of the dyno pit will need to be measured accurately +/- 1/16" – measure from pit wall to wall, with several depth measurements taken, including what the shallowest depth of the existing pit
  - Also get width measurement of the pit edge lip so we can match up tread plates
  - Measurement of rear tie down – how far from back of dyno pit and is it centered between existing dyno rollers? Please note the distances from the rear anchor centerline to both left and right sides of pit
  - Does center of Dyno line up with center of overhead door opening?
- Measure distance of rear wall to rear of dyno pit
- Get room dimensions:
  - Overall Length & Width
  - Distance from pit to right & left walls of room
  - Distance from front of pit to overhead door
  - Distance from rear of pit to rear wall, and tie down anchor
- Send detailed pictures of entire room, including ceiling and outdoor shots that include roof.

Training

- PTI includes in every system quote on-site, hands-on operations training of the software and maintenance of the equipment. It can be a good idea to video portions of the training – i.e. – how to create test patterns or reports. This can save both parties phone calls, but our Tech Service Dept. or sales staff are always just a phone call away to help answer questions.

Additional Options to Consider

- If you lease your building, we offer an above ground installation kit, eliminating the need for a pit. Keep in mind, in comparison, pit construction is ~$10K less expensive.
- If you test trucks with older mechanical engines with no ECM, we have an Optical Tachometer Group option that can monitor RPMs for dyno control of engine speed
- If you are in a flood plain and do not have your pit gravity drain to an oil separator, we offer a Pit Evacuation Sump Pump
- Sometimes during a test, rocks that get stuck in tire treads can fly out at 50+ MPH. This can be a safety hazard and can damage the walls of your test cell. PTI offers a stone guard set to help protect against that.
  - Beware of anything behind the truck on the roll set – i.e. – man door, control room, anything that could get damaged from flying pebbles.
- A control room is optional for a chassis dyno. A rolling work station that can store the monitor, keyboard, PC hardware, and printer is a less expensive option. Tech will spend most of their time inside the truck cab w/ the wireless handheld tablet controlling the dyno test.